

Healthy Eating and Food Security for Urban Aboriginal Peoples Living in Vancouver

A Case Study
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Provincial Health Services Authority

Acknowledgements

Written by:

Bethany Elliott - University of Toronto

Deepthi Jayatilaka - Provincial Health Services Authority

Case Study Resource Team:

Contessa Brown – Advisory Committee Member, Heiltsuk Nation

Kitty Corbett - Simon Fraser University

Alvin Dixon - Indian Residential Schools Survivors Society, Heiltsuk Nation

Hilda Green - Provincial Health Services Authority, Shuswap Nation

Bryanna Rapa – Project Participant, Hallsa Nation

Leslie Varley - Provincial Health Services Authority, Nisga'a Nation

Herb Varley - Advisory Committee Member, Nuu-chah-nulth Nation

Kim van der Woerd - Reciprocal Consulting, 'Namgis Nation

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For further information, contact:

Leslie Varley
Director, Aboriginal Health

Provincial Health Services Authority
201 - 601 West Broadway Avenue
Vancouver, BC
lvarley@phsa.ca
www.phsa.ca

Deepthi Jayatilaka
Provincial Manager, Food Security

Provincial Health Services Authority
600 - 1380 Burrard Street
Vancouver, BC
djayatilaka@phsa.ca
www.phsa.ca

Introduction: Project Origins

In 2009, the Centre for Aboriginal Health at the Provincial Health Services Authority (PHSA) received funding from PHSA's Centres for Population and Public Health to develop and implement the Chronic Disease Prevention in Aboriginal Communities project. Three Aboriginal communities participated in the project: Gitsegukla (near Hazelton); West Moberly (north of Chetwynd); and the Urban Aboriginal Community Garden Kitchen Project (Downtown Eastside Vancouver). All three communities identified healthy eating and food security as key factors in preventing chronic disease in Aboriginal peoples. In 2011, the Food Security program of the PHSA partnered with this project to explore the barriers to healthy eating and food security within the three participating communities. A graduate student practicum was negotiated to undertake a community-based research project to explore:

- 1) The barriers to healthy eating and food security in each of the three communities;
- 2) How these barriers compared to issues identified in the literature;
- 3) The patterns of consumption of traditional food; and
- 4) The barriers to accessing traditional food.

The Food Security program has prepared this case study to document the process as well as key insights and learning gained from the student project.

Project Development

The first challenge in the process was the need to design a community-based research project that a graduate student could plan, implement and conclude during a 20-week practicum placement. The second challenge was doing this while exploring terrain new to the Food Security program. Although the Food Security program

What is Food Security?

Food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life. (FAO, 2002)



regularly addressed access to adequate amounts of healthy, affordable foods in the general population, a focus on Aboriginal food security was new. Furthermore, the Food Security program had previously not engaged the grassroots community; essential for this community-based research project.



The Food Security program worked in close partnership with the Aboriginal Health program at PHSA to ensure that the project learning would be relevant and of value to both programs. The Chronic Disease Prevention in Aboriginal Communities Steering Committee, a multi-stakeholder group, played a critical role in shaping the foundation of the project. In addition, a research consultant was recruited to ensure an academically rigorous research project. An Aboriginal person herself, the researcher was very helpful in designing a project that bridged academic rigour and cultural sensitivity. The graduate student, researcher and Manager of the Food Security Program made up the core research team.



Literature Review

The research project began with a comprehensive literature review to understand healthy eating and food security in BC Aboriginal communities and to identify knowledge gaps in the current literature. Peer reviewed and grey literature from across Canada that explored food security in Aboriginal communities, with a particular emphasis on traditional foods and how these foods were accessed, were reviewed for this purpose.

The majority of Canadian studies on Aboriginal food security took place in the far northern regions of the country, focusing on Inuit and northern First Nations communities. Nevertheless, the studies

What is Cultural Food Security?

Cultural food security emphasizes the ability of First Nations and Inuit to reliably access important traditional/country food, through traditional harvesting methods, to ensure the survival of their cultures. (Power, 2007)

reviewed highlighted the importance of traditional foods to Aboriginal health and food security. Studies found that traditional foods provided more nutrients (particularly protein, vitamin D, iron and zinc) and less fat, sodium and carbohydrates (especially sucrose) than “market foods” bought at a store.



A number of these studies were toxicology studies that assessed environmental contamination of traditional foods. Many of them found that contaminant levels in foods were within acceptable levels, but this varied depending on the geographic location and the type of food studied. Researchers highlighted the need to balance the nutritional, cultural, social, and economic benefits of traditional foods with the risk of contamination, and stressed that all decisions should be made collaboratively between regional toxicology experts and community members.

The literature indicated that eating traditional foods was common among Aboriginal peoples, though the amount consumed varied greatly. Most Aboriginal peoples reported that they would like to consume more traditional foods than they currently do. The literature pointed to a number of barriers to accessing traditional foods including:

- loss of traditional knowledge and land due to the history of residential schools and colonization;
- not having a skilled hunter/fisher in the family;
- gradual erosion of cultural values of sharing and reciprocity in some communities;
- increased migration to urban centres;
- change in lifestyle – less time to hunt, fish or gather as a result of time spent in paid employment;

- government restrictions and regulations on hunting and fishing;
- high costs of equipment and transportation; and
- contamination and species decline due to pollution and climate change.



Unfortunately, there were limited studies that focused on BC Aboriginal communities. The most comprehensive study in BC was the *First Nations Food, Nutrition and Environment Study*.¹ This study, undertaken with on-reserve Aboriginal communities, demonstrated that Aboriginal peoples had a healthier diet and consumed more nutrients on days when they ate traditional foods. Overall, there were few studies that examined food security or traditional foods access in urban settings, despite the fact that 60% of Aboriginal peoples in Canada live off reserve.²



The knowledge gained from the literature review helped refine our initial research questions to focus on:

- 1) The barriers and solutions to accessing healthy food, including traditional foods, in each of the three identified communities and how these compare to the issues identified in the literature;
- 2) The patterns of consumption of market foods and traditional foods in the three communities, particularly comparing between reserve and urban communities;
- 3) The impact of traditional foods on Aboriginal food security; and
- 4) What “food security” means to Aboriginal communities.

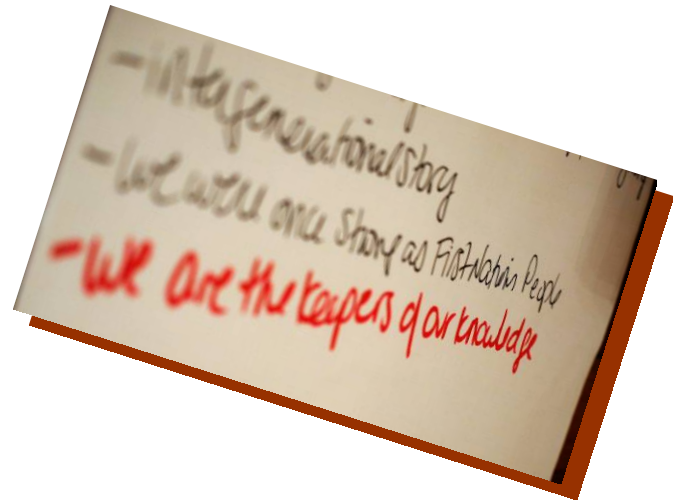
¹ Chan, L., Receveur, O., Sharp, D., Schwartz, H., Ing, A., and Tikhonov, C. (2011). *First Nations Food, Nutrition and Environment Study (FNFNES): Results from British Columbia (2008/2009)*. Prince George: University of Northern British Columbia.

