Improving Nutrition and Health:
The Perspectives of First Nations Youth and Adults

by

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A Thesis submitted to the Faculty of Graduate Studies of
The University of Manitoba
in partial fulfilment of the requirements
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Abstract

The high prevalence of obesity among Canadian First Nations youth and type 2 diabetes among First Nations adults is well documented. However, the perspectives of First Nations people, particularly adolescents, toward improving health and preventing diabetes are not well represented in the research literature. This research explores the perspectives of First Nations youth and adults working with them on the meaning of health as well as their thoughts on opportunities for and barriers to improving health and preventing diabetes. Ten in-depth individual interviews with adults and five focus groups with 26 youth were conducted in Opaskwayak Cree Nation near The Pas, Manitoba in October 2004. Interviews were tape-recorded and transcribed verbatim. Qualitative analysis was conducted using thematic analysis, analytical memos and NVivo 2 software. When talking about what being healthy meant to them, both youth and adults included the four aspects of health depicted in the Medicine Wheel in their descriptions. Participants spoke about the importance of positive adult role models for emotional health, the incorporation of traditional native practices into everyday life for spiritual health, the changes in diet and activity level that could affect physical health, and the significance of making good choices for mental health. Both generations identified diabetes and its complications as a concern in their community. For adults and youth, improving health and preventing diabetes incorporated more than physical health. Other components of emotional, spiritual and mental health were connected to these goals. Opportunities for improving health focused on community and family support. First Nations youth are concerned about factors in their surroundings that present a barrier to health and have constructive and practical ideas for improving health. Inclusion of cultural values in

health promotion activities could encourage participation and foster ownership of these programs.

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Dedication

This thesis is dedicated to the youth of Opaskwayak Cree Nation.
You are the future generation.
Soar high.

Table of Contents

List of Tables

List of Figures

CHAPTER ONE

Statement of the Problem

First Nations[1] people and communities have witnessed a dramatic shift in their way of life over the past 50 years (Harris et al., 1997). The traditional diet of many Canadian First Nations people has changed from one containing low carbohydrate and dietary fibre, moderate fat and high protein to one consisting of more saturated fat and refined carbohydrates (Gittelsohn et al., 1996a). The disease burden has shifted from infectious diseases such as tuberculosis, to chronic diseases related to modern lifestyle such as obesity, diabetes[2] and cancer (Hackett, 2005).

The high prevalence of overweight and obesity in First Nations people in Canada is a well-known problem (Gittelsohn et al., 1996b; Katzmarzyk & Malina, 1998). In particular, the increase in childhood and youth obesity has emerged as a significant public health issue (Guo & Chumlea, 1999; Nicklas et al., 2003; Serdula et al., 1993). Coupled with this, is the dramatic increase in the incidence of type 2 diabetes among First Nations youth (Dean et al., 1992; Young et al., 2000b). The factors that surround these issues are complex. Public health researchers are beginning to address these concerns using various approaches, the majority of which have focused on physiological and epidemiological factors using mainly quantitative methods. Investigators have reported associated risk factors for overweight among Canadian First Nations children such as television watching, fitness level and consumption of junk food (Hanley et al., 2000). Young and

[1] The term "Aboriginal" includes three distinctive groups in Canada: Indian, Métis and Inuit peoples (Constitution Act, 1982; Statistics Canada, 2003). The term "First Nations", referring to descendants of the original inhabitants of Canada, is now commonly used instead of "Indian". The terms, "First Nations", "Native", "Aboriginal" and "Indigenous" have been used interchangeably throughout this thesis where appropriate to refer to First Nations people.

[2] The term "diabetes" is used throughout this thesis to refer to "Type 2 diabetes".

colleagues (2000a) reported that high rates of obesity among children in a northern Manitoba First Nations community were associated with impaired glucose metabolism, indicating a high risk of development of type 2 diabetes (Young et al., 2000a). In a later study, Young and colleagues (2002b) investigated prenatal and early infancy risk factors for diabetes in Native children in Manitoba. They identified maternal diabetes, both pre-existing type 2 and gestational, as a strong risk factor for diabetes and breastfeeding longer than 12 months as a strong protective factor against diabetes (Young et al., 2002b). The prevalence of type 2 diabetes among children and adults in various Canadian Aboriginal communities has also been well documented. Researchers have reported steadily increasing and significantly higher rates of diabetes among First Nations populations compared to other Canadians (Dean, 1998; Fagot-Campagna et al., 2000; Green et al., 2003; Harris et al., 1996; Harris et al., 1997; Maberley, et al., 2000; Pioro et al., 1996). For instance, in Manitoba, First Nations people have more than four times the rate of treatment for diabetes than other Manitobans (Martens et al., 2002). While rates of other life-threatening conditions such as infectious diseases have decreased, these chronic health issues such as diabetes among First Nations people in Canada are becoming more prevalent and require examination from broader perspectives.

The quantitative studies reviewed above provide valuable information as to the extent and severity of obesity and diabetes among Canadian First Nations children and adults. Yet this epidemic is not well understood and numerous questions remain unanswered. For example, what are First Nations people's thoughts on this issue? Minimal literature exists that gives account of how Canadian Aboriginal adults and youth describe and consider health or the recent increase in chronic diseases such as diabetes

among their people. Judith Bartlett argues that "little academic effort has been expended for research on the meaning – conceptions and dimensions – of Aboriginal health and well-being for the purpose of program development" (Bartlett, 2005; p.25). Since youth are part of this current epidemic and are the future generation, it is especially important to speak with them to gain an understanding of their perceptions on improving health and preventing diabetes. As one Aboriginal youth proposed, "a lot of things that have been put in place for youth don't work because they haven't consulted youth themselves" (RCAP, 1996b; p.151).

Thus far, research into Canadian Aboriginal perspectives on health and disease has focused almost exclusively on adults with the exception of the Royal Commission on Aboriginal Peoples (1996b). The task force investigators asked youth about their thoughts on some of the health and social issues affecting them today and has reported that Aboriginal youth are eager to share their ideas and be involved in finding solutions (RCAP, 1996b). To date, no known research is available that follows up on the expressed interests and concerns of First Nations youth.

Several qualitative studies have been conducted with Canadian Aboriginal adults. In 1990, Naomi Adelson reported results of her exploration into the practices and perceptions of health of Aboriginal adults living in the James Bay area of Quebec (Adelson, 1990). Several accounts of Aboriginal women's values and beliefs concerning health have been conducted by researchers connected with the Prairie Women's Health Centre of Excellence (PWHCE) in Winnipeg, Manitoba (PWHCE, 2004; Wilson, A., 2004). Wilson (2003) has conducted qualitative research with adults in a Canadian First Nations community to explore the relationship between place (the land) and health

(Wilson, K., 2003). More recently, Judith Bartlett (2005) has explored Manitoba Métis women's conceptions of health and well-being through focus group discussions. Participants in all of these studies describe health in ways that go beyond commonly held biomedical concepts. Health was described by these participants as a balance between the spiritual, mental, emotional and physical aspects of the individual in connection with family, community and nation. These studies are helpful in understanding the perspectives of Aboriginal adults; however, they do not include the views of First Nations youth on the meaning of health. As stated, this is important for establishing appropriate intervention strategies.

Scant information is available in Canada on the potential barriers to and opportunities for improving health as understood by rural First Nations youth. Aside from the Royal Commission on Aboriginal Peoples (1996b) report, only one survey study asking rural non-Aboriginal youth living in western Canada about their attitudes towards improving health is available (Groft et al., 2005). These students identified improved nutrition, reduced stress and increased levels of physical activity as being important for health. This information is valuable for this specific community, but does not express the views of all rural First Nations youth.

Body image concepts and weight control practices of Canadian Aboriginal youth and adults have been studied by Gittelsohn and colleagues (1996b) as well as by Marchessault (1998). Most participants indicated dissatisfaction with their current body weight or shape and expressed a preference for smaller body shapes. Given the high prevalence of obesity among First Nations youth it is important to explore their cultural

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perspectives on weight and health concerns and how these viewpoints might be used to promote healthful thinking about weight problems and diabetes prevention.

Numerous qualitative investigations have been conducted among Canadian First Nations adults to learn about their attitudes towards and experiences of living with diabetes (Bruyere, 1998; Bruyere & Garro, 2000; Cosby & Houlden, 1995; Garro, 1995; Grams et al., 1996; Gregory et al., 1999; Henderson et al., 1995; Hernandez, 1995; Hernandez et al., 1999). Participants in these studies talked about an alternative perspective of diabetes. Explanations of diabetes pointed to individual responsibility as well as to broader societal and environmental changes experienced by First Nations communities in the recent past. Interactions with health-care providers were often relayed as less than positive (Cosby & Houlden, 1995; Gregory et al., 1999), and current diabetes education methods were said to be mostly ineffective because First Nations traditional ways had not been incorporated (Gregory et al., 1999; Hernandez et al., 1999). Results of these studies provide a culturally-specific perspective of living with diabetes, in addition to participants' views of current diabetes education strategies. These viewpoints warrant further investigation with the inclusion of First Nations youth's perspectives.

Efforts towards community intervention strategies have been initiated in several Canadian First Nations communities with the goal of developing collaborative partnerships between researchers and communities (Bisset et al., 2004; Boston et al., 1997; Gittelsohn et al., 1995; Harris, 1998; Potvin et al., 2003). These authors describe using various qualitative approaches to gain an understanding of relevant issues in the community and then move towards participatory action. Community participation in partnership with researchers has been reported to contribute to the success and

sustainability of primary diabetes prevention strategies in some communities (Harris, 1998). Inclusion of traditional Aboriginal culture and beliefs has been reported to enhance positive attitudes towards these programs. Although these studies provide examples of incorporating community members' support for improving the health of First Nations people, they have typically incorporated the perspectives of key community adults and health professionals and have not consulted community youth. Further, each First Nations community is unique in its culture, resources and health issues. Lessons learned from one community research project can be shared with other communities but must be adapted and tailored to the specific needs of each community, therefore requiring community-specific investigations.

Little in-depth research has been conducted on the perspectives of Canadian First Nations people, particularly adolescents, who are a part of the epidemic described above, and are the future generation of this population. Numerous questions arise from the existing research that need to be answered in order to address the established health concerns among First Nations people. What are the perspectives of First Nations youth on improving health? How do First Nations youth understand traditional values and beliefs regarding health and weight? Do they see these concepts as relevant? What are the perceived barriers and opportunities for improving health and preventing diabetes? What suggestions do First Nations youth give for improving health? Answers to these and other questions are necessary in beginning to understand how First Nations people view the health issues that are currently affecting them. By understanding their ways of thinking and knowing, strategies for improving health among First Nations people could be more effective.

The Research Question

The major purpose of this study was to elucidate the perspectives of First Nations youth and the adults working with them on their concept of health. Participants were asked for their perspectives on the meaning of being healthy, the current health status of youth and adults in their community, traditional Aboriginal beliefs on health and their relevance for today, and the barriers to and opportunities for improving health. Last, questions concerning perceptions of body weight and diabetes were included in the interviews with youth.

Overview of the Thesis

"Being cognizant of the role of the target group's health behaviour perceptions is key to planning appropriate and effective intervention" (Hakim & Wegmann, 2002; p.163). The objective of this qualitative inquiry was to understand the perspectives of First Nations youth and secondarily, other key adults at Opaskwayak Cree Nation (OCN), on improving health and identifying the opportunities and barriers for diabetes prevention. This is important because local perceptions, followed by active participation, can play a key role in empowering communities and fostering ownership of health promotion programs. Qualitative methods were selected for this project since in-depth research in this area is not well represented in the literature. Inclusion of youth's ideas can help to establish a framework for intervention strategies as well as increase youth participation in health promotion programs. As Rich and Ginsburg (1999) state: "Qualitative modes of inquiry can offer an adolescent-centered view into this complex

world. ...Our vision for the direction of adolescent health is likely to be clearest when adolescents serve as our guides, for they best understand the prose and the poetry of their lives" (p. 377).

Opaskwayak Cree Nation (OCN) was selected for this study because of a community member's expressed interest in the research. The size and location of this community made opportunities for finding participants for the project feasible. In addition, diabetes is a known concern in this community, and local people are interested in discussion about it. Approximately 400 OCN members have currently been diagnosed with diabetes (personal communication, Otineka Health Centre staff, October, 2005). These numbers are a rough estimate based on self-identification as having diabetes and are being monitored by the Otineka Health Centre in OCN.

Data collection began with an environmental scan, including a sketch of the layout of the community and assessment of local food costs, to provide an understanding of the realities of living in Opaskwayak Cree Nation. Through discussion with Opaskwayak Cree Nation youth, their perspectives on the meaning and value of being healthy (or unhealthy) were elucidated. Focus groups were conducted to explore their perspectives on health and the barriers to and opportunities for improving health and preventing diabetes. In-depth individual interviews were conducted with community adults to provide a context for the project, investigate their perceptions of health and ascertain their suggestions for improving the health of youth.

The literature review in Chapter Two includes discussion of both quantitative and qualitative writings in further detail that pertain to understandings on the meaning of health, both from a global and Aboriginal perspective. In addition, studies exploring body weight and health-related issues such as diabetes, particularly in relation to First Nations people are discussed. Finally, perceptions of supportive and unsupportive environments for health are reviewed. Review of these three topics provides an overview of what is already known in relation to the research objectives of the current study. Chapter Three explains the research methods used for this study and includes a research time-line, ethical considerations and participant profiles. Chapter Four provides the results of the environmental scan, and features a historical overview of relevant experiences of Canadian First Nations peoples throughout the past three centuries. This is followed with a brief review of current demographic statistics of the Canadian and Manitoba Aboriginal populations. The chapter ends with a description of the research site and results of the food costing comparison. The environmental scan provides a context for the comments of participants. Research results are presented in Chapters Five, Six and Seven. Chapter Five highlights meanings of health as described by the study participants. An understanding of how people in this First Nations community perceive health provides a culturally appropriate framework from which their other comments can be viewed. Chapter Six outlines the comments given by participants regarding weight issues and diabetes, including suggestions for diabetes prevention and health promotion. This type of information facilitates understanding of the significance of these issues to community members and highlights their views on prevention approaches. Chapter Seven documents participants' perspectives on barriers to and opportunities for healthy lifestyles in Opaskwayak Cree Nation. Youth's and adults' suggestions for improving the health of

youth in their community are also presented. Obtaining community members' views as to the realities and challenges of healthful living in their community provides a basis on which to focus intervention strategies. Incorporation of community members' ideas on improving health may encourage participation in, and cultivate ownership of health-promoting activities. Chapter Eight includes a summary of the results of the study, implications for the Opaskwayak Cree Nation community, and suggestions for further research.

CHAPTER TWO

Concepts of Healthful Living

This literature review will cover three main topics following the major research objectives. First, concepts of health from a general, global perspective will be presented followed by more specific concepts of health described by Aboriginal people. This information can aid in situating the perspectives of those who participated in the current study into a broader health context and allows for consideration of how these health perspectives may affect the lifestyle and health care of First Nations people. Next, a review of existing quantitative research on the high prevalence of obesity and weight-related diseases such as type 2 diabetes among First Nations people is presented. This is followed by explanations of causation of diabetes as described by First Nations adults. Given the current health status of Canadian First Nations people it is helpful to have an understanding of the rate of obesity and diabetes among this population. In addition, First Nations adults' explanations of the recent increase in the incidence of diabetes among their people begin to provide insight into their understandings of their own health circumstances. Last, perceptions of supportive and non-supportive environments for healthful food choices and adequate physical activity are presented. Opinions of a broad range of ethnically and socioeconomically diverse youth as well as adults are included. In order to maintain or strive for healthful lifestyles, an awareness of perceived barriers and opportunities for healthful living at the individual, family and community levels are helpful.

Meanings of Health

Global Concepts of Health

Thoughts about the meaning of health among the general population vary depending on personal experience, age and cultural and economic background. Crawford has suggested that health, similar to illness, is a perception based on the understanding and concerns of day-to-day life (Crawford, 1984). In a review of the literature and a large-scale survey on health attitudes in Western industrialized societies, Blaxter (1997) noted that those who were older with lower incomes were less likely to mention illness in relation to poverty or environmental issues, than those who were in more favourable circumstances. Similar ideas were conveyed in a discussion with working class women in Scotland (Blaxter, 1983). These women felt that poverty was not the cause of disease, but that disease was just something that happened, indicating the perception of randomness or inevitability of disease. To admit that poverty was the cause of illness and disease would be to admit that one did not have control over one's life and that in fact social class or status was directly related to health. Health, for many represents a status, which is socially recognized and admired (Crawford, 1984).

Another perspective on health mentioned by Blaxter (1997) is that of health being 'inside' the individual. Health was seen as the result of harmony, equilibrium and self-fulfilment. Conversely, illness was viewed as an attack from the outside, caused by the stresses of daily life. Based on her review of the literature, Blaxter (1997) concluded that in general, the idea of the inequalities of health is not expressed by lay people. Perhaps as Crawford (1984) has suggested, 'health' is a value-laden term and talking about health is a method for personal and social assessment.

Aboriginal Concepts of Health

According to the Royal Commission on Aboriginal Peoples, the concept of health for a First Nations person encompasses much more than merely the absence of sickness. "Aboriginal people from almost every culture believe that health is a matter of balance and harmony within the self and with others, sustained and ordered by spiritual law and the bounty of Mother Earth" (RCAP,1996a; p.184). When asked to define what being healthy meant to them, First Nations adults used descriptions such as having an "ultimate good feeling", "doing what he wants to" (Hakim & Wegmann, 2002), and "being alive well" (Adelson, 1990). A group of urban First Nations and Métis women living in Saskatchewan defined health using a holistic view. Their description included a broad range of factors such as "...education and training and parenting skills, kinship networks and physical environments ..." (PWHC, 2004; p.4). Adelson notes that the Cree word that best defines health means "being alive well" (Adelson, 1990; p. 25). This phrase includes a more comprehensive definition of health – eating well, keeping warm and being able to participate in work and social activities (Adelson, 1990 & 2000). Based on her work among Native American people (American Indians and Alaska Natives), Joe (2001) states that the cultural perception of health among most people in this group, is based on a framework of harmony and balance. A healthy state is believed to be one in which a person is free of pain or discomfort, is at peace with oneself and others and is in harmony with the elements of the greater environment (Joe, 2001). For the First Nations person, health symbolizes a balance between the physical, spiritual, emotional and mental aspects of life (Bird & Greyeyes, 1995; Hernandez et al., 1999; Turton, 1997). Thus, when life is out of balance, there is disharmony and possible sickness (Wilson, A., 2004). This

cultural framework of balance and harmony is represented by the Medicine Wheel, and has been used by indigenous peoples across North America (Abele, 1989). The interconnectedness of the wheel represents the relationship of the individual with their family, community and the world and balance of each aspect of the wheel is considered to be crucial for optimal growth and development (PWHC, 2004). The Medicine Wheel is also considered to be a symbol of "holistic healing, embodying the four elements of whole health" (RCAP, 1996b; p.153).

In discussions with Métis women living in Manitoba, Bartlett (2005) noted a distinction between health and well-being. Health was connected most often with physical issues, whereas well-being incorporated a broader, holistic approach. Conceptions of health for these women included exercise and a healthy diet, particularly for children and families. These concepts were expressed more in terms of staying healthy for the family than for personal reasons. Dimensions of well-being focused on a balance of emotional, spiritual, physical and mental health for the collective rather than individual good.

Similar perceptions were expressed by individuals from other non-Western cultural backgrounds. During interviews with moderately to highly acculturated Mexican-American women, aspects of physical, emotional and spiritual health were included in descriptions of health. These women experienced 'being healthy' as having balance and harmony within all these components (Mendelson, 2002).

