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Krista Johnson
AUTEUR DE LA THÈSE / AUTHOR OF THESIS

M.A. (Human Kinetics)
GRADE / DEGREE

Faculty of Health Sciences
FACULTÉ, ÉCOLE, DÉPARTEMENT / FACULTY, SCHOOL, DEPARTMENT

The Life Course "Connection": A Psycho-Social Exploration of Women's Dietary choices in a Northern First Nations Community
TITRE DE LA THÈSE / TITLE OF THESIS

Michael Robidoux
DIRECTEUR (DIRECTRICE) DE LA THÈSE / THESIS SUPERVISOR

CO-DIRECTEUR (CO-DIRECTRICE) DE LA THÈSE / THESIS CO-SUPERVISOR

EXAMINATEURS (EXAMINATRICES) DE LA THÈSE / THESIS EXAMINERS

Audrey Giles

Eileen O'Connor

Gary W. Slater
Le Doyen de la Faculté des études supérieures et postdoctorales / Dean of the Faculty of Graduate and Postdoctoral Studies

The Life Course "Connection":

A Psycho-Social Exploration of Women's Dietary Choices in a Northern First Nations Community

By

KRISTA JOHNSON

Thesis submitted to the
Faculty of Graduate and Postdoctoral Studies
In partial fulfillment of the requirements
For the M.A. Degree in Human Kinetics

Human Kinetics
Faculty of Health Sciences
University of Ottawa

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Your file Votre référence
ISBN: 978-0-494-61278-1
Our file Notre référence
ISBN: 978-0-494-61278-1

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Acknowledgements

I would like to thank many people who have offered their support and guidance throughout the duration of this degree and my long, grueling but rewarding thesis. It is difficult to imagine accomplishing any of this without the support of my family, friends and teachers.

Firstly, I would like to thank my advisor, Dr. Michael Robidoux for opening my eyes to the world of research within First Nations' communities. I have learned a great deal about the construction of meaningful and relevant research. To my committee members, Dr. Audrey Giles for her amazing behind the scenes support, feedback and motivation to do my best, to persevere amidst adversity and to Dr. Eileen O'Connor for her thoughtful remarks and constructive feedback.

Lastly, I record my gratitude to my mother and my best friends, who heard and saw all of the joys and frustrations that come with completing a Master's degree and thesis. From editing, to listening, to encouraging me and to helping me shape the moral imperatives of my thesis, they have been an abiding source of inspiration.

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Introduction

Many of the critical health challenges with which First Nations' people are faced, in particular, obesity and obesity related diseases (Dick, Klomp, Tan, Turnell & Boctor, 2002; Kaler, Ralph-Campbell, Pohar, King, Laboucan & Toth, 2006; Kirmayer, Brass & Tait, 2000; Young, Reading, Elias & O'Neil, 2000) can be effectively managed through altered lifestyles. The preliminary findings of the First Nations' Regional Longitudinal Health Survey (2003) recorded that obesity rates were twice as high for First Nations as compared to non-First Nations' people in Canada. In another study, Garriguet (2004) noted that the overall differences in overweight/obesity and obesity between Aboriginal and non-Aboriginal populations were largely attributable to Aboriginal women, specifically those aged 19 to 30. This study noted that despite identical energy needs, Aboriginal women consumed more calories than non-Aboriginal women by eating "foods not belonging to one of the four food groups in the Food Guide" (p.7).

Some researchers and health officials attempted to offer solutions to improve the low levels of health that were identified in First Nations communities. These solutions, however, are often provided without a clear understanding of the complexities of First Nations' cultures and the specific health challenges faced in local communities. This frustration was evident in a 2003 press release by the National Chief of the Assembly of First Nations, Mathew Coon Come who commented on the most recently published statistical profile on Aboriginal Canadians' health status. He stated that the report confirmed "the already well known disparities in our health compared to non-Aboriginal Canadians" (Assembly of First Nations' Press Release, 2003, p.). He went on to say, "So far, this government is more preoccupied on spending millions of dollars to impose unwanted colonial legislation on First Nations rather than investing in measures that will improve our quality of life" (AFN Press Release, 2003, p.1). Failure to consider challenges unique to First Nations' people are evident in intervention based research programs that are influenced by

Western dietary practices. Unfortunately, because the conditions in which many First Nations people live resemble those of the third world, Western dietary practices may not always be economically feasible or consistent with historical food gathering practices (Berkes, George, Preston, Cummins & Turner, 1995; Lawn, Harvey, Hill & Brule, 2002; Morrison & Dooley, 1998; Saksvig, Gittelsohn, Harris, Hanley, Valente & Zinman, 2005; Schraer, Mayer, Vogt, Naylor, Brown, Hastie & Moore, 2001).

Research has indicated that the nutrient density of traditional[i] diets combined with the intensive nature of food procurement would protect against the cardiovascular and obesity related diseases that are prevalent among First Nations' people (Anand, Jacobs, Davis, Yi, Gerstein et al., 2001; Bersamin, Zidenberg, Stern & Luick, 2007; Johnson & Sarin, 2002; Kuhnlein, Receveur, Soueida & Egeland, 2004; Lambden, Receveur & Kuhnlein, 2007; Receveur, Boulay & Kuhnlein, 1997; Wein, 1995).

Despite these known health benefits of traditional diets and activities, in many regions, off-the-land foods and methods of food procurement comprise less than one-third of diets (Bersamin et al., 2007; Kuhlein et al., 2004; Kuhnlein, Receveur & Chan, 2001; Wein, 1999; Wilson & Rosenberg, 2002; Young et al., 2000). Many Elders and community leaders, in northwestern Ontario specifically believe that the replacement of traditional foods and the methods used to obtain these foods with store bought foods and modern methods of harvesting and procurement are key contributors to the alarmingly high obesity rates (Gittelsohn Harris, Whitehead, Wolever, Hanley, Barnie, Kakegamic, 1995; Robidoux, Haman & Sethna, forthcoming). This shift from "off-the land" to "store bought" foods implies decreased levels of physical activity and increased consumption of processed foods. Considering how various socio-cultural, environmental and biological factors interact to influence food choice will enable a clearer understanding of the challenges First Nations' people face in maintaining a healthy diet, and will allow researchers to

understand how choices around diet may be improved (Rock, 2003). Although First Nation local realities and subsequent sites of knowledge construction differ vastly from community to community across Canada (Wilson, 2003), it is commonly believed among community leaders that people were "healthier" when they were engaging in traditional activities (Boston, Jordan, MacNamara, Kozolanka, Bobbish-Rondeau et al., 1997; Bruyere & Garro, 2000; Lambden et al., 2007). Despite the cultural significance and health benefits associated with 'off the land' dietary practices, (Adelson, 1998; Adelson, 2005; Kuhnlein, Receveur & Chan, 2001) academic researchers have yet to fully examine the possibility of re-emphasizing off-the-land food sources and integrating them with the contemporary habits of the people of the First Nations. In keeping with beliefs that First Nations people were healthier before they "had to eat food of the white man" (Boston et al., 1997, p 30.) and with the Royal Commission on Aboriginal People's Report (2007) to protect, extend and apply traditional healing to contemporary Aboriginal health, 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. In particular, factors influencing food choices and perceptions of health were examined among women aged 18-55 in Kasabonika First Nation. Part of the thrust of this research was to articulate avenues in which community members, researchers and health officials can begin improving health standards for First Nations' peoples in this region of Ontario, in particular as they related to local women and their dietary practices.

Literature Review

Before I begin this section on review of literature I wish to acknowledge that some of the studies discussed have been conducted with First Nations' people in Canada and with Aboriginal people in other parts of the world. Generalizations attempting to describe the health challenges of all first Nations' people must be avoided because they would not represent the realities of a particular community. Moreover, especially in view of the paucity of information regarding Kasabonika First Nation, it would appear that a review of a broad array of research on the subject is essential. As a consequence, studies conducted in other parts of Canada are discussed in the following chapter with the belief that some of the health trends, the factors influencing food choices and the challenges faced by individuals elsewhere, will help to inform this current study.

The impact of Euro-Canadian intervention on First Nations' peoples is well documented (Kelm, 1998; Kirmayer et al., 2000). In North Western Ontario specifically, there have been radical lifestyle transformations over a 200-year period. One critical component of this transformation was the forced abandonment of hunting and gathering practices, to become sedentary, reserve based communities reliant on Western goods and services (Bishop, 1976; Ray, 1976). For Kasabonika First Nation, this transformation began with the expansion of the fur trade in the late 18th Century, and came to fruition in the 1940's with complete government (in this case both provincial and federal) intervention and the implementation of Treaty policy (Morrison, 1986).

Treaty 9, the Treaty under which Kasabonika First Nation falls, was signed in the 1910's, but it was only by the 1940's that actual reserve allocation was implemented and permanent settlements with stores, schools and churches were created. This settlement-based existence led to a heightened reliance on Western goods and technologies that drastically changed the lives and culture of community members. One of the most noticeable changes was in dietary acquisition and

consumption. With the introduction of a permanent store, no longer was it necessary for community residents to get on to the land for daily subsistence, thus reducing physical activity levels and providing more readily available food sources. This transition, typically labeled the "nutrition transition," characterized by increased use of highly processed foods high in starch, fat and sugar and decreasing levels of physical activity (Popkin, Lu & Zhai, 2002) is a contributing factor for the rise in obesity and obesity related diseases, such as Type II diabetes (Bruce, 2000; Young et al., 2000), hyptertension (Hegele, Hanley, Sun, Connelly & Zinman, 1997) and cardiovascular diseases (Anand et al., 2001).

The following section will highlight research that documents how the nutrition transition has contributed to physiological and mental health problems within First Nations communities. In addition, the roles that traditional modes of healing and traditional diets may have in improving health are highlighted. Studies examining the current dietary patterns of First Nations' people and factors affecting dietary selection such as culture, food insecurity and changing physical environments are later discussed. Lastly, the challenges that First Nations women face, particularly as they relate to their roles within local food choices, will also be considered.

Social Origins of the Health Problems of First Nations' People

The colonization process that occurred in northwestern Ontario as a result of European contact led to many lifestyle changes for the First Nations people living in the area (Adams, 1999). These changes included forced sedentariness through reserve allocation and the decimation of traditional food resources due to over-hunting and trapping. (Adams, 1999; Adelson, 2005; Kirmayer et al., 2000). LaRocque (1993). These changes defined colonization as "that process of encroachment and subsequent subjugation of Aboriginal peoples since the arrival of the Europeans. From the Aboriginal perspective, this colonization process simply results in the loss of lands, resources, self-direction and to the severe disturbance of cultural ways and values" (p. 73).

The loss of lands and severe disturbances of cultural values are reflected in drastic dietary transformations for First Nations' people (Bishop, 1976). Dietary changes such as decreased consumption of traditional wild foods and increasing reliance on highly processed store bought foods (Gittelsohn, Wolever, Harris, Harris-Giraldo, Hanley & Zinman, 1998; Kuhnlein et al., 2001) have resulted in First Nations' people experiencing elevated rates of Type II diabetes (Bruce, 2000; Harris, Gittelsohn, Hanley, Barnie, Wolever & Gao, 1997; Iwaski, Bartlett & O'Neil, 2004; Johnson & Sarin, 2002; Young et al., 2000). When Bruyere and Garro (2000) interviewed First Nations' men and women living with diabetes in Opaskwakak Cree Nation, Manitoba, they found that the participants attributed the emergence of diabetes to the arrival of white settlers. One participant illustrated this perspective by explaining that diabetes was a result of "not doing their culture" and "instead adopting the eating practices of whites" (Bruyere & Garro, 2000, p. 26). Although this study was conducted with Manitoba First Nations' people, it is likely that First Nations people living in northwestern Ontario have had similar feelings with regards to the origins of their health problems. As stated by Rock (2003) "the collective experience of having suffered over several generations is now being expressed in the sweetening of blood" (p. 152).

Research conducted with First Nations individuals living in northwestern Ontario confirmed that a "sweetening of blood" is indeed occurring. In the Sioux Lookout Zone of North Western Ontario, within which Kasabonika First Nation is found, the prevalence of diabetes has increased by 45% over a 10-year period (Fox, Harris & Whalen-Brough, 1994). Two factors associated with incidence of Type II diabetes, elevated levels of C-reactive protein (CRP) and high waist circumference were found to be prevalent among the Sandy Lake Oji-Cree, further substantiating that Type II diabetes is a problem in North Western Ontario (Connelly, Hanley, Harris, Hegele & Zinman, 2003). Kaler et al. (2006) screened 297 First Nations individuals in

Alberta for diabetes, pre-diabetes, cardiovascular risk, and metabolic syndrome which are a pre-cursor for diabetes. Results indicated that 50% of adults and 40% of individuals under the age of 18 had metabolic syndrome, with waist circumference being the most prevalent correlate for the syndrome. Although conducted in Alberta, this study demonstrated the prevalence of obesity and obesity related diseases in this region, which is a trend that is unfortunately noted across Canada (Young et al., 2000). Other studies looking at prevalence of obesity have noted especially high rates among Cree children, and incidences of Type II diabetes in children residing in the Island Lake Region emerging as young as 8 years of age (Bernard, Lavallee, Gray-Donald & Delisle, 1995; Dean, Young, Flett, Wood-Steiman, 1998; Ng, Marshall & Willows, 2006). Research looking at First Nations women in northwestern Ontario has found the prevalence of self-reported diabetes to be as high as 25% for all adults and 80% among women aged 50-64 years (Harris et al., 1997). Dyck, Klomp, Tan, Turnell & Boctor (2002) found rates of gestational diabetes (GDM) among Aboriginal women in Saskatoon were significantly higher than those of non-Aboriginal women (11.5% and 3.5% consecutively). Although these studies document the incidence of obesity and obesity-related diseases among First Nations communities all over Canada, these are health conditions that have similar origins and effects. Findings also illustrate that diabetes and related conditions, which were relatively non-existent prior to the 1940's, are now prevalent among First Nations communities which is due, in large part, to the changes imposed by the nutrition transition (Bersamin et al., 2007; Kuhnlein et al., 2004; Popkin et al., 2002; Samsom & Pretty, 2006). The widespread nature of obesity and related conditions among First Nations Canadians suggests that understanding choices around diets could aid in the development of programs that would be best suited for the specific needs of First Nations' communities.

