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## The life course "connection"

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Item Type	Article
Authors	Johnson, Krista L.;Batal, Malek;Haman, Francois;Imbeault, Pascal
Publisher	Native Counselling Services of Alberta
Rights	With permission of the license/copyright holder
Download date	2026-07-03 09:28:02
Link to Item	<a href="http://hdl.handle.net/20.500.12424/176473">http://hdl.handle.net/20.500.12424/176473</a>

# THE LIFE COURSE “CONNECTION”; AN EXPLORATION OF WOMEN’S DIETARY CHOICES IN A NORTHERN FIRST NATIONS COMMUNITY<sup>1</sup>

Krista L. Johnson

Malek Batal

François Haman

Pascal Imbeault

Jules M. Blais

Shinjini Pal

Timothy A. Seabert

Eva Krümmel

Michael A. Robidoux

## ABSTRACT

The high incidence of obesity and obesity related diseases have been well-documented within First Nations communities across Canada. Therefore, examining current dietary choices and then altering and managing alternative healthier choices are essential in the treatment of obesity and its related diseases. The present article describes a dietary study looking specifically

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1. Acknowledgements: This research was conducted in collaboration with Kasabonika First Nations and the Shibogama First Nations Council. We are grateful to the Kasabonika Chief and Council for their support throughout this project. We also thank Geraldine Brown in Kasabonika for her assistance in participant recruitment and translation of Oji-Cree interviews. We also extend our gratitude to the study participants for taking the time to speak to us about their food choices. This research was supported by the Northern First Nations Environmental Contaminant Program. Krista L. Johnson was supported by a graduate scholarship from Social Sciences and Humanities Research Council.

at the dietary choices of women living in a First Nation's community in northwestern Ontario. Ethnographic research was conducted to discern local food practices and uncover influences affecting women's food choices.

**Keywords:** Diet, First Nations, obesity

## INTRODUCTION

For First Nations peoples across Canada, the prevalence of overweight and obesity is significantly higher than it is amongst non-First Nations peoples in Canada (Fox et al., 1994; Harris et al., 1997; Kuhnlein et al., 2004). According to the Assembly of First Nations (2007), approximately 75% of First Nations adults were overweight/obese compared to 53% of the adult non-First Nations population (Health Canada, 2006). In northern Ontario specifically, where this study was conducted, the prevalence of obesity increased 45% over a ten year period (Fox et al., 1994). In the Sandy Lake region, the prevalence of type 2 diabetes among community members was 17.2%, and rates of obesity were higher among women than among men (Harris et al. 1997; Hanley et al., 1997). Further research conducted by Robidoux et al. (forthcoming) in the Kasabonika and Wapekeka First Nations, recorded a prevalence of overweight/obesity over 90% among a representative samples of adults aged 18–16 years, almost double the national average cited among non-First Nations populations (Assembly of First Nations, 2007).

The alarming increase in the prevalence and consequences of overweight and obesity for First Nations peoples in Canada is not uniformly experienced by men and women (Fleming et al., 2006; Garriguet, 2004; Iwasaki et al., 2004; Koch, Kralick and Sonnack, 2000). Garriguet (2004) noted that the overall differences in overweight and obesity between First Nations and non-First Nations populations were largely attributable to First Nations women, specifically those between the ages of 19–30. In this study, Garriguet (2004) determined that despite identical energy needs, First Nations women consumed more calories by eating “foods not belonging to one of the four food groups in ...[Canada's] Food Guide” (p. 7), indicating that the extra calories came from high fat, high sugar foods.

Considering, then, that food choice is the outcome of myriad historical and cultural factors, this research sought to understand local perspectives surrounding diet and dietary practices, and how these perspectives intersected with traditional and modern western trajectories of knowledge. The influence of Euro-Canadian intervention on First Nations communities makes it imperative to study the historical and social contexts of food

choices in the First Nations communities. The notion of food choice has become a more complex phenomenon for First Nations people because of what is commonly described as the “nutrition transition” (Kuhnlein et al., 2007; Popkin et al., 2002). Increased availability of food choices and the accompanying change in diets is cited as a primary cause of the rapid deterioration of health among First Nations populations (Anand et al., 2001; Harris et al., 1997; Kuhnlein and Receveur, 1996). To address this deterioration in health, First Nations peoples are seeking to improve dietary strategies with limited success. Understanding critical factors influencing dietary choice is an important starting point in improving dietary practices and ultimately the escalating prevalence of obesity and obesity related diseases.

## METHODS

This study was built on existing research by Robidoux et al. (forthcoming), conducted in the Kasabonika and Wapakeka First Nations in 2007 and 2008, on traditional foods in northwestern Ontario to identify potential benefits and risks of their consumption as it relates to obesity and type 2 diabetes. This paper focuses on research conducted exclusively in one of the two communities: Kasabonika First Nation. The research was conducted according to research protocols established in the initial planning phases for the larger research program with the Shibogama First Nation Tribal Council, Kasabonika and Wapekeka Chiefs and Band Councils, and the University of Ottawa research team. All research activities underwent full ethics review and were approved by the Research Ethics Boards at the University of Ottawa and Health Canada.

### COMMUNITY PROFILE

Kasabonika is an isolated community located 575 km north of Thunder Bay, Ontario. Community population figures indicate a band registry of 996 members, with 932 people residing in the community. Most recent data indicate that the age median in the community is 18.5 (19.8 female and 17.3 male) (Indian and Northern Affairs Canada [INAC], 2010). Kasabonika is accessible year-round by air and, for approximately three months of the year, by winter road, depending on ice and weather conditions. No formal trucked garbage disposal system exists, however, a dump is maintained by the community members. Water and sewer infrastructure is present in the community with only 80% of homes having piped water and flush toilets. Approximately 80% of the houses have direct water hook up, and the re-

maintaining 20% have treated water delivered by truck. There are no standpipes or wells in the community.

The community has an arena, community hall, and gymnasium. There are some community organized sports including hockey, broomball, and baseball. The local school system offers education for students from kindergarten to grade 12. There are 271 students enrolled in the community school. To date, 43 people (F. Tarrant and Associates, 2005) have obtained a high school diploma from the school. Permanent full-time jobs are available at the band office, the school, the daycare, and the Northern Store. Thus, employment is often seasonal, resulting in unemployment rates ranging from 60–70%. Fresh fruits and vegetables, milk, whole grain products, fuel, and furniture items are available at the Northern Store, the primary grocery and retail store in the community. Fresh meat products are not available in the local store.

## ETHNOGRAPHY

An ethnographic methodology from a feminist perspective (Crotty, 1998; Hesse-Biber et al., 2004) was employed to examine the dietary patterns of women in Kasabonika. Ethnography is a methodology where one employs “all five senses” to illuminate a cultural behaviour (Bernard, 1988; Fine, 1993; Hammersely and Atkinson, 1995). The “bottom up” nature of ethnography enables the researcher to become immersed in local community practices and experience behaviour, and in this case, food choices, as part of larger cultural and social processes. Behaviours are the result of individual experience and cultural influences (Devine, 2005; Elder et al., 1998). The interaction between individuals and culture is noted by “analyzing relationships and looking to the ways in which members of a culture respond to contingencies in their social settings” (Emerson et al. 2001, p. 162).

The research for this phase of the ethnography was conducted over a three-week period, from May 6–26, 2008. During this time various activities were attended, i.e., Mothers’ Day and memorial feasts, informal meals, rummage sales, and goose hunting. More active involvement consisted of organizing and teaching exercise classes, participating in wild food cleaning/preparation, participating in a cake baking contest and routinely grocery shopping at the Northern Store. At all times, extensive field notes were taken, which described the types of foods that were available and consumed, the number of people who attended events, the women’s roles at these events, the women’s attitudes and behaviours, and the importance of these different events for members of the community. This participatory-observational

component of the research was critical in recognizing how food choice is embedded in psychological, social, and cultural factors, particularly in life on a remote reserve in northern Ontario. Moreover, interacting with the women in informal settings provided comfortable opportunities for sharing knowledge and ideas.