² Statistics Canada. (2010). *Census 2006: Aboriginal peoples in Canada in 2006. 2006 Census Analysis Series*. Ottawa. Retrieved from <http://www12.statcan.ca/census-recensement/2006/as-sa/97-558/index-eng.cfm>

In some of the studies reviewed, researchers questioned the appropriateness of using conventional 'food security' definitions and measures for studying Aboriginal food security, given the potential for different meanings in different cultural contexts. Having considered this information and the feasibility of answering question 3 and 4, the project team, in consultation with the Chronic Disease Prevention in Aboriginal Communities project Steering Committee, decided to focus the research project on answering questions 1 and 2 only.

OCAP Principles

The literature review underscored the importance of following the OCAP principles (developed by the National Aboriginal Health Organization³) in conducting research in Aboriginal communities. These principles are meant to guide researchers to conduct



studies that are of benefit to First Nations Peoples and to use the results of the research ethically. The hallmarks of the OCAP principles are: *Ownership* of cultural knowledge/data/information by the community or group; the right of First Nations Peoples to seek *Control* of all aspects of research and information management processes that impact them; First Nations Peoples' *Access* to information and data about themselves and their communities, and right to manage access to their collective information; and the right of First Nations Peoples to physically *Possess* the data collected.

Guided by these principles, the project team set out to cultivate relationships and collaborative partnerships with the three identified communities. It was soon apparent that the 20 week student project did not allow the time nor the resources required to meaningfully engage three separate communities – two of which were in

³ First Nations Centre. (2007). *OCAP: Ownership, Control, Access and Possession*. Sanctioned by the First Nations Information Governance Committee, Assembly of First Nations. Ottawa: National Aboriginal Health Organization.

Northern BC. After consulting the Steering Committee for the Chronic Disease Prevention in Aboriginal Communities project and community contacts from Gitsegukla and the Urban Aboriginal Community Kitchen Garden Project, the geographic scope of the research project was scaled back to focus on urban Aboriginal peoples currently living in Vancouver. Since the literature review also revealed a lack of studies that explored healthy eating and food security among urban Aboriginal peoples in BC, the student project intended to address this knowledge gap.

Project Advisory Committee

In keeping with the OCAP principles and our goal of a participatory research approach, the project team set out to engage key community partners to guide the research project. The Urban Aboriginal Community Garden Kitchen Project facilitated our entry into the urban Aboriginal community in Vancouver. At their invitation, we participated in a variety of cultural events, attended their meetings, and volunteered in their garden and kitchen activities. Through these interactions, the research team was able to learn about Aboriginal cultures, foods, and communication styles, as well as the community's strengths, needs and research interests. These interactions helped to cultivate positive relationships between the research team and the Urban Aboriginal Community Kitchen Garden Project, which generated a genuine community interest in the research project.



Community interest and buy-in in the research project was evident in the way Urban Aboriginal Community Kitchen Garden Project staff, participants, and allies promoted the research project to key individuals who were knowledgeable and interested in urban Aboriginal food security. Many of these individuals agreed to serve on the Advisory Committee, which guided all aspects of planning and implementing the research project. The Aboriginal Health program at PHSA and a representative from the Chronic Disease Prevention in Aboriginal Communities Steering Committee were also part of the Advisory Committee, providing a link between the two projects.

The role of the Advisory Committee was to ensure that the research project generated information that was useful to Aboriginal peoples and that our approaches were culturally relevant and respectful. The committee helped to refine the research question, select the methodology, shape the analysis and plan the dissemination of findings. In keeping with the OCAP principles, the Advisory Committee also acts as the community or group that co-owns the knowledge generated by the research project. The committee provided input at monthly meetings and via telephone and email. At the monthly meetings, the group shared a healthy meal, incorporating traditional foods whenever possible. The project team made sure that the committee's input was honoured by incorporating the recommended changes. The generous contributions of knowledge, time and effort made by the Advisory Committee members were acknowledged with honoraria.



Research Project

Research Question

To arrive at our final research question, the two questions that were informed by the literature review and vetted by the Chronic Disease Prevention in Aboriginal

Communities Steering Committee were reviewed by the Advisory Committee. From experience, the Advisory Committee knew that traditional foods were culturally important to urban Aboriginal peoples and were regularly consumed when available. They determined that exploring and documenting the challenges and, more importantly, the solutions to accessing traditional foods in the city was warranted. In dialogue with the Advisory Committee, the decision was made to explore the question:

What are the challenges and solutions to accessing Aboriginal traditional foods in the urban setting of Vancouver?

Research Participants: Connecting Youth and Elders



Both the Urban Aboriginal Community Garden Kitchen Project and the Chronic Disease Prevention in Aboriginal Communities project had specified intergenerational learning as a priority for their respective projects. The Advisory Committee incorporated this goal into the research design and decided that participants for the study would include both Elders (or ‘Elders-in-Training’⁴) and youth (aged 18-30) to facilitate intergenerational learning. Advisory Committee members (one youth and one Elder-in-Training in particular) played a leading role in recruiting youth and Elder participants. To recruit youth participants, committee members reached out to Aboriginal youth programs in Vancouver (e.g. Urban Native Youth Association) and made presentations at community gatherings (e.g. Family Night and West Coast Night at the Aboriginal Friendship Centre). Elders who were knowledgeable in traditional foods and practices were recruited by the Advisory Committee using personal networks.

⁴ Some Aboriginal peoples were too young to be recognized as Elders, but were knowledgeable in traditional practices and active teachers in their communities.

Methodology: Use of Innovative Storytelling Method

The project team had initially considered using qualitative interviews with six elders and focus groups with eighteen youth as the method for data collection. However, the project team learned of a storytelling methodology that had been developed to gather and/or generate knowledge based in people's personal experiences.⁵ Besides facilitating data collection, this method provided the additional benefit of involving research participants in synthesizing and analyzing their data.

Due to the synergy of this methodology with OCAP principles and resonance with an important cultural practice, the project team proposed the use of the storytelling method for data collection. The Advisory Committee was enthusiastic about the methodology, because storytelling fit well with Aboriginal traditions, practices, and ways of knowing. However, this storytelling methodology was highly structured, with participants having to self-guide their discussion and continuously sort and organize their data to arrive at deeper levels of analysis of anecdotal stories.



While the storytelling approach resonated with the Advisory Committee, the overly structured format did not. Therefore, the project team adapted the methodology by:



- adding trained facilitators to gently guide the discussion to deeper levels of analysis, and to sort and organize the data; and
- incorporating traditional practices such as the use of sharing circles to more closely resemble traditional storytelling.

⁵ Labonte, R. & Feather, J. (1996). *Handbook on using stories in health promotion practice*. Health Canada.