Discussions with elders of different multicultural backgrounds also elucidated a broad explanation of being healthy (Hakim & Wegmann, 2002). The 94 participants included Native-Americans, African-Americans, Latinos and Vietnamese from a large metropolitan centre in Texas. References to spiritual, mental and physical health were

included in descriptions of being healthy. For example, Native Americans mentioned "Good Spirit" and "ultimate good feeling", Latino participants said "being active" and "helping people" and African-Americans cited "thinking good" and "free from disease" (Hakim & Wegmann, 2002; pp.165-167).

The understandings of health discussed above suggest a perspective that goes beyond the physical aspects of health, to encompass a broader framework which includes other aspects of health such as the mental, emotional and spiritual components.

Weight and Diabetes

The prevalence of obesity among First Nations youth has been well researched and documented. In The United States as well as in Canada, obesity rates among Aboriginal youth are increasing. In general, approximately 34% of girls and 28% of boys are overweight and an additional 36% of girls and 34% of boys are obese (Dean et al., 1998; Gittelsohn et al., 1996b; Hanley et al., 2000; Katzmarzyk & Malina, 1998; Young et al., 2000a). When compared with Canadian youth of European ancestry, the prevalence of obesity among Canadian First Nations youth was 9% higher in First Nations boys and was almost twice as high for First Nations girls (Katzmarzyk & Malina, 1998). Further, obesity rates have also been shown to increase with age. Gittelsohn and colleagues (1996b) reported that in an Ojibway-Cree community in northern Ontario, 30% of 10 – 19 year-olds; 50% of 20-29 year-olds and 70% of those over 30 years old were overweight (body mass index (BMI) over 27 kg/m^2).

High rates of obesity in children and youth are a concern because overweight children tend to become overweight adults (Nicklas et al., 2003). In addition, those who are overweight as children or adolescents have at least twice the risk of adult obesity than non-obese children (Guo & Chumlea, 1999; Serdula et al., 1993). Based on the research it is evident that interventions for healthy weights should focus on children and youth in order to reduce the rates of obesity in adulthood.

Obesity in the adult years has been shown to be directly linked to an increased risk of some chronic diseases which are currently affecting First Nations communities, such as hypertension, heart disease and diabetes (Field et al., 2001; Mokdad et al., 2003; Must et al., 1999; Nicklas et al., 2003; Young et al., 2000b). Overweight and obesity are closely linked with type 2 diabetes. Approximately 75% of people with type 2 diabetes in the United States are obese (Shils et al., 1999). Overweight and obesity have been found to be significant predictors of developing diabetes (Hu et al., 2001; Young & Sevenhuysen, 1989). Furthermore, the prevalence of these obesity-related diseases has been shown to increase with degree of overweight (Field et al., 2001).

Prior to the 1950's, type 2 diabetes was uncommon among First Nations people (Young et al., 2000b). Since then a rapid increase in the prevalence of diabetes has been documented in some regions. Rates in some communities have increased by 45 – 50 % (Fox et al., 1994; Pioro et al., 1996). In Opaskwayak Cree Nation (OCN) near The Pas, Manitoba (the site of the current research) approximate estimates of those with diabetes increased from 3.7 % of the population in 1976 to 7.3 % in 1996 (Bruyere, 1998). Of particular concern is the increased occurrence of non-insulin-dependent or type 2 diabetes mellitus among adolescents and the trend toward earlier age of onset (Dean et al., 1992;

Young et al., 2000b). In studies looking at Canadian First Nations youth the prevalence of diabetes ranged from 2.3/1000 to 9.9/1000 (Dean et al., 1998; Fagot-Campagna et al., 2000; Harris et al., 1996; Maberly et al., 2000).

The diabetes epidemic in Canadian First Nations communities has prompted a focus on the prevention and control of obesity (Dean et al., 1992; Health Canada, 1999; Maberley et al., 2000; Young et al., 2000b). It is known that escalating body weight is associated with an increased risk for glucose intolerance and type 2 diabetes (Chan et al., 1994; Colditz et al., 1995; Pi-Sunyer, 1996). Hensrud (2001) contends that diet, physical activity and behavioural modification for the treatment of diabetes are especially important in type 2 diabetes due to the increased health risks associated with both diabetes and obesity. Both obesity and type 2 diabetes are associated with increased morbidity and mortality (Task Force on Prevention and the Treatment of Obesity, 2000). Obesity prevention among First Nations people should be directed towards children and youth in order to prevent this increasing epidemic. In order to be effective, First Nations communities must be included in the planning and implementation of any interventions developed to address this issue.

Numerous programs have attempted to address the high rates of obesity and type 2 diabetes mellitus in First Nations people, as well as non-Native people, with limited success. Little research has investigated the role of First Nations' cultural beliefs and traditional activities on improving health (Wilson, K., 2003; Wilson & Rosenberg, 2002). Although these studies focus primarily on the role that First Nations culture plays in the link between health and place, the findings point to the need for further exploration into the relationship between culture and health. An even smaller number of studies have

examined First Nations adolescents' perspectives on health and weight issues or preventing diabetes (Joe, 1993; Marchessault, 1998). Findings from these studies will be discussed in the following sections. Given the prevalence of overweight and weight-related disorders among First Nations youth it is relevant to discuss what these youth are thinking and saying about their own weight and health status.

According to recent studies, First Nations youth are not unlike most other youth when it comes to what is most important to them, and the ways in which they address these issues (Gittelsohn, et al., 1996b; Marchessault, 2001; Neumark-Sztainer et al., 1997; Story et al. 1994; Story et al, 1997). The issues of physical beauty, body image and weight are as pervasive in First Nations youth as they are in non-native youth. In the past, researchers speculated that the matter of high weight norms among First Nations children and youth was related to less concern about weight or a cultural weight ideal that was 'heavier' than that of teens in the general population (Marchessault, 1999). Other researchers however, have indicated that First Nations youth are just as concerned about their weight as other youth. In a review of the literature on weight perceptions and practices among Native youth, Marchessault (1999) reported that many youth are dissatisfied with their body weight and often resort to weight control practices such as self-induced vomiting, extreme dieting or fasting, use of diet pills or laxatives. In a survey of over 13,000 Native American youth in grades seven through twelve attending non-urban schools, almost half (48.3%) of the girls and one third (30.5%) of the boys reported that they had dieted in the past year. Further, more than one fourth (28%) of the girls and 21% of the boys indicated some type of purging behaviour. In this study, "high emotional stress was associated with both dieting frequency (girls) and purging (girls and boys)"

(Story et al., 1997; p. 6). Story and colleagues used the same study sample to examine weight perceptions and weight control practices; 49.9% of the girls and 31.7% of the boys were dissatisfied with their weight (Story et al., 1994). When compared to rural white youths in the same area (Minnesota), American Indian girls were more likely to have body dissatisfaction, to binge eat and to self-induce vomiting than were rural Minnesota girls. While the prevalence of dieting behaviour was similar between American Indian boys and rural white boys, American Indian boys had higher a rate of weight dissatisfaction and weight loss practices in all categories (Story et al., 1994). The results of this study suggest that Native youth are in fact as concerned as or more concerned about their weight than are their non-native peers. At the same time, these concerns should be considered in any programs attempting to address obesity.

Overweight and its accompanying weight control practices are just a few of the lifestyle-related health issues affecting First Nations youth today. In order to address these issues, as well as other factors that may play a role in health outcomes, an investigation into First Nations youth's understandings and attitudes towards health within the framework of their sociocultural environment is useful.

Diabetes is an illness that is relatively 'new' to First Nations people. It has only become prevalent in the last 50 years. In fact, most Aboriginal languages did not even have a word for diabetes, and it is still often referred to as 'sugar' or 'sugar disease' (Bruyere, 1998; Garro, 1995). When asked for explanations on the origin of diabetes, some First Nations adults attribute the onset of the disease to "the foods we eat", including overeating, drinking, high-sugar foods, contaminated food, chemicals and food additives (Garro, 1995). A decline in 'bush life', due to social changes generated by

economic development, was also mentioned as an explanation for diabetes (Boston et al., 1997; Bruyere, 1998). The change in diet from wild foods to store-bought foods and junk foods was given as another contributor to diabetes (Bruyere, 1998; Bruyere & Garro, 2000; Garro, 1995). The view that diabetes is a 'white man's sickness' was expressed. Diabetes was often grouped with other infectious diseases that became more prevalent following colonization (Boston et al., 1997; Garro, 1995). Researchers have indicated that understandings of diabetes among First Nations people are sometimes interwoven with biomedical explanations, those that may have come from physicians and other health care workers (Bruyere, 1998; Garro, 1995). Some First Nations adults have also expressed a feeling of lack of control, of being overtaken by the disease, and of the omnipresence and inevitability of related complications of diabetes (Bruyere, 1998; Gregory et al., 1999, Henderson et al., 1995). In general, diabetes is not perceived by First Nations people as a result of individual behaviour but as a collective experience (Bruyere, 1998). Diabetes is sometimes perceived by Aboriginal people as a result of living 'out of balance' "...a life of lost or severed connections with land and kin and a life with little control over past, present or future" (Thompson & Gifford, 2000; p.1457).

In summary, the concepts and meanings of health of Aboriginal people include more than the common physical aspects. There are numerous factors from centuries ago to today that have played a role in the current health of Canadian Aboriginal people. Supportive environments in schools and communities are recognized as being important for health. Numerous environmental barriers to health have been identified. The prevalence of problematic weight issues and diabetes among the First Nations population has been well-documented. Explanations of diabetes by Aboriginal adults living with the

disease have also been described. However, a key question remains unanswered. What are the perspectives of Canadian First Nations youth regarding the current state of their own health and the health of their people? A review of the literature provides limited insight into this question. The Royal Commission on Aboriginal Health gives a glimpse into the realities of First Nations youth. They are asking to be heard, to be included in planning and decision-making, to be listened to with genuine concern, with an ear for what they are really saying. Aboriginal youth are asking for and suggesting solutions to current problems which are grounded in their cultures and traditions (RCAP, 1996b). "Healing youth today will lead to their empowerment tomorrow. With empowerment they will have the mental, physical, emotional, and spiritual energy to help those around them: their peers, their parents and their communities" (RCAP, 1996b; p.194).

Supportive and Non-supportive Environments for Healthful Living

Living and working in an environment that is supportive or promotes healthful living, may increase success for youth in making healthy food and physical activity choices. Schools provide a prime environment for promoting such activities. As Story and colleagues (2002) wrote, "The school food environment can have a large impact on adolescents' food choices and dietary quality because adolescents consume a large proportion of their total daily energy at school" (p.45). Neumark-Sztainer and colleagues (2000) have made similar comments in support of school involvement in health promotion activities. They suggest that schools provide a natural learning environment and have the opportunity to educate students from all socioeconomic backgrounds in a cost-effective manner.

Researchers conducting studies in Minnesota, Western Canada and Costa Rican high schools have documented comments from youth as to the important role of their schools in promoting health (Croll et al., 2001; Groft et al., 2005; Monge-Rojas et al., 2005). These studies represented ethnically and socioeconomically diverse populations including urban and rural Caucasian and Costa Rican, African-American, Asian-American, Hispanic and Native-American participants. Young people in these studies indicated that schools could help them attain their health-related goals by providing information and support within the school setting. The availability of nutritious foods at the school was cited as a motivator for healthful eating. In addition, peer support was noted in two of the studies as an important contributor to healthful eating (Croll et al., 2001; Monge-Rojas et al., 2005).

Two studies by Neumark-Sztainer and associates (1999 & 2000) were conducted using group interviews with adolescents from diverse socioeconomic and ethnic backgrounds (including American Indian) in St. Paul, Minnesota to learn of their thoughts on factors that influenced their food choices and their suggestions for obesity prevention programs in the school. Suggestions for making it easier to eat healthfully included making healthy food more available and convenient in homes, schools and restaurants (Neumark-Sztainer et al., 1999). In terms of obesity prevention programs in the schools, adolescents pointed out the importance of having a supportive environment in which youth could feel comfortable, including helpful and caring teachers and accessible facilities for physical activity and healthful eating (Neumark-Sztainer et al., 2000).

Community environments may also provide opportunity and support for sport and recreational activities. Opportunities for improved health and diabetes prevention among

First Nations people may be enhanced through the involvement of schools, families and the broader community (Davis et al., 1999). Culturally relevant education in the classroom has been expressed as an important aspect of improving health. This includes both the development of appropriate educational materials and teaching by First Nations educators (Boston et al., 1997). The involvement of families may aid in the development of a supportive environment for students striving to live in a healthful way. A community setting may be developed where there is opportunity and support for healthful habits such as regular exercise and healthy eating (Davis et al., 1999). Parents have been identified as key promoters and communicators of healthful eating and exercise habits (Borra et al., 2003; O'Dea, 2003; Thompson et al., 2001). Several First Nations communities that have developed partnerships between researchers and communities, shared expertise and knowledge, and incorporated traditional native culture and beliefs have seen active interest in community health issues by community members (Davis & Reid, 1999; Harris, 1998; Potvin et al., 2003). For example, in two Canadian First Nations communities, many members have actively participated in the programs and the community leaders have played a major role in designing and continuing the projects (Harris, 1998). The collaboration of researchers and local citizens can empower the community and promote ownership and sustainability of intervention programs (Davis et al., 1999; Harris, 1998).

Family and community members can also play a part in supporting positive lifestyle choices by being role models. In Ojibwe culture, elders are considered to be important role models for younger generations (Turton, 1997). They are the vessels of authoritative knowledge and are considered to be appropriate teachers, sharing their experience and expertise through the oral tradition. Wilson reported that Manitoba

Aboriginal women indicated that they strived to be role models to community members by graduating from high school, displaying healthful lifestyles and providing leadership (Wilson, A., 2004). American Indian adults who were part of a multi-ethnic study exploring perceptions about diabetes prevention stated the significance of seeing their own people as role models of healthful living. They thought that spokespersons that were at risk of developing diabetes but had managed to "keep it at bay" would be most convincing. To increase trustworthiness further, participants wanted to receive health promoting messages from people who "looked like them" (Satterfield et al., 2003; p.61). The Royal Commission on Aboriginal Peoples (1996b) noted that it is important to promote Aboriginal athletes as role models to provide inspiration and encouragement for Aboriginal youth.

Absence of the supportive environments for healthful living mentioned above as well as others may present barriers to following health-promoting choices. In an investigation of childhood obesity, Sturm (2005) pointed to current societal trends of increased consumption of snack foods with low nutritional value that may be impacting the recent increase in overweight and obesity among American children. Based on the Continuing Survey of Food Intakes by Individuals (1989-1998) and the Nationwide Food Consumption Survey (1977-78), two trends were noted for children aged six to eleven (Enns et al., 2002). The intake of snack foods such as chips, pretzels and crackers tripled from the mid-1970s to the mid-1990s. Second, the intake of soft drinks doubled within the same time period. Similar trends have been reported for different age groups by other researchers (Nielsen, et al., 2002). Sturm (2005) drew a possible connection between the increasing consumption of snack foods and soft drinks and the relative price changes of

snack foods and fresh produce. Between 1978 and 2002 relative price changes for fruits and vegetables were double that of sweets and soft drinks. Factors such as those reported by this study may present a barrier to healthful eating.

Barriers to healthful eating as well as physical activity have been reported by researchers who spoke with children and adolescents from Australia (O'Dea, 2003) and Minnesota (Croll et al., 2001). Participants in both studies pointed to the easy access and minimal preparation of convenience or "junk food" as a barrier to healthy eating. They also mentioned the time costs involved in preparing more healthful options. Australian youth indicated that when they ate junk food they felt lazy, and thus eating junk food was perceived to be a barrier to physical activity (O'Dea, 2003). Diane Neumark-Sztainer and her colleagues (1999) also reported on barriers to healthful eating as suggested by Minnesota youth. Participants in this study indicated that schools and fast-food restaurants rarely promote or make healthful eating appealing. They also indicated that fruits and vegetables and other healthful foods are typically more costly and less convenient than other foods.

Patterns of physical activity and data related to the barriers of, and supports to, physical activity among American Indian children were collected as part of the Pathways study (Thompson et al., 2001). This multiple-site study was designed to test an obesity prevention program in schools attended by grade three to five students in Arizona, New Mexico and South Dakota. Barriers to physical activity included a lack of appropriate facilities, equipment and trained staff, and inconsistent frequency and duration of physical education in some schools. Caregivers in this study were supportive although they indicated they were not always exemplary models of a physically active lifestyle

themselves. Time constraints due to chores and homework as well as weather and safety were other common barriers mentioned by both parents and students. This information was then used to develop practical, sustainable, culturally appropriate physical activities for children attending schools in these communities.

Similar barriers to participating in school-based physical activity programs aimed at obesity prevention were mentioned by Minnesota youth (Neumark-Sztainer et al., 2000). Lack of time due to other responsibilities, cost of the program and lack of transportation for activities offered outside school hours were major barriers to participation.

Social or cultural barriers may also play a role in maintaining or improving health. Members of First Nations communities have conveyed to researchers working in their communities some of the main barriers to improving health and reducing the incidence of diabetes among First Nations people. Poor communication between health professionals and community members as well as between segments within the community and individuals has been identified as a major barrier (Boston et al., 1997; Cosby & Houlden, 1995). Another key area of concern is the language barrier. This includes literacy issues such as reading food labels and medications as well as reduced effectiveness of existing services. Isolation is another concern for those with diabetes. Some feel uncomfortable telling others that they have diabetes, and thus it becomes secretive, hidden from family and the community (Boston et al., 1997; Bruyere, 1998). The maintenance of a strict 'diabetic' diet as typically taught by health care personnel has been expressed as a difficulty for some First Nations people with diabetes due to cultural expectations related to social eating (Boston et al., 1997). To refuse food is thought to be disrespectful. To

offer food is a deed of kindness. As a result, for someone with diabetes, the social aspect of food becomes a barrier. For some First Nations people with diabetes, the number of personal behavioural changes was too overwhelming, and thus became a barrier for improved health (Henderson et al., 1995). For others, appropriate and acceptable procurement of food may be a barrier to health. First Nations women interviewed in a small Ontario First Nations community expressed views that a reduction in the consumption of wild foods such as meat, fish and berries and a change in food preparation methods were a major reason for their perceived overweight (Giuliano, 1995). For women who had moved from a rural to an urban center in Manitoba, the greatest barriers to food procurement were financial insecurity and transportation (Sinclair, 1997).

The concepts of health, weight and diabetes, and perceptions of supportive environments for living described in this literature review offer insight into these issues. However, for First Nations people, each community is unique in its outlook on health because of characteristics specific to the community. Therefore, in-depth exploration into the perspectives on health at Opaskwayak Cree Nation can specifically highlight the perceptions of members of this community, and contribute to the existing literature on First Nations viewpoints more generally.

CHAPTER THREE

The Research Process

The Research Question

The major research question of this study is: What are the perspectives of First Nations youth on improving health and preventing diabetes? An environmental scan was conducted to provide a framework for the research. Youth were asked for their perspectives on the meaning of being healthy, traditional Aboriginal beliefs on health and their relevance for today, and the barriers to and opportunities for improving health. Last, questions concerning perceptions of body weight and diabetes were included. Adults who work with youth in the community were also interviewed to provide additional context and to allow further exploration of the topic.

Methods

Qualitative research is said to be the best research method for discovering underlying perceptions and values (Lucasey, 2000). Results may shed light on the 'what, how and why' of an issue (Giacomini & Cook, 2000). A deeper understanding of the perspectives of First Nations youth as well as adults has the potential to contribute to the effort to improve health and prevent diabetes in this population. "The key to qualitative work is to learn from the informants rather than control for them. Qualitative research emphasizes the uniqueness of the human situation, so that variation in experience rather than identical repetition is sought" (Krefting, 1991).