Further understanding dietary choices that are specific to communities may reveal other benefits of traditional foods, as recent research suggests that consumption of traditional foods is

related to psychological well-being and improved mental health (McGrath-Hanna, Tavernier, & Blt-Ito, 2003). Although traditional diets varied from region to region, they were generally comprised of wild game, seafood and seasonal plants such as berries and greens (Receveur et al., 2007; Samson & Pretty, 2006; Wortman, 2008). These wild foods are an important source of omega 3 and omega 6 fatty acids, which are essential in brain development (McGrath-Hanna et al., 2003; Nobmann et al., 2005; Wein, 1995). Studies suggest that the sudden deprivation of these important fatty acids from the diets of First Nations people, contributes to increased levels of aggression, depression, post-partum depression anxiety and suicide (McGrath-Hanna et al., 2003 & Samson & Pretty, 2006). Also, research has identified that these traditional diets which are high in protein and low in carbohydrates (Kuhnlein et al., 2001; Receveur et al., 1997) are beneficial for weight loss (Wortman, 2008). Therefore, by eating a traditional diet, some of the negative psychological effects that overweight people often experience such as poor self-esteem, self-image and weight dissatisfaction (Crocker, Sabiston, Kowalski, McDonough & Kowalski, 2006; Harter, 1999; Fulkerson, Strauss, Neumark-Sztainer, Story, & Boutelle, 2007; Receveur & Kuhnlein, 1998; Sherwood, Harnack & Story, 2000) can be potentially avoided. Research also shows that the harvesting, sharing and consumption of traditional foods are a symbol of one's commitment to culture (Adelson, 1998; Adelson, 2005; Guyot, Dickson, Paci, Furgal & Chan, 2006); and these processes are "an integral component to good health" (Van Oostdam et al., 1999, p. 230). Research indicates that having this strong sense of cultural identity, fostered by the consumption of traditional foods, is strongly related to mental health (Chandler & Lalonde, 1998).

Unfortunately, colonial strategies such as reserve allocation, religious interventions and forcing children to attend residential schools have left many First Nations peoples and communities bereft of their cultural heritage and struggling to situate themselves as First Nations peoples within this community conceived by colonial imagination: (Mignolo, 2000). In the words

of one Band Office Executive from a First Nation in northwestern Ontario, "there is a conflicted reality in this community." (Robidoux et al., 2009, p. 4). These sentiments are consistent in many of the First Nations in this region, as people struggle to reconcile what is understood to be contemporary existence and the seemingly residual cultural values being advocated by Elders and certain community leaders (Boston et al., 1997; Fleming, Kowalski, Humbert, Fagan, Cannon & Girolami, 2006; King, Sanguins, McGregor & LeBlanc, 2007). Wintrob & Sindell (1972) and Kirmayer et al. (2000) pointed to the consequences of this growing disconnect, arguing that the erosion of traditional knowledge and practices is leaving youth without a clear sense of identity and direction to their lives. Hicks (forthcoming) noted that the drastic changes involved in moving people from living "off the land" to "in towns" has caused uncertainty about their past and their roles in the present, leading to hopelessness, depression and even suicide.

Research by Kral (2003) suggested that the crisis of suicide is linked to a long prior history of inequity combined with rapid and growing social and cultural changes. As reflected by Melbourne Aboriginals who participated in a study by Thompson and Gifford (2000) many of the health problems were due to 'conditions that have been imposed from the outside, through the disruption of ties that bind' (p. 1467). Feelings of identity and control over one's life are essential for psychological health (Chandler & Lalonde, 1998; Skinner et al., 2006). By increasing reliance on store bought foods and decreasing consumption of traditional foods, Euro-Canadian intervention was both physiologically and psychologically devastating, as individuals felt a loss of control over their own lives and choices and their bodies. Although resistance occurs by many First Nations individuals and communities (Anderson, 2003; Cooper, 2003) the effects of Euro-Canadian intervention are still evidenced in increased rates of suicide, depression, alcoholism and diabetes among First Nations' people (Adelson, 2005; First Nations Regional Longitudinal Health Survey, 2003; Seto, 2006; Young et al., 2000). Perhaps re-emphasizing traditional foods is another

way to help First Nations people regain a sense of cultural identity and also to experience the nutritional benefits that these foods have to offer.

Research has shown that for many First Nations people, a key component of health involves conscious expressions of traditional culture. (Adelson, 1998; Adelson, 2005; Benoit, Carroll & Chaudhry, 2003; Hanrahan, 2002; Kuhnlein et al., 2001; Lambden et al., 2007, Receveur & Kuhnlein, 1998; Seto, 2006; Van Oostdam et al., 1999). Paproski (1997) found that for First Nations women living in urban British Columbia much of their healing process was facilitated by a reconnection to their cultural identity and traditional native spirituality. Healing traditions such as sharing in the circle of life, following a cultural path and regaining balance were also found to be beneficial for another group of First Nations women living in British Columbia as a way to resolve health issues. (Hunter, Logan, Goulet & Barton, 2006). MacKinnon (2005) emphasized that conventional clinical approaches may not fit well with traditional indigenous values or with the realities of contemporary urban settlement life. Kirmayer et al. (2000) has suggested that we must think of healing as the rebuilding of nations and as a process of decolonization. Thus, we must think of ways that health and healing can be improved by hearing the perspectives, values and aspirations of local communities, individuals and families. In research conducted by Sunday, Eyles & Upshur (2001) that involved discussions with community members in urban British Columbia regarding improving health, one community commented on the importance of traditional foods and stated: "It is about re-learning, especially the next generation, re-learning how to prepare those foods" (p. 76). Re-emphasizing 'off the land foods' as a way to reconnect with traditional culture may be a viable option in improving diets and health of First Nations people (Indian Affairs Canada (INAC),1996; Seto, 2006). To further explore the possibility of re-introducing off the land foods as a way to improve health however, an

understanding of the diets of First Nations people and the motivations and factors that influence food choices must first be obtained.

Diets of First Nations People

The Canadian Diabetic Association recommends eating a balanced diet consisting of the four food groups to protect against developing Type II diabetes: consuming 8-10 servings of vegetables and fruit, 7-9 servings of grain products, 2-3 servings of milk and 2-3 servings of meat products/and or alternatives per day. Recommendations vary from person to person depending on age, sex, height, activity levels; however, they do provide general guidance for achieving a healthy diet. The American Heart Association goes on to specify that 30% or less of the day's calories should come from fat, and calories obtained from complex carbohydrates such as vegetables and grain products should fall between 55-60% of daily calorie intake (Krauss, Deckelbaum, Ernst, Fisher, Howard et al., 1996). These recommendations, however, may not be suitable or plausible within a First Nations context, particularly in remote regions of northwestern Ontario where permanent stores were only established 50 years ago and prices of produce remain exorbitant (Lawn et al., 2002; Wein, 1995).

Traditional diets consisting of foods high in protein and low in sugar (Kuhnlein et al., 2004) may offer similar nutritious benefits as compared to diets recommended by the American Health Association (Krauss et al., 1996). In fact, research has found that the increased levels of vitamin A, vitamin D, vitamin E, Iron and n-3 fatty acids that are acquired from eating traditional foods are very beneficial to health (Bersamin et al., 2007; Kuhnlein et al., 2001; Kuhnlein et al., 2004; McGrath et al., 2003; Nobmann et al., 2005; Receveur et al., 1997; Wein 1995). Unfortunately, due to the establishment of permanent stores, traditional foods and the activities used to obtain these foods that served as protective factors against Type II diabetes has declined. Traditional foods often provide less than 30% of total dietary energy, leaving highly processed

foods high in simple carbohydrates and saturated fats to comprise the remaining 70% of diets (Bersamin et al., 2007; Kuhnlein et al., 2001; Kuhnlein et al., 2004). For example, Gittelsohn et al. (1998) studied the food consumption patterns associated with diabetes in the Sioux Lookout Zone in northwestern Ontario and found that consumption of breakfast foods, vegetables and hot meal foods had a protective effect against diabetes, whereas high consumption of foods within the bread and butter group and junk foods were associated with substantial increases in risk for diabetes.

Another examination of a community in the Sioux Lookout Zone indicated that their diet was typical of populations "undergoing rapid cultural change" (p. 603) as it was high in saturated fat, (approx 13%), high in cholesterol and simple sugars (22%) and low in dietary fibre (Wolever, Hamad, Gittelsohn, Hanley, Logan et. al, 1997). Researchers have revealed similar findings in the diets of Yukon communities and around James Bay, where levels of fat in diet exceeded 30% of dietary energy (Delormier & Kuhnlein, 1999; Wein, 1995). As summed up by Receveur et al. (1997) "the shift away from traditional food use is characterized by an increase in absolute energy intake and increased contributions of carbohydrate, fat and saturated fat to diet" (p. 2184). Further proving the benefits of traditional diets for diabetes care is an ongoing study being conducted by Jay Wortman (2008). In a community off the coast of Vancouver Island, 38 members have chosen to participate in a dietary intervention trial where their diets consist mainly of traditional foods that supply less than 30 grams of carbohydrates daily. After 54 days, the average weight loss was 8.5 pounds and blood pressure and fasting glucose levels had improved. The foods that comprise traditional diets in Vancouver Island as compared to northwestern Ontario are not identical. However, these diets are still characterized by similar amounts of low carbohydrate and high protein foods such as fish and wild game that are beneficial for weight loss. With the knowledge that First Nations people are experiencing a myriad of health related problems, it is important to pose questions surrounding health and determinants of food selection. This may allow us to

understand why in many communities, traditional foods are not being consumed despite the fact that research has shown the advantages they offer in reducing obesity related diseases.

The Role of Traditional and Western Culture

Beyond the basic physiological need to consume food, there are often many other environmental factors that influence a person's dietary choice. Research dedicated to understanding the socio-cultural determinants of the diets of First Nations people have revealed that choices surrounding food are mediated by a host of factors such as culture, food security and changes in physical environment (Boston et al. 1997; Che & Chen, 2003; Willows, 1995). The meaning and significance of food preparation techniques and meal time practices are socially constructed and vary from culture to culture (Willows, 2005). Research has shown that both Western and traditional culture influence the diets of First Nations people. Being immersed in one's culture encourages the consumption of traditional foods, and in turn eating these foods is "socially and culturally beneficial" (Lambden et al., 2007, p. 308), and strengthens feelings of cultural identity. In that sense, the relationship between being immersed in culture, consuming traditional foods and the associated psycho-social benefits is cyclical and inter-related. Among many Aboriginal communities, methods of food preparation, harvesting and production require commitment to a culture that focuses on cooperation, sharing and generosity (Stairs & Wenzel, 1992; Van Oostdam et al., 1999).

Health, for First Nations people is intricately tied to culture, and eating foods obtained from off the land (Adelson, 1998; Hanrahan, 2002; Hunter et al., 2006; Lambden et al., 2007; Wilson & Rosenberg, 2002). One study exploring how Cree people explained the rising incidence of diabetes revealed some interesting findings regarding the importance of traditional foods in maintaining feelings of health and cultural identity. The respondents talked about feeling isolated from not being able to "join in traditional Cree activities organized around eating"- a vital part of

the maintenance of family cohesion and unity (Boston et al., 1997, p. 7). One participant noted: "On the diet they say you should eat lots of vegetables and my stomach growls...but when I have a good diet in fats, I feel good. I feel as though I have eaten" (p. 8). Respondents felt their traditional diets were healthy, whereas the contemporary diets were "unhealthy," even though these contemporary Western diets were nutritious, they did not correspond to the diets of Cree culture. What researchers are beginning to learn, and what is slowly being acknowledged in medical communities, is that traditional diets, beyond offering rich cultural benefits, are very beneficial to health. These findings are especially important for First Nations people who suffer from diabetes, as now they do not have to choose between Western food and traditional food in order to be healthy, both psychologically and physically, as traditional foods offer both cultural and nutritional benefits.

Understanding the connection between local food practices and culture is clearly important, however the influence of the West on local food habits is becoming increasingly profound. (Adelson, 2005; Popkin et al., 2002). Receveur et al. (1997) noted that "market meats were substituted for traditional land animals among younger generations" (p. 2183). This inter-generational difference suggests that younger generations are losing the culture -specific knowledge that is necessary for harvesting and preparing traditional foods (Campbell, Diamant, Mapherson, Grunau & Halladay, 1994; Kuhnlein, Soueida, Recevuer & Baffin, 1996). Moreover, the rising popularity of Western foods signifies the lack of cultural transmission regarding the benefits of traditional foods (Receveur et al., 1997).