Three Aboriginal youth and members of the research team were trained in the adapted storytelling methodology to facilitate data collection. They assisted the participants to analyse their stories by walking them through four sets of questions exploring:

- 'What' happened in the story?;
- 'Why' did key events happen?;
- 'So What' can be learned from the story?; and
- 'Now What' actions will help mitigate the issues identified in the stories?

Data Collection: Telling our Stories of Cultural Traditional Foods

Telling Our Stories of Cultural Traditional Foods was a full day event at which the adapted storytelling methodology was used to collect data. The day began with a Musqueam Elder welcoming the group to her traditional territory. After a light but healthy breakfast and an icebreaker activity, participants were invited to form a sharing circle to introduce themselves and their motivations for participation. Next, participants were divided into three story groups, comprised of two Elders and five youth. In each group, one member shared their personal story of accessing traditional foods in the city, and other group members responded by asking clarifying questions or offering comments on how the story resonated with them. In this way,



all group members added their own stories to create a fuller picture of barriers and solutions to accessing traditional foods in the city. Trained facilitators helped to guide the group discussion and recorded notes on stories and comments shared. This was the data collection phase of the event.

Lunch was a healthy meal of salmon, catered by an Aboriginal entrepreneur. The lunch was appreciated by many participants for whom salmon was a traditional food. Nevertheless, due to the diversity of Aboriginal peoples represented, salmon was not traditional for all participants. After lunch, participants rejoined their story groups and facilitators helped groups to consider the underlying themes/meanings of their experiences. This process helped each group to synthesize and analyze their data and tease out the themes they felt were most important to share with the other story groups, and eventually, a wider audience including the PHSA and other stakeholders. At the end of the day, each story group presented their findings to the entire group, and each participant offered their personal thoughts on the day through a sharing circle. An Elder closed the event with an affirmation of the youth present and a group prayer song. In keeping with the tradition of offering gifts of appreciation for knowledge shared, all participants received honoraria for their contribution of knowledge to the research project. Offering compensation for knowledge is in keeping with the OCAP principles.



Following this event, the project team, through a secondary analysis, organized the themes into one cohesive story and drafted three models to visually represent the major themes. Draft models were brought to the Advisory Committee for feedback and to decide on the best model for use in presenting the findings to both the research participants and the wider community. Using the selected model, the story of challenges and solutions to accessing traditional foods in the city was presented to the participants at a follow up event held one month after the initial storytelling day. All participants and Advisory Committee members were invited to attend and participants gave feedback on the accuracy and clarity of their ideas and messages.

This participatory approach allowed participants to 'speak for themselves' and control how their stories and ideas were represented to a wider audience.

Participant Stories

Participant-identified challenges and solutions to accessing traditional foods in Vancouver are presented in diagrams 1 and 2 (pgs. 15 and 19). Diagram 1 organizes all the conditions that pose barriers to accessing traditional foods in the city. Diagram 2 organizes the solutions for increasing access to traditional foods in the

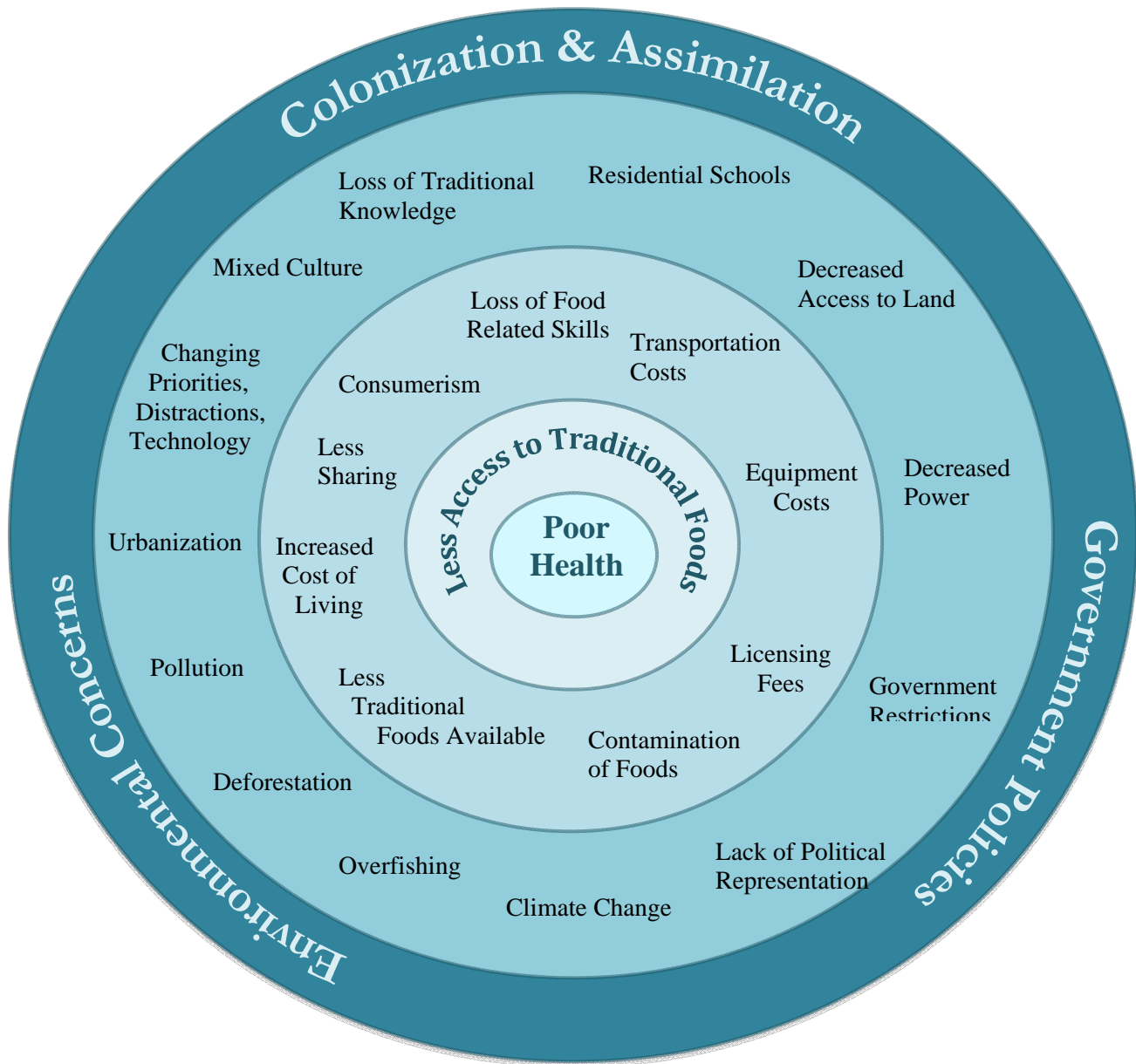


city. As highlighted in the literature review, and echoed by our participants, access to traditional foods improves health. As such, both diagrams are centred on the health of Aboriginal peoples. Research participants noted that the Aboriginal concept of health is holistic and includes not only aspects of physical health, but also emotional, mental and spiritual health – leading to overall wellbeing. This broader definition of health was apparent as participants discussed a wide variety of factors that either directly or indirectly impacted access to traditional foods and, by extension, health.