### SEMI-STRUCTURED INTERVIEWS

The interview component of this study followed a semi-structured format to obtain a rich experiential account of the role that food and diet play in women’s lives. The flexibility in progression of the interview and the construction of the questions made it a valuable method of inquiry because of the different characteristics of the participants and the relative importance that diets played in their lives (Crotty, 1998; Oakley, 1981). Efforts were made to conduct interviews in a nonthreatening manner and environment; women who participated in this study most often preferred to be interviewed in their homes using a conversational format.

Interviews were conducted with the assistance of a local female research coordinator who was hired at the outset of this study. Following community research protocols, participants were contacted by the local research coordinator to discuss the possibility of participating in interviews based on dietary intake. A total of 26 women were interviewed. The interviews lasted between 20–45 minutes and focused primarily on understanding the diets of the participants. Each interview had three components. The first component asked general questions about family, employment, childhood (i.e., diets as children). The second component involved understanding the relative contribution of store and wild foods to their diets. Questions sought to explore how participants viewed the changes imposed by the introduction of the store. After a baseline understanding of participants’ views on the store was established, questions focused on specific factors that influenced their selection of foods from the store or wild foods from the land. Participants were asked open-ended questions about living within their community and how the roles and responsibilities in their home affected the importance of price, convenience, taste, and nutritional value of foods when making selections. For those participants who indicated that wild foods were an important part of their diet, questions were asked pertaining to roles and responsibilities around wild food acquisition and preparation, and if there were any perceived cultural and nutritional benefits to these foods. The final interview component attempted to understand participants’ views on health. Participants were then asked questions about their

perception of the meaning of health, how they viewed their own health and that of other people in the community. Understanding individual experiences of community-specific challenges and social roles when making dietary decisions is of primary importance, as we were using the life course perspective (Devine, 2005; Elder, 1994; Wethington, 2005).

## THEORETICAL FRAMEWORK

### FEMINIST THEORY

Contemporary First Nations theorists such as Kim Anderson and Bonita Lawrence have devoted much effort into understanding what First Nations women are doing for themselves, their families and their communities as they “recover from the past and work towards a healthier future” (2003, p. 11). The roles of First Nations women are increasingly diverse in contemporary society, creating the challenge of negotiating between past and present roles and values associated with food preparation and culture. Maria Campbell, a Cree/Metis Elder from Saskatchewan, noted that in the past one received praise for how well one could skin and cut up buffalo or moose, or how well one could garden and preserve food (Culjack, 2001). While traditional practices are valued, new responsibilities and pressures are seen as women take more public and leadership positions in the communities. As a result, societal pressures for First Nations women that affect food choice pertain to body image (Fleming et al., 2006; Garner et al., 1980; Garner 1997; Gittelsohn et al., 1996), familial influence (King et al., 2007), and role-related stress (Iwasaki et al., 2004). In many regions, diabetes is “hitting women harder than men,” (Rock, 2003, p. 136) indicating that exploring dietary choices is essential in improving health.

It was, therefore, important in this study to draw from feminist theoretical traditions. First Nations women are part of a marginalized culture, a marginalized gender, and often marginalized by location. Because being First Nations *and* a woman influences dietary choices, critical attention was given to hearing and interpreting the differential experiences of each individual participant. Caution was taken to avoid “doubly colonizing” by imperial as well as patriarchal ideologies. In hearing women’s multiple experiences, knowledge production was held accountable to the power relations embedded in the process (Denzin and Lincoln, 1998; Wong, 2002). Resisting the urge to forge a notion of a common identity of First Nations women as oppressed victims was crucial, as this would only serve to reinforce power differences. Feminist traditions informed this research study by (a) calling

for an understanding of the way in which power operates through producing discourse; (b) being mindful of defining realities for women at risk of being doubly colonized; and (c) acknowledging that unique societal influences inform dietary choice within the social and cultural construction of what it means to be a woman. Being cognizant of the intersections between local women's practices, their roles within the family as mothers, daughters, and transmitters of informal knowledge, and the interplay between gender and the discoursing environment enabled an additional theoretical direction in the way of life course theory. Considering socially prescribed roles of women and the interaction between social factors, historical location, historical timing, and personal goals reveals a convergence of life course theory (Devine, 2005; Elder and Giele, 1998) and gender-based analysis (Shaw, 1994).

### THE LIFE COURSE THEORY

Life course theory was adopted to fully appreciate dietary choices of women. The life course perspective connects the trajectory of personal lives to larger cultural and economic changes (Elder, 1994). Articulation of the life course perspective stemmed from the need to integrate a snapshot "social relations" approach that viewed the impact of social surroundings on the individual and the "temporal" dynamic approach that traced the story of lives over time. The importance that Elder (1974) attributes to historical context in shaping one's life course comes from analyzing longitudinal data from studies undertaken by the University of California's Institute of Human Development. The participants of these developmental studies were children who had grown up during two different periods surrounding the Great Depression; the Oakland cohort (children born in the 1920s) and the Berkeley cohort (children born in the 1930s). Participants who were part of the Oakland cohort were adolescents during the Great Depression whereas the Berkeley cohorts experienced their vulnerable childhood years during the Great Depression. The life patterns of children in these cohorts were strikingly different. The works of Giele (1988) also made an important contribution to the articulation of the life course perspective. By comparing timing and concurrence of retrospective life histories across different birth cohorts, she discovered a clear shift toward multiple roles among women born since 1930. The role-model and life-course changes effect bidirectional change on women's life-patterns. They affect societal values and institutions on the one hand, and informal groups which influence women, on the other. The individual may, in turn, retreat or conform to past standards or,

as in the case of reform leaders, attempt to transform the social structure upward by changing group norms, institutional rules, and societal values (Elder and Giele, 1998, p. 8.). The combined works of Giele (1988) and Elder (1994) led to the development of four key factors that shape an individual's life course. They are: a. historical and geographical location (historical context); b. social ties to others (linked lives); c. agency or personal control (human agency); and d. variations in timing (timing of transitions).

Applying the four principles of the life course perspective provides a way to study development from childhood to adulthood in a society that is constantly changing. Considering individual life courses as functions of historical and geographic location, cultural heritage (historical context), friendships, and personal motivations (agency) that come together through the funnel of "timing" (Elder, p. 8) help explain why people's lives follow life courses. Researchers in health have noted that the major innovation of the life course perspective for health is that it

integrates disparate explanations for individual or group differences in health, including personality factors, current influences on health behavior, life history and the collective life history of different social groups. (Wethington, 2005, p. 116)

Health researchers have applied the life course perspective and trajectories to understand such things as food choices across the transition to motherhood (Olson, 2005) and food management skills (Bisogni et al., 2005).

## FOOD CHOICE TRAJECTORIES

For the purpose of this research project, *traditional foods* referred to any foods or dishes that were acquired from the land and required minimal processing and preparation. For example, caribou, goose, and moose are all considered traditional foods. *Store bought foods* referred to any foods (e.g. lettuce, milk, etc.), processed foods (bread, Kraft Dinner™), or prepared meals that were purchased from the store. Lastly, women are assigned to *trajectories*, where inclusion into a specific dietary trajectory means women made similar choices, and had similar thoughts, experiences, and perceptions in food choices. The following delineates what the women described as primary factors influencing their food choices and how these factors translated into specific trajectories.

### *Trajectory 1*

The women in this trajectory were between 18–36 years of age, with the exception of one woman who was in her 50s. The average age of the women

was 28 years. With the exception of one participant, these women had similar life situations and characteristics. They all had two or more children, were solely responsible for household chores, and had no formal education beyond high school.

The women in this trajectory described their food choices as being influenced entirely by the food’s palatability and convenience of preparation. They did not identify nutritional value as an influencing factor, and when probed further about nutrition, they explained that this did not enter their minds when selecting foods. Statements such as “I just buy what I like” (Sue)<sup>2</sup> and “I just buy what I am craving” (Barbara) were routinely expressed. The following excerpt between the interviewer and a participant is indicative of how food choices are made by women in this group:

**Interviewer:** So what kinds of foods does she buy at the store, what is she considering?

**Translator:** Kind of like my style — French fries, hamburgers.

**Interviewer:** Ok, so why does she choose those foods? Is it because they taste good, or is it because they are easy — like why does she go for those foods over maybe chicken, or broccoli?

**Translator:** Mostly the taste, she is living with her grandson, a boy — and this is for the boy.

**Interviewer:** Is she worried that those foods maybe aren’t necessarily the best in terms of health, or maybe aren’t that good for her? Does she think about that at all?