Researchers have suggested that decreased consumption of traditional foods among younger generations is due to the increased influence of Western culture (Bersamin et al., 2007; Bruyere & Garro, 2000; Iwasaki et al., 2004). The influence of Western culture also permeates many other ways of life on reserves (Chan et al., 2006; McGrath-Hanna et al., 2003). Increased

television viewing is a consequence of Western culture and research has indicated that it is a significant predictor of adiposity among First Nations children (Bernard, Lavallee, Gray-Donald & Delisle, 1995; Horn, Paradis, Potvin, Macaulay & Desrosiers, 2001; Seto, 2006). The 2002-2003 Regional Health Survey on First Nations' children found that "children who watch fewer hours of television are more likely to consume a nutritious balanced diet" and that strategies to reduce obesity should involve "minimizing exposure to food advertising and marketing that targets children" (Seto, 2006, p. 8). By introducing different recreational pastimes and media sources, such as television and magazines, Euro-Canadian intervention and culture had a two-fold effect on food choices. It popularizes certain Western fast foods (Dohnt & Tiggeman, 2006) and contributes to a sedentary lifestyle (Bernard et al., 1995) that can lead to poor choices in food.

Culture also affects preference for body size and shape, which may in turn influence the food choices of First Nations' individuals. Studies concerning the body images of First Nations' women in Canada, and Aboriginal women in the United States, demonstrate that cultural depictions of thin ideals affect body image (Cash & Pruzinsky, 2002; Garner, 1997; Garner, 1980), thus affecting choices in diet. First Nations girls living in Manitoba were found to prefer thin body sizes and may use dieting to lose weight (Marchessault, 2001). Research conducted with Native Americans has found that concerns surrounding weight exist among children, youth and adults and predict unhealthy weight control practices and eating disorders (Davis & Lambert, 2000; Sherwood et al., 2000). Certainly the influence of Western culture is felt on both individual and societal levels. Westernization has influenced foods that individuals choose to eat, socially acceptable body shapes and sizes, and ways in which individuals spend their leisure time (as seen with the increasing in time spent watching television). Considering culture is essential in this study as participants who live in a community that "struggles to maintain its past while moving

forward adapting to modern western lifestyles" (Robidoux et al. 2009, p. 4). is inevitably influenced by local and Western cultural perspectives.

Food Insecurity

Along with the influence of culture, food security plays a direct role in determining food choice. Food security, as defined by World Food Summit (1996), exists when all people at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active healthy life. Canadian public health research has emphasized access, availability and utilization dimensions of food security. Unfortunately, in Canada's Action Plan for Food Security, (1998) it was recognized that Aboriginal people experience all aspects of food insecurity. The report stated that ensuring traditional food acquisition was fundamental for establishing food security for First Nations people (Powers, 2008; Tarasuk, 2003). In addition, the 1998-1999 National Population Health Survey indicated that 27% of Aboriginal respondents living off reserve experienced food insecurity and 24% did not have enough food to eat, or they could not afford to purchase quality foods (Che & Chen, 2003). In a study assessing barriers to healthy eating and physical activity among First Nations youth in northern Ontario, it was found that food security, cost and accessibility/availability prevented both healthy eating and physical activity (Skinner et al., 2006). Similar barriers related to cost, lack of variety and lack of quality have inhibited the purchase of fresh fruits and vegetables in remote northern communities (Lawn & Harvey, 2003; Wein, 1994). Research has suggested that economic support for local community hunts, freezers and education programs, as well as better access to cheaper and higher quality *market food* would help in reducing some of these barriers. (Chan, Fediuk, Hamilton, Rostas, Caughey, Kuhlein et al., 2006; Sinclaire, 1997).

Along with increasing economic access and availability of market foods, increasing access, availability and utilization of traditional foods is of equal importance to Aboriginal people

(Powers, 2008). The close link between consumption and acquisition of traditional foods to cultural maintenance and personal identity makes the term "cultural food security" appropriate in conceptualizing food security for First Nations' people, as the ability for First Nations people to reliably access important traditional/country food through traditional harvesting methods is an important measure of psychological and physiological health. Indicators of cultural food security might include levels of traditional food knowledge, access to traditional food systems and the safety of traditional/country food. An understanding of different conceptualizations of food security is critical for this research, as feelings of food security are directly related to dietary choices. Also, feelings of cultural food security could perhaps be strengthened in the Kasabonika First Nation by increasing residents' access to traditional foods.

Changing Physical Environment

Dietary patterns and traditional food consumption is the modification of the physical environment. Research has shown that modification (e.g., hydroelectric dams, deforestation, climate change) and contamination of the physical environment, has resulted in the reduced availability of traditional animal and plant species in northern Canada (Bersamin et al., 2007). For example, participatory research carried out within two northern First Nations communities in Canada revealed that changes in climate, migration of species and changes in water levels around areas of harvesting had an affect on traditional food consumption and harvest (Guyot, Dickson, Paci, Furgal & Chan, 2006). Some researchers have also expressed concern regarding the contaminant levels of mercury, chlordane, toxaphene and PCB's among Cree, Inuit and Dene populations (Guyot et al., 2006; Kuhnlein, Receveur, Muir, Chan & Soueida, 1995; Van Oostdam et al., 1999). A common conclusion reached by many members of the scientific community (Berti, Receveur, Chan & Kuhnlein, 2002; Kuhnlein et al., 1995) however, is that the cultural and

nutritional benefits of traditional foods outweigh the risks of high contaminant levels. Instead, contaminant levels need to be monitored on a regular basis (Berti et al., 2002; Kuhnlein et al, 1995; Van Oostdam et al., 1999). The body of research concerning changes to physical environment and contaminant analysis highlights the many factors that must be considered when understanding dietary choices. Research has also suggested that additional factors must be explored when understanding the diets of First Nations women.

Unique Challenges for First Nations' Women

Contemporary First Nations women 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" (p. 11). The roles of First Nations women in the past compared to today have drastically changed. Maria Campbell, a Cree/Metis Elder from Saskatchewan noted that in the past, "you were valued for how well you could skin and cut up a buffalo or a moose and preserve it, or how well you could garden and preserve food." First Nations women in particular are faced with the challenge of negotiating between past and present roles and values associated with food preparation and culture. Societal pressures for First Nations women that affect food choice pertain to body image (Fleming et al., 2006; Garner, Garfinkel, Schwartz, & Thompson, 1980; Garner 1997; Gittelsohn, Harris, Thorne-Lyman, Hanley, Barnie & Zinman, 1996), familial influence (King, Sanguins, McGregor & LeBlanc, 2007; Sinclaire, 1997) and role-related stress (Iwasaki et al., 2004). Special consideration must also be given to women as in many regions diabetes is "hitting women harder than men," (Rock, 2003, p. 136) indicating that exploring dietary choices is critical in improving health.

In a study considering body image, Gittelsohn et al. (1996) examined the perceived body shape and body shape satisfaction of Oji-Cree women. They found that only 16% of the population was satisfied with their current body shapes, but that older women in the study had a preference for larger body shapes. Marchessault (2004) found that there is a strong desire to be thin among Aboriginal girls, suggesting that body-related concerns exist among First Nations women. The relationship between body image and diet is complex, as feelings about one's body will ultimately affect choice in food (Crocker et al., 2006; Sabiston et al., 2007). This relationship is thus important to consider in the current study if we wish to understand critical factors that may influence dietary choices among women.

Family pressures that First Nations women experience also affect food choice. King et al. (2007) studied the adaptations of First Nations people to lifestyle changes and found that some of the women in the study worried about being "too skinny" as it conflicted with cultural ideals and family values. When the barriers of food procurement were assessed among Aboriginal women in Manitoba, it was found that financial insecurity as well as a unique barrier of "obligation" to the family system was prevalent. Aboriginal women living in Manitoba also felt pressure with the knowledge that their dietary practices ultimately affected the dietary practices of their children (Sinclaire, 1997).

Other obligations and role-related stressors were highlighted by Iwaski et al. (2004) who found that for First Nations and Metis' women, childcare and household work were primary responsibilities of women. This study also called to attention the need to "consider female specific stress factors for those living with diabetes" (p. 208). These responsibilities influence dietary patterns and stress levels among women, which ultimately affect diabetes rates among women (Iwaski et al. 2004). The studies mentioned above indicate that family pressures may affect dietary choices for women as they try to conform to cultural ideals and fulfill their various gender roles

(King et al., 2007; Sinclaire, 1997). Understanding the factors that influence food choice among women is essential because: (a) they have a high incidence of obesity (Delormier & Kuhnlein, 1998; Garriguet, 2008; Sherwood, Harnack & Story, 2000); (b) they have additional pressure of conforming to Western ideal body shapes (Fleming et al., 2006); and (c) the dietary practices of women ultimately become the dietary practices of their children (Sinclaire, 1997). Traditional foods are important in feeling healthy, and are equated with food security among women (Lambden et al., 2007; Townsend et al., 2001). However, research has shown that Native Americans residing in Alaska (Nobmann et al., 2005) and Cree women residing in Wemindji Quebec, often consume less of these foods than men. Evidently, dietary patterns are complex for women, thus understanding how factors such as culture, food insecurity, body image and family intersect to influence the women. Therefore, in this proposed study, it will be beneficial in attempting to understand health and food choice from their perspective.

Conclusion

Research has shown that First Nations people equate traditional ways of life, including consumption of traditional diet and engaging in traditional activities with health (Adelson, 1998; Boston et al., Hanrahan, 2002; Lambden et al., 2007). Research has also shown that First Nations people were healthier when consumption of traditional foods (moose, caribou, berries) and traditional "bush-like" activities were more common (Berkes et al., 1995; Kelm, 1998; Samson & Pretty, 2006). Unfortunately, the nutrition transition that took place over the course of the 1900's in northwestern Ontario marked the beginning of a drastic change in lifestyle and diet, which resulted in decreased consumption of traditional foods, increased consumption of unhealthy store bought foods and decreased activity levels (Popkin et al., 2002). Reliance on store bought foods is common today, despite the fact that many regions have "substantial wild food resources"

(Gittelsohn, et al. 1995). The shift away from off the land foods and methods of procurement suggests why there are high rates of obesity and obesity related diseases among First Nations communities in Canada (Garriguet, 2004; Harris et al., 1997; Johnson & Sarin, 2002).

Studies exploring the determinants of food choice within First Nations populations have identified that the westernization of diet, increased availability of store bought food and western "popular culture- all these factors influence food selection. Although traditional foods have important health implications, they are consumed less often because of this westernization of diet (McGrath-Hanna et al., 2003) and also because of physical changes to the environment that impede harvesting of traditional foods (Guyot et al., 2006). Economic limitations are also factors that prevent both consumption of traditional foods and consumption of fresh produce and nutritious market foods.

The Assembly of First Nations (2003), The Preliminary Findings of the Regional Longitudinal Health Survey (2004) and the Report Card for the Royal Commission on Aboriginal People (2007) all recommend incorporating traditional foods and culture into health intervention programs. Although some research interventions that encourage traditional diet and activities have been explored and proven successful (Seto, 2006; Wortman, 2008), research in this area is far from complete, as First Nations' people often do not choose to incorporate traditional foods into their regular diet. The elevated rates of obesity and obesity related diseases among First Nations women speak to the need to understand factors underlying their unique dietary patterns. Part of understanding these unique dietary patterns includes understanding why women often consume less traditional foods than men (Lambden et al., 2007; Nobmann et al., 2005; Wilson & Rosenberg, 2002). First Nations' women also experience increasing pressures relating to food choice such as concerns about body image and maintaining family relationships. The fact that they

bear the responsibility of being dietary role models for their children provides further evidence that the factors influencing food choices of this group deserve more attention.

Theoretical Framework

In the previous chapter it was established that First Nations Peoples in Canada are currently undergoing tremendous health challenges. The rates of obesity and obesity related diseases in particular are disproportionately high compared to non-First Nations populations in Canada, leaving health practitioners, researchers and First Nations community leaders searching for realistic strategies to redress these health concerns. One approach has been to establish dietary and physical activity interventions, encouraging through education and community programs, improved diets and levels of physical activity (Hanley et al., 1995). The success of any such strategy, however, would be limited without fully appreciating the local cultural complexities surrounding health, diet and wellness. In the case of First Nations peoples, who have undergone forced dietary transformations as a result of Euro-Canadian intervention, it would have seemed prudent that any approach to ameliorate health/dietary standards and to understand behaviors be informed by an awareness of this socio-political context in which First Nations' peoples currently live.

As such, in proposing this research project, combinations of post-modern/ post-colonial theoretical perspectives were described as the theoretical framework that was to guide analysis. While concepts such as colonization, power, and the social construction of sex, gender as related to food choice, are commonly adopted by post-modern, post-colonial researchers, and are thus described in the following sections, alternative theoretical perspectives were also adopted throughout this research study. The psycho-social foundations of the life-course perspective (Elder, 1994; 1998; Elder & Giele, 1998) and gender based analysis (Shaw, 1994) lent valuable insights when conducting and understanding dietary choices of women. The theoretical frameworks that guided the development, research design and analysis of participants' experiences

were informed by feminism, post-colonialism and the life course theory. Distinctive features from these theoretical frameworks will be discussed in the following chapter.

Colonization, Discourse and Power

Colonization is a term that has been used to characterize a variety of social, political and economic phenomena. Many scholars have taken colonialism as an abstract force, as a structure imposed on a local practice (LaRocque, 1993; Stoler, 1989). These imposed structures can take the form of imposed dominant discourse or political suppression (Mohanty, 1991). From a First Nations perspective, colonization refers to loss of lands, resources and self-direction and to the severe disturbance of local discourse and cultural values (LaRocque, 1993). Due to the ambiguity and political connotation that often accompanies the term colonization, Euro-Canadian intervention will be used to define "colonization," in the remaining sections of this paper. Euro-Canadian intervention was initiated with the French and later with the English settlement in northern North America, early in the 17th Century, and remains constant today, more specifically with the development of Canada as a Nation state and the formal occupation of First Nation's lands and resources. The impact of this structural and discoursing domination has been devastating as evidenced by the creation of reserves, residential schools and relocation of First Nations people to remote regions. All these actions have contributed to the changes in the life-styles of First Nations people (Adams, 1999; Kelm, 1998; Kirmayer et al., 2000). First Nations people have their own beliefs about health, bodies, food and activity. While still retaining their own ideas and beliefs, these colonial regimes, steeped in Western European discourses, relentlessly imposed a new rationalized order over the intuitive and experiential knowledge and life practices of the First Nations' people (Kelm, 1998). While crude economics was the general impetus for European domination of the new world, its 'civilizing' mission became its justification or, as some would have argued, its moral obligation (Adelson, 1998; Kelm, 1998; Miller, 2000).