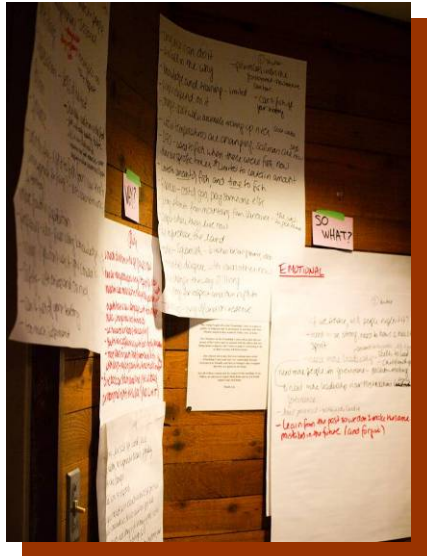
Factors that Limit Access to Traditional Foods in the City

Just as consumption of traditional foods improves the diet and health of Aboriginal peoples, less access to traditional foods leads to a poorer diet and poorer health. "Poor health" is placed in the centre of Diagram 1. The many factors that impede access to traditional foods are organized in concentric circles around "poor health." The more direct factors that impact access are placed closer to the centre and more indirect factors are placed in the increasingly larger outer circles. The circular representation was purposely selected because of the layered, interrelated and overlapping nature of these factors. A multitude of overlapping factors occurring over time has resulted in diminished access to traditional foods for urban Aboriginal peoples.

Diagram 1: **Factors That Limit Access to Traditional Foods in the City**



- **First (Largest) Circle:** The 'Big Picture' issues decreasing access to traditional foods.
- **Second Circle:** Factors indirectly decreasing access to traditional foods.
- **Third Circle:** Factors directly decreasing access to traditional foods.
- **Poorer Health:** Includes elements of physical, emotional, spiritual and mental wellbeing.



Research participants stated that traditional foods are often shared through family networks. However, they noted that due to distance or disconnection from their family and/or home community, they receive less traditional foods through these networks when they live in the city. Participants also noted that sharing of traditional foods has been affected by the increase in 'consumer mentality' in the city. As one participant observed, "We are measured only by how much we can buy." The group felt that people are increasingly more concerned about making money to meet the high costs of living than they are with sharing traditional foods and knowledge. Youth raised in urban

environments stated that they grew up in a "mixed culture" and struggled to maintain traditional ways of living, while attempting to be successful in a fast-paced urban environment. According to some participants, increased access to technology distracts from learning traditional practices, while other participants felt that technology could facilitate teaching and relationship building in an urban environment. Nevertheless, many youth participants stated they did not have the knowledge or skills to gather and prepare traditional foods.

While traditional knowledge continues to be preserved and shared in Aboriginal communities, participants stated that this knowledge is being lost over generations. Youth said that in the city they have fewer opportunities to learn from Elders. Participants traced this gradual loss of traditional knowledge and skills back to residential schools, where, for generations, children were removed from their families and communities and forced to learn European ways of living, eating, and speaking. The literature reviewed noted that assimilation practices initiated a 'nutrition transition' among Aboriginal peoples by introducing them to less healthy non-traditional foods. As one youth pointed out, colonization introduced Aboriginal peoples to the "five white sins": flour, salt, sugar, alcohol and lard. Needless to say,



these have had devastating consequences for Aboriginal health. Some youth participants noted that they do not like the taste of some traditional foods because they do not eat them often. Participants also underscored the lasting impact colonization and forced assimilation has had on traditional knowledge and family dynamics, both of which impact access to traditional foods.



Government policies and the changing environment were two other high level factors that participants identified as impacting access to traditional foods. For example, many participants stressed that “the Department of Fisheries and Oceans does not allow us to fish off our territory” – pointing to the artificial boundaries that now contain Aboriginal peoples and prescribe what they can and cannot do outside the reservations and territories. Discussions on government policies also highlighted that licensing fees make hunting and fishing too expensive for many Aboriginal peoples, impacting their ability to afford and share these foods. Furthermore, continuing increases in transportation and equipment costs leave many families unable to afford the equipment or gas needed to hunt, fish, or gather traditional foods. As one Elder stated, “Traditional foods shouldn’t be a privilege [for the wealthy], it should be available for all!” Lack of Aboriginal control over how land and waterways are being used, environmental pollutants that contaminate food and food sources, deforestation, climate change, and overfishing were all discussed as factors reducing the availability of traditional foods. Participants felt that not enough people were raising these issues with decision makers, and noted the insufficient political representation of Aboriginal peoples in the Canadian government as a significant issue.

The challenges to accessing traditional foods so comprehensively articulated in the storytelling workshop match those identified in the literature reviewed. Aboriginal peoples know the issues – they live with them. Participants were very clear: more time and resources must be devoted to working towards community-identified solutions rather than continuing to dwell on already known challenges.