**Translator:** No [chuckles].

Statements such as “I don’t plan for meals” and “I just cook what I have” (Sarah) highlight the limited attention given to meal management and planning by women in this group.

Surprisingly, women in this trajectory did not feel the cost of foods influenced their decision to purchase foods of higher “nutritional value.” Similarly, if participants wanted junk foods they would simply buy them. Take, for example, this excerpt:

**Interviewer:** Do you find it difficult to buy fruits and vegetables because they are so expensive?

**Ann:** No not really, we just don’t really like them.

**Interviewer:** So, in general, does it matter how much foods cost?

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2. All names of participants were replaced with pseudonyms for confidentiality purposes.

**Ann:** Not really, I just buy whatever. Usually what the kids like fries, chicken nuggets.

When asked about traditional foods, the women in this group were generally ambivalent and indicated that these foods were not a priority for them to eat. Emergent themes predicting food choices were *taste* and *convenience*.

### *Trajectory II*

The average age for women in this trajectory was 38, with ages ranging from 33–42. Four of the five participants were employed full time, occupying prominent positions in the community. These women were generally active in the community and participated in all of the community events. Unlike the participants in trajectory one, these women were more verbal and forthcoming during interviews.

For women in this dietary trajectory, good choices were based primarily on what was available and convenient; however, participants were aware of healthy food messages and expressed interest in improving their diets. The interest in making healthier food choices is what differentiated these participants from the previous group. Women in this group needed clarity in what eating “healthfully” meant for them and how to improve their diets so that changes could be meaningful and sustainable. For example, the information the women received about nutrition was derived primarily from the nurses and staff at the community nursing station. The women perceived the strategies, i.e., label reading, controlling portions, calorie counting to be based on ideals of diets and nutrition. They tried to incorporate this knowledge when shopping at the store and mentioned how they would read labels and try to count calories. However, they also emphasized the challenges they faced when trying to implement these dietary guidelines and incorporate more nutritious foods into their diets. Consider the following exchange between the interviewer and a participant:

**Erin:** We have a diabetes worker there so she talks about nutrition.

**Interviewer:** What kind of things does she talk about?

**Erin:** She talks about the fish and says you have to boil it — but then when I saw the other diabetes nurse, in Thunder Bay, she said your sugars can get high even just from boiled fish. You know, from all of those oils, even when you boil the fish it can be oily at times.

**Interviewer:** Yeah, those are good oils, those are good fatty acids.

**Erin:** Um hum — it is confusing sometimes.

Often participants wanted to buy healthy foods like fruits and vegetables, but did not because of high costs and their lack of confidence in their nutritional knowledge, as heard here: “Figuring out what to buy is sometimes confusing; they used to put the sign that said ‘healthy choices,’ but not anymore” (Shelley). The outcome for some participants when deciding what to eat was the abandonment of guidelines altogether, as one participant noted, “I found it kind of interesting, but then I quit” (Kelly).

Women in trajectory two explained that they preferred the taste of traditional food over store bought foods and that these foods had cultural importance. Interestingly, these women did not associate wild food with the “healthy” food guidelines, which they had for the most part been unsuccessful in following. Instead, it was the store bought foods that were associated with eating “healthfully.” For example:

**Interviewer:** What kinds of foods do you like to buy at the store?

**Bethany:** Mostly like the healthy foods, like vegetables and fresh fruit. I would definitely buy more of that if I had more money.

**Interviewer:** Are those the foods you consider best for you?

**Bethany:** Yes definitely, like the fruits and vegetables and not that canned stuff.

**Interviewer:** During your childhood, before the store opened, what did you buy?

**Bethany:** We mostly had fish here, because there was no store, so we ate whatever my dad brought in. And when I think about it, the old people that can still get out walking; they ate lot of fish and the wild foods too.

Women did select traditional food options whenever available, but had limited access to wild meat which sometimes made traditional food intake sporadic and infrequent:

**Bethany:** My dad isn’t well, so he doesn’t go out hunting anymore, but yeah definitely, I would love to have more — I am craving fish now actually. Nowadays I just end up eating fast food, you know, the microwave food.

The emerging theme in this dietary trajectory was that women made food choices based on *availability*, regardless of motivations to eat nutritiously or to choose traditional foods. These perceived restrictions often restricted women’s dietary intake to the cheaper and less nutrient-dense store bought foods.

*Trajectory III*

The third group of women identified “nutritional value” as the primary factor that influenced food choice. Ages of these women varied from 30–72 years, with an average age of 52. The age of participants was a key determinant in whether they chose to eat wild foods or store bought foods as a way to “eat healthfully.” The younger participants in this group routinely indicated that they shopped for “healthy foods” at the store or made it a priority to consume traditional foods. These women either had the financial resources to eat nutritiously from the store, or had the cultural knowledge and resources to eat traditionally. Participants discussed the creative strategies they used to ensure they were eating well, e.g., making “wild game stir fries” or the portioning of wild foods. Many of the participants made reference to the Canadian Food Guide, but were also more aware of the health benefits of traditional foods. Moreover, the Elders with whom they were connected ate traditional foods and “were still doing many things and seemed to be a lot healthier” (Marla) compared to those who relied more on the store. The women were confident and openly shared their views about health and nutrition during the interviews. Women in this group were actively involved in the community, holding prominent volunteer and paid positions, e.g., community event organizer and high school teacher. They described their knowledge about health as coming from their past, or from their community/work experience, as noted by one participant:

**Eleanor:** One of my grade eight students has type 2 diabetes, and it just really makes me sad. When I think back to when I was a kid, we just didn’t have these problems, but it also makes me realize how important it is for me to eat healthy, and for me to try to teach my students to do the same.

Although there were differences between the younger women, motivations to eat nutritiously and include traditional foods as part of their regular diet, were uniformly shared. The women in this group were conscious about feeling “good” and believed that obtaining traditional foods were essential to achieving this good feeling:

**Interviewer:** You said you feel healthy now, why is that? Is it from eating the traditional foods?

**Sara:** It’s just the way I know eating those foods is what I have always done.

The Elders shopped at the store for sugar, flour, and lard, but often associated the “store” with the inevitable onset of “foreign” disease such as type

2 diabetes. The Elders often saw themselves as teachers of tradition and felt responsible to pass on their knowledge regarding wild food preparation and its cultural significance; "I find my daughters want to learn, they do, but it is hard too" (Gertie). The younger women in this group were those who had accepted knowledge of traditional foods and attempted to make food choices accordingly. The emergent theme among the women who had this dietary trajectory was the importance they attributed to choosing *nutritious store bought or traditional foods*.

## LIFE COURSE CONNECTIONS AND DIETARY CHOICE

The three dietary groups identified above were categorized according to the importance women placed on taste, convenience, cost, nutritional value, and traditional foods when making food choices. These results are similar to those found in previous studies which investigated factors influencing food choice among Aboriginals (Barton et al., 2004; Hoy, Norman et al., 2008; Iwasaki et al., 2004; Garriguet, 2004; Wein et al., 1991) and non-Aboriginal populations (Noble et al., 2003; Payette and Shatenstein, 2005; Schibchenne et al., 2007; Steptoe and Pollard, 1995; Stewart and Tinsley, 1995). While these factors are not mutually exclusive, it is important to determine why certain factors play a greater role than others when making food choices. For example, the women making choices solely based on taste had different family experiences compared to other women who had learned about the cultural and health benefits of wild food from parents and grandparents. For these women, it was clear that mothers and grandmothers transmitted knowledge during family events and gatherings. This created dietary trajectories with healthier choices because women had more appreciation for foods they were choosing to include in their diets. The following sections explain how the life course concepts of historical context, timing of transitions, linked lives and human agency together influence dietary trajectories (Devine, 2005; Elder, 1994; Elder and Giele, 1998; Wethington, 2005).