In other words, colonization was sold not so much as an imposition, but as a gift, transforming irrational, dangerous subjects into rational, knowledgeable human beings. Fanon (1967) described the process as the embodiment of whiteness, where subjects seek to adopt this Western, rational subjectivity through the abandonment of their own culture and beliefs. Fanon stated that "Others" may "congratulate themselves" when they embody whiteness, but in reality this achievement never occurs (p. 7). This inability to "catch up" to the white oppressor is what continues to situate "the native" in a perpetual time lag, forever striving to achieve Western, rational subjectivity (Pratt, 2002). How cultural suppression works to devalue First Nations knowledge and discourse clearly warranted consideration by research seeking to understand and improve the health of First Nations people (Adelson, 2005; Kirmayer, et al, 2000; Young et al., 2000).

Imperative during the research process was the thoughtful appreciation of dominant and local discourse. Discourse, or "regimes of truth" (Foucault, 1972) specify what can be said or done at particular times and places. Often, they are a system of statements, which construct an object, or as Foucault argues, discourses are "practices that systemically form the objects of which we speak" (p. 49). Discourses construct 'representations' of the world which bring to light a reality and the objects that form that reality. Discourse then cannot be discussed without relating them to power. They sustain specific relations of "power," and they construct particular practices (Parker, 1992). Individuals, groups or structures that exercise power often determine how an object is conceptualized and represented in discourse. People's knowledge of social situations, the interpersonal roles they play and their identities and relations with other interacting social groups are constituted via discourse (Van Leeuwen & Wodak, 1999). Thus dominant discourse and those with power are often responsible for justifying, perpetuating or transforming the status quo (Barker & Galasinski, 2001).

Along with the multitude of technological and material objects that accompanied the arrival of European settlers, there was an inherent power relationship that allowed for a new set of 'knowledge' to be put forth as 'truth' and reality. These metanarratives of modernity were discourses that described (and prescribed) 'truths' about individuals and social behavior (Mignolo, 2000; Wong, 2002). Dominant discourses still exist among First Nations communities, as formation of alternative discourses is a gradual and difficult process. Traditional ways that food and health were perceived among First Nations' individuals have been altered by Western discourses surrounding these objects. As an example, on many First Nations reserves, participation in traditional activities as a means of acquiring food have been replaced by modern food gathering and harvesting technologies (Bersamin et al, 2007; Gittelsohn et al., 1998). By understanding both dominant and local discourse, or 'the statements which construct objects' (Foucault, 1972) such as food and the body, an attention to discourse aided in understanding why certain choices were made with regards to diet, as meanings and truths were continually contested and redefined within a modern colonial conception.

Resisting Discourse and the Construction of Life Course

Recognizing how Euro-Canadian intervention and "Western power" have ultimately shaped dominant discourses, enables us to understand how those were successful at creating their own discourses and constructing their own life courses. For Quijano (1993), discourse is most vulnerable when appropriated and rearticulated in locally specific ways. He argues that this conciliation of meanings is exactly what can and does occur when "the dominated learned first to give new meaning and sense to alien symbols and images, and then to transform them and subvert them by including their own elements in all images, rites or expressive patterns of alien origin" (p.32). This is because dominant social structures have been a part of historical and cultural contextual fabrics and are interwoven by power relationships in place for centuries (Devine, 2005;

Elder & Giele, 1998). Although separation may never occur, to understand individual action and behavior, one must be aware of these forces of power.

In First Nations communities, resistance to dominant discourse and the construction of life courses are evidenced as some First Nations groups are returning to traditional modes of healing, spirituality and means of acquiring food as literal symbolic gestures of independence, health and sustainability (Hunter et al., 2006; Wortman, 2008). Other examples of resistance are seen in stories of native women such as Theresa Johnson Ortiz, an Ojibway and Janice Acoose a Cree/Metis who in their own way, challenged racial discourses of natives who were "savages in need of salvation" (Anderson, 2000, p. 138). Resistance is also seen in terms of First Nations individuals occupying public positions and exercising new powers to assist in empowering First Nations groups." Women in Kasabonika resisted capitulating to daunting circumstances as they sought to eat wild foods, maintain family traditions or pursued post-secondary educations. Social and cultural contexts, and what, or is not deemed acceptable, provides multiple sources of information in the form of discourse. Resisting discourse, and understanding a particular context, we must "seek to know from the actual context which actually begins with knowing oneself" (Fei, 1998, p. 3).

The Infusion of Feminism

Utilizing feminist traditions were critical for this study, first and foremost, because I am a woman, working with women in Kasabonika First Nation. Secondly, First Nations women are part of a marginalized culture, a marginalized gender and unfortunately are often marginalized by location. Because being First Nations *and* being a woman influenced or dictated 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 & 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. The acknowledgment that First Nations women have the ability to exercise power within certain discourses, and thus have the power to produce knowledge is done by conducting research within a feminist tradition. Individuals have the responsibility of being producers and transmitters of knowledge.

Inherent in this production of knowledge, is the social construction of the terms "sex" and "gender." These socially constructed terms were constructed and interwoven into the fabric of a patriarchal society (Hesse-Biber, 2004; Ong, 1994). Gender and the acceptable behaviors and ideals associated with a particular gender influence one's selection of foods. Women who are not of First Nations descent are influenced by cultural expectations of thinness, media, their roles in the family and a host of other factors when making dietary selections. Unique to First Nations women is their role in food preparation, food harvesting and their role as cultural role models (Popkin, 2002; Receveur & Kuhnlein, 1998). By listening to the experiences of women residing in Kasabonika and deconstructing each individual's experience with being "female", "thin", "big", "mother", "daughter" or "food-preparer" it was possible to come to an understanding of choices in diet that were influenced by sex, gender, health *and* local tradition (Fleming, et al., 2006). Therefore, in addition to the factors that influence Western women's diets, First Nations women have many unique gender roles (Rock, 2003) that were reflected in their food choices.

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) a host of unique societal influences inform dietary choice due to 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 was a pathway to adapting the life course perspective and conducting a gender based analysis of dietary choice.

Understanding Dietary Choice as Products of "The Life Course Theory"

Considering socially prescribed roles of women and the interaction between social factors, historical location, historical timing, and personal goals, would reveal a convergence of The Life Course Theory (Devine, 2005; Elder & Giele, 1998; Elder, 1998) and gender-based analysis (Shaw, 1994). To fully appreciate the complexities surrounding dietary choice within a contemporary First Nations' context and situate and understand participants' experiences appropriately, a life course perspective was adopted. One of the purposes of the life course perspective is to free researchers from "single-factor explanations" of behaviors (Elder & Giele, 1998, p. 22), as such, factors beyond mere situation, i.e., feelings of self-worth, body perception, ideals of health, self-esteem, economic and environmental barriers were taken into account.

Dietary choices are made by individuals who exist in socio-historical locations steeped in culture. The rapid historical and cultural changes within First Nations communities necessitate attending to history and culture of utmost importance. Considering individual life courses as functions of social location, cultural heritage, friendships and personal motivations that come together through the funnel of "timing" (Elder , p. 8) is both theoretically relevant and practically sound, when understanding health behaviors across the life span. The perspective has been applied to fields such as public health, medicine, sociology, psychology and education as these fields are largely influenced by cultural trends and preceding historical events (Bisogni et al., 2005; Devine, 2005; Devine & Olson, 1991; Olson, 2005; Wethington, 2005).

> Life course theory and research alert us to this real world, a world in which lives are lived and where people work out paths of development as best they can. It tells us how lives are socially organized in biological and historical time, and how the resulting social pattern affects the way we think, feel and act. (Elder, 1994, p. 15)

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 social relations approach is steeped in functionalist (Durkheim, 1893; 1933; Parsons, 1961; 1966) and psychological (Bronfenbrenner, 1979) thought as the individual in his or her surrounding environment is emphasized. The temporal approach tended to concentrate on individual actors at the macro level, with conflict theories of Marx, and at the micro level, in longitudinal studies of history. Integrating the social and temporal, or the structural and dynamic approaches that took into account the many levels of social structure, but at the same time, comprehended dynamic change, led Elder, a pioneer in articulating the life course perspective to reconstruct data that had been collected in 1930's.

The research of Elder (1974), and other works including that of Giele (1988) connects the trajectory of personal lives to large cultural and economic changes such as Depression and war. The importance Elder attributed 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 1920's) and the Berkeley cohort (children born in the 1930's). Participants who were part of the Oakland cohort were adolescents during the Great Depression whereas The Berkeley cohort experienced their vulnerable childhood years during the Great Depression. The

life patterns of children in these cohorts were strikingly different, leading Elder to draw conclusions regarding the significance that birth year plays in shaping experiences and opportunities.

The works of Giele (1988) also made an important contribution to the articulation of the life course perspective. Giele was interested in how the social needs of a system become articulated with individual goals through connections between social structure and personality, and how, in turn, individuals propel to change the larger structure and fabric of society. Her 1961 dissertation of the 19th century American women's movement raised questions of innovations in women's life patterns. 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 model she developed of role and life course change is bidirectional; that is, societal values and institutions and informal groups transmit influences to the woman that affect her life pattern. 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 & Giele, 1998; p. 8.). The combined works of Giele (1988) and Elder (1974; 1994) led to the development of four key factors that shape an individual's life course a) historical and geographical location (context) b) social ties to others (linked lives) c) agency or personal control (human agency) and d) variations in timing (timing of transitions).

Historical context. Further analysis of historical demographic data formed the basis for the concept of *historical context.* Demos (1970) reconstructed family life and helped to illuminate the family as a mediating institution between economic and social change, and the shaping of individual lives. The Berkeley and Oakland cohorts experienced the Depression at different developmental stages. The Berkeley children born during the depression and who experienced the

"empty houses of World War II" were more adversely influenced by other events they experienced in their lives compared to the children in the Oakland cohort who were born earlier. Differences in birth years expose individuals to different historical worlds with different constraints and options. Individual life courses will in turn, reflect these times.

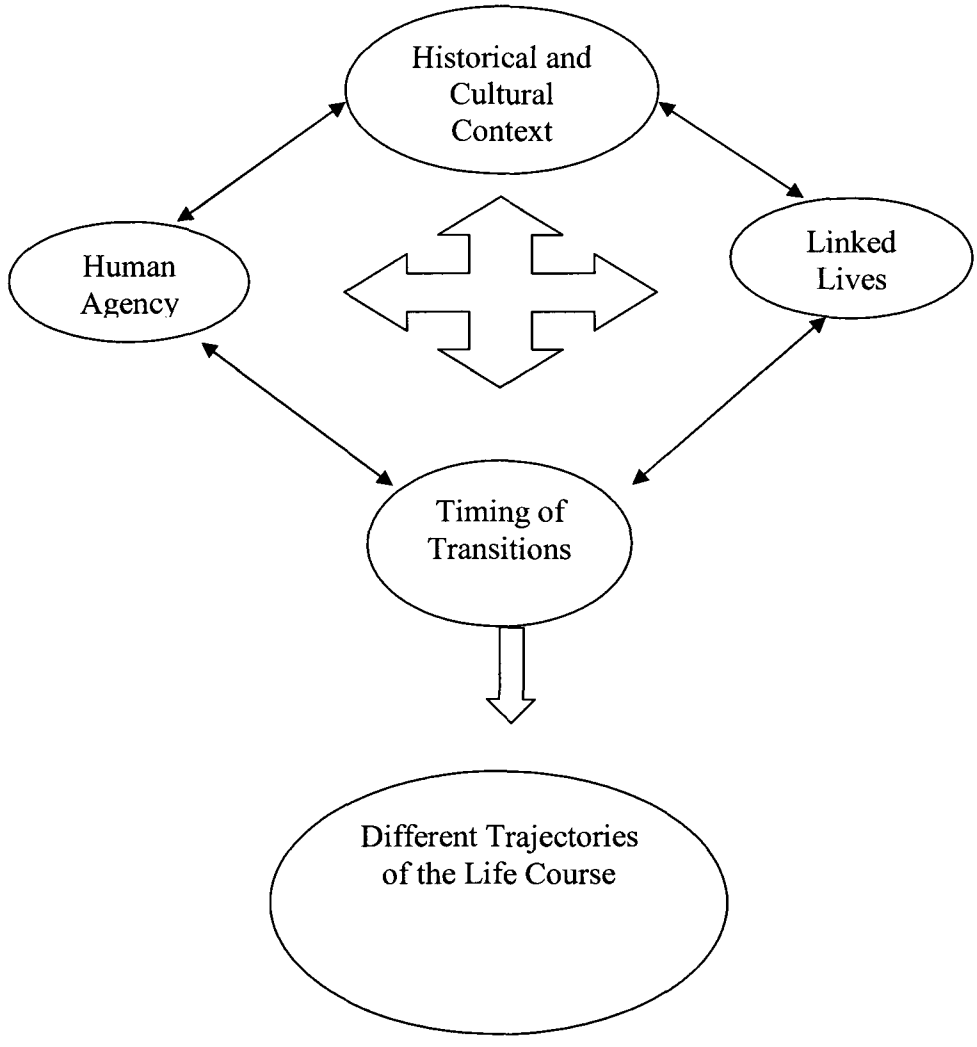
Timing of transitions. The element of timing emerged from analysis of panel studies of longitudinal surveys, and formed the basis of the *timing of transitions* concept. Individuals appear to adapt to the challenges confronting them by timing the events of their lives- in work, education, family behavior and leisure- so as to make the most of opportunity and suffer the least frustration and failure. Transitions into roles can be well timed or not well timed and may have positive or negative outcomes as a result (e.g., timing of entry into the workforce coupled with marriage at a young age may result in individuals experiencing stress and burnout). For example, the age at which one makes the transition from being single to being married will affect psychological development into adulthood if not "timed" constructively. Adjusting to this role will also be affected by whether or not one experiences another transition, such as the birth of a child. This incidence, sequence, and duration of roles is termed "social timing" by health researchers using the life course perspective (Devine, 2005). What Elder (1994), within the Berkeley and Oakland cohorts group study, concluded was that the timing of transitions such as early marriage, childbearing, or timing of education set in motion the culmination of disadvantage for study members in both cohorts.