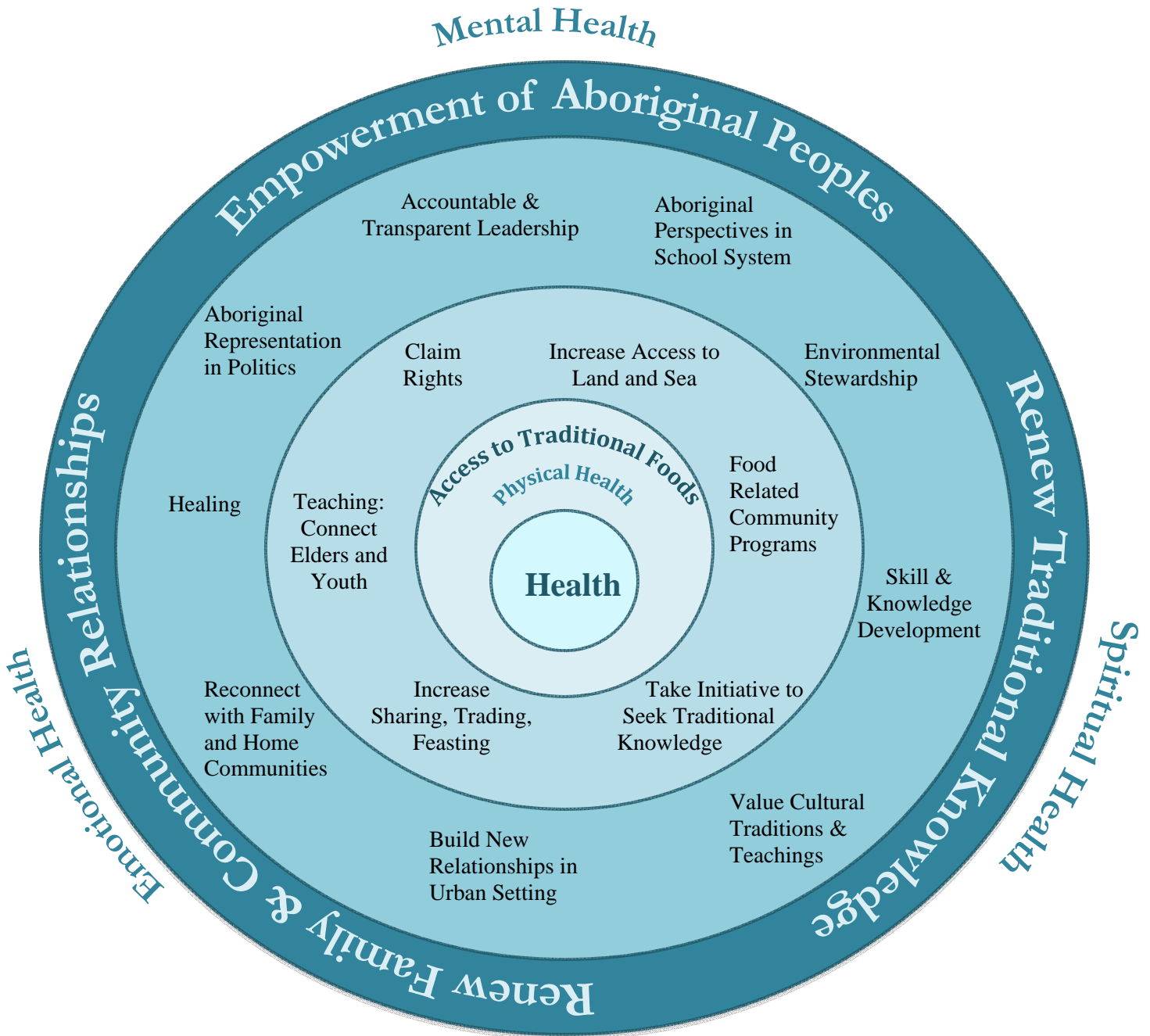


Solutions to Increase Access to Traditional Foods in the City

The solutions to increasing access to traditional foods are represented in Diagram 2. Similar to Diagram 1, health is at the centre. Consuming traditional foods improves diet, and therefore, physical health. The interrelated and overlapping factors that contribute to traditional foods access are organized in concentric circles, with more direct factors located closer to the centre. The more indirect, overarching solutions identified by participants – empowerment of Aboriginal peoples, renewal of traditional knowledge, and renewal of family and community relationships – are located in the outermost circle. These overarching solutions not only impact traditional foods access and physical health, but also have positive affects on mental, emotional, and spiritual health. This holistic view of health emphasized by participants is reflected in the diagram on page 19.



Diagram 2: Actions to Increase Access to Traditional Foods in the City



- **First (Largest) Circle:** The 'high level' solutions to increasing access to traditional foods.
- **Second Circle:** Factors indirectly affecting access to traditional foods.
- **Third Circle:** Factors directly affecting access to traditional foods.
- **Health Includes:**
 - Physical Health (healthy eating of traditional foods)
 - Emotional Health (social support through relationships)
 - Spiritual Health (increased cultural connectivity)
 - Mental Health (increased sense of cultural identity, pride and vision)

Overall, participants stressed the need to collectively heal from the past injustices of colonization and assimilation. As one participant highlighted, “We must learn from the past and forgive in order to be the best we can be.” Renewal of family and community relationships were seen as important for connecting youth and Elders, facilitating the teaching of traditional knowledge to the younger generation, encouraging the sharing and trade of traditional foods, and celebrating together in cultural feasts. When urban Aboriginal peoples are far from their family or home community, participants stressed the importance of building relationships among urban Aboriginal peoples to facilitate teaching, sharing and trading.

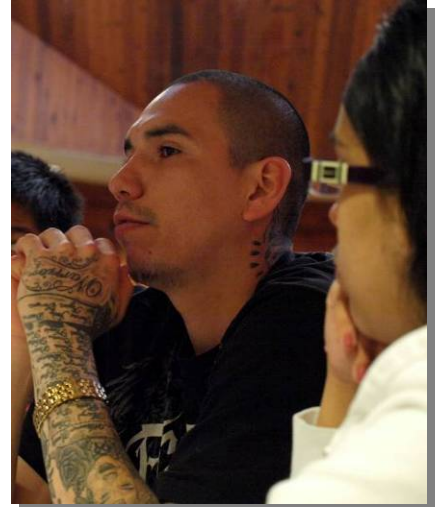


Elders underlined the importance of youth valuing traditional knowledge and investing time and energy into learning and gaining skills. Similarly, youth acknowledged the need to take initiative in seeking traditional knowledge from Aboriginal community programs/events, relatives, and Elders. Participants also noted that traditional knowledge and practices are closely linked to environmental stewardship, stating that traditional knowledge could help protect food sources from mismanagement, over-extraction, and pollution.

Participants saw the renewal of traditional knowledge as key to Aboriginal empowerment. Youth wanted to see an appreciation of indigenous knowledge in both Aboriginal and non-Aboriginal communities, and an inclusion of Aboriginal perspectives, history and culture in the school curriculum. For example, some youth said they had switched from the ‘regular’ social studies class to the First Nations option, but stressed the importance of Aboriginal and non-Aboriginal students learning “both sides of the story” in Canadian history.

Elders and youth emphasized the need for accountable and transparent leadership across the board, empowering Aboriginal peoples to claim their rights and access to land and water systems. The need for Aboriginal voice in public policy making was highlighted, with participants firmly stating, “We are not being heard!” They saw political representation as vital to improving access to traditional foods – not only in urban settings, but for all Aboriginal peoples.

Solutions for increasing access to traditional food are less common in academic literature. However, the participants in the storytelling event were more excited by discussing potential solutions and actions than by reiterating challenges. The opportunities for action identified by the group inspired participants to resolve to make personal changes and take collective actions to promote traditional foods access in Vancouver.