Given the exploratory nature of this project, qualitative methodology was seen as appropriate for determining the perspectives of Opaskwayak Cree Nation (OCN) youth, and adults working with them, on improving health and preventing diabetes. Two methods of qualitative data collection were used to address these issues. An environmental scan was conducted to provide information as to the physical surroundings of the research community. Two types of interviews were conducted. First, individual in-depth interviews were conducted with OCN community adults in order to provide background information about their community and to offer insight on the current health of OCN youth and ideas for improving youth's health. Second, focus groups were conducted with youth to learn of their perspectives on improving health in an informal setting with students of their own age and from their own culture and community.

The use of various means of data collection in this study can be regarded as *triangulation* which serves to augment the quality of the research and in particular its credibility (Krefting, 1991). Triangulation is based on the concept of blending multiple perspectives for collective verification of data to ensure that all aspects of a phenomenon have been explored (Knafl & Breitmayer, 1989).

Design and Analysis

Environmental Scan

The environmental scan provided a framework on which to base interview questions and gave the researcher an understanding of the realities of living in the Opaskwayak community. Sample questions are included in the Appendix. A map of the

physical layout of the community and several photographs of significant community features supply additional visual data. The location and characteristics of these buildings are important in determining how they may either encourage or deter healthful living within the community. Field notes were kept by the researcher on observations made while in the community including a driving tour provided by a community member. Finally a price list of foods available at the community grocery store was taken to assess and compare availability and cost of nutritious foods in OCN with a similar store in Winnipeg.

The environmental scan questions were analysed by evaluating and describing how the physical aspects of the community could either promote or hinder healthful living, using the observational data collected by the researcher. Food costs were analyzed by organizing the data into a table and listing the same type and brand of food from each store, side by side. Foods were arranged according to food group and the percentage cost differences were calculated for each food and by food group using Microsoft Excel 2002 software.

Interviews

The major method of data collection employed in this study was that of interviewing, a technique commonly used in qualitative research (Creswell, 2003). Although the primary intention of this research project was to ask First Nations youth at OCN about their perspectives on improving health, the viewpoints of adults in the community are also relevant. Youth are part of families and communities, a system of relationships that ultimately shape youth's health (Campbell, 2002). Therefore, individual

in-depth, semi-structured interviews were conducted with OCN community adults prior to holding focus groups with youth.

In-depth interviews have been described by Pope and Mays (1995) as a "face to face conversation with the purpose of exploring issues or topics in detail" (Pope & Mays, 1995; p.43). These interviews typically involve semi-structured, open-ended questions that are intended to bring forth views and opinions from the participants (Creswell, 2003). Responses from participants may then generate further questions, allowing a distinct flow of ideas from each participant (Rich & Ginsburg, 1999). Semi-structured questioning allows the interviewee to express their opinions, concerns and feelings regarding a particular topic. Therefore, this method was selected to interview OCN community adults to elicit their ideas on improving health and preventing diabetes for the youth in their community.

Focus group interviews with youth followed the individual interviews with adults. A focus group is an informal group interview. Discussions are centred on a specific topic or focus, facilitated by a moderator (Sim, 1998). Focus groups are intended to create an atmosphere in which opinions may be naturally formed and expressed. This method has been suggested as being one of the best methods to use for adolescent-based research (Rich & Ginsburg, 1999). Focus groups can be used to gather rich, detailed descriptions of shared individual experiences and beliefs, as was the intent with this study. The group process has the potential to enhance the richness of the data obtained by allowing for incorporation and stimulus of thought (Morrison-Beedy et al., 2001; Peterson-Sweeney, 2005).

The process of qualitative inquiry is often of a general to specific nature. Questioning typically begins broadly and then is allowed to naturally focus on an aspect that is especially interesting, after which the inquiry process is narrowed to a specific topic (Morse, 1995a; Rich & Ginsburg, 1999). This format for questioning was utilized in both the individual semi-structured and focus group interviews by beginning with questions on what it means to be healthy and then moving to more specific questions about factors thought to help or hinder healthy lifestyles, causes and effects of diabetes and the role of body weight in health. At times, some questions were asked in a slightly different order or rephrased to allow the conversation to flow.

An interview guide with questions for the in-depth interviews with adults was prepared in advance. (See Appendix B-1). Research questions and probes for key questions were included on this guide. Ten open-ended questions dealt with beliefs about being healthy; comparisons of health with older and younger generations; changes in ways of maintaining health over the years; supports and barriers for maintaining good health for adults and youth; as well as thoughts on how traditional practices affect health.

Similarly, an interview guide with 15 open-ended questions was prepared prior to beginning the focus group interviews (see Appendix B-2). Questions were pilot tested in one focus group session with OCN youth and adapted according to participants' comments as suggested by Creswell (2003). The students were asked questions about the meaning and value of being healthy, awareness of any traditional practices that may affect health, the barriers and opportunities to healthful living in their community, the causes and consequences of diabetes, and suggestions for improving health. These questions

were very similar to questions in the semi-structured interview guide used with adults except questions relating to weight and diabetes were added.

A *Record of Research* form including the date, time, length, and location of the interview was completed by the researcher at both the individual and focus group interviews (see Appendix C).

The analytic process began with the researcher writing reflective notes as soon as possible following each interview to record personal views, assumptions, ideas, concerns and possible prejudices about the interviews (Creswell, 2003).

The researcher transcribed all interviews word-for-word. This aided the analytical process by putting the researcher in touch with the interview data and allowing preliminary identification of themes in the data.

Qualitative data analysis is an on-going process, with continual reflection and the use of analytical memos to enhance understanding of the data. The primary intent of most qualitative research, including the current study, is to develop themes from the emerging data to generate theory (Creswell, 2003). The data in this research were initially organized according to the type of interview and by topic based on questions asked. Thematic analysis was employed to identify themes in the text and then to further code and categorize all interview data. Thematic analysis is described as a systematic method for classifying the content of text and identifying relationships between the categories (Berg, 1995). The coding process is used to generate themes or a description of the information gained from the participants. Miles and Huberman (1994; p.56) propose that "...coding is a process that enables the researcher to identify meaningful data and set the stage for interpreting and drawing conclusions". Coding of the data was conducted at two

levels. The first level divided the transcripts into 'chunks' according to three common themes: 1) meanings of health, 2) thoughts on weight and diabetes and 3) opportunities and barriers for improving health. Subsequently, these main themes were further analyzed to allow for identification of patterns within each of the three topics. Initial organization of themes was completed manually in addition to using MICROSOFT WORD 2002 software. Qualitative Software Research (QSR) NVivo 2 software was then used to browse, search and sort the interview data (QSR International, 2002). Throughout the coding process, analytical memos were written to record the researchers' thoughts, ideas and insights on the development of the ideas. Analytical memos often change and grow during the analysis process and are considered to be part of the data. As theory development begins, analytical memos may be sorted and compared and reincorporated into the data (Morse & Richards, 2002). Questions and assumptions arising from the researcher's thoughts and insights recorded in the memos were answered, confirmed or corrected during review of the interviews and conversations with OCN community members and then used to write the final report.

Sampling Strategy

Youth, parents, teachers, community leaders and local health workers were purposively selected and interviewed in order to understand their perspectives on the meaning of health, weight and diabetes issues, and surroundings important for the health of youth.

Qualitative inquiry typically focuses in depth on relatively small samples and purposefully-selected settings, where the researcher is most likely to find what is of interest to them (Morse & Richards, 2002). Thus, a northern Manitoba First Nations community with numerous health concerns and a known interest in the study was selected as the research site.

Sampling in qualitative inquiry is driven by the desire to illuminate the questions under study and to increase the scope or range of data exposed – to uncover multiple realities. Qualitative sampling concerns itself with *information-richness* (Kuzel, 1990). Purposeful sampling of participants deliberately selected because of their characteristics and possession of the information required, increases the potential for in-depth reflection on the questions under investigation (Kuzel, 1990; Morse & Richards, 2002). Accordingly, the selection criteria for adult participants were based on the requirement that participants were connected with First Nations youth through family, volunteering or work.

In qualitative research there are no set rules as to the specific sample size required for a study. Instead, sample size is dependent on what the researcher wants to know and the time and resources available (Patton, 2002). In keeping with these principles, the initial aim was to recruit five to eight adult participants for this study in order to gain various perspectives from a variety of community adults who were likely to have distinct views on improving health and preventing diabetes among First Nations youth. Snowball sampling, in which study participants recommend others for involvement, provided additional information-rich data (Morse & Richards, 2002; Patton, 2002). Sampling for individual interviews typically continues until *saturation* is achieved. Saturation has been

defined as 'data adequacy' and operationalized as collecting data until no new information is obtained (Morse, 1995b).

Focus groups with youth volunteers were planned following the individual interviews with adults. Prior to conducting the focus groups, a pilot focus group session with four or five youth participants was planned in order to test the interview questions proposed for use in the focus groups. A general rule of thumb for focus groups is to plan three to four groups with any one type of participant in order to increase reliability of the data (Krueger & Casey, 2000). Heary and Hennessy (2002) suggest that when conducting focus groups with children, four to six participants of the same gender per group is desirable, otherwise, participants may be reluctant to talk. This is important to achieve group openness and commonality among group members (Strickland, 1999). Consequently, five or six focus group interviews with five to seven youth volunteers per group were planned. Initial intents were to conduct the focus groups in an age- and gender-specific manner.

Implementation

Opaskwayak Cree Nation, a First Nations community in northern Manitoba was purposefully selected for this project because of the size and location of the community and expressed interest in the research by a community member. The research was carried out in October 2004. All data were collected by the researcher. Details of the implementation process are outlined in Table 1.

Table 1: Research Time-Line

Activities	Dates Achieved
Letter sent to Opaskwayak contact person	April 12, 2004
Initial contact made with school principal	May 10, 2004
Verbal approval received from OCN Health Board	May 10, 2004
Project approved at OCN Chief and Council meeting	June 4, 2004
Ethics protocol forms submitted to Joint-Faculty Research Ethics Board, University of Manitoba	June 30, 2004
Notified of OCN Chief and Council approval	July 29, 2004
Approval from Joint-Faculty Research Ethics Board, University of Manitoba	August 6, 2004
Information letter sent to OCN School vice principal	Sept. 21, 2004
Notification of HIR Committee, Assembly of Manitoba Chiefs	Sept. 27, 2004
Semi-structured individual interviews (adults) conducted	Oct. 5-8, 2004
Environmental scan conducted	Oct. 5–8, 2004
Information letter/consent forms sent to parents Of youth attending Joe A. Ross School	Oct. 6, 2004
Pilot focus group interview (youth) conducted	Oct. 8, 2004
Focus group interviews (youth) conducted	Oct. 25-28, 2004
Presentation to OCN health workers and school staff	March 17, 2005
Food costs priced (OCN)	March 17, 2005
(Winnipeg)	March 22, 2005

Environmental Scan

An environmental scan of the OCN community was carried out by the researcher mainly during the week of October 5 – 8, 2004. Food costing was conducted on March 17, 2005 at a local OCN grocery store. On March 22, 2005 the researcher conducted food costing at a similar size and type of Winnipeg grocery store. All aspects of this data collection procedure went as planned.

Interviews

Individual interviews with adults.

As suggested by Horsburgh (2003), selection of participants for this study was made on the strength of their capacity to provide relevant data on the topic under exploration. Ten adults participated in the individual in-depth interviews. These included parents of youth, teachers, youth councillors, community members, an elder, a local health worker and a health board member. The researcher's contact person at Otineka Health Centre in the community facilitated recruitment of the first three interviewees. The researcher recruited the remainder of the adult participants through personal invitation as well as through suggestions by other study participants and community members (snowball sampling). Since two of the participants were of non-Aboriginal descent, the researcher decided to interview an additional two adults. The comments from the two non-Aboriginal adults were retained and included in the results due to the valuable insight these participants had in connection with youth.

Nine of the 10 semi-structured interviews with adults living and/or working in OCN were completed on the first visit to the community over four days (October 5 – 8,

2004). The tenth interview was conducted on the second visit to the community (October 28, 2004) due to unavailability of the participant during the initial interview period.

At the beginning of each interview, participants were provided with a brief verbal description of the research project and a consent form which included information about the purpose, procedures, risks, benefits, incentives and confidentiality of the study (see Appendix D-1). After obtaining written consent the interview proceeded with nine standard questions on participant background information. Information on participants' length of residence in OCN, level of education, family size, ethnic background and occupation (if appropriate) was obtained (see Appendix D-2). The researcher either asked the participants the questions or participants filled in the questions themselves. The researcher then asked the semi-structured questions in the interview guide. These interviews ranged in length from half an hour to one hour and 45 minutes (with most being approximately 50 minutes). Eight of the 10 interviews were conducted at the participants' place of employment. One interview was conducted in the participant's home, and one was conducted at the participant's place of study.

Focus group interviews with youth.

The researcher recruited three youth participants for a pilot focus group session through personal invitation from among youth who were at the OCN Youth Centre. Although more than three youth indicated interest, only three youth were able to obtain parental consent. The interview took place on October 8, 2004 at the OCN Youth Centre. The pilot session was tape-recorded and took approximately 30 minutes.

Several weeks prior to beginning the focus group interviews with youth, the school administrator prepared an information letter to parents outlining the purpose of the

study (see Appendix E-1) and distributed the letter along with parental consent forms to all junior and senior high students in the school. On the second visit to OCN (October 25 – 28, 2004), five focus groups with 26 grade seven through twelve students were conducted at the local school. Recruitment of youth participants was completed during school hours through short in-class presentations as well as through a brief presentation at an assembly held in the school for junior high students. Focus group participants were grouped by similar age and/or grade in school to maintain homogeneity of the groups. The size of the groups ranged from four to seven youth each. Despite the initial intent, all groups were of mixed gender except the pilot group and one other focus group which consisted of only males, due to the difficulty in finding volunteers.

A parental consent form (see Appendix E-3) was distributed to participants who were under age 18 and necessary signatures were obtained. Following a brief introduction as to the nature of the study, students were asked to complete a sign-in sheet which included background information such as age, gender, grade in school, length of residence at OCN and ethnic background (see Appendix E-2). After obtaining written consent from the students the researcher began the focus group interviews. All the focus groups were carried out during school hours. Three of the focus groups were conducted in a classroom at the Opaskwayak community school (Joseph Albert Ross School), and two were carried out in the board room at the OCN Child and Family Services office located in the community in the Otineka Mall. Focus group interviews lasted between 50 and 75 minutes.

Any identifying features of the youth or adults, such as name or role, have been removed and replaced with a code to protect confidentiality. Adult participants were

given a number and coded as 'A' for adults, for example, 'A3'. Focus groups were coded and numbered according to age from youngest to oldest. For example, focus group number one ('FG1') included the youngest participants and focus group five ('FG5') consisted of the oldest students. Participant quotes were edited for ease of reading. Major omissions have been indicated by the use of "..." in the quotation. All references to specific individuals within the community were replaced by "he" or "she".

Describing the Participants

Adult participants

The 10 adults participating in the study ranged in age from 21 to 89 years, with a mean age of 43 and a median age of 38 (see Table 2). All participants had children, some had grandchildren, and one had great-grandchildren. Half of the participants were currently parents of teenagers and/or young adults. Seven of the participants were employed full time in a position in the OCN community. These positions included counsellors, teachers, health care workers and OCN Health Board members. Three of the adult participants had lived in the community since birth or childhood. Four others had moved to OCN as adults and lived there one to five years and 70 years. The three other adults interviewed lived in or around the nearby town of The Pas. Approximately half of the participants had lived in other Manitoba towns, cities or First Nations communities prior to coming to OCN. Four of the participants had lived in centres or First Nations communities outside the province, and two had lived outside the country.

Three of the participants had high school level education and seven of the 10 adults had completed college or had an undergraduate degree or had done some graduate work (see Table 2). In addition to speaking English, four of the adult participants spoke Cree. All others spoke English only.

Table 2: Demographic Characteristics of Adult Participants

Characteristic	Males & Females
Age	
Mean	43
Median	38
Range	21-89
Education level (# of adults)	
High School	3
College or an undergraduate degree or some graduate work	7
Family	
Parent/grandparent/great grand-parent	10
Parent of teens or young adults	5

Youth participants

There were 29 youth participating in the focus groups, including the pilot group. They ranged in age from 12 – 21 years and all were currently attending the local school. The mean age was 15 years and the median age was 14 years. There were 13 females and 16 males who participated in the focus groups. Characteristics of the participants, organized according to focus group are outlined in Table 3 below.

Table 3: Demographic Characteristics of Youth Participants

Group #	Number of participants	Grade in School (# in each grade)	Gender (# of each)
Pilot	3	Grade 11 (2) Grade 12 (1)	Males (3)
1	6	Grade 7 (6)	Males (6)
2	4	Grade 7 (2) Grade 8 (2)	Males (2) Females (2)
3	7	Grade 8 (1) Grade 9 (6)	Males (1) Females (6)
4	4	Grade 9 (1) Grade 10 (2) Grade 10/11 (1)	Males (1) Females (3)
5	5	Grade 12 (5)	Female (2) Males (3)

Nineteen (66%) of the youth participants had lived in OCN all their lives. The other 10 participants had lived in the community for five to 15 years. When asked if they spoke any language other than English, three (12%) said they spoke Cree fluently. All focus group participants, except pilot group participants reported their ethnic background as including some type of Aboriginal or Native ancestry. The terms they used to describe their ethnicity included: Native, Native American, Native Canadian, Native Cree, Aboriginal, Aboriginal Canadian, Aboriginal Cree, Oji-Cree, Cree and Métis. Pilot group

participants did not answer the question concerning ethnic background on the sign-in sheets.

Ethical Considerations

Approval for the research was obtained over a four month period and was facilitated by a community contact person. Approval was received from the Opaskwayak Cree Nation Chief and Council (see Appendix F-1) and the University of Manitoba Joint-Faculty Research Ethics Board (see Appendix F-2). A letter of notification was sent to the Health Information and Research (HIR) Committee of the Manitoba Assembly of Chiefs (see Appendix F-3) to inform the committee about Opaskwayak Cree Nation's decision to participate in the study.

Consent forms with an information letter to parents were distributed to students following short in-class presentations. The consent forms were reviewed with all participants who were asked to read and sign two printed copies indicating that they understood the intent of the study and their role in it. All study participants, both adults and students and their parents or guardians, gave written informed consent prior to involvement in the research. One copy of the signed consent form was given to each participant. The consent form included information for participants about the study and assured them that their participation in this research was independent of school or work and would have no consequences on either. Participants were told that participation was voluntary, and that they had the right to withdraw at any time during the study. A copy of

the consent form with both the researcher's and supervisor's contact information was posted in the school.

Following the interviews, all adults and youth participants, including the pilot interview participants, were given a small gift; $10.00 IGA gift certificate, OCN Blizzards hockey game admission ($6.00 value) and a $2.00 Tim Horton's gift certificate respectively.

All tape-recorded data were kept in a secure place accessible only to the researcher until the study had been completed at which time all tapes were erased.

The Manitoba Assembly of First Nations National Aboriginal Organization OPAC agreement provides guidelines regarding *ownership*, *control*, *access* and *possession* of collected data. With exceptions as required to protect confidentiality, these guidelines were followed. A copy of the final report from this study will be provided and reports for publication will be made available to the Opaskwayak Cree Nation prior to journal submission.

Study Strengths and Limitations

The use of various data collection methods in this study aided in addressing the research questions by providing a deeper understanding of the realities and dynamics of the OCN community in general. More specifically, detailed perspectives of both youth and adults provided insight on improving health and preventing diabetes for this First Nations community.

The first three individual interviews were set up by the community contact person. These participants were known to the contact person, and this may have affected diversity of perspectives in the sample. However, they were interested in the health of youth in their community as demonstrated by their involvement with youth. Selection of participants for qualitative research is based on their ability to provide pertinent information on the topic of the study (Horsburgh, 2003), and therefore these participants fit the selection criteria. In addition, the connection of this well-known community member established an avenue of trust between the researcher and the participants.