Linked lives. The concept of *linked lives* was developed from empirical works on the sociology of aging. By looking at relationships between and among generations one was able to understand the many possible ways in which the life course of one person is linked to the fate of both age peers and the larger social order. Elder (1994) noted that the emotional stress of the Depression affected parenting quality, which in turn affected the development and behavior of

children for multiple generations. Behaviours are influenced by intergenerational and intra-generational forces. As such, individual behaviours are not only affected by the historical context in which they are shaped, but by individual perceptions of connections and relationships around him or her.

Human agency. Of all empirical traditions associated with development of the life course, the contributions of life history and developmental psychology are most commonly identified. The term of *human agency* is defined as one's motivations to meet their needs, resulting in active decision making organized around certain goals. Depending on past experiences (historical and geographical location) individual goals may differ. Girls from the Depression era growing up in deprived homes, tended to seek traditional homemaking roles, whereas girls from non-deprived homes were more likely to get further education and be interested in combining paid work and family life. Feminist leaders experiencing personal loss were more likely to be interested in temperance and charitable work, whereas those denied education and work opportunities, due to gender were more likely to support the suffrage movement. Therefore, by making choices and acting *within* the opportunities and constraints of history and social circumstances, individuals are agents of change and construct their own life course. Figure 1 represents the interrelatedness of one's life experiences and the sociological and individual ramifications of timing.

Figure 1: Four Key Elements of the Life Course Perspective (Elder & Giele, 1998, p. 10).



Health and Life Course Trajectories

The four –faceted model of the life course is applicable and provokes insightful analysis for health researchers. Health researchers have applied the life course perspective and the idea of trajectories, to understand such things as food choices across the transition to motherhood (Olson, 2005) and food management skills (Bisogni et al., 2005). When applied to health, researchers have defined trajectories as stable patterns of health behavior that a person engages in over time (Seeman, Singer, Ryff, Love & Levy-Storms, 2002, Olson, 2005; Devine, 2005; Wethington,

2005). The accumulation of experience combined with individual goals and conscious desire for change situates individuals on diverse and flexible trajectories. Developmental outcomes and processes are shaped by the trajectories that people follow, whether reflective of good or bad times in history.

With reference to contextual factors that shape and constrain behavior change, such as resources, options, expectations and perceptions, the life course concept of historical-social location (context) offers a way for researchers to integrate and consider indicators of social location such as socioeconomic status, race or ethnicity or gender, as the correlation between socio-location indicators have been strongly linked to health status (Elder, 1994; Elder & Giele, 1998).

Olson (2005) found particular utility in the life course concepts of historical, social location, and stability of trajectories, as research addressed questions of stability of food choices across the transition to motherhood. In particular, the variance of food choices behaviors (consumption of milk, duration of breastfeeding) pre-pregnancy and postpartum was measured. Sustainable food choices evidenced two years post-partum was the inclusion of fruits and vegetables in diets, however results according to social location variables.

In a study aimed to develop conceptual understanding of how management of food and eating is linked to life events and experiences, Bisogni, Jastran, Shen & Devine (2005) noted the importance of recognizing people's experiences and perspectives in food choice. Individuals have a "food choice capacity" which is a function of confidence in meeting standards for food and eating, given their food management skills and circumstances. Life course trajectories define and develop an individual's food choice capacity.

Devine (2005) specifically defines food choice trajectories as "persistent thoughts, feelings, strategies and actions with food and eating developed over the life course in a social and historical

context (p. 122)." Food choice trajectories are persistent and relatively stable over adult lives. They are also cumulative; they develop over a lifetime, incorporating people's meaningful experiences with food and eating.

For the present study, drawing on the life course theory allowed for both depth and breadth when understanding food choice behaviors. In particular, considering historical location of women "is a necessary precondition for the identification of the historically unusual or unique," (Willigan and Lynch, 1982, p. 434) as undoubtedly, women in the First Nations community have undergone rapid historical and cultural transformations that cultivated motivation, "uniqueness" and individual food choice trajectories. In that sense, psycho-social-historical contexts merge to form life course trajectories, from which individuals can "resist discourse" or construct and enact life course trajectories surrounding food and health. Awareness of colonialism and the climate of discourse was critical in appreciating the realities of Canadian First Nations communities, whereas the psycho-social, event-based approach offered by the life-course theory laid the foundation for linking history with human lives, as "every research project, like every life, follows a unique trajectory" (Elder, et al., 1998, p. 294).

Methodological Implications

Up until this point I have focused on the existing research pertaining to the diets and health of First Nations people and the theoretical perspectives resulting out of this research. In order to carry out this research, however, specific research methods are drawn upon and need to be fully explicated. As such the following chapter is a discussion on research methodology and methods. Weber-Pillwax (1999) has argued that research methodology and research done in indigenous communities "should be a source of enrichment to their lives and not a source of depletion or denigration," and that a researcher must make sure that the three "R's- Respect, Reciprocity, and Relationality- are guiding the research" (p. 38). These notions guided the ethnographic methodology, the semi-structured interviews and participant observations that are discussed as methods in the present sections.

A Feminist Way of "Knowing" a Cultural Behavior

How knowledge is produced and how people come to "know" and understand their world are fundamental methodological concerns. To carry out my research I am adopting an epistemological perspective based in constructionism, which posits that "*all knowledge, and therefore all meaningful reality as such, is contingent upon human practices, being constructed in and out of interaction between human beings and their world, and developed and transmitted within an essentially social context*" (Crotty, 1998, p. 42; author's emphasis). For the First Nations women I will be interviewing and gathering knowledge which will be constructed according to the specific cultural contexts in which they live. Women construct different realities based on the gender experiences and roles within the community, and thus it is necessary to understand that women may raise different concerns and have different questions than men (Richards, 1982). Attention must also be given to the fact that the women I am working with are from a remote First Nations' community, and as such their sites for knowledge construction are

distinctive from my own Western urban experiences. As stated by Smith (1988) the Western perspective allows "us" to categorize "them" as *others*. Our fundamental beliefs about being human, our set of values, and the conceptualization of such things as time, space, language and power are all concepts that have been informed by a Western positivist tradition. As further discussed by Vukic & Keddy (2002), it is extremely important for Western researchers to reflect on how their own values derived from their social positioning in the hierarchy of power, structure their representation of indigenous voices. Foucault (1984) questioned whether ethnographers could capture the meanings of culture on the basis of how people act. He suggested that societal institutions and the power relations that shape society must also be accounted for, as individuals and the meanings they ascribe to situations are constantly changing and are influenced by their surroundings. These are all epistemological considerations that I was cognizant of when conducting the ethnography in Kasabonika. It has been argued that indigenous ways of knowing are largely constructed through experience and observation, from the land or from spiritual teachings (Castellano, 2000; Newhouse, 2004). While not sharing in a First Nations heritage, I can only strive to gain an appreciation of the holistic and multi-dimensional aspects of local knowledge. Feminist, indigenous and constructionist epistemologies are based on the idea that people's knowledge is derived through interaction with the objects in their social worlds. As a Euro-Canadian researcher I was cognizant of these epistemological considerations when conducting the ethnographic research in Kasabonika. Awareness of the different discoursing forces and social experiences that shaped my ideals, values and knowledge surrounding health and food, I aspired to understand how foods were conceptualized for women in Kasabonika

Ethnography, From a "Feminist" Point of View

In the following section I discuss ethnography and the methodological implications that were considered when conducting ethnographic research. The benefits and ramifications of doing

ethnographic research from a feminist perspective in a community where I am entering as an "outsider," as well as the various techniques used to ensure the genuineness of my research will be highlighted. Although my complex position as a researcher ultimately affected the information that I gathered from visiting the Kasabonika First Nation, this section suggests that my position also added richness and creativity to my ethnographic accounts.

Ethnography is a methodology where researchers employ "all five senses" (Hammersely & Atkinson, 1995) with the hope of illuminating cultural behaviour of dietary choice. Ethnography can be a powerful site where multiple voices are brought to light and negotiated, with hopes of avoiding this "us" versus "them" categorization which is done by "immersing oneself into the field" (Wong, 2002, pp. 67). Ethnography is also not just a way of gathering data, but it is an intellectual methodology aimed at understanding "how people make sense out of the world in which they live" (Spradley, 1979, p. 5). Besides understanding individual experience, ethnography allows for the holistic portrayal of culture by "analyzing relationships and looking to the ways in which members of a culture respond to contingencies in their social settings" (Emerson, Fritz & Shaw, 1995, p. 162). Remembering the purpose of the study was to explore determinants of food choice among First Nations women, it is important to remember that deciding what foods to consume is a product of socio-cultural and individual influences. Cultural forces may dictate what foods are acceptable and preferable to eat depending on whether the foods, and behaviours associated with eating these foods, conform to cultural ideals and values. For instance a First Nation's woman may be encouraged to eat meals high in fat because of positive associations community members have towards fat, whereas a young woman in an urban Western centre may restrict fat from her diet because of the emphasis on low fat diets and cultural aesthetics romanticizing thinness (Garner, 1980; Bordo, 1993). Individuals are also influenced by those around them (Crocker et al., 2006), their own perceptions of self (Sabiston et al., 2007),

ideas about health (Boston et al. 1997), availability of foods (Chan et al., 2006; Skinner et al., 2006) and taste preferences (Bernard et al., 1995). These socio-cultural and individual factors that influence the diets of First Nations women, deem an ethnographic methodology appropriate, as it allows for study of complex cultural behaviors (Hammersely & Atkinson, 1995; Lange, 2003; Marcus & Fischer, 1999; Wong, 2002). As noted in the previous chapter, feminist traditions, and thus feminist methodologies informed the way this study was conducted. Crotty (1998) and Hesse-Biber et al. (2004) noted, there are not so much distinct feminist methodologies, but rather, feminist perspectives entering into existing methodologies. Although I conducted ethnographic research, feminist perspectives coexisted within this methodology. Star (1979), noted the infusion of feminist thought is a way to understand one's participation in the socially constructed realities of participants, therefore, feminist traditions encouraged me to consider my own political and personal positioning when conducting the community ethnography.

The Insider-outsider debate. Concerns about ethnographers being able to portray a true and "accurate" portrait of a cultural phenomenon have been prevalent for decades (Fine, 1993; Naples, 2003). These concerns stem from a concern about innate power differences that exist between the researcher and the participants, which restrict the accuracy of information being shared. Wolf (1996) emphasized that the power relationship between researcher and researched is discernable in three ways: i) power differences stemming from different positional roles of the researcher and the researched; ii) power exerted during the research process, such as defining the research relationship, unequal change and exploitation; and iii) power exerted during post-fieldwork period-writing and representing. As Kondo (1990) stated, "the questions I asked and the responses I received, even the writing of ethnographic text, occupy a space within a particular history of a specific ethnographer and her informants as we sought to understand each other within shifting fields of power and meaning" (p. 8). Some researchers have described these positions in

terms of either being a research insider or research outsider, each bringing with it advantages and disadvantages. It has been argued that understandings of cultural practices and beliefs are only available to 'natives' who have greater linguistic competence, blend in more easily and are less likely to affect social settings, therefore an insider position is requisite for gaining an "accurate" understanding of cultural contexts and behaviours. An outsider position is arguably advantageous in that one can look at social contexts and cultural beliefs, and can view the culture with an "objective lens" and have limited effect on the behavior of the participants.

Having said this, however, it would seem a tenuous proposition that one can ever be completely outside or inside a particular experience, making this insider – outsider dichotomy not only problematic but dangerous. Donna Haraway (1988) offered a more malleable research position, one that situates the researcher on a continuum of insider-outsider positionality, one that both hinders and benefits the researcher throughout the fieldwork experience. For example, as a woman I do share in the power struggles of gender relations, albeit these struggles are informed by different cultural and historical context. At the same time, my experience as an urban woman of Euro-Canadian ancestry from Southern Canada accentuates difference not commonality. This again can heighten my awareness in the field, yet had the potential to limit my ability to relate and develop rapport in fieldwork settings. Zinn (1979) nicely articulated the notion of 'conditional insider status' which is often based on some fixed features of identity, such as gender, race and cultural background. This status is negotiated further throughout fieldwork experience and is enhanced by strong dialogic and reflective strategies (Naples, 2003). As a woman of Euro-Canadian ancestry entering the Kasabonika First Nation, it may be overstated to assume that some type of 'conditional insider status' was achieved in three weeks. Yet I have confidence that the shared experiences brought with me "in the field" assisted in negotiating an empathic and fair-minded, yet neutral presence within the community.