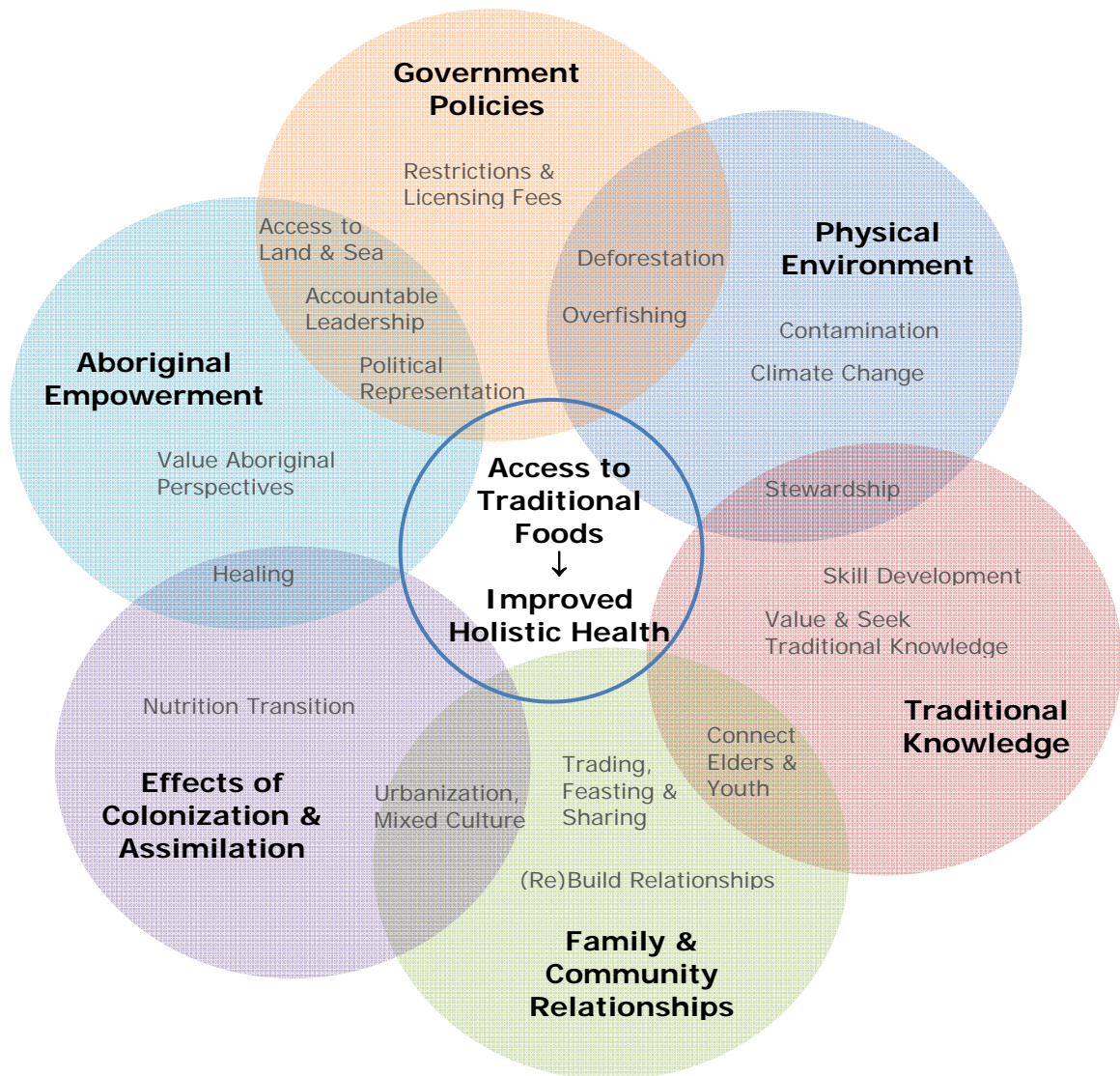
What We Learned

Access to Traditional Foods in Vancouver

This research project generated insight and learning at many levels. Most significant was the illustration of the importance of traditional foods to the health of Aboriginal peoples. Not only do these foods improve healthy eating, but through connection to family and community, culture and traditions, waterways and land, traditional foods also improve the mental, emotional and spiritual health of Aboriginal peoples. Traditional foods – from harvest to preparation and consumption – are intrinsically linked to the diverse cultures and holistic health of Aboriginal peoples. In light of this, it was concerning to see the impact of colonization and assimilation policies on access to traditional foods even in the present time. Current government policies and the impact of climate change seem to exacerbate these impacts. Issues that impede access to traditional foods are complex. Solutions will require action from many partners, working at many levels.

Interestingly, Elder and youth participants saw the need for a comprehensive and multifaceted response. The need for Aboriginal peoples to shape public policies through political representation; Aboriginal leadership that empowers Aboriginal peoples to claim their traditional rights; inclusion of Aboriginal perspectives in government and the education system; (re)building relationships with families, home communities, and other urban Aboriginal peoples; and facilitating the transfer of traditional knowledge and sharing of food were all seen as important for increasing access to traditional foods.

Diagram 3: Summary of Main Factors That Determine Access to Traditional Foods in Vancouver



Engaging and Collaborating with Aboriginal Communities

While critical content learning was gained from the project, much was learned from the research process as well. The key steps, considerations and approaches employed were instrumental in the effective engagement of Aboriginal partners – who participated with enthusiasm and played a defining role in the project. The investment in community engagement and a methodology that resonated with the cultures and traditions of the Aboriginal partners helped to draw a holistic and comprehensive picture of the importance of traditional foods to the health of Aboriginal peoples. The project team learned many important lessons about community-based research with Aboriginal partners, which are summarized below.

1. Undertake a Manageable Project

The literature review, OCAP principles and discussions with partners helped to narrow the geographic scope of the project, as well as the questions being explored. The refined project made it possible to dedicate time and resources towards building collaborative relationships with Aboriginal partners in Vancouver.

2. Invest in Community Engagement & Partnership Development

Valuing traditional knowledge, incorporating cultural practices into Advisory Committee meetings and the storytelling event, and striving to serve healthy traditional foods at project gatherings all helped to strengthen relationships with Aboriginal partners. This investment in community engagement helped to form a strong Advisory Committee. Regular communication and incorporation of partners' ideas, feedback and knowledge helped to keep all project partners invested in a truly collaborative project.



3. Value Traditional Knowledge

The value of Aboriginal knowledge to the project was demonstrated by spending time with and learning from Aboriginal programs, providing honoraria for knowledge shared, incorporating traditional practices such as gift giving and sharing circles, and using a methodology that paralleled traditional storytelling practices. This demonstration of the value of traditional knowledge not only helped strengthen relationships, but also strengthened the research findings. The resonance of the storytelling methodology with the cultures and traditions of participants, and the opportunity for participants to conduct the primary analysis of their own stories allowed participants to 'speak for themselves' and generate knowledge based on their own lived experiences as urban Aboriginal peoples. The keen focus that Elders and youth alike maintained throughout the day was a demonstration of the advantage of the storytelling approach and the importance of the topic being discussed.



4. Foster Community Leadership

The Advisory Committee demonstrated significant buy-in to the project when they took leadership roles to generate community interest in the storytelling event, especially among youth. The event reached maximum capacity with six Elders and fifteen youth, and was a resounding success largely due to the strong leadership provided by the Advisory Committee.

5. Clearly Express Study Limitations & Manage Community Expectations

From the beginning, the research team was cautious about managing community expectations on how solutions proposed by the research project might be acted upon after completion of the study. As discussed, our Aboriginal partners already knew the issues at hand – they were keen for actions to remedy these issues. Despite our efforts to be up front with our limitations, it was evident that expectations were created for direct PHSA support to continue the momentum built by the research project. The need for prior thinking and planning on how follow up efforts would be supported beyond a research project needs to be underscored, as community expectations are naturally raised when a significant organization such as the PHSA sponsors a project.

Next Steps

At the gathering following the storytelling event, many of the Advisory Committee members and research project participants generated a list of actions as potential next steps discussed. These included:

- Connecting youth and Elders for teaching and mentorship through currently available community garden plots;
- Hosting a community forum to increase knowledge about healthy eating, traditional foods and their link to health;
- Making a pitch to the Aboriginal Peoples Television Network (APTN) for a reality TV show that documents traditional skills and knowledge sharing between Elders and youth;
- Creating a Facebook group to promote events related traditional foods; and
- Organizing a social BBQ to keep the Advisory Committee and participants connected as a community of urban Aboriginal peoples

These ideas are yet another demonstration of the sense of ownership both the Advisory Committee and the participants have for the outcomes of the project. What is noteworthy is that several Advisory Committee members and research participants have volunteered time and energy to work on these initiatives independently.



The ability of the PHSA to continue the strong collaboration built with Aboriginal partners in realizing some of these ideas is currently uncertain. However, both the Food Security and Aboriginal Health programs at PHSA are committed to sharing what was learned in this project within the organization. The two programs are also committed to sharing this knowledge with key policy and community partners who could potentially act on the solutions identified by this project. The PHSA will continue the collaboration established with Aboriginal partners by ensuring that promotional materials developed and presentation made will be done in partnership.