### TRAJECTORY I: THE UNINFORMED DIETARY TRAJECTORY; STRAINED RELATIONS AND THE ACCUMULATION OF DISADVANTAGE

Women within the uninformed dietary trajectory (trajectory one) considered taste and convenience as the most important factors when making

dietary selections. Trajectories were characterized by unhealthy food choices and actions that showed little to no interest in personal health. Not surprisingly, these choices were persistent among family units and cumulative across the lifespan, as trajectories that develop in specific historical and social contexts are difficult to change and reinforced by situational factors (Wethington, 2005). This common food choice trajectory also illustrates how Western influence has shaped food selection, thoughts and feelings regarding foods, and the ways in which these women made choices.

*Timing of transitions place low priority on food choices*

Women in group one tended to have lower economic status, with limited education and meagre living conditions. Many of these women had two or more children in the household and were dependent on a spouse with seasonal employment. For example, two young mothers had recently started new jobs at a daycare: one indicated that she had four young children and the other woman had five. They explained that since taking on these new jobs, typical meals consisted of processed foods like Kraft Dinner™. Coming from a relatively low socioeconomic bracket within the community, coupled with the economic and psychological stresses of early motherhood, compromised these women's food choices and overall food consumption "I have five children to feed, so I just buy what the kids like to eat" (Marla). These types of situations left little time for education surrounding health or for preparing more nutritious wild foods, resulting in food choices that mirrored educational resources, social location, and current life situation.

The connection between low socioeconomic status and poor quality of health is well documented in the literature and is mediated by levels of education and knowledge (Janssen et al., 2006; Wardle et al., 2000). Application of the life course theory would suggest that the connection between low socioeconomic status and poor quality of health is influenced by timing of transitions. Elder (1994) noted that the timing of transitions, whether early or late, has long term consequences on the development of trajectories. Transitions in social roles, such as new employment or a birth of a child influence the development of trajectories (Wethington, 2005). The women in this particular group experienced many of these major transitions early in their lives, placing them in similar contexts in which they made choices. When experiencing these changes, dietary quality and making informed food choices become low priority.

Another example of the effect of *timing* was apparent during an interview with a middle-aged woman. Even though this woman was older than

most of the other women in the group, her life stresses, compounded by her limited education and low socioeconomic status, led to the development of a poor dietary trajectory. This trajectory accumulated over time and was reinforced by her current educational and financial limitations. The woman, in her fifties, was the caregiver to her husband, whom she had married at a young age, and to her developmentally delayed daughter and grandson. In the interview she indicated that she just bought food that her grandson and daughter liked, even if it was not healthy. She stated that she did not have regular access to traditional wild foods, nor did she receive adequate education surrounding store bought foods, as these foods were relatively foreign to her. For a variety of reasons she was not exposed to the protective factors that would have helped in the development of a “healthier” dietary trajectory (i.e., family in the community, formal or informal training). The perspectives that some women were able to achieve through experiences were relatively nonexistent for this woman. Her trajectory which “accumulated over time and with life experience” (Devine, 2005) was passed on to her daughter and grandson illustrating the intergenerational transfer of knowledge.

#### *Linked or unlinked lives*

The life course concept of *linked lives* also informs the decision making processes of these women. Behaviours are influenced by intergenerational and intragenerational forces. Individual behaviours are not only affected by the historical context in which they were shaped, but by individual perceptions of connections and relationships around him or her. The intergenerational forces experienced by First Nations people in Canada have been noted by researchers, such as Adelson (2005, p. 454) who states that behaviours are “entrenched in the history of relations between Aboriginal peoples and the nation state.” With the introduction of the permanent store in the 1950s, reliance on wild foods diminished and there came a greater reliance on the store. The extent to which people switched from land based diets to store diets has not been consistent across the community. Some women are still able to draw from wild foods in combination with store foods, and make relatively healthy choices. Others, such as the women enacting this uninformed dietary trajectory have been more negatively influenced. The convenience and taste of the foods offered by the store has become the primary motivation for dietary selection, resulting in poor health decisions.

Beyond the foods themselves, these women have become gradually detached from parents, relatives, and other community members, relation-

ships that are integral for obtaining wild food. Their lives are not linked to local cultural practices or others in the community. They do not participate in traditional food harvesting, preparation, and consumption, which remain important parts of the fabric of community life. The women discussed this sense of disconnectedness with their own familial upbringing. They explained that their parents did not have the confidence, knowledge, and/or resources to adapt to the wide variety of different foods and new western-based ideas regarding “meal times” that were introduced with the store (Kuhnlein et al., 2004; Kuhnlein et al., 2007; Popkin, 2002). This lack of confidence that resulted from people being told that their old ways were inherently “wrong,” unfortunately shaped feelings about food in similar ways. Behaviours and choices with regards to food appeared ambivalent. As evidenced in the interviews, sometimes these trajectories are passed inter-generationally, which supports the notion that “trajectories have inertia” and are difficult to change (Wethington, 2005, p. 116).

Evidence of the steadfast uninformed trajectory played out in two interviews with two women with disparate backgrounds. The first woman shared many of the same characteristics with the rest of the women within this trajectory: limited education, low socioeconomic status, and mother of multiple children. The other woman was young, had left the community at an earlier age to obtain a university degree, had a full time job and no children. Both women had expressed little to no interest in improving their diet and appeared content with the poor quality food choices they were making. During the interview with the first woman, she explained that she did not feel linked or connected to tradition and the land, which ultimately influenced what she ate. Here is an excerpt from the interview:

**Interviewer:** What kinds of food did you consider when shopping at the store?

**Ann:** I just buy the fast food, hamburgers, fries, things like that — that is what the kids like, I have five at home.

**Interviewer:** Does your husband hunt, or like to hunt?

**Ann:** Not really.

**Interviewer:** But if he did, would you eat those foods?

**Ann:** Well, I prefer the store, and so do the kids.

The second was quite open about “eating lots of junk food, because I like the taste” and eating “whatever was fast.” She talked about having “no connections or family on the reserve” saying “it is just my mom and I here,

and both of us work full time” (Erin). She had grown up in the community but indicated that neither she nor her mom particularly liked traditional food. Despite financial resources and formal education, this woman did not think it was important to maintain good health. This is where the importance of relationships, connections and “linked lives” becomes imperative to understanding the development of trajectories. Although different in some ways, these women both lacked the rich cultural connections and relationships necessary to develop the self efficacy needed to make healthy choices (Bandura, 1977; Bandura, 1989; Rimal, 2000; Sharma et al., 2007; Wiggins, Potter and Wildsmith, 2001).

### *“Agency” and adaptation*

Wethington (2005) defined adaptive strategies as the role of individual choice in producing life change. The interaction between individual characteristics and social norms affects one’s adaptation strategies (Elder et al., 2000). The life experiences of these women served to predict their similar adaptation strategies. As noted above, self-efficacy was generally low among these women and so they did not perceive themselves as having the ability to change their situation. People with these feelings favour adaptive strategies such as avoidance, ambivalence, and conforming to somewhat “unhealthy social norms.” There were occasions during the research where adaptive strategies were witnessed and poor choices were the result. On one occasion at a Mother’s Day feast, there were upwards of 200 community members present. People lined up to receive their serving of goose, which was depleted by the time it was the children’s turn to eat. Children were served bannock, Klick™ and some sort of sugary beverage. On another occasion, the recreation committee held a cake decorating contest. Despite the fact that cakes were not served until 11:00 pm, many community members, some of whom were young children and type 2 diabetics, consumed large portions of cake. Many of the children noted that “this was their supper” when asked by researchers. The reinforcing nature of contextually dependent trajectories was also apparent when people were seen visiting the Northern Store. It was typically busiest at lunch hour, where children bought processed foods, chips, and pop for their lunches, and at supper hour, where microwaveable meals and processed meats were popular food choices.

These examples illustrate the pervasiveness and general acceptance of consuming poor quality food items. People avoided learning about “western based dietary guidelines” that were not seen as attainable. Overall,

through interviews and experiences in the community, it was evident that what on the surface appeared to be ambivalent and apathetic attitudes towards foods were actually a product of strained relationships and situational factors. Life experiences and subsequent poverty forced women into making unhealthy food choices.