Checking the "familiar" in an unfamiliar place. Critical throughout my fieldwork was to constantly engage in self- reflective practice. Williams (1996) discusses the self-reflective nature of ethnography stating, "fieldworkers must perform ongoing self reflection or "homework" to continually try to figure out the power implications of who they are (or, better put, how they are being construed and by whom) in relation to what they are doing, asking and observing" (p. 73). Although I have discussed the importance of being reflective in my own research, I am equally aware that ethnographers never obtain a definitive portrayal of the culture and the behaviors within, regardless of how transparent or reflective they were in the field. It is now more commonly accepted that ethnographers speak to what was observed within the field creating a textual product that is "necessarily and partially located and screened through the narrator's eye/I" (Kondo 1990, p. 8).

Human beings, human relationships and events involving humans are never perfect. Therefore, trying to obtain an accurate description and attempting to eliminate oneself from the equation is a fruitless endeavor. There will always be power struggles, various influences on behavior and subtleties that affect situations no matter how careful and self-reflective a researcher attempts to be. Through ethnography, experiences are transformed into texts to be discussed, debated and critiqued in hope of fostering new epistemological possibilities. Clifford Geertz (1986) reiterated this point when he states: although the inherently partial and incomplete nature of ethnography has been a source of "pessimism for some readers, it is also liberating to remove the pretence of a methodology that assumes people can be objectified through ethnographic lenses" (p. 25.). Therefore, the information I put forth regarding food choice, and the multiple factors influencing these choices, must be understood within my own constraints as a researcher and as an individual. In other words, reflectiveness is not a pretense of correcting limitations to enact accurate fieldwork portrayals, but rather a means to open dialogue (Fine, 1993; Naples, 2003).

Engaging in self-reflective practice, both in the field and in writing, helped in (a) reminding me of my Western origins of knowledge and ways of understanding the world that I did not want to impose on the women in the community; (b) refraining from having my own biases lead me too much in one direction of thought and (c) to inform my readers that my personality and my position has influenced the textual product, giving them the ability to critically accept or reject what they are reading. Being aware of the way I was perceived in the community, through clothing, social mannerisms, my behavior at community events- all these factors influenced the experiences the women chose to share with me, and thus the findings of this research. Reflectiveness, as such, was essential in the field, as day-to-day experiences required constant introspection and reflection.

The responsibility I have to the readers is one last point I wish to emphasize. By the time the reader gets to read, visualize and understand a specific cultural activity, it is actually four times removed from the original activity, and such is the nature of an ethnographic text. The cultural event or behaviour is first selected by the researcher, who then interprets and articulates it in some form of written discourse, and it is then interpreted by the eventual reader, removing it once again from the initial experience (Robidoux, 2001). Because the aspects I chose to include in my description of these women's dietary behaviors will inevitably be influenced by my personality, my background, my values and the relationships that I have with the women, the readers must be able to account for my position. Once again, this inability of ethnography to produce an exact portrayal of an event is not its downfall, but rather it is what makes ethnography a unique, creative means of speaking to the complexities of culture and cultural behaviours.

Methods

The research methods for this study i.e., semi-structured interviews and participant observation were conducted in Kasabonika First Nation, where I worked alongside an existing research program with my supervisor Michael Robidoux. The existing research program is a

multi-year project analyzing benefits and risks of off-the-land diets of six First Nations' communities within the Shibogama First Nations'Council, including Kasabonika First Nation. One of the principal objectives of this project is to establish relationships between levels of Wild-Food consumption, human blood contaminant levels and the incidence/prevalence of Type II Diabetes (Robidoux, Haman, Blais, Imbeault forthcoming).

Women who participated in the study by Johnson, et al., and forthcoming were recruited as part of the Risk-Benefit Analysis Project in the autumn of 2007 according to research protocols co-designed with the Kasabonika First Nation and University of Ottawa research team. With the assistance of a local research coordinator, hired at the onset of the study, community members agreed to participate in the study. Through personal tape recorded interviews conducted by Robidoux seeking to understand participant wild food consumption patterns, a wild food index was established based on a scale of 0 to 100, where no wild food consumption was the baseline 0, and exclusive wild food consumption listed as 100. Participants were placed in the high wild food (HW) group if their wild food frequency (or WF index) was at least 60 or higher. The low wild food (LW) group was classified as having a WF index of 40 or lower. To ensure the comparability of the two groups, care was taken to minimize age disparities. A total of 18 high wild food (HW) and 15 low wild food (LW) participants agreed to participate in the study. The high wild food group was comprised of 8 women, whereas 10 women were in the low wild food group. The age of each group ranged from 32 years of age to 76 years of age. The average age of HW group members was 52 and for the LW group the average age was 41. Following community research protocols, these women 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 (see Appendix A for a sample list of questions).

Semi-Structured Interviews

The interview component of this study followed a semi-structured format in order to obtain a rich experiential account of the role that food and diet play in women's lives. The flexibility with regard to the 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; Dickson, Hesse-Biber et al., 2004, Oakley, 1981). Ong (1994) discussed the importance of the ethnographic interview in that it "brings out the voices of the less powerful and allows them to speak up" (p. 374). Oakley (1981) warned researchers about the structure of interviews as being patriarchal, where the interviewers define the role of interviewees as subordinates and where information is extracted and feelings and emotions do not exist. She noted that finding out about people through interviewing is sometimes hierarchal, but works best when the interviewer is prepared to invest his or her own personal identity in the relationship. The importance of participation and reciprocity in an interview has also been noted by others who have interviewed and worked with First Nations women (Benoit, Carroll & Chauldry, 2003; Dickson, 2000; Loppie, 2007). Efforts were made by our team to conduct interviews in a non-threatening manner and environment. The women most often preferred to be interviewed in their homes with a conversational format. While hierarchal relationships could not be entirely avoided, the relaxed atmosphere did put participants at ease which enabled more fluid and fruitful dialogues.

Interviews were conducted with the assistance of the local 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 (see Appendix A for a sample list

of questions). The interviews lasted between 20 to 45 minutes and focused primarily on understanding the diets of the participants. Each interview was comprised of three components. The first component involved asking 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 participants' perception of the store and how perceptions may or may not have changed their diets and their values with regards to foods. After this was established, questions focused on specific factors that influenced their food selection. Participants were asked open-ended questions regarding how their various life experiences had influenced the foods they chose to include in their diets. Specifically, how living within their community and 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, if we were using the life course perspective (Devine, 2005; Elder, 1994; Elder, 1998, Wethington, 2005).

Participant Observation

Over the course of the fieldwork for this project, approximately one month in the spring of 2008, I would provide ethnographic description of the community, regarding local infrastructure, facilities, resources and community demographics, local food habits, stores and

costs of food. These notes will be taken as I immerse myself in this culture and engage in various day-to-day activities such as meal preparations or village activities. These notes will later be useful in providing a more holistic picture of what is occurring within this culture. Apart from these descriptions, interviewing and living among the residents of Kasabonika, helped in placing the importance of food, diet, and health in the larger socio-cultural framework to which it belongs (Hammersely & Atkinson, 1995; Naples, 2003; Wong, 2002). After each interview, field notes that were taken included descriptive accounts of the women, the setting, emotional reactions and experiences of both me and the participants and my general thoughts regarding the outcome of the interview (Emerson et al., 2001; Vukic & Keddy, 2002). The "post-interview" reflection notes were an indispensable tool in understanding women's experiences. During the writing and analysis phase, interview notes helped in understanding how ethnographies and semi-structured interviews were very much about "shared experiences" and "mutually created stories," (Fontana & Frey, 2005, p. 696) as I was able to reflect on how my position as a researcher may have affected the information shared. A field diary was also kept, as according to Bernand (1988) "a diary is absolutely needed in the field as it helps in dealing with emotions in the field that make this work difficult" (p. 184).

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[i] I recognize the multiple meanings and potential political connotations of the term traditional. To avoid confusion or any sense of judgment, I refer to deGonzague et al who define traditional diet as being made up of "all food within a particular culture available from local natural resources and culturally accepted, as well as the activities associated with procuring it" (deGonzague, Receveur et al., 1999) p. 710).

[ii] As an example, Rose Bortolon is a resident of Prince George and Minister of Health for the Métis Nation BC. She has worked with the Métis as a volunteer since the 1970s. Rose works on behalf of the elders in her community and in B.C. on many fronts, including housing, health, culture and language. A volunteer for the 2005 Seniors Games, Rose was also a nominee for Citizen of the Year in Prince George. Rose is the mother of four daughters and grandmother of four. A woman of great strength and perseverance, she has risen above her own challenges and dedicated much of her life to ensuring the most vulnerable members of our communities have access to programs and services they need.

Running head: DIETARY ANALYSIS OF A FIRST NATIONS' COMMUNITY

Klick © Counting Calories or ...Caribou... Is it *Really* this Simple? A Psycho-Social Analysis of Dietary Choice in a Northern Ontario First Nations Community

Krista Johnson

University of Ottawa

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 at the dietary choices of women living in a First Nation's community in northwestern Ontario. An ethnography was conducted over a three -week period in which the researcher attended community events and interviewed twenty six women. Experiences in women's lives led them on different life courses. Family involvement and age of women influenced transmission of informal knowledge and feelings of self worth. These and other factors influenced the life course and the resultant "dietary trajectory" from which women made choice. Considering individuals in changing social, cultural and historical climates deemed the life course perspective applicable in this study. Findings suggest that solutions to the "health epidemic" can be found by looking to the women in the community who are making nutritious choices. From this point, formal and informal programs that facilitate reintroduction of traditional knowledge into lives of younger community members can be developed.

Introduction

Food choice is a topic explored by experts in many domains. Research has shown that choices are dependent on a wide variety of factors including taste, convenience, motivation, health benefits and socio-economic status (Bisogni, Jastran, Shen & Devine, 2005; Devine, 2005; Noble, Corney, Eves, Kipps & Lumbers, 2003; Olson, 2005; Stepcoe, Pollard & Wardle, 1995 Wardle, Parmenter & Waller 2000).

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, Receveur, Soueida & Berti, 2007; Popkin, Lu & Zhai, 2002). Popkin et al. (2002) described the nutrition transition as changes in food availability, increases in non-communicable disease, shifts to decreasing physical activity and an increase in use of processed food, high in starch, fat and sugar. Increased availability of food choices and the accompanying change in diets is cited as a primary cause for the rapid deterioration of health among First Nations' populations (Anand, Jacobs, Davis, Yi, Gerstein, Montague, Lonn, 2001; Harris, Gittelsohn, Hanley, Barner, Wolever & Gao, 1997). To address this deterioration in health, First Nations peoples are seeking local dietary strategies to replace Western dietary practices, both in terms of food selection, consumption patterns, and dietary change. The process by which food choices are made is playing an important role in the high prevalence of obesity and obesity related diseases (Kaler, Ralph-Campbell, Pohar, King, Laboucan & Toth, 2006; Kuhnlein et al, 2007; Wolever, Hamad, Gittelsohn, Gao, Hanley, Harris et al., 1997; Young, Reading, Elias & O'Neil, 2000).

For First Nations peoples across Canada, the prevalence of overweight and obesity is significantly higher than the rest of the population. (Fox, Harris, & Whalen-Brough, 1994; Harris

et al., 1997; Kuhnlein, Receveur, Soueida & Egeland, 2004). According to the First Nations Regional Longitudinal Health Survey (2005), approximately 75% of First Nations adults were overweight/obese compared to 53 % of the adult non-First Nations' population (2004 Canadian Community Health Survey). In North Western Ontario specifically, the area in which 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 in men (Harris et al. 1997; Wolever et al., 1997). Further research conducted by Robidoux, Imbeault, Blais, Pal, Seabert, Krummel et al.(forthoming) in the Kasabonika and Wapekeka First Nations, recorded the prevalence of overweight/obesity to exceed 90%, a prevalence which is almost double the national average cited among non-First Nations populations (Canada First Nations Regional Longitudinal Health Survey, 2005).

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, Kowalski, Humbert, Fagan, Cannon & Girolami, 2006; Garriguet, 2004; Iwasaki, Bartlett & O'Neil, 2004; Koch, Kralick & Sonnack, 1999). Garriguet (2004) noted that the overall differences in overweight and obesity between First Nations and non-First Nation- populations were largely attributable to First Nations women, specifically those between the ages of 19 and 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 the Food Guide" (p.7). The need for culturally relevant programs tailored for the specific needs of males and females is fundamental, as specific segments of the population are often more prone to developing obesity related diseases (Gittelsohn et al.,1995 & Fleming et al., 2006). Considering,

then, that food choice is the outcome of many health and cultural factors, the purpose of this study is to examine the food choice behavior of women in the Kasabonika, a First Nation's community.

Some of the research with First Nations communities has involved intervention type programs that aim to reduce type II diabetes (Gittelsohn et al., 1995; Hanley, Harris, Barnie, Gittelsohn, Wolever, Logan & Zinman, 1995). Oftentimes these programs emphasize diets based on the Canadian Food Guide, with little consideration given to the fact that these Western dietary practices may not always be economically feasible or consistent with historical food gathering practices (Berkes, George, Preston, Cummins & Turner, 1995; Bersamin, Zidenberg, Stern & Luick, 2007; Lambden, Receveur & Kuhnlein, 2007; Lawn, Harvey, Hill & Brule, 2002; Morrison & Dooley, 1998; Saksvig, Gittelsohn, Harris, Hanley, Valente & Zinman, 2005; Schraer, Mayer, Vogt, Naylor, Brown, Hastie & Moore, 2001). Taking into account the social and historical contexts in which choices are made will help researchers understand the certain situational and individual reasons why people choose to eat various foods. This paper also explores the cultural significance that is involved in the preparation and eating of traditional First Nations foods.