Subsequent interviewees were recruited through snowball sampling. Other study participants aided the researcher in making contact with additional potential study participants for individual interviews which resulted in a relatively trouble-free recruitment process. These participants were also interested in the health of youth in their community. Participants ranged in age, level of education, family, work and community roles, giving a good representation of the community and a broad range of perspectives.

The community contact person also provided the names of the school administrators which assisted in establishing communication with the school staff. This was helpful in gaining access to the school for focus group interviews. Obtaining student volunteers was a challenging process, although once the students were at the interview they spoke freely. One student commented that this type of a "conference" helped youth "get their ideas out there". Another student thanked the researcher for choosing OCN as the research site.

The effect of the researcher on the social setting in qualitative research can not be controlled for, and therefore the interface between the researcher and the participants and

their environment may be considered as a source of bias (Lincoln & Guba, 1985). Investigator bias may include a lack of attention to inconsistent data or alternative understandings (Whittemore et al., 2001). Personal biases and ideas due to the level and focus of education on the part of the researcher may influence interpretation of the results. The researcher may have overlooked interesting themes due to a limited knowledge of the culture and background of the participants. This may have affected understanding of expressed perspectives. In addition, participants may not be comfortable divulging personal information to the researcher which is noted by Rich & Ginsburg (1999) as a possible limitation in qualitative research. There is a possibility this may have occurred in this study. Nevertheless, there is evidence in the data to suggest otherwise and thus it can be presumed that interviews were conducted in a non-threatening way where participants did feel comfortable expressing their perspectives. A genuine effort was made on the part of the researcher to be aware of these possible limitations and conduct the interviews and analysis accordingly.

Bias however, may also be a resource, allowing the researcher to take a more critical look at the data. Olesen (1994; p.165) suggests that "...if the researcher is sufficiently reflexive about her project, she can evoke these [biases] as resources to guide data gathering or creating, and for understanding her own interpretations and behaviour in the research". In this study, the researcher's knowledge of existing research and desire to probe deeper into the meanings and explanations of health, created an opportunity for detecting less common perspectives on health and its related issues.

This study was conducted in only one rural northern First Nations community. This can be a strength as it allows for in-depth examination of the issues specific to the

OCN community. It should be remembered that members of this community may not have the same perspectives as those from urban or other First Nations communities. The results of qualitative research are typically not intended to be generalized, but are often transferable to other similar settings and populations and may be used to develop a theoretical understanding of a related set of experiences (Horsburgh, 2003; Krefting, 1991). As Patton (2002) has proposed, "while one cannot generalize from single cases or very small samples, one can learn from them – and learn a great deal, often opening up new territory for further research …" (p. 46).

The next four chapters highlight the results of what was learned through qualitative inquiry in the community of Opaskwayak Cree Nation. The first results chapter focuses on information gathered for the environmental scan.

CHAPTER FOUR

Environmental Scan

This chapter begins with a review of the history of First Nations peoples in Canada and more specifically in Manitoba to provide a historical-geographical background for the study. Second, a brief overview of the demographics of Aboriginal people in general and First Nations people in Manitoba is given. Last, a description of the current physical aspects of OCN is presented based on the environmental scan questions.

Historical Context of Canadian First Nations

A review of pertinent historical-geographical background of Indigenous people in Canada and Manitoba provides a context for the present day situation. The North American subarctic 'cultural area' covers most of Manitoba except the southern region. Anthropologists refer to 'culture area' as a geographical region in which people exhibit similarities in a number of cultural features, such as subsistence patterns, community organization and spiritual systems. Groups that live within the boundaries of such a region do not always speak the same language (Young et al., 1990). The subarctic area was and is still home to numerous First Nation groups, including the Cree in the north, Ojibway in the southern area, Dakota in the south western region, Ojibway-Cree in the northeast and the Dene in the northwest of Manitoba. The Ojibway, the Cree and the Ojibway-Cree are part of the Algonquian linguistic group (Assembly of Manitoba Chiefs [AMC], 2005a). Today, there are four main groups of Ojibway people, distinguished by their location. The Plains Ojibway live in Saskatchewan, western Manitoba, and the

northern part of the United States. The Northern Ojibway live in the forested areas of the Great Lakes and Hudson Bay, while the South-eastern Ojibway are in southern Ontario in the Georgian Bay area of Lake Huron. The South-western Ojibway or Chippewa live in Minnesota, Wisconsin and upper Michigan. The term Ojibway-Cree or Oji-Cree refers to a distinct combination of Ojibway and Cree people living in the Great Lakes and Hudson Bay areas of Canada (Turtle Island Productions, 2003). Within the Cree there are also distinct groups including Woodlands Cree, Swampy Cree, Plains Cree and James Bay Cree. Each group has a unique culture based on geographical location, tradition and history (Assembly of Manitoba Chiefs [AMC], 2005a). The current study population is part of the Swampy Cree group which covers a large area from Cumberland Saskatchewan, just west of the Manitoba town of The Pas, (see Appendix G) to the coast of the Hudson and James Bay areas (Wolfart, 1973).

Aboriginal people and communities of Canada have experienced significant changes in many aspects of their lives throughout the development of this country, including their physical, social, cultural, and spiritual environments (Hudson-Rodd, 1998). Many of these changes were influenced by the coming of the European explorers.

Several thousand years ago early Aboriginal peoples of Cree descent would meet at the junction of the Saskatchewan and Pasquia Rivers, the current site of Opaskwayak Cree Nation. Prior to European contact, the local Cree people of The Pas area lived off the abundant natural resources available to them in this region. Methods of food procurement typically included hunting large game such as buffalo, moose and deer and fishing in rivers and lakes along their nomadic paths. Gathering of plant foods such as roots and berries was also common (Dickason, 2002). Considerable changes occurred in

their way of life following the arrival of European traders. First Nations people of Manitoba were involved in the fur trade during the 1600s to the mid-1800s. Numerous forts, operated by the Hudson's Bay Company and the Northwest Company, were established near First Nations communities. In 1749 LaVerendrye built Fort Paskoyak on behalf of the French at the location of the present-day town of The Pas. In 1856 the Hudson's Bay Company established Fort Defiance for the British in the same vicinity (Sikler, 1997). European immigrants traded merchandise such as tea, flour, sugar, cloth, tools and utensils with local Aboriginal people. Initially, First Nations people were considered to be a vital part of the economy of the country (AMC, 2005a). Newly arriving fur traders depended on local First Nations people for their survival and knowledge of food procurement methods and appropriate shelter for the Canadian climate. First Nations people sold the traders furs and their own labour, but still subsisted mostly by living from the land (Abele, 1989).

Another large influence on the way of life for the local Cree people was the coming of the missionaries who began to arrive in the Manitoba area during the 1800s. In 1840 the Church Missionary Society established Devon Mission at The Pas. Reverend Henry Budd and his successors drew many local First Nations people to their mission, and by the 1960s a large settlement had developed in The Pas. During the same time period, the churches established residential schools for First Nations children and continued to operate them over the next 150 years with the stated mission of improving the well-being of First Nations people (AMC, 2005a; Hudson-Rodd, 1998).

The reserve system was established in 1857 through the 'Act to Encourage the Gradual Civilization of the Indian' with the intent to preserve land for use by First

Nations and to provide protection from European influences. First Nations were granted specific areas of land on which to live and hunt, thus allowing for colonial expansion. The Indian Act, introduced in 1876, increased the influence of the Government of Canada over all major aspects of First Nations life (AMC, 2005b). This was a national framework with the original goal to assimilate Canadian Aboriginal people into European society (Dickason, 2002). "The assumption, inherent in both laws, was that the reserve was the place where indigenous people could become educated and 'Christianized' and taught how to be farmers, leaving behind their 'uncivilized ways'" (Hudson-Rodd, 1998; p.59).

In 1867, the British North America Act (Constitution Act) was established, giving the Canadian government authority over the "Indians and Land reserved for Indians". In the numbered treaties which followed, the Aboriginal people gave up all title to the lands and in return received parcels of land for reserves. In addition, monetary allowances and the provision schools, fishing and hunting rights, agricultural equipment and cattle, annual cash payments for clothing, flags, twine, medals and ammunition were promised (Natural Resources of Canada, 2004). Those First Nations which signed the treaties also consider health care to be a treaty right (MacKinnon, 2005).

Prior to Canadian Confederation in 1867, formal political agreements between European and First Nations people began with peace and friendship treaties occurring from 1725 to 1779. A treaty is defined as "a formally concluded and ratified agreement between individuals or parties, especially for the purchase of property" (Barber, 1998). These first agreements were carried out during the conflicts between France and England and were intended to gain assistance or at least neutrality of First Nations in an exchange for a promise not to interfere with their traditional activities (AMC, 2005b). Numerous

formal treaties were signed between the Government of Canada and First Nations groups across Manitoba, following Confederation of Canada. The signing of numbered treaties began in 1867 with Treaties No. 1 and No. 2 and continued until 1923 with the signing of Treaty No. 10. In September of 1876, The Pas Indian Band, as it was known then, and several other area communities signed Treaty No. 5 with the Canadian government. In 1906, the Band relinquished some of their land which is now the town of The Pas. The people moved across to the north bank of the Saskatchewan River to the current site of Opaskwayak Cree Nation. This was a process undertaken by the Canadian government to clear any Aboriginal title to land in order to facilitate the building of a railroad to the west coast and further expansion and development of the area (AMC, 2005b). The federal government also took responsibility for the provision of health care services to those Bands that signed the Treaties (Aboriginal Justice Implementation Commission, 2005). The views as to what these treaties granted were not necessarily shared between the government and the First Nations people. As Dickason (2002) has described, "in the Amerindian view, the treaties they were now negotiating with the Canadian government were a means by which they would be able to adapt to the demands of the contemporary world within the framework of their own traditions" (Dickason, 2002; p.255).

Following World War II, the skills of the First Nations people became less relevant and the previous reliance of European settlers on First Nations began to shift. Native people now found themselves more dependent on non-Natives. They were excluded from plans for Canadian political and economic development, and their lives became organized by European teachers, administrators and medical personnel that had come to help (Abele, 1989).

Contact with Europeans resulted in considerable changes in the way of life for First Nations people. Their religious beliefs were challenged by missionaries. New tools for hunting such as rifles and steel traps were introduced, and hunting, trapping and cooking methods changed. Due to the increased number of European fur traders coming to northern Canada, large game typically hunted by First Nations people such as moose and caribou decreased, resulting in a switch from large to smaller game and dependence on new trade items (Bishop, 1972). All of this resulted in an increased dependence on non-indigenous commodities.

The European settlers also brought new diseases that had devastating effects on the Aboriginal population (Abele, 1989). There was a time, three hundred years ago, when the health status of Aboriginal people was equal if not better than that of Europeans. Two centuries ago, smallpox took the lives of many Aboriginals, sometimes entire tribes, while the Europeans remained unaffected. One hundred years ago, tuberculosis caused hundreds of First Nations people in Manitoba to die, even as the Europeans were not so severely affected (Hackett, 2005). The inequality of health between First Nations people and that of other Manitobans continues today but is no longer due to infectious diseases. For example, hypertension is more common among First Nations people and they have more than four times the rate of treatment for diabetes. Also, the rate of hospitalization of Manitoba First Nations people is more than three times greater than their Manitoba counterparts and they have twice the rate of premature mortality (Martens et al., 2002). Statistics such as these have prompted a substantial amount of research into the possible reasons for these health disparities using both qualitative and quantitative approaches. The current study explores the perspectives of First Nations youth and adults on

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improving health in hopes of beginning to understand this epidemic from the First Nations point of view.

Demographics of Canadian First Nations

Not only has the lifestyle of Canadian First Nations people changed over the past few decades, but their demographic profile has also changed. The number of Canadians who registered some Aboriginal ancestry (origin) has been steadily increasing over the past 100 years. Statistics Canada reported that in 1901 there were 127,941 Canadians who indicated some Aboriginal ancestry compared to 1,319,890 in 2001, making up approximately 4.4% of the total Canadian population in 2001. From 1901 to 1950 the increase in the Aboriginal population was slower than the Canadian population as a whole (29% compared to 161%). From 1951 to 2001 however, the Aboriginal population increased seven-fold while the total Canadian population increased two-fold. Although this growth in the Aboriginal population may be attributed to decreased infant mortality or increased participation in the Census, natural increases such as birth rates are also a factor (Statistics Canada, 2003).

According to the 2001 Canadian Census, Aboriginal origin may include North American Indian, Métis or Inuit. Of those Canadians who identified themselves as Aboriginal, 62% (976,305) reported being North American Indian, with approximately half (47%) living on reserves. North American Indian people made up approximately 8% of the total population of Manitoba, and approximately 3% of the Winnipeg population.

The city of Winnipeg, Manitoba had the largest North American Indian population (22,955) of 10 metropolitan Canadian centres (Statistics Canada, 2003).

The demographic profile of Canadians reporting Aboriginal ancestry is opposite to the trend among Canadians in general. Statistics collected for the Royal Commission on Aboriginal Peoples (1996b) showed that more than half (56.2%) of the Canadian Aboriginal population, but only 35% of Canadians were under the age of 25. Children aged 1-14 years made up 36.5% of the Aboriginal population and only 21.1% of the Canadian population. Youth aged 15-24 years represented 14.2% of the Canadian population, but 19.8% of the Aboriginal population. In contrast, only 7.3% of Aboriginal Canadians were 55 years of age or older, whereas 19.7% of Canadians were in this age group (Norris et al., 1995).

Similar statistics were recorded for the North American Indian population living in Manitoba in 2001. This group was much younger compared to other Manitobans. Children less than 14 years of age accounted for 35% of the Manitoba North American Indian population, while 19% of non-Aboriginal people were less than 14 years of age. The median age of this group in Manitoba was 23.5 years compared to 37.7 years for other Manitobans (Statistics Canada, 2003). In Opaskwayak Cree Nation, 41% of the on-reserve population were children under the age of 18 (personal communication OCN Band Registrar, July, 2005).

The overall demographic trends indicate that the Aboriginal population in Canada is one of the fastest growing groups, particularly the youth who make up a significant portion of this increase. Aboriginal youth are also in the midst of the health crises that are currently affecting both themselves and their families. Therefore, this age-group in

particular, should be acknowledged and consulted as to their perspectives on improving health and preventing further disparities among First Nations people.

The Research Site: Opaskwayak Cree Nation

The physical environment can play a central role in influencing participation in physical activity and other healthful behaviours (Pikora et al., 2002). An environmental scan can provide important information on the features of the physical surroundings of a community. For the current study, some of the questions in the environmental scan (see Appendix A) were answered by way of direct observation by the researcher. Others were answered in conversations held with community members and those who participated in the interviews. The researcher also sketched out the general layout of OCN following a driving tour through the community and a walk through the main town site (see Figure 1). Photographs of some community buildings were taken by the researcher to provide additional information (Figures 2 – 5). These observations, conversations and photos provided insight into how the location of homes, stores, the school, recreational facilities and the health centre might promote or hinder healthful living. Following is a brief description of the results of the environmental scan outlining the services, amenities and other physical features of the community.

OCN is a large community located approximately 620 kilometres northwest of Winnipeg, Manitoba near The Pas. It is accessible by an all-weather road and has regular railway service (see map Appendix G). At the time of data collection the population of OCN was 4,671 (including children) with 2,873 people (1,700 adults) living on the

reserve (personal communication OCN Band Registrar, October, 2004 and July, 2005). The main town site of OCN is located adjacent to Highway No. 10, a major provincial road running in a north-south direction. It also borders the Saskatchewan River and is directly north of the town of The Pas. The majority of services and amenities in the community lie within this area.

Over the years, this First Nation has experienced considerable socioeconomic change due to large-scale resource developments including hydroelectric development and a pulp and paper industry (Tolko) (Bruyere, 1998). Unemployment continues to be a concern given the limited employment opportunities offered to OCN residents by these industries (personal communication M. Jebb, June 2, 2005). However, beginning in the 1960s, the OCN administration has made efforts to establish greater autonomy and an improved quality of life for their members. The Opaskwayak Cree Nation is one of the larger employers in the region and is also recognized as one of the economic leaders among Manitoba's First Nations communities. New enterprises and community development initiatives are now providing substantial income for OCN members (OCN, 2005a; Bruyere, 1998). These include a gas station, a hotel (Kikiwak Inn), and a mall. The Otineka mall (Figure 2) is an OCN-owned enterprise which opened in 1975 and includes a small department store, OCN administrative offices, the Otineka Health centre, an IGA grocery store, several fast food outlets and numerous other retail stores.

There are currently two churches in the community, The Church of Redeemer and the Church of Messiah. One is located close to the main town site and another is approximately two kilometres away. A locally-controlled school, the Joseph Albert Ross School provides culturally relevant curriculum for Kindergarten to Senior Four students

(Figure 3). A Community Centre provides space for social gatherings. In addition, The McGillivary Care Home for elders was built in 1982, along with a "Six-Plex" for additional housing for the elderly.

Some homes are located directly behind the main town site area, (Figure 4) while others are up to five kilometres away. The quality of housing has improved in recent years; however there is still a shortage of housing and crowding is an issue. Most homes have adequate space available for proper food storage and preparation. Some families only have small refrigeration units and freezer space is limited. This restricts receipt of larger quantities of wild game which are sometimes traditionally shared with family and community members (personal communication, M. Jebb, October 2005). This may be a concern in terms of supporting nutritional and activity efforts in the community. All houses in the community have hot and cold running water as well as modern sewer facilities. Sufficient clean drinking water is available, however some community members expressed concerns regarding a flushing process to clean out the water lines, which takes place once every five years. During this time the water turns a brownish colour and people often buy bottled water.