## TRAJECTORY II: THE EVOLVING TRAJECTORY; CHANGING RELATIONS AND TRANSITIONS

The evolving dietary trajectories of women in this group were characterized by confusion regarding “what” to eat, which is largely due to the timing of life transitions. The dietary trajectories of women in this group must still be understood as developing within a similar historical context to the previous group, in that western culinary patterns have and continue to play a large part in shaping attitudes towards various foods. Dietary choices however, were not simply based on taste and convenience as compared to women in the previous trajectory, and as cited in other research with First Nations people (Bernard et al., 1995; Hoy et al., 2008; Schcibchenne et al., 2007). The life course concepts of “timing of transitions” and “human agency” help us to comprehend those goals, relationships to others, and timing of events. (e.g., diabetes diagnoses can predict behaviour change).

### *Timing of transitions: Time for change*

The timing and nature of transitions shaped these women’s evolving trajectories. Over half the women with this trajectory had recently been diagnosed with diabetes. Evidently, a great deal of emotional stress and changes in daily life, accompany a transition of this nature (Bartlett et al., 2007; Barton et al., 2004; Iwasaki et al., 2004; Koch et al., 1999). In addition to dealing with the emotional and physical consequences of this disease, women were supposed to incorporate very new nutritional guidelines and information into their diets. Consider the comment made by one participant who was newly diagnosed:

**Tina:** I try to boil the eggs, and eat the oatmeal, fresh milk, and I try to buy those healthy foods, like fruit and vegetables.

**Interviewer:** How do you find this? Is it difficult at all?

**Tina:** Well I find figuring out what to buy is confusing. They used to put the signs that say healthy choices, but not anymore.

Another diabetic participant seemed unsure of what foods she should be eating:

Lately I have been hearing a lot about omega 3's so I figure that it comes from the fish, and I always try to get milk, so that my kids get calcium. That is one thing I concentrate on, but uh, the price of things is really expensive. I try to get more, you know, the healthier foods, but I still do buy bread. The nurses' station, they were teaching on that, like what foods to eat and how to read labels. It was ok.

It was not only this transition, but the timing at which women were diagnosed with Type 2 diabetes that made the experience stressful and decreased their confidence. One woman noted,

By the time I come home from work, I just eat whatever my son cooks, and sometimes he doesn't know. I try to tell him what to buy, but I am not even sure what to buy sometimes. (Lori)

Rimal (2000) pointed out that when trying to improve health behaviour, individuals must feel confident and have a “realistic appraisal of their abilities” (p. 224). Otherwise, efforts that are solely focused on knowledge enhancement will only induce stress among individuals who are not able to convert their new knowledge into meaningful behaviour because of low perceived ability. Koch et al. (1999) found that for several women, a lack of education when diagnosed with diabetes had made them feel diffident in managing their diabetes and concluded that educational support can be conducive to a person's sense of wellbeing. Similar sentiments were felt by the participants in this study, who, as evidenced, felt diffident regarding foods they “should” be eating (“I don't follow all of that, it's too confusing”—Michelle). When people felt as though existing knowledge had not been taken into account, confidence diminished, which further explained the food choices that resulted.

#### *Historical and cultural context: A contextual disconnection*

Similar to other Aboriginal people experiencing diabetes (Boston et al., 1997) the general sense of confusion for women with this evolving trajectory was heightened by disconnected knowledge; between traditional foods that they knew to be “good” for them, and the “healthy” foods they now were trying to incorporate into their diets. The role of traditional foods, that had always been thought of as inherently “good” (e.g., “eating traditional food is just what I know” –Elizabeth) was not as clear to these women.

Compared to the women with the uninformed dietary trajectory, these women had experienced *some* informal knowledge sharing due to family involvement and connections to the community (e.g., family living on the reserve, preparing traditional dishes alongside grandparents, and attending community events).

Evidence that participants did not align their own traditional foods with health became increasingly evident during interviews and fieldwork. One participant noted: “My father had used wild plants as a way to heal many infections, so yeah I guess they must be good for us” (Tanya). Another woman with an evolving trajectory openly expressed a desire to improve her health: “I know I have to eat more fruits and veggies” (Christina), but gave no credit to traditional foods as a way to do this. She gave no credit to wild foods as a way to improve health even though she felt “tired and sluggish” after having limited access since her father had passed away.

At one particular feast there was an abundance of dishes made from wild and store bought foods. Two of the women were urged to try the “moose stew” that they had made. The pride they displayed was evident, however, they later said that they did not eat it very much and urged us to exercise similar caution, due to the perceived high fat content of the dish. These comments are significant in that both of these women were type 2 diabetic, and this high protein, low sugar dish would have been much more beneficial than some of the store bought foods they were consumed at the feast (Bersamin et al., 2007; Berti et al., 1998; Kuhnlein et al., 2004; Kuhnlein et al., 2007; Wortman, 2008). When incorporating traditional foods into diets requires a lot of extra effort, and life stressors are abundant (e.g., managing diabetes, household chores) eating foods that are available becomes appealing. In addition, women’s informal knowledge of traditional foods (e.g., “eating these foods is something that has always been done”) was not infused within a knowledge system surrounding diabetes care and western nutritional guidelines. The resulting *evolving dietary trajectories* of women in this group were characterized by a sense of confusion and hopelessness, despite their efforts to eat well, as life situations were not favorable and their knowledge was disconnected.

*Agency: Change is in the air*

Although the women’s food choices were many times determined by what was *available*, they were beginning to take more active roles in making healthy food choices and engaging in healthy behaviours. The use of com-

munity resources, although somewhat “haphazard,” exemplifies the life course principle of agency (Elder 1994) in that some women constructed their own life course through choices and actions they took within available opportunities. For example, health professionals in the community organized a walking group called “the biggest loser” where members would participate in community walks two evenings a week and attend nutrition information workshops. Although these clubs and groups are grounded in western ideals of “health” and nutrition, some women attended the workshop sessions and were eager to learn how to manage diabetes. This evolution of women’s dietary trajectories was illustrated on many occasions. Motivation to change health behaviour, and make food choices not solely based on availability was dependent on situational factors and agency. Educational programs with an emphasis on traditional foods, and utilizing informal methods of instruction would be effective in helping inspire women and set achievable goals, as learning informally was just “the way we learned” (Christina).

### TRAJECTORY III: THE HEALTH TRAJECTORY; CONNECTIONS AND “HEALTHY” RELATIONSHIPS.

The food choice trajectories of the third group of women differed significantly from those of the other two groups. They had *healthy trajectories*, (positive attitudes and beliefs towards foods). However, their age predicted “how” these women had come to conceptualize foods and diets. For Elders, healthy trajectories were a result of a strong connection to traditional food and ability to pass this knowledge to younger women. For younger women, it was informally receiving this knowledge, and using their resources, education, etc. to integrate their knowledge of traditional foods (and culture) in a way that would be practical and sustainable for them. Choices for all women with this trajectory were also somewhat dependent on a food’s sensory appeal, convenience, and cost which is unavoidable when people live in similar social locations (Olson, 2005; Wiggins et al., 2001). The life course concepts, specifically, the intersection between cultural context, linked lives and agency explain the women’s confident, stable attitudes towards foods and *healthy trajectories* that developed out of feeling linked and connected to others in the community (Benoit et al., 2003; Elder, 1994; Rimal, 2000).

#### *Historical context and agency: Elders’ ability to share*

For the Elder women in this group, the healthy trajectories were a result of the ability to maintain family ties and a connection to their childhood and

culture. Feeling “good” was about sharing knowledge of traditional foods and sharing culture with family and community members by attending feasts, plucking geese with their grand-daughters, or teaching nieces and nephews how to make “moose pizza.” All of the Elder women in the community talked about their “responsibility” to pass down their knowledge of traditional foods and culture to the younger people in the community. These women said things such as “learning how to prepare these foods” and “feeding kids traditional foods at a young age” were essential in maintaining the tradition and positive morale of the community. Consider the following excerpt from a conversation with one 72 year old woman:

**Donna:** there are ways — we have to teach the children, about the life of the past. I volunteer at the school, and serve at the breakfast program for the little children. Sometimes I get to show them how to prepare some of the traditional foods. Sometimes it is oatmeal and things like that. I find they are eager to learn when they are with us. I am just not sure what is taught to them when they go home.