Assessing the viability of a re-emphasis on wild foods is an avenue for increasing connections to culture and re-instilling a sense of pride and self efficacy that have been lacking since Euro-Canadian intervention (Bruyere & Garro, 2000, Kuhnlein et al., 2004; Kuhnlein et al., 2007; Lambden et al., 2007; Popkin, 2002; Receveur & Kuhnlein, 1998; Rimal, 2000). In order to understand the viability of re-introducing wild food consumption, how dietary decisions are made must first be considered. The life course perspective considers individuals making decisions from within specific social and historical contexts (Elder, 1994; Elder, 1998). Ethnography is the methodology used to understand food choices for women in Kasabonika. This was one of the two community partners that participated in the research program described below.

Methods

This study has been built on existing research by Robidioux et al. (forthcoming) that was conducted in the Kasabonika and Wapakeka First Nations in 2007 and 2008. This portion of the research was done exclusively in the 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 956 members, with 898 people residing in the community. Kasabonika is accessible year-round by air and by winter road for approximately three months of the year, depending on ice and weather conditions. No formal trucked garbage disposal system exists, however a dump is maintained by the community members. Processes for the removal of large items and the removal of hazardous materials are not in place. Water and sewer infrastructure is present in the community with 80% of homes having piped water and flush toilets. Approximately 80% of the houses have direct water hook up, and the remaining 20% have 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 (Community health profile, 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 employment rates ranging from 30-40%. The community has one grocery store that provides basic food, some clothing and sundry items. Fresh fruits and vegetables, milk, whole grain products, fuel and furniture items are available in the store. Fresh meat products are not available in the local store. A list of some of these items along with their cost is provided under items # 53 and # 54 in the community profile template found in Appendix B.

Ethnography

An ethnographic methodology conducted from a feminist perspective (Crotty, 1998; Hesse- Biber, Leavy & Yaiser 2004) is used to examine the dietary patterns of women in Kasabonika.. Ethnography is a methodology where one employs "all five senses" in hopes of illuminating a cultural behaviour (Bernand, 1988; Fine, 1993; Hammersely & 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, Ayala, Guadalupe & Harris, 1999). 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, Fritz & Shaw, 1995, p. 162).

The ethnography for this study was conducted over a three- week period, from May 6th through to May 26th, 2008. During this time various activities were attended: e.g., Mothers' Day and memorial feasts, informal meals and rummage sales. 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 understanding that food choice is embedded in psychological, social and cultural factors that are a result of living on a remote reserve in North Western, 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 in order to obtain a rich experiential account of the role that food and diet play in women's lives. The flexibility with regard to the 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; Dickson, Hesse-Biber et al., 2004, Oakley, 1981). Ong (1994) discussed the importance of the ethnographic interview in that it "brings out the voices of the less powerful and allows them to speak up" (p. 374). Oakley (1981) warned researchers about the structure of interviews as being patriarchal, where the interviewers define the role of interviewees as subordinates and where information is extracted and feelings and emotions do not exist. She noted that finding out about people through interviewing is sometimes hierarchal, but works best when the interviewer is prepared to invest his or her own personal identity in the relationship. The importance of participation and reciprocity in an interview has also been noted by others who have interviewed and worked with First Nations women (Benoit, Carroll & Chauldry, 2003; Dickson, 2000; Loppie, 2007). Efforts were made by the researcher to conduct interviews in a non-threatening manner and environment, as women who participated in this study most often preferred to be interviewed in their homes using a conversational format.

While hierarchal relationships could not be entirely avoided, the relaxed atmosphere did put participants at ease which enabled more fluid and fruitful dialogues.

Interviews were conducted with the assistance of the local 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 (see Appendix A for a sample list of questions). The interviews lasted between 20 to 45 minutes and focused primarily on understanding the diets of the participants. Each interview was comprised of three components. The first component involved asking 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 regarding how their various life experiences had influenced the foods they chose to include in their diets. Specifically, how living within their community and 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; Elder, 1998, Wethington, 2005).

Theoretical Framework

The Life Course Perspective

A life course perspective 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).

> Life course theory and research alert us to this real world, a world in which lives are lived and where people work out paths of development as best they can. It tells us how lives are socially organized in biological and historical time, and how the resulting social pattern affects the way we think, feel and act. (Elder, 1994, p. 15)

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 1920's) and the Berkeley cohort (children born in the 1930's). 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 change effects bidirectional change on women's life-patterns. They impact on societal values and institutions on the one hand, and on 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 & Giele, 1998; p. 8.). The combined works of Giele (1988) and Elder (1994) led to 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).

Historical context. Further analysis of historical demographic data formed the basis for the concept of historical context. Demos (1970) & Bronfenbrenner (1979) reconstructed family life and helped to illuminate the family as a mediating institution between economic and social change, and the shaping of individual lives. The Berkeley and Oakland cohorts experienced the Depression at different developmental stages. The Berkeley children born during the Depression and who experienced the "empty houses of World War II" were more adversely influenced by other events they experienced in their lives compared to the children in the Oakland cohort who were born earlier. Individual life courses will in turn, reflect differences in birth years.

Timing of transitions. Individuals appear to adapt to the challenges confronting them by timing the events of their lives- in work, education, family behavior and leisure- so as to make the most of opportunity and suffer the least frustration and failure. Transitions into roles can be well timed or not well timed and may have positive or negative outcomes as a result (e.g., timing of entry into the workforce coupled with marriage at a young age may result in individuals experiencing stress and burnout). For example, the age at which one makes the transition from being single to being married will affect psychological development into adulthood if not "timed"

constructively. Adjusting to this role will also be affected by whether or not one experiences another transition, such as the birth of a child. This incidence, sequence, and duration of roles are termed "social timing" by health researchers using the life course perspective (Devine, 2005).It is noteworthy that within the Berkeley and Oakland cohorts, the impact of timing into transitions of roles was examined. Transitions, such as early marriage or childbearing, would naturally set in motion numerous advantages and disadvantages.

Linked lives. Empirical works on the sociology of aging helped to comprehend the many possible ways in which the life course of one person is linked to the fate of both age peers and the larger social order (Elder & Giele, 1998). Behaviours are influenced by intergenerational and intra-generational forces. As such, 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 bidirectional model of social movement, proposed by Giele (1988) largely attributes women's consciously changed behaviors to her perceptions of micro and macro level relationships.

Human agency. Arguably the most important concept of the life course theory, individuals exhibit agency in every action. Motivations of individuals to meet their needs result in their active decision making and organizing themselves around certain goals. Depending on past experiences (historical and geographical location) individual goals may differ. Elder's (1975) research noted that girls from the Depression era growing up in deprived homes, tended to seek traditional homemaking roles, whereas girls from non-deprived homes were more likely to get further education and be interested in combining paid work and family life. Giele (1988) noted that feminist leaders experiencing personal loss were more likely to be interested in temperance and charitable work, whereas those denied work opportunities, due to gender, were more likely to support the suffrage movement. By making choices and acting *within* the opportunities and

constraints of history and social circumstances individuals are agents of change and construct their own life course.

Applying these 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 to understand why people's lives follow life courses. Life Courses is defined as: "Life courses and trajectories that result refer to a sequence of socially defined roles that the individual engages in over time" (Elder & Giele, 1998, p. 22). 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 of trajectories to understand such things as food choices across the transition to motherhood (Olson, 2005) and food management skills (Bisogni et al., 2005).

Trajectories applied to health. Trajectories are similarly defined by researchers in psychology, sociology and health "as stable patterns of behavior that a person engages in over time" (Seeman, Singer, Ryff, Love & Levy-Storms, 2002, Olson, 2005; Devine, 2005; Wethington, 2005). Developmental trajectories are shaped by the four key principles of history, time, linked lives and agency (Elder 1985, 1994). The motives of people (agency), the degree of internalization and integration of societal expectations and norms (linked lives) and/ or an individual's different cultural backgrounds are all mutually influential.

Devine (2005) specifically defined a trajectory for food choices as: food "persistent thoughts, feelings, strategies and actions with food and eating developed over the life course" in a

social and historical context (p. 122). Food choice trajectories are cumulative and relatively stable over adult lives. Often, because they develop over a lifetime, they incorporate people's meaningful experiences with food and eating. In the following sections, the term "dietary trajectories" will be adapted from Elder (1985) and Devine (2005) to understand how dietary choices are products of individual goals, social contexts and cultural heritage.

Results

Interpreting Results; Understanding Choice

Before reading the following sections on trajectories, several terms must be clarified. 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, moose stew and bannock 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 at the Northern Store. Lastly, women are referred to as belonging to *trajectories,* where inclusion into a specific dietary trajectory meant women made similar choices, and had similar thoughts, experiences and perceptions with regards to food choices. Factors influencing dietary choices are further illustrated in a tabular format (Tables 1-3), found in Appendix C. The following, delineates what the women described as primary factors influencing their food choices and how these factors translated into specific trajectories.

Trajectory I. The women in this trajectory were between 18 and 36 years of age, with the exception of one woman who was in her 50's. 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 described their food choices as being influenced entirely on the food's palatability and convenience of preparation. These participants 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" **(Sally[i])** and "I just buy what I am craving" **(Lisa)** 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 necessarily? Is it because they taste good, or is it because they are easy, or is it because—like why does she go for those foods over maybe chicken, or broccoli or— ?

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

Interviewer: So she finds that her grandson likes the fries and that kind of thing—

Translator: Yep

Interviewer: Is she worried that those foods maybe aren't necessarily the best foods 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" **(Rebecca)** highlight the limited attention given to meal management and planning by these women.

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

[i] All names of all participants have been replaced with pseudonyms

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

Heraldina: No not really, we just don't really like them.

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

Heraldina: 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 women in this trajectory ranged from 33 to 42 years of age and had an average age of 38 years. Four of the five participants were employed full time occupying prominent positions in the community, such as Northern Store Clerk and Manager of Band Finances. Participants in trajectory 2 were generally active in the community and participated in all of the community events we attended over the course of the fieldwork. Unlike the participants in trajectory 1- participants, these women were more verbal and forthcoming during interviews.

For women with this dietary trajectory, good choices were based primarily on what was available and convenient; however, participants were cognizant of healthy food messaging 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 with regard to 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, 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 Western ideals of diets and nutrition. The women explained that they did try 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:

> **Betheena**: We have a diabetes worker there so she talks about nutrition
>
> **Interviewer**: What kind of things does she talk about?
>
> **Betheena**: 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
>
> **Interviewer**: Really?
>
> **Betheena**: Yeah, that is what she said--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
>
> **Betheena**: 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 seen in: "figuring out what to buy is sometimes confusing; they used to put the sign that said 'healthy choices' but not anymore" **(Sharolyn).** 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" **(Therez).**

Women in trajectory II 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 Western foods that were associated with eating 'healthfully.' For example:

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

Therez: 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?

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

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

Therez: 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:

Sharon: My dad isn't well, so he doesn't go out hunting anymore, but ya 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 themes in this dietary trajectory were 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 years. 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. As the Elders with whom they were connected ate traditional foods and "were still doing many things and seemed to be a lot healthier" **(Mave)** 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:

> **Helena**: One of my grade eight students has type II 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 Elders 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?
>
> **Sylvia**: 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" **(Cecilia)**. 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*.

Discussion

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 Aborginals (Barton, Anderson & Thommansen, 2004; Hoy, Norman, Hayhurst & Pugsley, 2008; Iwasaki, Bartlett & O'Neil, 2004; Garriguet, 2004; Wein et al., 1991) and non-Aboriginal populations (Noble et al., 2003; Payette & Shatenstein, 2005; Schcibchenne et al., 2007; Stepcoe & Pollard, 1995; Stewart & Tinsley, 1995). While these factors are not mutually exclusive from one another, it is important to determine why certain factors play a greater role than others when making food choices. For example, the younger women making choices solely based on taste had different experiences over their lives' course such as less family involvement, impacting informal knowledge sharing, compared to the older women who had learned about the cultural and health benefits of wild food. Some of the women in the community, both young and old, had received knowledge of tradition and culture. Knowledge was transmitted by mothers, grandmothers, during family events and gatherings. This impacted dietary trajectories that resulted in healthier choices because these women had more appreciation for foods they were choosing to include in their diets. Helpful in understanding why knowledge was (or was not) shared among families in the community is intricately linked to the life course theory. 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; 1998; Elder & Giele, 1998, Wethington, 2005).

Considering Life Courses: Everything is 'Connected'

The Uninformed dietary trajectory; Strained Relations, and accumulation of disadvantage. Women enacting the uninformed dietary trajectory (trajectory 1) 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 the situation (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*:** Elder (1998) 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 life, placing them in similar contexts in which they made choices. When experiencing these changes, dietary quality and choices surrounding foods become low priority. For example, there were two young mothers who were starting 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 socio-economic bracket within the community, coupled with early motherhood, compromised these women's food choices and overall food consumption.

Women in group one shared similar economic status, similar levels of education, and living conditions in many cases were minimal. Many of these women had two or more children in the household and were dependent on a spouse with seasonal employment. At times, it appeared that their life focused exclusively on obtaining necessities: "I have five children to feed, so I just buy what the kids like to eat" **(Erica)**. These types of situation left little time for education surrounding

health or for preparing more nutritious wild foods, etc. This resulted 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, Boyce, Simpson & Pickett, 2006; Wardle, Waller & Parmenter, 2000; Wardle, Waller & Jarvis, 2002). Although the direction of this relationship (i.e., whether low socio-economic status prohibits positive health behaviours, or poor health leads to low SES) is unclear, women in this group had a low-socioeconomic status and educational levels. This impacted their ability to make informed decisions around nutrition and health (Janssen, Boyce, Simpson & Pickett, 2006).