Figure 1: Sketch of Physical Layout of Opaskwayak Cree Nation

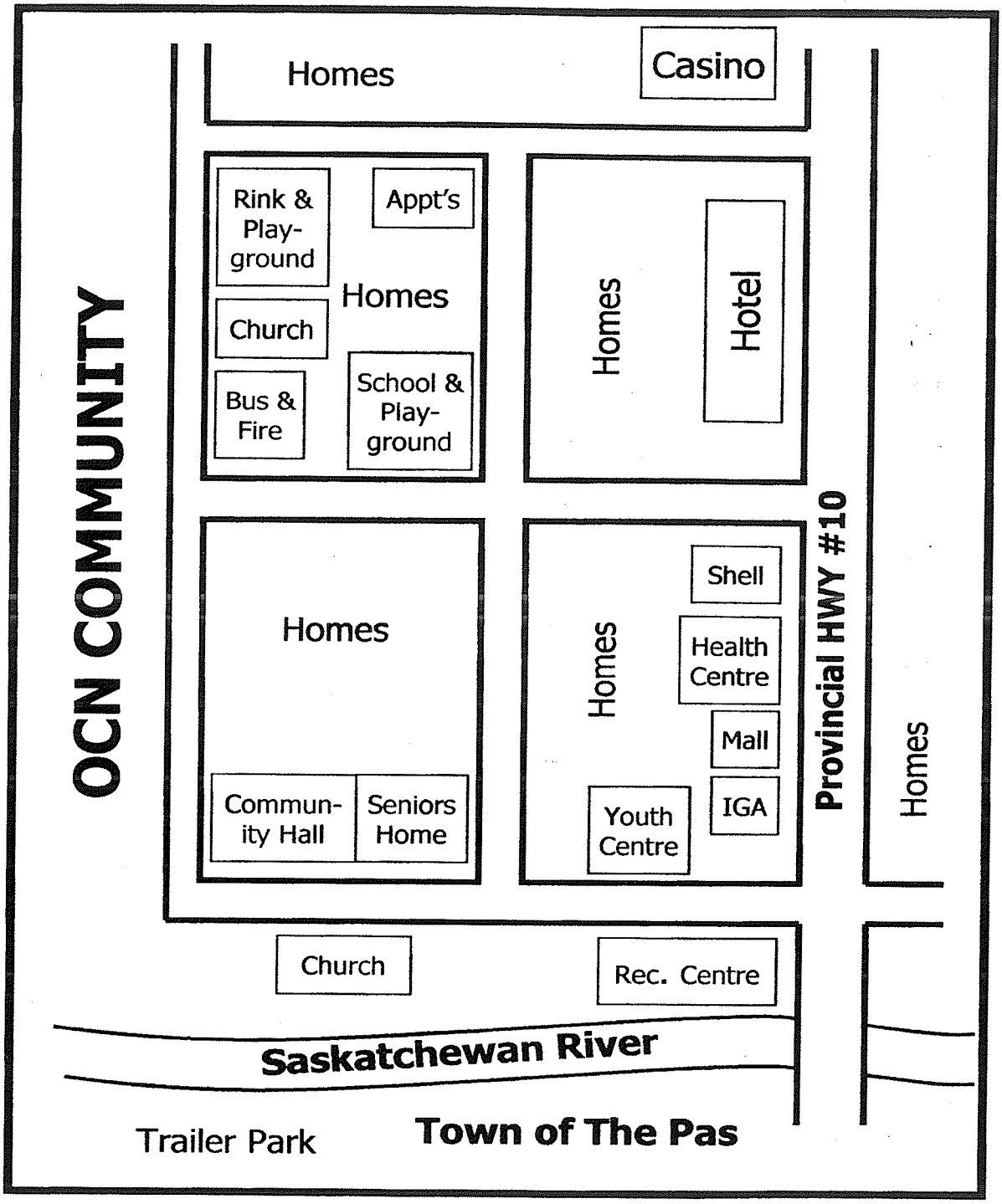


Figure 2 **Otineka Mall in OCN**

Figure 3 **Joseph A. Ross School**

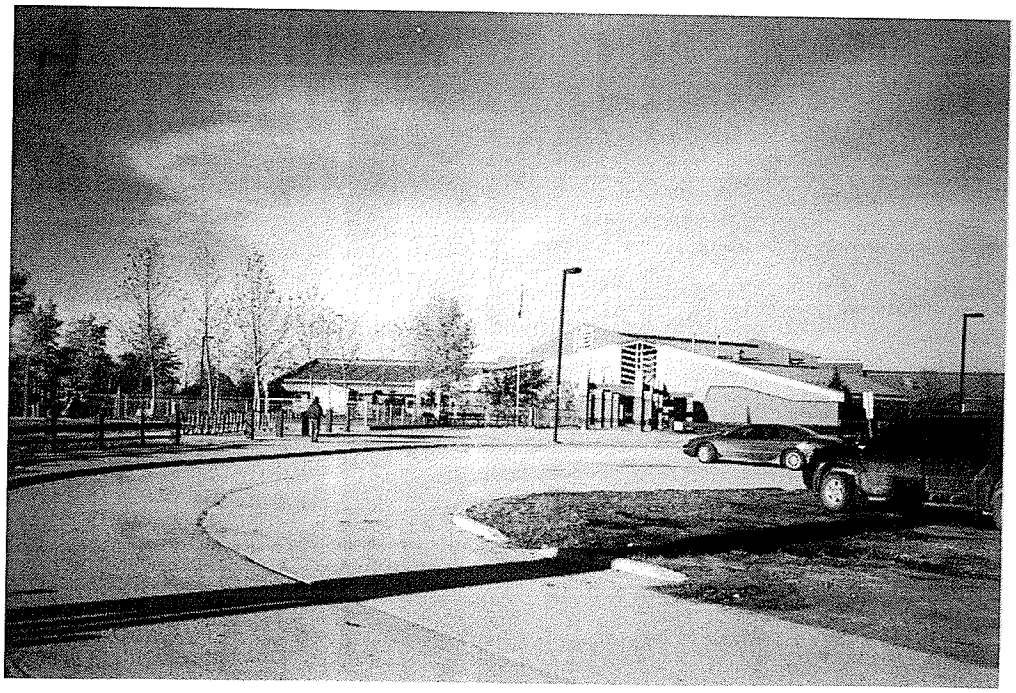
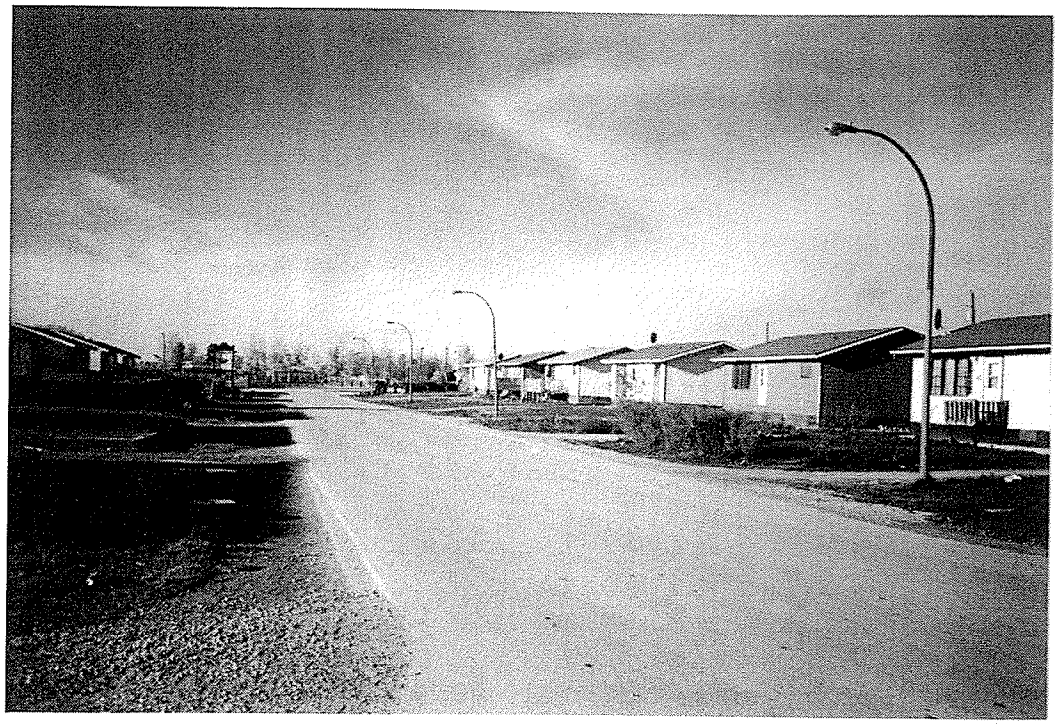


Figure 4 OCN homes near the main town site and school



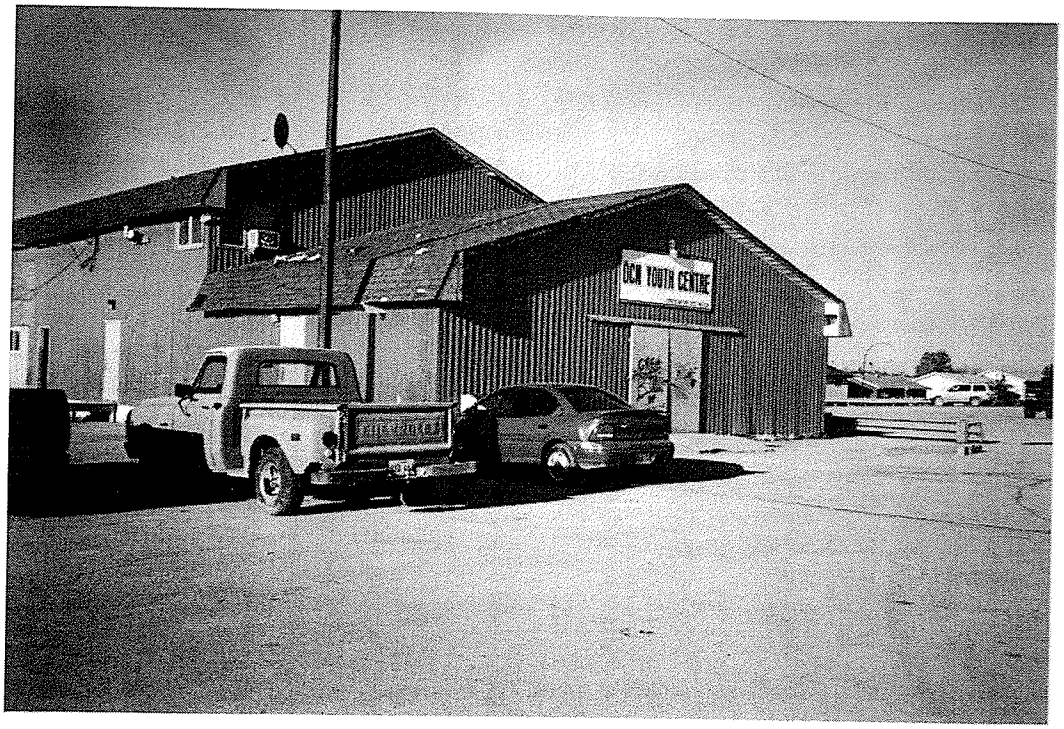
The community health centre, Otineka Health Centre, is located in the Otineka mall. There are currently numerous major health issues affecting OCN members. According to Opaskwayak Health Authority (OHA) staff, there has been a recent increase in a variety of cancers among community members. In addition, hypertension and other cardiovascular conditions as well as diabetes are widespread among those living in OCN (personal communication, OCN community health nurse, June 2, 2005). Diabetes and its related complications have been reported to be a growing problem in this community according to a recent Opaskwayak Health Authority (OHA) Report (2004). Included in the report is a call for continued and augmented efforts towards diabetes prevention education directed towards children, adolescents and adults.

OCN community members and community support services have made substantial efforts to offer activities which support healthy living and promote positive

lifestyle behaviours. Walking Derbies which take 35-45 minutes are organized by the Otineka Health Centre three or four times a year. People of all ages are encouraged to take part, and it is a well attended event with anywhere between 200 and 400 participants, including parents with their children in strollers and those in wheelchairs. Water and refreshments are provided in addition to prizes such as a bicycle or running shoes. A health fair is organized by Otineka Health once a year in the OCN mall where nurses do blood sugar, blood pressure and cholesterol testing.

Recreational facilities available at OCN during the summer months include a soccer pitch, baseball field and a running track at the school. The OCN Youth Centre located behind the Otineka Mall, (Figure 5) has basketball hoops and a ball hockey area outdoors and a pool table and a ping pong table are available indoors. In The Pas there is an indoor swimming pool, a skateboard park and walking paths. In the winter, OCN residents can use the hockey arena for public skating and playing hockey. OCN owns and operates the OCN Blizzard hockey team, which is a member of the Manitoba Junior Hockey League and plays out of the Gordon Lathlin Memorial Centre at OCN (OCN, 2005b). In addition, there are several outdoor hockey arenas, equipped with outdoor lighting in various areas of the community. Although most families were said to have cars, the long distance from some of the homes to facilities in the main town site may make it difficult for youth to access these services and recreational areas. Conversely, it may also provide opportunities for physical activity by walking or bicycling to this area. For instance, many youth who want to participate in activities at the OCN Youth Centre or in The Pas often walk.

Figure 5 OCN Youth Centre



An IGA grocery store, located in the Otineka mall, is very similar to southern (Winnipeg area) stores of the same kind. There are also several grocery stores in The Pas, which OCN community members use. Home gardens at OCN are very rare. Those interviewed made reference to times in the past when gardens and home-grown foods were common.

As part of the environmental scan, the researcher conducted a food costing survey in March, 2005 to compare prices and assess the availability and variety of foods offered for purchase in OCN (see Table 4). Most foods that are available in the south were also available at the IGA located in the Otineka Mall at OCN. The results of the food costing survey were analyzed according to food group.

Foods in the Grains and Cereals food group were priced equally or similarly in both the OCN and Winnipeg stores. The exceptions were fresh pasta which was 30%

lower and corn flakes cereal which was 66% higher (sale item) at OCN than in the Winnipeg store. In the Fruits and Vegetables food group, common fruits and vegetables were of similar or equal price in both stores. Specialty or out of season vegetables and fruits were between 30% and 125% higher in OCN than in the Winnipeg store. For example, red peppers, parsnips, cucumbers, cauliflower and Brussels sprouts were 30-40% more expensive and yams were 125% higher in the OCN store. Apples, oranges, bananas and grapes were priced alike in both stores; however, the grapes were of poor quality in the OCN store. Similar to the vegetables, a few specialty items such as plums and strawberries were 23% and 101% higher respectively in the OCN store. However, other less common fruits such as red papayas, peaches and Anjou pears were 10-20% less costly in the OCN store. Pure fruit juices were 25% higher in the OCN store. Milk was priced significantly higher (30-40%) at OCN for all types and quantities. Four litre containers of skim, 1%, 2% and whole milk were all at least one dollar more in OCN. Yogurt and cheese products were priced similarly in both stores. In the Meat and Alternatives food group, ground beef was the same price in both stores while poultry products, both fresh and frozen, were 30% less in the OCN store. Some deli meats such as cooked ham as well as one brand of wieners were 30% less costly at OCN. Eggs, including specialty varieties such as *Omega Pro* were the same price in both stores.

Based on the results of the food cost data, if OCN residents were to consume common foods in all four food groups, they would be spending an equal or slightly higher amount than Winnipeg residents who shop in a similar store. The higher cost of milk in OCN may however lower consumption of the recommended number of servings of milk products in this community. It is unclear as to why milk prices were higher in the north,

since other heavier items such as ten or twenty pound bags of potatoes were equal or lower in price at the OCN store than in the Winnipeg store. Issues such as perishability and possibly a low demand for milk in OCN may play a role in the higher cost of milk in this community. Overall, the total cost of foods priced was five percent higher in the OCN store compared to the Winnipeg store. If the income and cost of living were the same in both locations, the cost of most foods in OCN would not be a barrier to healthful living in this community except for milk as mentioned above. These results are comparable to the findings of other investigators and therefore it may be helpful to provide information using alternative food costing data. Manitoba Agriculture and Food conducted a food cost survey in other stores in Winnipeg, Manitoba in November, 2003 and calculated the average annual cost of a "food basket", the cost of feeding a family four (Manitoba Agriculture and Food , 2004). The average annual cost of food in Winnipeg was six percent lower than in Thompson, a northern centre accessible by major provincial highway. Other communities in the north (location not specified) had annual average food costs up to 16% higher than in Winnipeg.

Table 4: Food Cost Comparison between OCN and Winnipeg Stores

FOOD ITEM	Quantity	OCN Store Prices 2005-03-17	Winnipeg Store Prices 2005-03-22	Price Difference Between OCN & Winnipeg	Percent Difference
GRAIN PRODUCTS					
Bread, Enriched White	454 g	$0.99	$0.99	$0.00	0%
Bread, 80% Whole Wheat	454 g	$0.99	$0.99	$0.00	0%
Bread, Low Fat	454 g	$1.49	$1.49	$0.00	0%
Bread, Rye (Canadian)	907 g	$3.19	$2.99	$0.20	7%
Fresh Pasta (Our Compliments [OC])	350 g	$2.39	$3.39	-$1.00	-29%
Macaroni/Cheese Dinner (Kraft)	225 g	$0.89	$0.89	$0.00	0%
Raisin Bran Cereal (OC)	1.3 kg	$7.79	$7.49	$0.30	4%
Corn Flakes (Kellogg's)	750 g	$4.99	***$3.00***	$1.99	66%
VEGETABLES					
Broccoli, Spears	1 lb	$1.99	$1.99	$0.00	0%
Broccoli, Whole	Each	$0.98	***$0.98***	$0.00	0%
Brussels Sprouts	1 lb	$2.49	$1.78	$0.71	40%
Cabbage, Green	1 lb	$0.79	$0.54	$0.25	46%
Carrots, Fresh	2 lb Bag	$1.29	$1.28	$0.01	1%
Carrots, Fresh	5 lb Bag	$2.79	$2.98	-$0.19	-6%
Carrots, Fresh	1 lb Bulk	$0.99	$1.49	-$0.50	-34%
Carrots, Baby	16 oz Bag	$1.69	$1.88	-$0.19	-10%
Carrots, Baby	32 oz Bag	$2.58	$2.58	$0.00	0%
Cauliflower, Florets	1 lb	$1.99	$1.98	$0.01	1%
Cauliflower, Whole	One head	$2.99	$2.18	$0.81	37%
Celery, Sticks	1 lb	$1.99	$1.98	$0.01	1%
Celery, Whole Stalks	Each	$1.79	$1.48	$0.31	21%
Celery, Hearts	2 stalk pkg	$2.69	$2.99	-$0.30	-10%

FOOD ITEM	Quantity	OCN Store Prices 2005-03-17	Winnipeg Store Prices 2005-03-22	Price Difference Between OCN & Winnipeg	Percent Difference
Cucumber	1 whole	$1.29	$0.88	$0.41	47%
Lettuce, Romaine	1 head	$1.39	$1.48	-$0.09	-6%
Lettuce, Green Leaf	1 head	$1.39	$1.39	$0.00	0%
Lettuce, Iceberg	1 head	$0.98	$0.98	$0.00	0%
Lettuce, Romaine Hearts	1 pkg	$3.48	$3.48	$0.00	0%
Mushrooms, Fresh	1 lb	$2.89	$2.48	$0.41	17%
Onions, Green	1 Bundle	$0.66	$0.68	-$0.02	-3%
Parsley, Fresh	1 Bundle	$0.79	$0.58	$0.21	36%
Parsnips	1 lb	$1.99	$1.49	$0.50	34%
Pepper, Green	1 lb	$1.48	$1.48	$0.00	0%
Pepper, Jalapeno	1 lb	$3.49	$2.98	$0.51	17%
Pepper, Red	1 lb	$4.49	$3.49	$1.00	29%
Potato, Red	10 lb Bag	$3.48	$3.48	$0.00	0%
Potato, Red	20 lb Bag	$5.49	$5.98	-$0.49	-8%
Potato, Russet	10 lb Bag	$1.98	$1.98	$0.00	0%
Radish	1 lb	$1.29	$1.31	-$0.02	-2%
Rutabagas	1 lb	$0.59	$0.69	-$0.10	-14%
Salad, Mix with Dressing (Tanimura)	340 g	$3.69	$3.49	$0.20	6%
Spinach, Fresh	284 g Bag	$0.99	$3.98	-$2.99	-75%
Tomato	1 lb	$1.28	$1.28	$0.00	0%
Tomato, Roma	1 lb	$1.69	$1.48	$0.21	14%
Yam	1 lb	$1.19	$0.53	$0.66	125%
FRUIT					
Apple, Gala	1 lb	$0.88	$0.88	$0.00	0%
Apple, Golden Delicious	1 lb	$1.19	$1.18	$0.01	1%