Appendices

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Project Advisory Committee

Contessa Brown - Heiltsuk Nation

Kitty Corbett - Simon Fraser University

Alvin Dixon - Indian Residential Schools Survivors Society, Heiltsuk Nation

Bethany Elliott - University of Toronto

Hilda Green - Provincial Health Services Authority, Shuswap Nation

Deepthi Jayatilaka - Provincial Health Services Authority

Lea Jensen – Lu'ma Native Housing, Musqueam Garden Project

Jeri Sparrow – Musqueam Nation

Samantha Tsuruda – McCreary Centre Society, Stó:lō Nation

Leslie Varley - Provincial Health Services Authority, Nisga'a Nation

Herb Varley - Nuu-chah-nulth Nation

Kim van der Woerd - Reciprocal Consulting, 'Namgis Nation

Chronic Disease Prevention in Aboriginal Communities Steering Committee

Leslie Varley - Provincial Health Services Authority

Hilda Green - Provincial Health Services Authority

Debbie Sullivan – Gitsegukla Health Center

Elsie Sampare – Gitsegukla First Nation

Vincent Prince – Nak'azdli First Nation

Agnes Snow – Northern Health Authority

Theresa Healy - Northern Health Authority

Victoria Stewart - Northern Health Authority

Linda Day – Vancouver Native Health Society

Jeannie Parnell – Vancouver Native Health Society

Tannis Cheadle – Provincial Health Services Authority

Deepthi Jayatilaka - Provincial Health Services Authority

Miriam Rosin – BC Cancer Agency

Kitty Corbett - Simon Fraser University

Storytelling Facilitators

Vina Brown – Heiltsuk & Nuxalk Nations

Bethany Elliott – University of Toronto

Deepthi Jayatilaka – Provincial Health Services Authority

Samantha Tsuruda - Stó:lō Nation

Kylee Swift – Métis

Kim van der Woerd – 'Namgis Nation

Aboriginal Food Security in Canada: A Review of Traditional Foods Studies

Aboriginal Health and Food Security

Aboriginal peoples in Canada have poorer physical health and higher levels of food insecurity than the general population. The 2nd Report on the Health and Well-Being of Aboriginal People in British Columbia (Province of British Columbia, 2009) reports that Aboriginal peoples have significantly higher rates of diet-related health concerns such as obesity, diabetes and heart disease. Fifty-four percent of the BC Aboriginal population identified themselves as either overweight (31.8%) or obese (22.6%) – both of which are risk factors for many other chronic diseases (Ibid). In BC, the rate of diabetes is 40% higher among Aboriginal peoples than the rest of the population, and the incidence of diabetes in Aboriginal peoples is rising (Ibid). Prevalence of heart disease was approximately 25% higher and congestive heart failure was about 75% higher in Aboriginal peoples than in other BC residents (Ibid). Furthermore, Aboriginal peoples were 70% more likely to have experienced a stroke than the rest of the population (Ibid). There is a clear distinction between the health of Aboriginal peoples and other Canadian residents that cannot be explained solely through biological differences. This inequity is also apparent in food security levels.

The term **Aboriginal peoples**, as defined by the Canadian Constitution Act, includes Indian (a term which is now commonly replaced by the more accepted term 'First Nations'), Inuit, and Métis peoples.

Many of the diet-related chronic diseases mentioned above stem from limited dietary options and insufficient access to adequate amounts of affordable and culturally appropriate food. In 2004, Health Canada measured levels food insecurity among the general population, including Aboriginal peoples living off reserve, and found that one in three Aboriginal households (33%) was food insecure (Health Canada, 2006). Food insecurity among non-Aboriginal households was much lower at 9% of households (Ibid). Many factors other than Aboriginal status may contribute to food insecurity (e.g. education level, home ownership, income adequacy, primary source of income, etc.). However, researchers found that even after controlling for differences in these household socio-demographic risk factors, Aboriginal households were still 2.6 times more likely to be food insecure than non-Aboriginal households (Willows, Veugelers, Raine & Kuhle, 2008). The obvious and related inequities of both the health and food security of Aboriginal peoples needs to be addressed.

What is Food Security?

Food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life. (FAO, 2002)

Cultural food security emphasizes the ability of First Nations and Inuit to reliably access important traditional/country food, through traditional harvesting methods, to ensure the survival of their cultures. (Power, 2007)

Historical Context

An understanding of the history of colonization of Aboriginal peoples in Canada is crucial to understanding their present health and food security status (Hackett, 2005; Smith, 1999; Cannon & Campus, 1995). Although each Aboriginal community has unique experiences of colonization, European contact broadly impacted Aboriginal foods and health through reduced access to land, destruction of people and their knowledge, reduction or complete loss of species, and a lack of acknowledgement of other modes of economic or social organization (Cannon & Campus, 1995). Colonization was the first step in the 'nutrition transition' – a gradual westernization of Aboriginal diets to include more pre-processed foods and drinks, which are high in saturated fats and carbohydrates, and less traditional foods, which are low in fat and high in protein, vitamins, and essential minerals (Damman, Eide, & Kuhnlein, 2008; Kuhnlein & Chan, 2000). This transition combined with decreased physically demanding cultural activities and a more sedentary lifestyle on limited 'reserve' land, contributed to an increase in the chronic health concerns described above (Province of British Columbia, 2009; Cannon & Campus, 1995). In addition, for generations, children were separated from their families and communities through the residential school program, effectively severing cultural ties and traditional knowledge transfer to the younger generation (Province of British Columbia, 2009). However, Aboriginal peoples continue to consume traditional food (Chan et al., 2011; Batal, Gray-Donald, Kuhnlein, & Receveur, 2005) and endeavour to pass down traditional knowledge of land and food systems to younger generations, increasing food security and self-sufficiency within their communities (Morrison, 2008).

The Traditional Food System

The term 'traditional food system' includes all of the food species that are available to a particular culture from local natural resources and the accepted patterns for their use within that culture. This term also embraces an understanding of the socio-cultural meanings given to these foods, their acquisition, and their processing; the chemical composition of these foods; the way each food is used by age and gender groups within a selected culture; and the nutrition and health consequences of all of these factors for those who consume these foods. (Kuhnlein & Chan, 2000, p. 596)

Traditional Food Studies

Many researchers have studied the role of traditional foods in the Aboriginal diet in Canada. Most studies have focused on First Nations and Inuit communities living on reserve or in the far North, and fall into one of three categories: 1) nutritional studies examining dietary adequacy of traditional foods compared to market foods purchased in a store; 2) toxicological studies measuring environmental contamination levels of traditional foods; or 3) socio-cultural studies qualitatively assessing the significance of traditional foods to Aboriginal peoples and barriers to its access. Although this review focuses on access to traditional foods, a number of technical studies examining nutrient contents or contamination levels of specific foods emerged through the search process. A brief overview of the high level findings of these studies provides valuable context; however, this is not intended to be a comprehensive review of nutritional and toxicological studies. Where possible, the review highlights studies conducted in British Columbia.