Another example of the effect of *timing* was apparent during one interview with one 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 was in her fifties and was the caregiver to her husband, whom she had married at a young age and was caregiver 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 had been raised during the 1960's when diets and accompanying knowledge were undergoing rapid transformations. She subsequently 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. Then due to a myriad of factors and events in her life, she did not experience any of the protective factors that would have helped in the development of a 'healthier' dietary trajectory (i.e., family on the reserve, formal or informal training). The perspectives that some were able to achieve through experiences, were relatively non-existent 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 inter-generational transfer of knowledge.

***Linked or un-linked lives*:** The life course concept of linked lives serves to inform the decision making processes of these women. Behaviours are influenced by inter-generational and intra-generational forces. As such, 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 inter-generational forces experienced by First Nations' people in Canada have been noted by researchers, such as Adelson (2005) who states that behaviors are "entrenched in the history of relations between Aboriginal peoples and the nation state" (p. 454. Since the introduction of the permanent store in the 1950's, reliance on wild foods diminished and there came a greater reliance on the store (Popkin et al., 2002; Popkin et al., 2003). 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, as maintaining these relationships is 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, 2004; Kuhnlein, 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 accordingly. Behaviors 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 socio-economic 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 had no children. Both women had expressed little to no interest in improving their diet and were seemingly 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?

Heraldina- 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?

Heraldina: Not really

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

Heraldina: 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" **(Lisa).** 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 & Wildsmth, 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., 1999). 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 in actuality a product of strained relationships and situational factors. Life experiences and subsequent poverty forced women into making unhealthy food choices.

The Evolving trajectory; changing relations and transitions. The evolving dietary trajectories of women in this group were characterized by confusion regarding 'what' to eat largely due to the timing of 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, Lavallee, Gray-Donald & Delisle, 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 behavior 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, Iwasaki, Gottlieb, Hall & Mannell, 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:

> **Sharolyn:** 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?
>
> **Sharolyn**: 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:

> **Bethena**: 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 it was the timing at which women were diagnosed with Type 2 diabetes that made the experience stressful and decrease 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" **(Therez)**.

Rimal (2000) pointed out that when trying to improve health behavior, individuals must feel confident in their own abilities and have a "realistic appraisal of these 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 behavior 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.e., "I don't follow all of that, it's too confusing"- **Sharon**). 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: 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" **Sylvia**) 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" **(Karen)**. Another woman with an evolving trajectory openly expressed that she wanted to improve her health: "I know I have to eat more fruits and veggies" **(Martha),** 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 that they did not eat it very much and urged us

to exercise similar caution, due to the high fat content of the dish. These comments are significant in that both of these women were type 2 diabetic, and in actuality this high protein, low sugar dish would have been much more beneficial than some of the store bought foods that were consumed at the feast by these women (Bersamin et al., 2007; Berti, Receveur, Chan & Kuhnlein, 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. Especially due to the fact that these women's informal knowledge of traditional foods (e.g. "eating these foods is something that has always been done" **Bethena**) was not infused within 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 behaviors. The use of community resources, although somewhat "haphazard," exemplifies the life course principle of agency (Elder 1994, 1998) 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 behavior, and

make food choices not solely based on availability was dependent on situational factors and agency. If programs and nutritional guidelines had a greater emphasis on traditional foods and were taught informally, women may have been more inspired to make changes and achieve goals, as learning informally was just "the way we learned"- **Therez**.

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 foods' 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"- **Cathy**. 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:

> **Irene**: 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 if this is 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" **(Sylvia)**. Eating these foods was a way to demonstrate commitment to culture as these were the foods that had kept family strong for generations, and in actuality, 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 childhood. 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 grand-daughters 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 & 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, 1971; 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" (**Laura**).

> **Mave:**"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:

> **Marlene**: When I was growing up, there was no T.V., 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"-**Marlene.**

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

> **Kathy**: 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:

> **Marlene:** 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 these women gained from having family and engaging in activities together (i.e. 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. As these women learned from their families, and surrounding contexts, we as researchers, must learn from them as well. The participatory community centered 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 changed as women proceeded through their life course. Inherent in this progression through life, is that with age comes new experiences and the confidence to make change. In this particular First Nations community, choices regarding diet followed a similar trajectory. Trajectories were best understood when projected onto an age-based continuum, where awareness and knowledge are the underlying forces. As such, younger women made unhealthier choices and older women made healthier choices. A group of women however, formed an exception to this trend, in that they were young, motivated and aware of ways to live a healthy lifestyle. The key to their awareness was a sense of agency, and pride that was fostered through connections.

Human behaviors are the result of individual thoughts and feelings and the social context in which the individual exists (Bandura, 1977; Bandura, 1989; Rimal, 2000). Whether one takes the study of human behaviour and applies it to understanding romantic relationships, family relationships, behaviors 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 psycho-social influences that affected dietary choices and perceptions. The application of the life course theory to First Nations' populations is pioneering, but the relevance is evident in women's dietary experiences. Further, this research demonstrated 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 "uniformed, evolving and healthy." Historical locations preceded challenging life circumstances which "set" some women on the uninformed dietary trajectory. Informal knowledge sharing had not taken place for these women and therefore an unawareness of foods, health and nutrition was prevalent among these young women of low socio-economic status. The fact that these feelings and behaviors were only the reality for a minority of women in the community, challenges some of the dominant misperceptions of First Nations' people.

The intra and intergenerational linkages, and the timing of a major transition 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 a group of women, both young and old. Their healthy trajectories resulted in dietary choices that were informed by nutrition and tradition. The older women had similar views on health and the foods they were eating. There was a sense of dislike towards the store, as this was something that the woman attributed to the high incidence of diabetes in the community. They felt good eating

wild food but had little understanding regarding the nutritional values of their wild foods. The younger women 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 on the reserve and had knowledge of their past.

The second conclusion and future direction that can be taken from this research is the evidence that people in the community were making healthy lifestyle and dietary choices. Women were agents of change, acted towards a healthy goal, and resisted a dominant and prevailing unhealthy discourse: 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, women's definition of health were self-derived and internalized. It came from their own experiences, (informally; being taught by their grandmothers, learning from their fathers, or formally, post-secondary training, learning from the health practitioners). As First Nations scholarship gains momentum and popularity amidst mainstream research, there has been a demand to articulate the uniqueness of the thought of First Nations people, knowledge, wisdom and relations (Bartlett et al., 2007; Wilson & Rosenburg, 2002). One such notion stressed by Canada's first peoples is the importance of relationships and the "context that they represent" (Wilson, p. 161, 2003). Another is the cyclical and inter-connected nature of all things living (Newhouse, 2004). Understanding these fundamental differences between First Nations and Western thought forces us to consider both the direction of future research with First Nations people and to understand the current state of community health. Looking to the women in this community, both young and old who were making choices that were nutritious, practical and sustainable will provide researchers with answers to the encroaching health epidemic.

Informal knowledge sharing sessions facilitated by Elders, hunter assistance programs and inclusion of local representatives in school curricula would be potential avenues to encourage and support the wellness that already exists in the community. Efforts and resources must be utilized in harnessing the desires of First Nations people to teach, to share and to connect. While recognizing the strengths of the First Nations culture, and listening to the intelligent and intuitive voices of these people, we must also help them to integrate modern knowledge with their traditional knowledge and this would further promote their health and wellness. The wellsprings of inspired knowledge and wisdom come from within the very spirit of a culture. Our efforts can, at best help them to enhance, to elevate and to enlighten the finest aspects of their culture.

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Appendix A

Semi-Structured Interview Guide

Personal Profile

1. Can you tell me a little bit about yourself?
    a. Age
    b. Place of birth,
    c. Length of time living in community
2. Do you have any hobbies? (what do you like to do in your free time?)
3. Do you have any children?
4. Are you married, single/ common law?

Traditional Foods ***(Main objective: why has consumption of traditional foods decreased, what do you think affects traditional food consumption)***

1. What is traditional food to you?
2. Do you eat traditional foods? Why or why not?
3. Do you prefer traditional foods or store-bought foods?, what is your favorite traditional food?
4. Do you believe traditional foods are important for your culture?
5. How do you feel when you eat traditional foods?
6. Does the way the food is prepared make a differences as to whether or not it is considered 'traditional' (if something is deep fried is it still traditional?
7. What are your least favorite traditional foods? Why?
8. What do you think effects traditional (wild food) consumption?
    a. Availability
    b. Cost
    c. What are some things you think could be done to increase the amount of traditional food that people eat?
9. Are there some traditional foods that are viewed more positively or negatively than others? If yes, why?
10. What is the most important traditional food in your family? Is there a traditional food that is always consumed for a certain special occasion
11. What foods did your parents, grandparents eat?, what have they said about the food that is eaten now versus the foods in the past
12. What are the differences you see in terms of diets between children, your generation and your parents?

Role of Women as Connected to Food ***(Main objective: what is women's role in local foodhabits: do women's unique roles affect food choice?)***

1. Who in your household is responsible for getting the food?
2. Where do you get your food?

3. If it is wild food, who gets it (who does hunting, fishing, harvesting?) who cleans and prepares it?
4. Is this a task that requires a lot of time and effort?
5. Is this an enjoyable activity?
6. Do you like cooking traditional meals for your family, or would you prefer to eat foods that are easily prepared
7. If mainly store-bought, who does the grocery shopping?
8. Is this done weekly, monthly, as needed (is this an enjoyable activity for you, stressful?)
9. What does your diet mainly consist of? Do you have 3 meals a day?
    a. How many fruits, vegetables, dairy, meat products do you consume daily?
10. Are having 'sit down' dinners important in your family?
11. Do you have any family traditions with regards to meal times
12. What does a holiday celebration look like for your family? What is your role in relation to preparing for these celebrations
13. Do you believe your role as women affects the foods you eat? If you had different responsibilities in the home or community, do you think you would choose to eat different foods
14. Do you know what the roles of your great grandmother was in relation to food preparation, harvesting?
15. How does your role compare to this?
16. Do you wish you had a more similar role?

Influences on Food Choice ***(Main Question: What other factors influence food choice?)***

1. What influences your choices in food?
2. What factors at the store influence the foods that you choose?
3. Are you influenced by television? (influenced by advertisements)
4. Are you influenced by magazines, models in magazines?
5. Do you consider the nutritional aspects of food when you decide what to eat?
6. I know sometimes when I am tired and have had a long day I don't feel like preparing a big meal? When you feel like this, do you think you choose different foods? Does effort required to prepare the foods influence what you eat?
7. When you are in a good mood, or when you have had a bad day, do you think you choose to eat different foods? Does mood affect your food selection? If so how?, what foods do you typically eat?
8. Do you think the way you feel about yourself (self esteem) affects the foods you eat?
9. Stress level?
10. *Is eating healthy foods important to you?*
11. Have you ever gone on a 'diet?'
12. If yes, what did your diet consist of?
13. Are you still on a diet now? Why or why not?
14. How does cost of food influence your diet?
15. If someone wanted to lose weight, what foods do you think they would try to cut out?" traditional vs non-traditional.?

Knowledge Regarding Food and Health *(Main question: What are the discourses that inform food choice? Which are dominant, local?)*

1. What is an important source of knowledge in the community? How do people learn about what are considered healthy foods, what are considered traditional foods
    a. School, parents, community, media, doctors, peers, nutrition labels?
    b. What foods do you believe are healthiest for you?
    c. Where did you learn about this?
    d. Where does your knowledge regarding 'what is healthy' come from?
    e. Is there a connection between certain foods and being healthy?
    f. If someone were trying to loose weight, what foods do you think they would try to cut out (traditional vs. non traditional?)
2. Is traditional knowledge valued in the community?
3. Are traditional foods valued in the community? Why or why not?
4. Were your parents an important source of knowledge for you?
5. What did they teach you regarding preparation of traditional foods?
    a. Do you think this is important?
6. How has your knowledge regarding food and health changed over time?
    a. Were certain things taught to you as a child are no longer valued?
    b. Are there any changes at all?
7. What are some of the things you think are important to teach today's children regarding traditional foods

Appendix B

Kasabonika Community Profile (F. Tarrant & Associates, 2005).

BASIC NECESSITIES OF LIFE

Availability of fresh fruits and vegetables (yes/no)
Yes

Availability of fresh milk (yes/no)
Yes

Availability of fresh meat products (yes/no)
No

Availability of whole grain products i.e. brown bread (yes/no) Yes

Availability of gas, fuel and oil products (yes/no)
Yes

Availability of furniture / household / personal items (yes/no) Yes

Estimated costs of food items: Based on what is available in the community please identify
the price per unit / volume / weight i.e. flour $5.95 / 5 lbs

Apples:$2.14/kg Oranges:$1.22/kg Bananas:$.84/kg Carrots:$9.95/5lbs
Potatoes:$7.79/5lbs Onions:$7.49/3lbs Milk:$6.45/2litres Cheese:44.69/250/12's
Yogurt:$1.29/175g Chicken:$13.89/1200g Pork Chops:$9.59/454g
Hamburger:$8.69/kg Brown bread:$3.69/loaf Oats:$7.49/1.35kg
Sugar:$6.15/2kg Juice:$3.89/litre
Soda pop:$1.25/355ml Chocolate chip cookies:$8.45/800g Potato chips:$3.99/270g