FOOD ITEM	Quantity	OCN Store Prices 2005-03-17	Winnipeg Store Prices 2005-03-22	Price Difference Between OCN & Winnipeg	Percent Difference
Apple, Macintosh	1 lb	$0.77	$0.77	$0.00	0%
Apple, Red Delicious	1 lb	$0.89	$0.99	-$0.10	-10%
Banana	1 lb	$0.59	$0.57	$0.02	4%
Cantaloupe	1 Each	$1.98	$1.98	$0.00	0%
Grapes, Red Seedless	1 lb	$1.49	$1.48	$0.01	1%
Honeydew Melon	1	$3.98	$3.69	$0.29	8%
Kiwi	3	$1.00	$1.32	-$0.32	-24%
Lemon	Each	$0.49	$0.39	$0.10	26%
Lime	Each	$0.49	$0.49	$0.00	0%
Mango	1	$0.98	$0.98	$0.00	0%
Nectarine	1 lb	$1.98	$2.18	-$0.20	-9%
Orange, Navel	1 lb	$0.58	$0.58	$0.00	0%
Orange, Navel	5 lbs	$3.99	$3.49	$0.50	14%
Papaya, California Red	1 lb	$0.98	$1.28	-$0.30	-23%
Peach	1 lb	$1.98	$2.18	-$0.20	-9%
Pear, Anjou	1 lb	$1.19	$1.28	-$0.09	-7%
Pineapple	1 whole	$3.48	$3.48	$0.00	0%
Plum	1 lb	$1.98	$1.61	$0.37	23%
Strawberries	1 lb	$3.99	$1.99	$2.00	101%
MILK PRODUCTS					
Milk, Whole (3.25%) Parmalat	4 L	$4.89	$3.72	$1.17	31%
Milk, Whole (3.25%) Parmalat	2 L	$2.79	$2.19	$0.60	27%
Milk, 2%, Parmalat	4 L	$4.49	$3.48	$1.01	29%
Milk, 2%, Parmalat	2 L	$2.69	$2.13	$0.56	26%
Milk, 1%, Parmalat	4 L	$4.59	$3.28	$1.31	40%

FOOD ITEM	Quantity	OCN Store Prices 2005-03-17	Winnipeg Store Prices 2005-03-22	Price Difference Between OCN & Winnipeg	Percent Difference
Milk, 1%, Parmalat	2 L	$2.59	$2.10	$0.49	23%
Milk, Skim, Parmalat	4 L	$4.49	$3.25	$1.24	38%
Milk, Skim, Parmalat	2 L	$2.59	$2.05	$0.54	26%
Yogurt, Astro Fat Free	750 g	$2.99	$2.69	$0.30	11%
Cheese, Marble	100 g	$1.59	$1.59	$0.00	0%
Cheese, Cheddar (Bothwell)	100 g	$1.52	$1.49	$0.03	2%
Cheese, Feta Light	400 g	$7.59	$6.99	$0.60	9%
MEATS AND ALTERNATIVES					
Ground Beef, Lean	1 kg	$5.99	$5.99	$0.00	0%
Ground Beef, Lean (warehouse pk)	1 kg	$5.49	$5.49	$0.00	0%
Ground Beef, Regular	1 kg	$3.69	$3.69	$0.00	0%
Chicken, Fresh Boneless Breasts	1 kg	$14.59	$13.04	$1.55	12%
Chicken, Fresh Drumsticks/Thighs	1 kg	$4.18	$5.71	-$1.53	-27%
Chicken, Frozen Breasts	1 kg	***$8.99***	$11.00	-$2.01	-18%
Turkey, Whole Frozen	1 kg	$2.84	$4.39	-$1.55	-35%
Bologna, Deli	100 g	$0.85	$0.79	$0.06	8%
Ham, Cooked Deli	100 g	$0.59	$0.79	-$0.20	-25%
Salami, Deli	100g	$0.99	$0.99	$0.00	0%
Turkey Breast, Deli	100 g	$1.99	$1.99	$0.00	0%
Wieners (Burns)	450 g	$2.09	$2.99	-$0.90	-30%
Wieners (Schneider's)	450 g	$3.69	$3.29	$0.40	12%
Eggs, (Smart Choice)	1 doz. Large	$1.99	$1.99	$0.00	0%
Eggs, (Smart Choice)	1 doz. Medium	$1.89	$1.89	$0.00	0%
Eggs, (Omega Pro)	1 doz.	$2.99	not available		

FOOD ITEM	Quantity	OCN Store Prices 2005-03-17	Winnipeg Store Prices 2005-03-22	Price Difference Between OCN & Winnipeg	Percent Difference
Eggs, (Break Free)	500 mL	not available	$2.99		
Margarine, Tub (Becel)	4 lbs	$9.49	$8.49	$1.00	12%
Margarine, Tub (Becel)	454 g	$2.79	$2.79	$0.00	0%
BEVERAGES					
Pepsi	2L	***$1.25***	***$1.25***	$0.00	0%
Coke	12 cans (3.65L)	$4.79	$4.29	$0.50	12%
Apple Juice, 100% (Sun Rype)	1 L	$2.09	$1.69	$0.40	24%
Apple Orange Passion, 100 % (Sun Rype)	1 L	$2.09	$1.69	$0.40	24%
Apple Orange Passion, 100 % (Sun Rype)	5 x 200 mL	$1.99	$1.89	$0.10	5%
Apple Juice Blend (Niagara)	1 L	$1.49	***$0.99***	$0.50	51%
Hi 5 Fruit Beverage (Sun Rype)	1 L	$0.99	$0.99	$0.00	0%
TOTAL		**$263.25**	**$251.77**	**$11.48**	**5%**

Note: Sale priced items in bold italics

Discussion

Canadian First Nations people have experienced significant changes in their way of life over the past several centuries. The coming of European settlers influenced Aboriginal people in physical, cultural, social and spiritual ways through the

establishment of churches, residential schools, land-entitlement treaties and health care provision.

Along with changes in their physical environment came changes in their health status. Although the life span of most First Nations people is now longer, the health status of First Nations people across Canada is generally much poorer than that of other Canadians. Some diseases such as diabetes have now reached epidemic proportions in this population.

The demographic profile of First Nations people has also changed over the years. The numbers of First Nations people in Canada has been increasing, particularly for youth under 25 years of age. This trend is opposite to that of the general Canadian population. This has a significant impact on how health promotion strategies are planned and implemented.

The northern Manitoba First Nations community of Opaskwayak Cree Nation has seen similar changes and health issues as other Canadian First Nations communities. New industries in the area have had environmental effects on the community. Similar to other First Nations communities, unemployment is a concern in this community. However, OCN is a progressive community, and leaders of OCN have taken initiatives to start new enterprises which have provided some employment opportunities for OCN members. This community also has a locally controlled school where culturally significant curriculum is taught. There are numerous opportunities for physical activity in and around the community including the town of The Pas, directly across the river from OCN.

The food cost comparison completed as part of the environmental scan showed that food prices are five percent higher in OCN compared to a similar store in Winnipeg.

The variety of foods available was also similar. OCN is located just across the river from the town of The Pas, which may provide competitive food pricing and thus keep food prices at the OCN store at a comparable cost. Therefore, assuming that income and other costs are similar, food costs in OCN would not be more of a barrier to healthy living than in Winnipeg.

The health issues experienced by First Nations people in general are also a concern in OCN, particularly heart disease, cancer and diabetes. The staff at Otineka Health Centre is making efforts towards addressing these issues by providing community education and health care.

CHAPTER FIVE

Meanings of Health: The Medicine Wheel

The World Health Organization (WHO) (1978) has defined health as "a state of complete physical, mental, and social well-being and not merely the absence of disease and infirmity" (p.2). In speaking with members of a northern Ontario First Nations community, Wilson (Wilson, K., 2003) reported that their conceptions of health could be explained through the Medicine Wheel:

> *According to beliefs, all four elements of life, the physical, emotional, mental and spiritual, are represented in the four directions of the Medicine Wheel. These four elements are intricately woven together and interact to support a strong and healthy person. One of the main teachings of the Medicine Wheel is that balance between all four elements is essential for maintaining and supporting good health* (Wilson, K., 2003; p.87).

Community adults, living or working in Opaskwayak Cree Nation participated in individual semi-structured interviews using open-ended questions about the meaning of health. Similar questions were asked of youth in focus group sessions. When asked about what being healthy meant to them, the responses of adults compared to youth had both similarities and differences. Seven of the ten adults (including non-Aboriginals) spoke about being healthy in terms of the Medicine Wheel or having a balance between the physical, emotional, spiritual and mental aspects of health.

> *A1: Well for myself it would be leading a healthy lifestyle, which means the whole aspect of the, I like to use the Medicine Wheel, the balancing of the Medicine Wheel* [pause] *because you know we have a balance between our emotional wellbeing, our spiritual, our physical, and our spirituality and mental, mentally as well. So, healthy to me is a balance in those four aspects.*

> *A8: We were put on this earth for us to work, physically, mentally, spiritually and emotionally. These are our understandings that they have to be all healthy. ... When* we *have a balance which is a balance of understanding and practicing in all these, keeping it in the same level, all these, all the different elements I just mentioned ...they are all part of, of our being fit ...yes you have to be fit in all those areas.*

One of the adult participants went on to describe how she actively used the Medicine Wheel on a daily basis to help her focus on which of the four areas needed attention that day. This was useful for her and helped her to keep "in balance". She explained:

> *A1: Sometimes during the day when I'm not feeling right I take a look and I just draw it, I just draw a Medicine Wheel* [draws a sketch of a Medicine Wheel] *and then I put down the areas, like spirituality, physically, emotionally and mentally and then I rate myself from one to ten, with ten being right in the middle and one being at the far end.*

This participant then explained how this exercise helped her to have *"something concrete to look at"* so she could determine which areas (rated with lower numbers) needed to be "*worked on*" to attain balance that day.

Another aspect of health that was discussed by several adult participants in conjunction with the Medicine Wheel was the concept that being healthy was more than just the absence of illness. For example, "*I also believe you can be healthy and have diabetes"* (A5) or "*... a healthy person could be someone that's dying of cancer, but if they're living their life like that,* [making conscious decisions in their life to become a better person] *then to me that's still a healthy person"* (A2). Alternatively, it was said that someone could be physically healthy, yet not healthy in the other aspects of their life:

> *A2: Because if you have someone that's got a VO_2 max of 90 and they're smoking and they're all messed up mentally and stuff they might not be the healthiest person.*

Others focused on what needed to be done to maintain the physical aspects of health without mentioning the Medicine Wheel or the concept of balance. For example, "*take care of yourself, eat healthy food, exercise*" (A9). Most of the youth interviewed in the focus groups spoke of being healthy mainly in terms of the physical aspects of health.

> *FG1: Exercise. Eating right ... like salads and vegetables and fruit.*
>
> *FG2: Doing stuff like running or biking.*
>
> *FG3: Staying fit. Eating right. Taking care of yourself.*
>
> *FG4: Don't smoke. Drug-free body.*

The exception to this way of speaking about being healthy was the youth in the oldest group who mentioned the four aspects of health as depicted in the Medicine Wheel as an explanation of what being healthy meant. However, they did not specifically use the term "Medicine Wheel" until probed by the researcher.

> *FG5: Respecting your body. Not just physically, emotionally too or mentally. Well in order to finish the cycle you've got to have four points and for the body there's four of them. There's mentally, and there's physically. Another one's emotionally, and the last one is spiritually, and by that I mean know who you are, your nationality I guess and stuff like that. So with these four points, that's health.*

Discussions on the concept of health similar to that described by the participants of this study have been described elsewhere. The report on the Royal Commission on Aboriginal Peoples (RCAP) stated that "Aboriginal people from almost every culture believe that health is a matter of balance and harmony within the self and with others, sustained and ordered by spiritual law and the bounty of Mother Earth" (RCAP, 1996a; p. 184). Similar perspectives on the meaning of health were found in the scientific literature by researchers who conducted qualitative research with Aboriginal people (Bird &

Greyeyes, 1995; Hakim & Wegmann, 2002; Hernandez et al., 1999; Turton, 1997) as well as with elders from other non-western cultures living in The United States (Arcury et al., 2001; Hakim & Wegmann, 2002). Although only the oldest youth articulated a health perspective according to the Medicine Wheel, other youth included issues in all four areas of health depicted in the Medicine Wheel in their discussions.

The notion that health was more than the absence of disease, that one could have a disease such as diabetes or cancer and still be healthy if all other aspects of health were in balance is also reported in the literature (Adelson, 1990; Wilson, K., 2003). Alternatively it was stated that if a person had only good physical health and the other components such as mental, emotional or spiritual health were out of balance, that person would be considered to be unhealthy. Similar perspectives were recorded by Mendelson (2002) when speaking with 13 Mexican-American women living in a mid-sized south-west American city. For them, health represented an integration of both the physical and the emotional and was experienced as wholeness or being in balance and harmony. Mendelson went on to say that for these women "although health was possible in the presence of physical illness, health was not attainable in the presence of emotional instability" (p. 216).

Given the importance of these concepts of health to the participants, the following results and discussion are elaborated according to the emotional, spiritual, physical and mental components of health that both youth and adults spoke of during the interviews. Due to the distinct format of this chapter, results for each component will be presented and discussed before moving on to the next area. Consequently, the concluding summary

and discussion focuses mostly on summation of participants' comments with limited discussion.

Emotional Health - Parents/Adults as Role Models

Traditional use of the Medicine Wheel by Aboriginal people most often begins in the eastern quadrant, to reflect the rising of the sun, the beginning of a new day (Whiskeyjack, 2000). In the eastern section of the Medicine Wheel, we also find emotional health. Similarly, this discussion will begin with the topics related to emotional health that were discussed by the study participants.

Both youth and adults expressed the importance of having positive adult support and role models for youth to follow in order to promote the best possible emotional health.

> *A2: But the kids aren't coming close to, they don't have the tools to deal with emotional problems. They don't have the knowledge from home and the supports from home to say that smoking is bad. Or they don't have the supports from home to make them stick it out, say if they join hockey or something. They don't have the supports to get them through tough times when they're in sports, things like that.*

> *A5: And then I know some families that the mom is too tired, she's got six kids at home and you know, you go there, the TV's blaring, the kids are kind of eating whatever, wherever, and I know that these are the kids that are less likely to get out to hockey and get out to go swimming. So I think the parents have a big influence.*

> *FG5 Female: I'd say parents need to reach their children more too, but the parents also have to do their job of being a good role model around their child. Instead of saying, "Don't drink. Don't do this." And yet their parents go out and drink and do that.*

There were also some positive comments from an older youth about First Nations people now becoming role models for younger children.

> *FG5 Male: It's not really hard because now there's a bunch of Aboriginal people out there making it in the world, becoming role models and at the time I was growing up I didn't have that kind of stuff.*

OCN youth expressed hope for future generations in that First Nations youth are able to look up to those Aboriginal people who have made positive contributions through accomplishments in athletics and acting. Additionally, an older youth and a young adult both suggested that they were also now positive role models for the younger generations in their community.

The Royal Commission on Aboriginal Peoples states that "... emotional health [is] gained through access to sharing circles, counsellors and elders" (RCAP, 1996b; p.153). In order for children and youth to make healthy lifestyle choices it is valuable for them to have positive adult role models such as parents, teachers, school counsellors and elders in their community. This point of view was mentioned numerous times particularly by several adults and older youth. Adults pointed to the need for children and youth to have a strong support system from the home and community in order to obtain the tools or assets required for healthy emotional development. The Royal Commission on Aboriginal Peoples (1996b) also suggested that promoting Aboriginal athletes as role models helps to encourage young Aboriginal people and makes connections between Aboriginal people and the larger Canadian community.

Researchers in adolescent health acknowledge that addressing all aspects of adolescent health including emotional health, develops the whole person. Associates at the Search Institute in Minneapolis, Minnesota have developed a framework that focuses

on naming and increasing positive building blocks in young people's lives. Forty developmental assets are identified in this framework. Among the external assets in the framework are, *support* from family and other adults, and *boundaries and expectations* which includes the modelling of positive, responsible behaviour from parents and other adults. Results from their research suggested that building specific developmental assets was associated with a decrease in risk behaviour patterns and an increase in patterns of thriving behaviour among a collective sample of nearly 100,000, sixth-grade to twelfth-grade youth in 213 US communities (Scales, 1999).

Spiritual Health - Traditional Practices and Health

Moving clockwise, as the sun travels southward, the second component of health according to the Medicine Wheel is "spiritual health, which can mean many things, depending on the individual's approach to spirituality, and may include participating in ceremonies, gaining traditional knowledge, and exploring spiritual heritage" (RCAP, 1996b; p.153). Both youth and adults were asked how traditional native practices might affect health, with encouragement to respond either negatively or positively. Younger youth, while supportive, were not as familiar with traditional practices and their discussions on the topic included comments such as:

> *FG1: Sweats.*
> *It's an Indian ceremony.*
> *That's all I know.*
>
> *FG4: Sweat lodges, do they smoke in there, smoke tobacco?*
> *I think so.*
> *Don't they pass around a pipe or something?*

Older youth expressed more familiarity about traditional practices.

FG5: Well if you want to get spiritual healing from the creator and ask him for stuff or ask the creator to help make someone better or heal them or protect them you usually go to a sweat lodge. That's a place to go for spiritual healing for the good side of health.

When asked about the purpose of a sweat lodge, a member of one focus group responded: *"It's like cleansing our soul or something; it's like cleansing it and giving our thanks to the Creator" (FG4).*

When asked how traditional practices could affect health, several youth in focus groups said it could affect health *"in a good way"* (FG1 and FG2). Most focus groups talked about traditional practices in terms of hunting, sweats or Pow-wows and how these activities could have a positive effect on health due to the physical benefits involved.

FG1: Sweats ...it sweats you skinny.

FG2: Keep the germs away.

FG3: Hunting ... you're running, and you're always moving, trying to find the animals and stuff.

FG4: Well for the dancers, it is healthy for them because they're moving all the time on the Pow-wow grounds. More Pow-wows would improve health.
FG4: And it's like really, really, really, really hot in there so it cleans out all your pores.

Several adults also expressed the perceived benefit of traditional practices on the reduction of drug and alcohol use, thus giving support to the spiritual element of health.

A3: They think it helps teenagers that go into drugs. They take them out there, [to] *sweats; they say they pray when they're sweating. ... He says he has two boys that went to sweat lodges and they're doing well now. They were on drugs, and now they're doing good.*

A6: I think there would hardly be any drinking and drugs and stuff like that, because there's a lot of that that goes on, on the reserve. Like there's even drug trafficking. And then these kids, if they were involved in their culture we wouldn't have to deal with things like that.

There were however, comments by several adults and some youth on the possibility of negative impacts of misuse of traditional practices. Several adults (A1, A2, A10) expressed thoughts on how the original intent of traditional native practices had either changed or been misused in recent years, and if practiced in this way, were not healthy.

> *A2: I know a lot of people that call themselves traditional that are the most unhealthy people around, like chain smokers let's say. They say because tobacco is sacred, if you pray with your cigarettes and offer one of them you won't get anything negative from the tobacco. So to me that's just ridiculous. So there are a lot of traditional practices of people that are completely unhealthy.*

> *A1: First Nations people can hunt whenever they can and they need it, to fill their freezer and share their meat, but they also have to be aware of the closing of certain areas too and try and respect it as well because they need to replenish, you can't just kill them totally out. But then you've got some that don't follow that, whether it's a traditional practise of replenishing, there's some that don't follow that rule, they go and kill five moose, but they'll still say "I've given it to family and friends".*

Some youth also pointed out that traditional native practices could have a negative impact on a person.

> *FG2 Female 2: Some medicine's bad. It can harm you.*
> *C: Are you talking about traditional native medicines or medicines that you get from the doctor?*
> *FG2 Male 1: Native medicines.*
> *FG2 Female 1: Native medicine.*
> *C: So how can they harm you?*
> *FG2 Male 2: Sometimes if you use too many or whatever.*
> *FG2 Female 1: If you get someone mad they can use it against you.*
> *FG2 Male 1: Like voodoo?*
> *FG2 Female 1: Something like that.*

One youth participant used the term "bad medicine" to talk about drugs like "*weed*" (marijuana). When brought into a traditional ceremony such as a Pow-wow, it

was viewed as an act that was "... *no good for our culture... like if you bring it around there it's just it's probably like bringing bad luck or something.*"

A youth in an older focus group pointed out that there could be both positive and negative effects of both western and traditional medicines.