Fulfillment of their roles as teachers of tradition was evidenced in the pride Elders displayed when making choices. The preference for traditional foods was uniformly shared; “I first tasted canned foods when I was 8 years old and didn’t like them” and “I eat the wild foods that my son gets for me. I think it is the store that caused diabetes” (Sophie). Eating these foods was a way to demonstrate commitment to culture as these were the foods that had kept family strong for generations; western concepts of “nutrition” and “health” were foreign:

**Interviewer:** Is there a word for health in Ojii Cree — when we say health, do the Elders understand what we mean?

**Translator:** It just sounds weird, when I translate that “eat healthy” I just say like “eat the foods here” (771) like that.

**Interviewer:** Right, and in the past, there weren’t those choices of foods, because you ate what was there, right?

**Translator:** Exactly.

*Agency: Young women receive and integrate*

When Elder (1998) reflected on his studies regarding the development and life courses of children of the Great Depression he said:

The central theme in their lives is not the harsh legacy of a deprived family through enduring limitations. It is not the long arm of a Depression in child-

hood. Rather, it is the story of how so many women and men successfully overcame disadvantage in their lives. Some rose above the limitations of their childhood through military service, others through education and a good job, and still others through the nurturing world of family. (p. 9)

These accomplishments amidst adversity resemble those achieved by some of the women in this study; the granddaughters and daughters who had received teachings of traditions and became agents in constructing their own life course. The strong connections to family and tradition helped foster a sense of individualism and agency, allowing for confidence in managing food and healthy choices for themselves and their families. Life course research points to the family as an important mediating institution between economic and social change and the shaping of individual lives (Demos, 1970; Elder and Giele, 1998). Similarly, the role of the family for women with healthy dietary trajectories was a balance between teaching about cultural heritage and tradition, and fostering the confidence needed to integrate new information (such as western nutritional guidelines), that could be used to make healthy choices. Either way, learning about the past, and/or learning new information increases confidence, and agency needed to make changes long lasting. (Bandura, 1977; Elder et al., 1999; Koch et al., 1999; Olsen et al., 2007; Rimal, 2000).

The role of the family in *maintaining close relationships to one another and culture* was evident during interviews and community events, as seen in the statement: “we just prepared things together, it was fun, I enjoy preparing those foods now, when I have the time” (Marla).

**Joan:** I always go onto the land when I feel stressed, even if I am busy with work, it always makes me feel better. That is something we always did when I was a child, my father would take us out on the land, for months at a time.

Although women found staying connected difficult at times, the desire to teach family tradition and a sense of pride prevailed. Here is an example of that:

**Beth:** When I was growing up, there was no TV, no music, no mp3, no computer. All of that is here now with my kids. They are still interested, if I could only access more traditional food now....

This same woman taught researchers in our group the technique involved in plucking a goose. She and her sisters sat around the fire and discussed with us that these were their traditions, and one of the younger children added “I love goose stew.”

The role of the family in *fostering resourcefulness and a sense of community pride and resilience* was also easily apparent. Listen to the following:

I hate seeing the children eating chips and pop for their breaks at recess- I eat healthy to better myself and feel good. Ella

Women were motivated to eat healthfully and be progressive in their thinking;

**Marla:** I don't know if getting rid of the junk food would really solve anything. The price of things makes it hard for people to connect to healthy food. It is more about assimilating the knowledge of the past and traditional culture, with the knowledge from the West.

Another woman noted:

**Beth:** I really feel that there is a need for support for women, especially in terms of health, and you know, for young women, teaching the women about tradition, and other issues.

Participants in this group were aware of their realities and chose to eat healthfully, because of the confidence they gained from having family and engaging in activities together (attending community rummage sales, feasts, learning crafts from Elders). This togetherness promoted resilience and adaptive skills (Rimal, 2000; Wethington, 2005) used to make good choices and develop healthy trajectories. The strong support system offered by family gave the women the confidence they needed to take control of their lives through education, employment, or returning to their traditional ways. Essentially, family promoted achievement in other areas of their lives. Unique life courses were constructed by women making choices and acting within the opportunities and constraints of history and social circumstances. The participatory community centred approach to research with First Nations people is imperative if their health status is to change (Dickson, 2000; Loppie, 2007).

## CONCLUSION

Two main conclusions can be drawn from this research. One is that much like many behaviours and choices that people make throughout their lives, dietary choices change as women negotiate their way through the events of their lives. Throughout the various stages of life, women gain new experiences that can affect decision making in positive and negative ways. In this

particular First Nations community, choices regarding diet followed similar patterns. Second, trajectories — one’s thoughts, beliefs and the conceptualization of foods and health — were best understood when projected onto an age-based continuum, where awareness and knowledge were the underlying factors. Young women who made nutritious choices more often did so based on their awareness and education, whereas older women were more inclined to feel healthy and positive about foods based on their knowledge and connections to their past. The key to women’s positive trajectories was awareness, a sense of agency, and pride that was fostered through connections.

Human behaviours are the result of individual thoughts and feelings and the social context in which individuals exist (Bandura, 1977; Bandura, 1989; Rimal, 2000). Whether one takes the study of human behaviour and applies it to understanding romantic relationships, family relationships, behaviours in the workforce or those that have to do with health, considering the individual (psychological) and contextual (sociological) forces at play is of utmost importance. Life course theory and four key concepts of historical context, linked lives, timing, and agency described the various psychosocial influences that affected dietary choices and perceptions. The application of the life course theory demonstrates the merging of historical context and individual agency, or, the dynamic interplay of traditional and western knowledge that creates a new social milieu, which may facilitate healthier food choices. Indeed, there were three unique dietary trajectories that conceptualized women’s thoughts about their diets, which were identified as: “uninformed,” “evolving,” or “healthy.” Personal history seemed key for the uninformed dietary trajectory, where women’s lack of knowledge sharing experiences proved detrimental for appreciating foods, health, and nutrition.

The intra and intergenerational linkages, and the timing of major transitions characterized the “evolving trajectory.” Women in these evolving trajectories made choices based on knowledge which was in itself transient and subject to change. These women were middle-aged and experiencing obesity-related health problems or other major life transitions. The disconnection between past and present knowledge led to feelings of confusion, resulting in choices of foods based on availability and costs, and not based on their intrinsic nutritional value.

The role of family in fostering agency and connections to the past was evidenced among both the “evolving” and “healthy” trajectories. For the

“healthy” trajectory, however, dietary choices were informed by nutrition and tradition. For the older women there was a sense of dislike towards the store; they attributed the high incidence of diabetes in the community to its presence. They felt good eating wild food but had little understanding regarding its nutritional value. The younger women in this group had life experiences that had allowed them to develop confidence, putting them in a position to value their health and make informed food choices. They were well connected to family and had positive associations with their past.

A final point is that there was real evidence that there were people in the community making healthy lifestyle and dietary choices. The women are agents of change, and act towards achieving a healthy goal, and resist prevailing trends of eating lower quality, convenient foods. Key to understanding that women were making “healthy” choices was that women had constructed a clearer understanding that “good health” was personally meaningful and relevant. For some, mainly the younger women, it was eating from the store, for many of the Elders, it meant eating traditional foods. Regardless of the source, the women’s definition of health was self-derived and internalized. This understanding was derived from their own experiences: informally, being taught by their grandmothers, learning from their fathers; or formally, postsecondary training, learning from the health practitioners. By learning from the women themselves, this research provides insight into factors influencing food choice and First Nations health. This is an important first step in redressing the rising health problem in First Nations communities, most notably as it relates to obesity and obesity related diseases.

## REFERENCES

- Adelson, N. (2005). The embodiment of inequity: Health disparities in Aboriginal People. *Canadian Journal of Public Health*, 96, 545–561.
- Anand S.S., Y.S., Jacobs R., Davis, A.D., Yi, Q., Gerstein, H., Montague, P.A., and Lonn E. (2001). Risk factors, atherosclerosis, and cardiovascular disease among Aboriginal people in Canada: The Study of Health Assessment and Risk Evaluation in Aboriginal Peoples (SHARE-AP). *Lancet*, 358, 1147–1153.
- Anderson, K. and Lawrence, B. (2003). *Strong Women Stories: Native Vision and Community Survival*. Toronto: Sumach Press.
- Assembly of First Nations. (2007). *First Nations Longitudinal Health Survey (RHS) 2002/03: Results for Adults, Youth and Children Living in First Nations Communities*. Revised Second Edition. Ottawa: Assembly of First Nations.

- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavior change. *Psychological Review*, 84, 191–215.
- (1989). Human agency in social cognitive theory. *American Psychologist*, 44, 1175–1184.
- Bartlett, J.G., Iwasaki, Y., Gottlieb, B., Hall, D., and Mannell, R. (2007) Framework for Aboriginal-guided decolonizing research involving Metis and First Nations persons with diabetes. *Social Science and Medicine*, 65, 2371–2382.
- Barton, S.S., Anderson, N., and Thommasen, H.V. (2004). The diabetes experiences of Aboriginal People living in a rural Canadian community. *Australian Journal of Rural Health*, 13, 242–246.
- Benoit, C., Carroll, D., and Chauldry, M. (2003). In search of a healing place: Aboriginal women in Vancouver's downtown eastside. *Social Science and Medicine*, 56, 821–833.
- Bernard, R.H. (1988). Taking and managing field notes. In: *Research Methods in Cultural Anthropology*. London: Sage Publications. pp. 180–200.
- Bernard, L., Lavallee, C., Gray-Donald, K., and Delisle, H. (1995). Overweight in Cree schoolchildren and adolescents associated with diet, low physical activity, and high television viewing. *Journal of the American Dietetic Association*, 95, 800–802.
- Bersamin, A., Zidenberg, C., Stern, J., and Luick, B. (2007). Nutrient intakes are associated with adherence to a traditional diet among Yup'ik Eskimos living in remote Alaska Native communities: The CANHR Study. *International Journal of Circumpolar Health*, 66, 62–70.
- Berti, P.R., Receveur, O., Chan, H.M., and Kuhnlein, H.V. (1998). Dietary exposure to chemical contaminants from traditional food among adult Dene/Metis in the Western Northwest Territories, Canada. *Environmental Research*, 76, 131–142.
- Bisogni, C.A., Jastran, M., Shen, L., and Devine, C.M. (2005). A biological study of food choice capacity: Standards, circumstances, and food management skills. *Journal of Nutrition Education and Behavior*, 37, 284–291.
- Boston, P., Jordan, S., MacNamara, E., Kozolanka, F., Bobbish-Rondeau, E., Iserhoff, H., Mianscum, S., Mianscum-Trapper, R., Mistacheesick, I., Petawabano, B., Sheshamush-Masty, M., Wapachee, R., and Weapenicappo, J. (1979). Using participatory research to understand the meanings aboriginal Canadians attribute to the rising incidence of diabetes. *Chronic Diseases in Canada*, 18(1), 18–52.

- 54 ©Pimatisiwin: A Journal of Aboriginal and Indigenous Community Health 8(3) 2010
- Crotty, M. (1998). *The Foundations of Social Research*. London: Sage Publications.
- Culjack, T. (2001) Searching for a place in between: The autobiographies of three Canadian Metis women. *American Review of Canadian Studies*, 31, 137–157.
- Denzin, N. and Lincoln, Y.S. (1998). *The Landscape of Qualitative Research: Theories and Issues*. Thousand Oaks, CA: Sage.
- Devine, C.M. (2005). A life course perspective: Understanding food choices in time, social location, and history. *Journal of Nutrition Education and Behavior*, 37, 121–128.
- Demos, J. (1970). *A Little Commonwealth: Family Life in Plymouth Colony*. New York: Oxford University Press.
- Dickson, G. (2000). Aboriginal grandmother's experience with health promotion and participatory action research. *Qualitative Health Research*, 10(2), 188–213.
- Elder, G.H. (1974). *Children of the Great Depression: Social Change in Life Experience*. Chicago: University of Chicago Press.
- Elder, G.H. Jr. and Giele, J.Z. (1998). Life course research: Development of a field. In: G.H. Elder and J.Z. Giele, eds., *Methods of Life Course Research: Qualitative and Quantitative Approaches*. Thousand Oaks, CA: Sage Publications, pp. 5–27.
- Elder, G.H. Jr. (1994). Time, human agency, and social change: Perspectives on the life course. *Social Psychology Quarterly*, 57, 4–15.
- (1998). The life course as a developmental theory. *Child Development*, 69, 1–12.
- Elder, J.P., Ayala, Guadalupe X., and Harris, S. (2000). Theories and intervention: Approaches to health-behavior change in primary care. *American Journal of Preventive Medicine*, 17, 275–284.
- Emerson, R.M., Frets, R.I., and Shaw, L.L. (2001). Participant observation and field-notes. In: P. Atkinson, A. Coffey, S. Delamont, J. Lofland, and L. Lofland, eds., *Handbook of Ethnography*. Thousand Oaks, CA: Sage Publications pp. 352–368.
- F. Tarrant & Associates. (2005) *Community Profile: Kasabonika*. Prepared for Sioux Lookout First Nations Health Authority.
- Fine, G.A. (1993) Ten lies of ethnography: Moral dilemmas in field-research. *Journal of Contemporary Ethnography*, 22, 267–294.
- Fleming, T.L., Kowalski, K.C., Humbert, M.L., Fagan, K.R., Cannon, M.J., and Girolami, T.M. (2006). Body-related emotional experiences of young aboriginal women. *Qualitative Health Research*, 16(4), 517–537.
- Fox, C., Harris, S.B. and Whalen-Brough, E. (1994) Diabetes among Native Canadians in northwestern Ontario: 10 years later. *Chronic Disease Canada*, 15, 92–96.

- Garner, D.M. (1997). The 1997 body image survey results. *Psychology Today*, 3, 75–84.
- Garner, D.M., Garfinkel, P.E., Schwartz, D., and Thompson, M. (1980). Cultural expectations of thinness in women. *Psychological Reports*, 47, 483–491.
- Garriguet, D. (2004) Obesity and eating habits of Aboriginal population. *Health Reports*, 19, 1–10.
- Giele, J.Z. (1988). Gender and sex roles. In: N.J. Smelser, ed., *The Handbook of Sociology*. Newbury Park, CA: Sage Publications, pp. 291–323.
- Gittelsohn, J., Stewart, B.H., Thorne-Lyman, A.L., Hanley, A.J, Barnie, A., and Zinman, B. (1996). Body image concepts differ by age and sex in an Ojibway-Cree community in Canada. *The Journal of Nutrition*, 126, 2990–3000.
- Hammersley, M. and Atkinson, P. (1995). *Ethnography: Principles in Practice* (2nd ed.) London: Routledge.
- Hanley, A.J.G., Harris, S., Barnie, A., Gittelsohn, J., Wolever, T.M.S., Logan, A., and Zinman, B. (1995). The Sandy Lake health and diabetes project: Design, methods and lessons learned. *Chronic Diseases in Canada*, 16, 1–8.
- Harris, S.B., Gittelsohn, J., Hanley, A., Barnie, A., Wolever, T.M.S., and Gao, J. (1997). The prevalence of NIDDM and associated risk factors in Native Canadians. *Diabetes Care*, 20, 185–187.
- Health Canada. (2006). *Canadian Community Health Survey, Cycle 2.2, Nutrition (2004): A Guide to Accessing and Interpreting the Data*. Ottawa: Government of Canada.
- Hesse-Biber, S.N., Leavy, P., and Yaiser, M.L. (2004). Feminist approaches to research as process: Reconceptualizing epistemology, methodology and method. In: S.N. Hesse-Biber and M.L. Yaiser, eds., *Feminist Perspectives on Social Research*. Oxford: Oxford University Press, pp. 3–26.
- Hoy, W.E., Norman, R.J., Hayhurst, B.G. and Pugsley, D.J. (2008). A health profile of adults in a Northern Territory Aboriginal community, with an emphasis on preventable morbidities. *Australian and New Zealand Journal of Public Health*, 21(2), 121–126.
- Indian and Northern Affairs Canada. (2010). Population census statistics. Retrieved January 16, 2010, from [http://pse5-esd5.ainc-inac.gc.ca/fnp/Main/Search/FNPopulation.aspx?BAND\\_NUMBER=210&lang=eng](http://pse5-esd5.ainc-inac.gc.ca/fnp/Main/Search/FNPopulation.aspx?BAND_NUMBER=210&lang=eng)
- Iwasaki, Y., Bartlett, J., and O'Neil, J. (2004). An examination of stress among Aboriginal women and men with diabetes in Manitoba, Canada. *Ethnicity & Health*, 9, 189–212.