Nutritional Studies

Dietary studies conducted in Canada found that traditional foods contain higher amounts of nutrients and less fat, sodium and carbohydrates (especially sucrose) than market foods (Downs et al., 2009; Egeland et al., 2004; Simoneau & Receveur, 2000; Receveur, Boulay & Kuhnlein, 1997; Kuhnlein, Soueida & Receveur, 1996; Wein, 1996; Wein, Sabry & Evers, 1991). However, nutrient content varies based on the type of traditional foods consumed and most studies reviewed examined traditional foods common in northern Canada. However, in 2008, the University of Northern British Columbia, the Université de Montréal, and the Assembly of First Nations initiated the First Nations Food, Nutrition & Environment Study (FNFNES) examining First Nations traditional foods, dietary adequacy, and environmental contamination (Chan et al., 2011). Results from British

Columbia collected between 2008 and 2010 paralleled studies conducted in northern Canada, showing that dietary adequacy was improved on days when Aboriginal peoples consumed traditional foods. Traditional foods were a major contributor of protein, vitamin D, iron, and zinc. Due to the health benefits of traditional foods, researchers have warned of the dietary and health risks associated with the 'nutrition transition' to western market foods (Chan et al., 2011; Receveur et al., 1997).

Toxicological Studies

Similar to the nutritional research on traditional foods, the majority of toxicological studies have been conducted in the Arctic and Canada's northern regions. Levels of contamination of traditional foods vary by region, community, and type of food consumed. All studies found contaminants such as organochlorines, mercury or lead in traditional foods (Donaldson et al., 2010; Van Oostdam et al., 2005; Kuhnlein & Chan, 2000; Kuhnlein, Receveur, Muir, Chan & Soueida, 1995; Cameron & Weis, 1993). However, the level of contamination, and by extension, health concern, varied throughout the studies. Some studies showed that food contaminants were below acceptable levels (Cameron & Weis, 1993); others stated that contaminants were at a level of concern, but did not require immediate action (Van Oostdam et al., 2005); while others still found that contaminants exceeded acceptable levels (Kuhnlein et al., 1995). Due to the variety of geographic locations represented and varying contamination levels, it is difficult to extrapolate this data to BC communities.

The First Nations Food, Nutrition & Environment Study (FNFNES) (Chan et al., 2011) is the first study to systematically assess contamination of traditional food sources and water across Canada below the 60th parallel. British Columbia data (collected between 2008 and 2010) showed that contamination levels were below the acceptable guidelines, with the exception of cadmium. Recommendations to reduce cadmium included limiting moose kidney and liver to half a cup per month and limiting seaweed intake to half a cup per day. Researchers recommended continued consumption of traditional foods due to the nutritional benefits, but contaminations levels warrant continued monitoring and follow up studies (Chan et al., 2011). The FNFNES study, along with other toxicological studies conducted in Canada's northern regions, emphasized the need to balance the nutritional, cultural, social, spiritual, and economic benefits of traditional food with the risk of contamination, and encouraged decisions to be made collaboratively between regional experts and community

members (Chan et al., 2011; Van Oostdam et al., 2005; Simpson, 2003; Kuhnlein & Chan, 2000; Poirier & Brooke, 2000; O'Neil, Elias & Yassi, 1997).

Socio-cultural Studies

A common critique of nutritional and toxicological studies is the priority of western science over traditional knowledge and Aboriginal perspectives (Tobin, French & Hanlon, 2010; Power, 2007; Simpson, 2003; Smith, 1999; O'Neil et al., 1997). An increasing number of qualitative studies are assessing Aboriginal perspectives on traditional foods in an attempt to capture the cultural, social, spiritual and economic importance of these foods, in addition to their impact on a healthy diet. Due to the centrality of food in Aboriginal culture, most Aboriginal peoples would like to consume greater quantities of traditional foods (Chan et al., 2011; Wein, 1996); however, there are many socio-cultural, political and environmental barriers that prevent Aboriginal peoples from accessing their traditional foods.

Socio-cultural values, such as sharing, reciprocity, and caring for those in need, have historically fostered the distribution traditional food throughout Aboriginal communities (Beaumier & Ford, 2010; Ford, 2009; Chan et al., 2006; Gombay, 2005). Some communities have expressed concern that the erosion of cultural practices overtime and migration away from rural communities to urban centres has reduced the practice of food sharing, leaving many without access to traditional food (Beaumier & Ford, 2010; Brown, Isaak, Lengyel, Hanning & Friel, 2008; Chan et al., 2006; Gombay, 2005). Migration to urban centres for work or education opportunities has also resulted in decreased opportunity and time to learn traditional practices related to procuring or preparing food (Brown et al., 2008; Turner & Turner, 2008). Many Elders report a generational loss of traditional knowledge and young people often have not acquired a taste for traditional foods, preferring instead to consume less nutritious market foods (Chan et al., 2006; Kuhnlein & Receveur, 1996). Furthermore, related social issues such as poverty and alcohol consumption have affected the transfer of traditional knowledge and practices (Beaumier & Ford, 2010). These cultural changes, as noted previously, are rooted in a history of colonization, separation of families and communities, and displacement from traditional territories. Aboriginal peoples have been denied access to their traditional lands, children were indoctrinated with European values and traditions at residential schools, and traditional practices such as the potlatch were outlawed (Damman et al., 2008; Turner &

Turner, 2008). Colonization has had a lasting impact on Aboriginal culture, which is still affecting traditional foods access today.

Current political influences also impact access to traditional foods. Government regulations on hunting and fishing do not take Aboriginal perspectives into consideration (Heaslip, 2008), and the harvester support programs – intended to provide financial support for traditional foods practices – are often inadequate to meet the rising costs of equipment, transportation, and fuel (Beaumier & Ford, 2010; Chan et al., 2006; Power, 2007). The cost of hunting and fishing equipment, combined with the high cost of market foods in remote areas was a major barrier to Aboriginal women's food security (Lambden, Receveur, Marshall & Kuhnlein, 2006). Furthermore, government decisions regarding land and water use directly impact Aboriginal traditional foods (Chan et al., 2011). For example, government policies concerning salmon farming in BC have negatively impacted coastal First Nations food supply (Heaslip, 2008).

Industrial land use has contributed to concerns of environmental degradation and contamination of traditional food sources. Aboriginal peoples have also observed changes in the appearance of traditional food due to contamination and species decline due to climate change (Ford 2009; Turner & Clifton, 2009; Guyot, Dickson, Paci, Furgal & Chan, 2006; Willows, 2005). Hunters, fishers, and gatherers have adapted to gradual changes; however, increasing climate extremes and consecutive years of unfavourable conditions may leave those dependent on traditional foods increasingly vulnerable to food insecurity (Ford, 2009).

Gaps in the Literature

The research reviewed highlighted the importance of traditional foods for a healthy diet and the potential for traditional foods to reconnect people with cultural practices and traditional knowledge. However, the majority of these studies have occurred in the far northern regions of Canada, with limited data on BC Aboriginal peoples. Chan et al.'s (2011) study is a significant step forward in understanding traditional foods access, use, and contamination in BC, but even this study is focused on reserve communities and did not include the urban Aboriginal population. With approximately 60% of the Aboriginal population in Canada living off reserve (Statistics Canada, 2010) an increased understanding of traditional foods in the urban context is crucial to understanding urban Aboriginal food security.

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