> *FG5 Female: I think there's both good and bad, both sides, you can have like allergic reactions on one side to like non-native lifestyle and the medicine and stuff and then same with the other side, you use them, there's good medicine, there's bad medicine on both sides.*

Awareness about the frequency of occurrence of traditional events such as sweat lodges in the OCN community was quite varied. Some youth indicated that there were "*hardly, there's hardly any* [sweat lodges] *around here, once in a while*" (FG4), whereas others said they happened on a weekly basis. "*Yeah there's* [sweat lodges] ... *every week on Sunday*" (FG5). An adult however explained the frequency of traditional practices at OCN.

> *A5: They have sweats, different elders, different groups have different sweats running almost every day of the week around here. You've just got to know where they are. They have pipe ceremonies at special events like Pow-wows or conferences at six in the morning or five in the morning. We have an annual Pow-wow with Indian Days here every year. And we have a lot of kids, I don't know if there's any in the school, but they belong to drum groups. So they're singers. I don't believe OCN has any Sun Dances here, but I know a lot of people go out to them, to Saskatchewan and down in the Unites States.*

The adults who were interviewed had numerous ways of talking about the term "traditional practices". Three adults (A1, A8, A10) spoke about traditional practices in terms of values such as respect and sharing ... "*like sharing is a really important value in our community*" (A10). Two adults said the tradition of using the Medicine Wheel could have a positive impact on health. Others described traditional practices as specific

activities such as sweat lodges and Pow-wows and how this could be beneficial for spiritual health.

> *A5: They seem as very strong people. And traditional people, I mean people that go to sweats, people that are pipe smokers in pipe ceremonies, ... do drum around Pow-wows, drum groups, Pow-wow dancers, jingle dress dancers, traditional dancers, they don't use alcohol. So I mean they're healthy in that way.*
>
> *A6: I feel better when I'm around it ... I feel good about who I am. I attend sweats regularly and I enjoy going to Pow-wows, and it's a healthy lifestyle I would think.*

Another adult portrayed traditional practices as being related to outdoor activities such as hunting, fishing and trapping as opposed to sweat lodges and Pow-wows.

> *A2: If I were to define traditional as that, getting outside and hunting and fishing and trapping and just being outside, then that's totally healthy, but a lot of people they don't, they get traditional and that definition of traditional mixed up with the definition that's based on sweet grass and feathers and Pow-wow dancing and a lot of the times they're completely different lifestyles.*

Two participants spoke of traditional practices in terms of the foods and preparation methods involved in traditional feasts. Both gave comments on the negative impact on health of the foods and preparation methods which were typically used during feasts.

> *I suppose in some cases diet. I mean there's a lot of smoked food. Smoked foods are good for you but there's also a lot of salt involved. For example there's a lot of baking in lard and fat.*

> *So you know when I go to one of our traditional feasts and I see big pots filled with sturgeon, and I don't say "Oh do you know how heavily endangered sturgeon are? And you guys have slaughtered all these sturgeon to make this?" I don't say anything, plus it's also extremely fattening too. But you know "everything in moderation". It's a traditional event.*

In spite of this opinion, there was also recognition that eating these foods at traditional feasts was a means of maintaining the traditional native culture in the school and community.

> *Even though some of these practices might reflect issues or cause health issues, the trade off is that it's keeping kids aware of their roots, their foundation, their culture, which is also an aspect of health. ... And the kids, they really enjoy the whole school being together with the elders and members of the community and such. It gives them a really good sense.*

Even though most of the adults thought traditional practices could be helpful, two of those interviewed had not been taught about them and therefore felt they could not comment on specifics. One participant referred to their experience in a residential school, where traditional native ways were not taught.

Younger youth in this study were generally supportive of traditional practises, but did not seem to have a great deal of experience regarding specific ones. Older youth expressed a somewhat broader awareness of traditional practices such as sweat lodges and Pow-wows. It was unclear in the case of the younger youth, whether awareness of traditional practices was being lost or whether the youth were not developmentally ready to discuss the topic in any depth.

When adults were asked how traditional practices affect health, most were supportive. When they spoke of the benefits of traditional practices, it was mainly linked to benefits to spiritual health and the inner strength that participating in sweat lodges and Pow-wows provided for people. Two adult participants mentioned the use of sweat lodges as being beneficial for those who were struggling with drug and alcohol abuse. This has also been recorded in discussions among the Ojibway in the Great Lakes region where spiritual help was commonly sought for drug or alcohol abuse (Turton, 1997). Youth on the other hand felt that participation in traditional practices would have a positive influence on health because of the physical benefits involved such as the exercise involved in hunting, and dancing during Pow-wows, or the action of intense heat of sweat

lodges which "*sweats you skinny*" and *"cleans out all your pores"*. The lack of familiarity of traditional native ways was also expressed by the youth interviewed for the Royal Commission on Aboriginal People where youth "... said they were proud of their culture, but most of them did not even know their culture until they were exposed to it at the Edmonton Young Offenders Centre" (RCAP, 1996b; p 156). There are several references to the benefit of using traditional Aboriginal activities to increase activity level and cultural identity for Aboriginal youth. The Royal Commission on Aboriginal Peoples (1996b) makes numerous references to support the use of traditional activities such as traditional dancing, canoeing, and hunting as being important to include in physical activity programs for Aboriginal youth. Similarly, several programs such as Pathways, a culturally appropriate obesity-prevention program for American Indian schoolchildren, and the Kahnawake Schools Diabetes Prevention programs have incorporated "traditional native culture and beliefs" (Harris, 1998), traditional "fitness lessons" (Davis et al., 1999), and "American Indian games" (Thompson et al., 2001) into their physical education curriculum. These programs have reported increased physical activity levels in community children.

There were comments by both adults and youth that implied that if the original intent of a traditional practice had been misused, this may result in a negative impact on health. For example, one adult spoke of the practice of smoking commercial cigarettes while attending a sweat lodge. In his opinion, the traditional use of sacred tobacco was being used as an excuse by some community members for their own choice to abuse tobacco, with the reasoning that smoking is sacred and thus would not harm their health.

This issue was raised in conversations Struthers and Hodge (2004) had with six Ojibwe traditional healers or spiritual leaders from Ojibwe communities in northern and central Minnesota. In traditional Anishinabe (Ojibwe term for 'original man') culture, tobacco, obtained from the red willow, is sacred and is considered a symbol for peace and healing. Contemporary use and abuse of commercial cigarettes on the other hand was considered an unhealthy practice by all of the participants. One key participant went on to explain how the use of commercial cigarettes and the use of ceremonial tobacco

> *...are in my opinion two different things...two very contradicting things. This tobacco, cigarette tobacco, is a tobacco of pleasure, and of a different purpose than the tobacco that I use for prayer. Some people have lost that understanding that the tobacco we use for our life, has come with the same purpose as a cigarette. It is not...it is not even close* (Struthers & Hodge, 2004; p.219).

Youth's comments in answer to a question on traditional practices provide insight into their knowledge, interpretation and experience of traditional practices. When asked if traditional practices could affect health in a bad way, youth in two of the focus groups introduced the term "bad medicine" and the idea of traditional medicines having bad outcomes. Although members of the groups did not specifically define the term, their discussion can provide insight. One focus group discussed the use of traditional native medicines which included sweet grass, sage, kinnikinnick (made from red willow bark) and pine needles. Another perspective of traditional medicine discussed in an older focus group was the topic of "bad medicine". At first this notion was used to refer to physically taking the medicine and it was said that if too much was used it could be harmful. Another comment on "bad medicine" seemed to refer more to the idea of sorcery or "wishing someone ill" (Turton, 1997). Youth spoke about "bad medicine" being used against a person who had angered another, with the discussion suggestion *"like voodoo?"*

Traditional Aboriginal health beliefs involving supernatural intervention are common among Aboriginal peoples in North America and Australia and are often used to explain causes of ill health and suffering (Maher, 1999; Turton, 1997).

When asked about traditional practices and health, adults described four different kinds of traditional activities. Several spoke of traditional practices as being the common collective values among their people such as respect and sharing. Others spoke of sweat lodges and Pow-wows. One person described traditional practices as hunting, fishing and trapping, while two non-Aboriginal participants who worked in the community spoke of traditional practices in relation to traditional feasts. Traditional native practices may encompass any or all of these activities.

In discussion of traditional practices such as sweat lodges and Pow-wows it is helpful to include a description of the nature and function of these customs.

> *In a sweat lodge, saplings are tied together to construct a dome-like structure. In the middle of the sweat lodge there is a pit in which the rocks are placed. During a sweat lodge ceremony, the inside is made completely dark and water is sprinkled on the rocks, which creates heat. Within the sweat lodge individuals come together for praying, drumming and singing. The function of the sweat lodge is multifaceted: it is used for prayer, to maintain health and for health and social problems, such as, alcoholism and drug addictions* (Wilson, K., 2003; p.89).

> *At these communal gatherings* [Pow-wows] *competitive dancing is combined with prayer and festivity, feasting and relaxation. While the term `Pow-wow' comes from the Algonquian for shaman, the Pow-wow is not a religious event as such, but a festivity with religious aspects. Most elements of the Pow-wow come from the Plains, from amalgamated summer celebrations and ceremonies and* [special] *dances* (King, 2000; p.231-2).

Physical Health – Diet and Activity

The third and westerly segment of the Medicine Wheel involves physical health which may include cultural activities, nutrition and recreation (RCAP, 1996b). In this study, both adult and youth participants repeatedly mentioned three major factors in response to the questions about health: change in diet and foods available, change in physical activity and advances in technology.

Change in Diet/Availability of Foods

A change in diet and the availability of different foods was cited as one of the reasons for changes in health status over the years. Four of the adult participants (A4, A5, A7, and A8) pointed out that the increased prominence of processed, convenience and fast foods had had a negative impact on their health.

> *A5: We went shopping last night, everything is throw-away ... You can get shepherd's pie in a box now. Like, what is that all about? It's no wonder we have such bad health problems as opposed to our ancestors, generations ago.*

> *A8: There are more fast foods out there. I don't know how many fast foods we have in this community. We have all of them ... fast food restaurants here that are in many urban centres. So from there, there's going to be consequences or an outcome when you eat daily like that. And the foods that we buy now are already precooked or whatever. We have rice that's all ready, all it takes is five minutes to cook, and to me that's not healthy ... It's changed. The foods have changed too.*

Similar thoughts were voiced by the youth in three of the focus groups (FG3, FG1, and FG5). These youth indicated that the increase in "*greasy foods, junk food, fast foods*" such as "*hamburgers, fries, chips, coke, and pizza pops*" caused people to be less healthy "*because of all the junk food and all that stuff. There's more junk food now compared to the past*" (FG5).

Youth also cited the increase in variety of nutritious foods available (FG1, FG2, FG3, FG5) as a cause for better health today than in the past. These youth indicated that today "*they have more nutrient plans, nutritious foods, healthy foods, apples, oranges, bananas, fruits, vegetables*" than in the past.

> *FG5 Female 2: Our generation has more nutrients that we can get from different parts of the world. Because before like all we had was meat, and now we can get fruit.*
> *FG5 Male 1: Crab apples.*
> *FG5 Female 2: And vegetables. Because we live in the north, so we don't have much time to grow an apple tree or a banana tree. So now we get more nutrition than we had in previous generations.*

They identified other positive aspects of today's food supply.

> *FG2 Male 1:* [More] *healthy food.*
> *FG2 Male 2: Apples, oranges, bananas, fruits ... vegetables.*
> *FG2 Female 1: And you see foods with 'Health Checks' on them.*

Youth in one of the focus groups (FG2) expressed opinions relating the negative impact of foods available in the present day.

> *FG2: Female: I think it was healthier back then than at this time because they didn't usually have money, so they couldn't go buy greasy foods and stuff.*
> *FG2 Male: They only used to hunt for their food.*

Several of the adults, both Aboriginal (A3 and A5) and non-Aboriginal (A4 and A7) talked about the shift from obtaining foods from hunting and gardens in the past to more consumption of junk foods today.

> *C: So how is that different from when you were a young person?*
> *A3: Oh, we never had that* [junk food] *in our young lives. There was no such thing as, all we ate all the time was wild food. Well sometime we used to buy beef eh, to make soup, and we used to plant gardens and we ate potatoes, carrots, turnips. Yah we ate all those during my time.*
> *C: Do people in this community still plant gardens?*
> *A3: No, no I don't know of anybody. There's a few in the valley there. Very few now plant gardens. Before, there would be quite a few here that used to plant gardens.*

A7: So it's changed and also growing up here, I think like culturally, I'll say both for non-treaty and treaty the lifestyle has changed in that not as many people are going out and hunting and getting the wild meat or in the gardens. It's all being bought, and a lot of times we steer away from the healthy foods and we get the junk food.

Similarly, youth in one focus group thought that the health of their grandparents when they were young would have been better than their own because they hunted and ate wild meats.

C: Do you think that kids your age here at OCN are healthier than your grandparents were when they were your age?
FG1 Male 3: No because all they ate was meat, moose meat.
FG1 Male 1: Wild meat.
C: So what did that do for them?
FG1 Male 2: Keep them healthy.
FG1 Male 1: Make them healthy and strong.

Two adults and youth in one focus group also discussed the impact of pollution on health and specifically how it had affected their community. This included comments on air and water pollution and contamination of the local food supply.

A1: But my ancestors and now, even my mother and my father, they used to be able to eat quite a bit of good healthy wild meat, but because even our wild meat is being contaminated by the environment it's hard for us to... we still eat it whenever we can. You can even see the difference in fish right now because they used to be kind of harder and now they're kind of soft, and when you're filleting they're not as healthy and hard as they used to be.

This participant continued by attributing the contamination to the sewage a nearby paper mill (Tolko) was dumping into the river. Hydroelectric development (a hydro dam) which affected the nearby river was also held responsible for environmental decline.

A1: It all affects the whole ecosystem, right from the moose and the deer and the fish, all the different kinds of fish, the muskrats, you can't find muskrats anymore.

A8: Yes, another thing I wanted to bring up is the water (laughs). I've always believed that water is so essential to everybody. When we respect our water it will take care of us, but at this point there's been a lot of damage to our water. So I believe our water is not as good as it used to be. Our air, everything's changed now. [There's] *a lot of industrial pollution, a lot of people are using chemicals in the land, and it goes to the water. And I think the animals, they are affected.*

Change in Physical Activity

Participants in all the focus groups and several adults spoke about the decline in the amount of physical activity that had occurred in recent years and the resulting "laziness" of both youth and adults. Adults talked about how the activity level of OCN community youth had decreased dramatically since the past.

A2: Differences in physically, they're [youth] *way less active, like to the point where it's, I mean there's a few kids here that are kind of out of the norm that are really active and stuff, but most of the kids are just incredibly inactive.*

A4: So I think back a couple generations ago they would have, they ate a lot healthier, well they still had their bannock with lard I guess but they had to be more active especially if they were still doing a lot of hunting and stuff they would have been more active than our youth today. If they [youth] *go hunting they go out on their 'quad'* [four wheeled all terrain vehicle] *and you know you're not walking anymore.*

A8: The youth today are, they're not fit today, like many other Canadians, not only Aboriginal people. At least TV, a lot of them have games today, they don't move around like the way we used to I guess maybe in the sixties. They're more stationary in the house.

Similarly, there were comments by adults and youth concerning the decline in physical activity of adults as well.

A8: Even my grandparents, they moved around. They had a hunting area, territory where they used to move back and forth. So today, we're more stationary so we're not mobile anymore. Not only that the physical side of the activity that's involved with the lifestyle that we had is not there anymore. So we're less fit today. Today it's not like that anymore. We use vehicles, the men don't go out

there anymore, the women, you know they had their own jobs. But that's changed, into more of the non-Aboriginal lifestyle.

C: What do you think causes people to be less healthy now than...?
FG2 Female 2: They don't exercise as much
FG2 Female 1: Less exercising
C: Ok and why is that?
FG2 Male 1: Being lazy

On the other hand, youth in four of the focus groups (FG2, FG3, FG4 and FG5) mentioned that there were now more opportunities for activity using exercise machines, gyms, sports leagues and extra-curricular activities, and this improved people's health.

FG2 Female 1: Like they have those things like 'Bow-Flex' [exercise equipment] *and stuff.*

FG5 Male 1: Probably all the different opportunities that we endure each day, because there's extra-curricular activities that's happening that our parents didn't have.

Four adult participants (A3, A5, A7 and A9) and youth in one focus group (FG2) stated that adults used to work hard, and children used to play outdoors, but this was no longer the case.

A3: In our young days we worked hard, eh. We had to carry water, get wood, and help the men chop wood. We did a lot of hard work. I think that kept us healthy. But now, oh kids don't do that kind of work. To say it, I think they're lazy now, (laughs) the young generation.

A10: We never sat around the way the kids do now. A lot of them are very sedentary, and they play a lot of video games. They don't move around very much. When we were kids we used to go out. We played. We climbed trees. We swung from trees so we had a lot of physical activity that kept our bodies always on the move.

FG3 Female 2: I think they were a lot healthier a hundred years ago. They didn't have fast food and their parents got them to exercise and stuff.
FG3 Female 2: There was a lot of work.
FG3 Female 2: Because they had nothing else to do much.

FG3 Male: Because there were no TVs or nothing like that, so they'd just go play.

Technology

In connection with the decline in physical work and play, numerous adults (A2, A5, A7, A8, and A9) and youth (FG2, FG4 and FG5) pointed towards advances in technology as a possible cause of these declines.

> *A5: Well I think generations ago we didn't have satellite and we didn't have telephone and we didn't have cars. So people had to work, they had to walk, they just, they stayed healthy without even knowing it. So today when we think of staying healthy it means parking our cars, turning off our thousand-dollar TV's, stuff that they didn't even have to think about back then, years ago.*
>
> *A7: Well again, like with technology, computer games, you have TV, 300-, 500-odd channels that a person can get. So you're looking at couch potatoes. A lot of kids don't go out and play. When I was a kid it was, "go outside and don't come back in the house". And so we invented things to do because we didn't have the computer games or video games or TV to watch.*
>
> *FG2 Female 1: Well they never had cars back then.*
>
> *FG5 Female 1: Not only that it's the video games that are out there too that's making them stay home and ... not be in physical shape or go to sports or keeping themselves in shape and stuff like that. There are not only video games, there's computers and laziness that's just come over a person.*

In a discussion on the possible causes for better or poorer health now compared to the past, both youth and adults spoke of changes affecting physical health, such as diet and physical activity. Four adults and participants in three focus groups talked about how the increase in convenience foods including processed/fast/junk foods has played a role in the declining health of people today in comparison to their ancestors. It was stated numerous times that these types of foods are not healthy and have a negative impact on health. This idea was also expressed in a study reported by Health Canada (2003) asking consumers about their perspectives on healthy eating. In speaking with 30 pairs of

Canadians from three major cities, there was widespread belief that processed/pre-made/packaged foods are not as healthy as fresh, unprocessed or natural foods. In contrast to the youth in four of the five focus groups, there was no discussion of increased availability of "nutritious" foods improving health.

Several of the adults and participants in one focus group spoke about the change in traditional food systems. They spoke of the shift from eating wild foods, to junk foods or store-purchased foods. The former were labelled by some as healthy foods giving strength; the latter as unhealthy. Similarly, in earlier studies in two Manitoba First Nations communities, participants related the consumption of wild foods as superior to purchased foods or junk foods (Bruyere & Garro, 2000; Neufeld, 2003). The change from consumption of wild foods to junk foods was also a common explanation for the recent increases in diseases such as diabetes among First Nations people. This concept will be discussed in a later chapter in conjunction with thoughts on diabetes.

Several participants in this study saw contamination of wild game and fish by industrial pollution, and resulting poorer quality or quantity of animals contributing to the decreased consumption of wild. In a review of dietary changes and traditional indigenous food systems, Kuhnlein and Receveur (1996) comment that environmental pollutants are now being found in traditional plant and animal foods commonly used by indigenous people in various locations across North and South America. As with the reasons for the changes in food patterns mentioned previously, First Nations people living in Manitoba communities linked the increase in disease with the lack of availability of wild foods due to environmental contamination (Bruyere & Garro, 2000; Garro, 1995).