- Janssen, I., Boyce, W.F, Simpson, K., and Pickett, W. (2006). Influence of individual- and area-level measures of socioeconomic status on obesity, unhealthy eating, and physical inactivity in Canadian adolescents. *American Journal of Clinical Nutrition*, 83, 139–145.
- King, K.M., Sanguins, J., McGregor, L., and LeBlanc, P. (2007). First Nations people's challenge in managing coronary artery disease risk. *Qualitative Health Research*, 17(8), 1074–1087.
- Koch, T., Kralik, D., and Sonnack, D. (1999). Women living with type II diabetes: The intrusion of illness. *Journal of Clinical Nursing*, 8, 712–722.
- Kuhnlein H.V., Receveur, O. (1996). Dietary change and traditional food systems of Indigenous Peoples. *Annual Review of Nutrition*, 16, 417–442.
- Kuhnlein, H.V., Receveur, O., Soueida, R., and Berti, P.R. (2007). Unique patterns of dietary adequacy in three cultures of Canadian arctic Indigenous Peoples. *Public Health Nutrition*, 11, 349–360.
- Kuhnlein, H.V., Receveur, O., Soueida, R., and Egeland, G.M. (2004). Arctic Indigenous Peoples experience the nutrition transition with changing dietary patterns and obesity. *Journal of Nutrition*, 125, 2501–2510.
- Loppie, C. (2007). Learning from the grandmothers: Incorporating indigenous principles into qualitative research. *Qualitative Health Research*, 17(2), 276–284.
- Noble, C., Corney, M., Eves, A., Kipps, M., and Lumbers, M. (2003). Food choice and secondary school meals: The nutritional implications of choices based on preference rather than perceived healthiness. *International Journal of Hospitality Management*, 22, 197–215.
- Oakley, A. (1981). Interviewing women: A contradiction in terms. In: Y.S. Lincoln and N.K. Denzin, eds., *Turning Points in Qualitative Research: Tying Knots in a Handkerchief*. New York: AltaMira Press, pp. 243–263.
- Olson, C.M. (2005). Tracking of food choices across the transition to motherhood. *Journal of Nutrition Education and Behaviour*, 37, 129–137.
- Ong, A. (1994). Colonialism and modernity: Feminist representations of women in non-Western Societies. In: A.C. Hermann and A.J. Stewart, eds., *Theorizing Feminism: Parallel Trends in the Humanities and Social Sciences*. Boulder, CO: Westview Press, pp. 372–381.
- Payette, H. and Shatenstein, B. (2005). Determinants of healthy eating in community-dwelling elderly people. *Canadian Journal of Public Health*, 96, 527–531.

- Popkin, B.M., Lu, B., and Zhai, F. (2002). Understanding the nutrition transition: Measuring rapid dietary changes in transitional countries. *Public Health Nutrition*, 5, 947-953.
- Rimal, R.N. (2000). Closing the knowledge-behavior gap in health promotion: The mediating role of self-efficacy. *Health Communication*, 12, 219-237.
- Robidoux, M.A., Imbeault, P., Blais, J.M., Pal, S., Seabert, T., Krümmel, E.M., Batal, M., Thériault, A., and Haman, F. (Forthcoming). Traditional foodways in two contemporary northern First Nations communities. *Canadian Journal of Native Studies*.
- Rock, M. (2003). Sweet blood and social suffering: Rethinking cause-effect relationships in diabetes, distress and duress. *Medical Anthropology*, 22, 131-174.
- Scheibehenne, B., Micslcr, L., and Todd, P. (2007). Fast and frugal food choices: Uncovering individual decision heuristics. *Appetite*, 49, 578-589.
- Sharma, S., Cao, X., Harris, R., Anselm, J.M., Hennis, M., Leske, C., Wu, S.Y., and The Barbados National Cancer Study. Dietary intake and development of a quantitative food-frequency questionnaire for a lifestyle intervention to reduce the risk of chronic diseases in Canadian First Nations in North-Western Ontario. *Public Health Nutrition*, 10(5), 464-470.
- Shaw, S.M. (1994). Gender, leisure and constraint: Towards a framework for the analysis of women's leisure. *Journal of Leisure Research*, 94, 20-30.
- Step toe, A., Pollard, T.M., and Wardle, J. (1995). Development of a measure of the motives underlying the selection of food: The food choice questionnaire. *Appetite*, 25, 267-284.
- Stewart, B. and Tinsley, A. (1995). From qualitative to quantitative: Development of an instrument to assess food choice influences of young adults. *Ecology of Food and Nutrition*, 34, 171-181.
- Wein, E.E., Sabry, J.H., and Evers, F.T. (1991). Food consumption patterns and use of country foods by Native Canadians near wood Buffalo National Park, Canada. *Arctic*, 44, 196-205.
- Wethington, E. (2005). An overview of the life course perspective: Implications for health and nutrition. *Journal of Nutrition Education and Behavior*, 37, 114-120.
- Wiggins, S., Potter, J., and Wildsmith, A. (2001). Eating your words: Discursive psychology and the reconstruction of eating practices. *Journal of Health Psychology*, 6, 5-15.

Wilson, K. and Rosenberg, M.W. (2000). Exploring the determinants of health for First Nations peoples in Canada: Can existing frameworks accommodate traditional activities? *Social Science and Medicine*, 55, 2017–2031.

Wong, Y.K.R. (2002). Reclaiming Chinese women's subjectives: Indigenizing "Social work with women" in China through postcolonial ethnography. *Women's Studies International Forum*, 25(1), 67–77.

Wortman, J. (2008). *Healthy Eating and Active Living in Aboriginal Communities*. Retrieved March 18, 2008 from <http://www.mhp.gov.on.ca>

Young, T.K., Reading, J., Elias, B. and O'Neil, J.D. (2000). Type 2 diabetes mellitus in Canada's First Nations: Status of an epidemic in progress. *Canadian Medical Association Journal*, 163, 561–566.

**Krista Johnson** has completed a Masters of Arts in Human Kinetics at the University of Ottawa. She is now pursuing work with the Ministry of Health Promotion on various community initiatives. The dietary interviews with women in Kasabonika were conducted as part of her Master's thesis and the results are presented in this paper.

**Dr. Malek Batal** is a professor of community nutrition and the acting director of the Honours Baccalaureate in Nutrition Sciences program at the Faculty of Health Sciences of the University of Ottawa. His research focuses on the social, cultural, economic and environmental determinants of nutrition and their relation with the health of humans and ecosystems.

**Dr. François Haman** is a professor at the Faculty of Health Sciences of the University of Ottawa. His research deals with all aspects of human energetics. It focuses on how humans orchestrate metabolic fuel selection to improve chances of survival and increase performance in adverse environmental conditions such as changing climates and important modifications of dietary behaviour.

**Dr. Pascal Imbeault** is a professor at the Faculty of Health Sciences of the University of Ottawa. His research activities focus on the impact of different factors (i.e., exercise, diet restriction, environmental pollutants and energetic supplements) on adipose tissue-derived proteins involved in the control of body weight control and insulin sensitivity.

**Dr. Jules Blais** is a biogeochemist and ecotoxicologist at the Centre for Advanced Research in Environmental Genomics at the University of Ottawa. He studies sources, pathways and fate of persistent pollutants and trace metals in aquatic environments. His research encompasses a range of biological and chemical limnology, environmental toxicology, land-water interactions, biogeochemical cycles, and water quality issues.

**Shinjini Pal** completed an MSc degree in Chemical and Environmental Toxicology at the University of Ottawa and is currently coordinating research activities for the Indigenous Health Group at the University of Ottawa.

**Timothy Seabert** is finishing an MSc degree in Chemical and Environmental Toxicology at the University of Ottawa and is also working for an environmental consulting firm.

**Dr. Eva Krümmel** completed a Postdoctoral Fellowship in the Faculty of Health Sciences at the University of Ottawa and is now working for the Inuit Circumpolar Council in Ottawa.

**Dr. Michael Robidoux** is an Associate Professor and part of the Indigenous Health Group of the Faculty of Health Sciences at the University of Ottawa. Dr. Robidoux’s research focuses on indigenous cultural practices as they relate to physical activity and local dietary practices.