The decline in physical activity levels of North American people of all ages has been well documented in the literature (Thompson, et al., 2001). Both the adults and the youth interviewed in this study commented on the decrease in physical activity of people in their community. Two adults spoke about the reductions in physical activity as the result of a move away from a traditional lifestyle involving more mobility due to the search for food. The comments of youth in several focus groups and one adult implied that the youth today were just inactive and generally sedentary. According to one study of urban Native American youth aged 5 to 18 years, 59% of the 155 youth surveyed were found to be sedentary (Gray & Smith, 2003). In a study using data from the Canadian component of the 20001/02 World Health Organization *Health Behaviour in School-Aged Children Survey*, Janssen and colleagues (2004) found that less than 20% of nearly 6,000 Canadian youth aged 11-16 engaged in 60 or more minutes of physical activity on 6 or 7 days of the week. Health Canada recommends that adolescents should aim for 90 minutes of physical activity per day (Health Canada, 2002). The results of these two studies support the comments of participants in the current study in that children and youth today seem to be leading mostly sedentary lifestyles.

Despite the decline in activity levels, participants in four of the focus group discussions said that there was now more opportunity for exercise due to availability of sports programs and exercise equipment.

Another common theme that was evident from the interviews was the theory that because of the shift from a traditional to a more Western lifestyle, OCN adults were no longer engaging in physical work, and children and youth were no longer actively playing outdoors. This resulted in a lack of physical activity for both. These ideas were also

conveyed through earlier research in OCN and a southern Manitoba First Nations community where participants noted that in the past they had engaged in "a lot of work", or "worked hard" (Bruyere, 1998; Neufeld, 2003) but were now more sedentary.

Half of the adults, and youth in three of five focus groups, pointed out how the advances in technology, including vehicles, televisions, and computer games, had played a role in reducing physical activity of community members. The increased use of vehicles for everyday tasks and recreational vehicles for hunting had lessened peoples' physical activity. In addition, the prevalence of televisions and computer games in many homes kept children and youth indoors and inactive. In a literature review looking at barriers and supports of physical activity in American Indian school children, Thompson and colleagues (2001) cited four studies where researchers reported between 26% and 33% of 8 through 16-year-olds surveyed watched at least four hours of television a day. It was concluded that watching television and playing video games replaced moderate and vigorous physical activities in adolescents. Given the amount of discussion by study participants relating to the connection between technological advances and decline in physical activity, similar barriers to physical activity may be playing a role for children and youth in OCN.

Mental Health - Making Choices

Mental health occupies the top or northern section of the wheel, including "education, knowledge of Aboriginal history and cultural contributions, and activities that promote self-confidence" (RCAP, 1996b; p.153). When asked what being healthy meant to them, both youth and adults indicated that being healthy involved making good

choices. As one participant said, "*A healthy person would be the person who also makes healthy choices*" (A5). Three of the adult participants specifically stated that being healthy was about making good choices and indicated that one needed to be making a conscious effort on a continual basis in order be healthy. The ability to make healthy choices was said to require knowledge of what the good choices are and why, and then acting on that information.

> *A7: So I think knowing the choices, that are good for you and acting on those choices instead of following the fast track, main*[line] *fast food type of, "I need a quick fix", but actually taking the time and doing things. I think that's all part of being healthy, making the right choices.*

With prompting, the participant went on to explain why those choices were important:

> *A7: When you know what the good choices are, that's part of well being, because if you know why it is, because it makes you feel better, makes you function better, mentally and physically. I think the healthy person makes the right choices.*

Another adult (A8) talked about the need for individuals to make good choices in order to achieve a balanced life. He expanded this thought by saying that health is not only an individual issue but needs to be carried further into the larger community in order to be truly effective.

> *A8: Every individual has their own calling toward their own choice to get to that balanced life outlook and everything that's involved. So each individual has that choice, but at the same time we need to incorporate the sharing. One group is not part of the wellness of the community. All the entities within our community will have to come together under our traditional teachings. The sharing and our community sense have to be strong. So to me that's what a healthy individual is because you can't separate the community and the individual. You know, we were not like that before Western influence, everybody was one.*
> *C: And has that changed?*

A8: It has changed tremendously. We are more you know we do our own thing now. We are more like the other non-Aboriginal Canadians; we're more structured like that too. So that's changed.

Several participants also said that being healthy is like a process that one is working towards as opposed to just a state of being. "*They'd always be conscious of what they're putting into their body, food, tobacco stuff like that, sugar. And just their thinking, their mental processes too would be healthy*" (A5). As long as there was a conscious awareness and effort to work towards, and make choices to improve one's health, that was said to be healthy.

A2: What does a healthy person look like? A healthy person to me looks like someone that's making conscious decisions in their life to become a better person. So they're living out that process of healthy living.

When OCN youth were asked what being healthy meant to them, they responded with comments in regards to the influence of peers on making good choices.

FG5 Male 3: I grew up around people that did that kind of stuff [drinking and smoking]. *It didn't influence me. They tried to make me do it with peer pressure but I didn't fall into it. I just made my own choices.*
C: So what's helped you to make those choices?
FG5 Male 3: I would have to say my uncle, like he was a Medicine man but he passed away 10 years ago. And I learned lots when I was small. I remember lots that he told me, and I always made my own choices from there. I usually made good choices from then.

An older youth in one of the focus groups felt that their generation was aware of current health issues and appropriate responses, but ultimately it was up to the individual to make the final choice.

FG5 Female 2: From my point of view it seems that everyone is doing the best to their ability to acknowledge people, especially youth, about health and health problems. It's just a person's choice to listen to them or not. But if it does happen to them, that's when they kind of realize that they should have listened in the first place. So this generation if it happens, if something not healthy happens and then

it's already too late, but other people don't understand stuff unless it happens to them, that they get the effects of it.

Another youth spoke about how not many youth are making their own choices but are following the crowd and making their choices based on what they think their peers want them to do.

FG5 Female 1: Going back to what he said about being lost, that's how it looks to me that some kids are around here, they're tending more to want to fit into what their friends are doing than making their own choices themselves. Like people will say, "oh you're not my friend no more because you don't want to come and do this with me or you're not going to hang out with us". So they have that peer pressure I guess you can say on fitting in and not fitting in. Some people make the right choices and some people don't.

When asked how the health of youth at OCN compared to the health of generations past, the importance of making good choices was referred to again in connection with the change in lifestyle of today's families.

A7: I think now, more so than when I was growing up. Number one, the culture of everyone is different because we are so fast paced; we have to grab a quick meal. It's on the go, and it's never taking the time to prepare things. So we've changed that way. We're not making the healthy choices anymore.

The need for parents to be more educated in terms of healthful lifestyles was mentioned by several adult participants.

A4: Sometimes people I have the biggest fight with in terms of the athletes is sometimes with the parents. The kids hear it from me, what kind of lunch you pack if we're going on a road trip for a game or for a race. But then I see the parents dropping off, you know they're getting mixed messages, the parents are giving them junk food and stuff like that. So there's not a strong enough education sometimes of the parents on how to help their kids, give them healthy choices because they don't really know themselves.

A7: Parents have to be educated too not just the students, because so often like I said before, it doesn't matter, on a First Nation reserve or on a non-treaty like a town, it doesn't matter, you see parents that aren't making healthy choices for their kids. And that's part of the education too, not just the students but having the parents being educated as well.

One of the adult participants reiterated the importance of school-aged children receiving health education and indicated the current health education efforts at OCN were effective.

> *A10: And they need to be receiving education on that* [health], *be knowledgeable about that. I feel that the kids are starting to understand the importance of that and they really pick up on information very well.*

The importance of making good choices for healthful living, which involves cognitive decision making, was discussed by both adults and youth, but in different ways. Adults spoke of healthy choices mostly in terms of making an effort to make nutritious food choices and ensure adequate physical activity, reflecting the premise of western biomedicine. According to Falk and colleagues (2001) diet has long been acknowledged as an important contributor to health, and many people connect eating and good health, as was conveyed by the adult participants.

Youth spoke of the influence of peers on their ability to make good choices in relation to issues such as the use of alcohol, tobacco and illegal drugs. The persuasive influence of peers on either positive or negative behaviours was reported in a study that looked at personal and social-environmental factors which influence adolescents' health choices (He et al., 2004). Responses from a questionnaire, completed by 1,487 ethnically diverse students from a public urban high school in Massachusetts were used to measure correlates of healthy lifestyle choices. The teens' perceptions of peers' approval of risky behaviours, such as alcohol, tobacco and illegal drug use negatively influenced teens' lifestyles. On the other hand, the support of families and schools played an important role in supporting positive behavioural choices (He et al., 2004). This concurs with the comments of an older male youth in one of the focus groups, who with the support of an

adult relative who was a Medicine Man and respected elder, was able to overcome peer pressure to engage in negative behaviours and instead, make positive lifestyle choices. The results of the above study may be relevant to OCN youth given the discussion regarding the impact of peers and family members to influence their behaviour either negatively or positively.

In connection with making good choices, one adult talked about the significance of making the choice to maintain a balanced life for the benefit of both the individual and the community. The notion of healthful living involving not only the individual but also the community was also expressed by Adelson in her description of a Cree interpretation of the concepts of health. "Health is ... 'whole health', involving spiritual, social and mental aspects of the life of the individual and the community" (Adelson, 1990; p.26). This was also expressed by other researchers who have spoken to Aboriginal people in both North America and Australia in regards to health. Participants in these studies indicated that good health also meant living in harmony with others in the larger family and community, where the health of the community is personified in the individual (Maher, 1999; Thompson & Gifford, 2000; Wilson, K., 2003).

Summary and Discussion

The meaning of health explained by adults in OCN focused on the teachings of the Medicine Wheel (Figure 6). Similar to discussions with some other Aboriginal adults, most adults talked about the importance of having balance or harmony among the emotional, spiritual, physical and mental aspects of health (Bird & Greyeyes, 1995; Hakim & Wegmann, 2002; Hernandez et al., 1999; Turton, 1997). Youth were more

likely to discuss modern influences on their health. Although few youth explicitly mentioned the Medicine Wheel, they discussed the four aspects of health as depicted in the Medicine Wheel. Given the amount of discussion on health from this viewpoint, it is evident that some adults and youth at OCN value the teachings of the Medicine Wheel and incorporate these teachings into their interpretations of health.

Figure 6: The Medicine Wheel. Adapted from Whiskeyjack, (June 2000) with topics from study participants added.

Adults and youth introduced the importance of emotional wellbeing in the interviews. They specifically stated the value of having positive role models for youth, including parents and other community members. In addition, they expressed the need for role models beyond the community. First Nations youth are looking to Aboriginal people to be portrayed as role models in their modern world. According to participants, more exposure of First Nations leaders, athletes and celebrities leading healthful lives would be helpful.

Spiritual health can be defined in various ways, depending on the individual (RCAP, 1996b). Both youth and adults in this study thought traditional practices, if

followed in the traditional way could have a positive impact on spiritual health. Traditional practices were described in numerous ways. Some participants spoke of common values such as respect and sharing. Others talked about traditional activities such as sweat lodges, Pow-wows, hunting and fishing. Those who practice traditional native ways were viewed as having inner strength and spiritual health. Based on the comments by participants, traditional practices are an important part of the day-to-day life and health of people in this community.

Physical health was discussed at length by both youth and adults. In particular, the changes over the years in activity level and diet as well as the impact of technology were mentioned. Adults spoke of the decrease in availability of wild foods and fresh produce from local gardens, and the increased consumption of prepared foods. These perspectives have also been given Aboriginal adults in earlier research in Manitoba (Bruyere & Garro, Neufeld, 2003). Youth focused on physical activity and healthy eating. They talked about the increase in availability of nutritious foods and opportunities for physical activity. OCN youth are living in a contemporary world with many influences from both inside and outside their community. Consequently their perspectives on health are shaped by what they see in their own community as well as what they see through external factors such as the media.

A key aspect of mental health, discussed by both youth and adults, was the importance of making good choices. Adult participants talked about the necessity for both youth and their parents to be educated on what the healthy choices are and why. These comments were mostly in reference to diet and exercise. Making choices was also described as being of importance beyond the individual and more for the collective good

of the community. Youth spoke of the influence of peers as well as family members who could affect them either positively or negatively. Discussion by youth on making good choices went beyond having knowledge of what the healthy choices are, to how their behaviours are influenced in making healthy choices. Youth indicated that they are receiving the education and have the knowledge of which choices are healthful, but their actions may still be influenced by others, either in a negative or positive way.

When talking about what being healthy meant to them, both youth and adults spoke about the importance of positive adult role models, the incorporation of traditional native practices into everyday life, the changes that had occurred in the physical aspects of health such as diet, activity level and disease and the significance of making good choices. Upon further reflection, it became evident that the adults were not the only ones speaking of health in terms of the Medicine Wheel. Through each of the four categories mentioned above it became clear that the youth were also speaking of health in a similar way. For example, the position of parents and other adults as role models supports the emotional health of youth. The value of traditional practices conveyed in the youth interviews substantiates the function of spirituality for good health. The lengthy discussion by youth on the importance of diet and exercise for optimal health displays a concern for physical well-being. Making choices requires cognitive processes and would thus fit under the mental aspect of health.

First Nations people in Canada have experienced dramatic shifts in their way of life as attested to by some of the comments by participants in this chapter. Regardless of the causes of these changes, a return to traditional lifestyle is not realistic. At the same time it is important to be mindful of individual and collective perceptions of health and

the value of traditional ways when interacting with First Nations people. Perhaps the principles of traditional Aboriginal life may serve as a basis on which to live in their changing world.

CHAPTER SIX

Perspectives on Weight and Diabetes

As mentioned earlier, the change in lifeways experienced by First Nations people over the years is paralleled by a shift in disease pattern, from infectious diseases to the current diseases of modern lifestyle such as obesity, heart disease and diabetes (Hackett, 2005). In a recent analysis of the health status of First Nations people in Manitoba, Martens and colleagues (2002) reported that this group has a higher prevalence of hypertension and four times the rate of treatment for diabetes compared to all other Manitobans (18.9% versus 4.5%) (Martens et al., 2002).

When planning for health improvement and diabetes prevention strategies for First Nations people, it is useful to ascertain the viewpoints of this group. Perspectives on body weight issues and explanations of some possible causes and effects of diabetes are valuable in understanding the framework this group uses to think about these topics. It is also beneficial to obtain their ideas about perceived barriers to, and suggestions for improving health and preventing diabetes. Inclusion of the users' ideas in health promotion strategies can encourage participation in, and ownership of the programs by the participants.

Weight Issues

OCN youth were asked a few questions regarding weight issues during the focus group sessions. Youth from all five focus groups indicated that body weight was related

to health. When asked what body weight had to do with health, they shared their perceptions about this topic.

> *FG3 Female 3: Yeah, they get bigger or they get smaller. They gain or they lose weight.*
> *C: So gaining or losing weight how does that affect health?*
> *FG3 Female 3: It's not good.*
> *FG3 Male: If you're really skinny you're not eating right. If you're really big you're eating too much.*

> *FG5 Female 2: Well my last health teacher, she said that it's not like if you're skinny you're skinny, if you're fat, you're fat whatever. She told us that it was all on your elbow, the width of your elbow determines how much you're supposed to weigh and what range you're supposed to be in. ... So it all depends on your body structure how much you're supposed to weigh.*

Youth in two focus groups (FG1 and FG2) briefly noted potentially harmful practices related to weight control such as *"making yourself puke"* and being *"anorexic"*.

> *FG1 Male 1: Not eating, what happens if you're overweight and you want to get skinny? Don't some people just starve themselves to get skinny?*
> *FG1 Male 1: Or else they just throw up until they get skinny or something.*
> *FG1 Male 4: Make yourself puke.*

Members of this group went on to suggest alternative methods of weight loss such as *"just lift weights, run around" "play some sports"* or work out on a *"Bow-Flex"* machine.

Youth in another focus group did not see losing weight as something their peers were intentionally trying to do. They indicated that children were typically not concerned with their weight, and then as they got older their involvement in sports helped them to lose weight. Another member of the group thought youth did not likely become involved in sports merely to lose weight.

> *FG5 Female 2: I don't see youth as trying to lose weight. I see youth as trying to become involved in sports and communicate with people, as well as they start*

sports and they want to continue it so they just keep doing it year after year or month after month. I don't see it as sport; I see it as a hobby. ...I never thought, "Oh I'm going to join sports so I can lose weight, or develop my muscles". I just did it because it was fun.

This group did not think eating disorders were a concern for youth in their community.

C: So it's not really a big issue then, like eating disorders and that kind of stuff?
FG5 Female 2: No.
FG5 Male 1: No I never, around here I don't see people, Oh wait I do actually know someone who had an eating disorder... I guess she was partially bulimic, because every now and then she threw up.

Weight issues discussed among youth in this study included both physical effects and possible emotional or mental concerns with being overweight.

FG5 Male 1: Having excess weight, probably your metabolism rate is pretty low, so that kind of makes you, not only does it damage your body physically but it damages you emotionally and mentally and that's three of the things there,[aspects of health represented in the Medicine Wheel] *and it leads to low self esteem.*

Youth in one of the focus groups said that "*if you're overweight you have an eating disorder*" and you're "*eating too much*". They also mentioned probable results of being overweight, including "*it makes you breathe harder*", "*you get tired, you can't run fast*". Youth in three other focus groups cited more critical possibilities connected with being overweight.

FG2 Female 1: You're more at risk to diabetes when you're overweight.

FG4 Female 1: It can cause like
FG4 Male 1: Heart attack.
FG4 Female 1: You can die when, I don't know what those things are called, like the little pipes in you and if your heart clogs up you can die.
C: The arteries?
FG4 Female 1: Yeah.
FG4 Female 3: High blood pressure, sugar diabetes.

FG5 Male 2: If you're overweight it's going to be like if you have fat on you, you're only allowed to have so much body fat for your height. And if you have lots of body fat it's going to be clogging up your veins and arteries and stuff and it leads to heart attacks, heart diseases.
FG5 Female 1: Become obese.

Explanations of Diabetes

A8: It's very personal to me, I've lost my wife, I'm always there to support people looking into something that has affected me. So I speak to you in remembrance of my wife and in remembrance of my family that I've lost, and I thank you for coming here. And when you phoned me, I said this is the time to tell my story, an opportunity for me to share ... how diabetes has affected me, my family.

The intent of this portion of the investigation was not to test youth's knowledge of diabetes. However, it is helpful to gain information as to their understanding and awareness of the disease in view of prevention strategies. Youth were asked several questions regarding the nature, cause and effects of diabetes. These questions were not asked of adults, however many adult participants spoke of their experience with diabetes while addressing other questions, as did the participant quoted above (A8). Numerous youth and adults spoke of how diabetes was common in their families and in their community.

A8: It affected me, it affects our community. ... I've lost count how many family members I've lost. And my wife and my parents and my wife's side of the family, and I've lost friends to diabetes. So it's there, you know it's real.

A10: Well diabetes is a really big issue, because we have so many people that are diabetic, and then because of the all the high-risk factors. I know that diabetes is increasing and continually increasing in our community.

There were discussions among youth in several focus groups about people in their families who had diabetes.

FG2 Female 2: My mom, my granny, my Kookum [Cree word for grandmother]
FG2 Male 1: My mom, my grandma, most of, half my family does.
FG2 Male 2: My granny.
FG2 Female 1: Most of the people in my family. My mom and my dad are both diabetic.

FG4 Female 3: My mom has it, my mom, her mom and all her brothers and sisters.
C: So do you know anyone that has diabetes [asking the others]?
FG4 Male 1: I do. My grandpa and my stepsister. She's 25.
FG4 Female 1: My grandma.

Several adult participants and youth in one focus group spoke of the increase in rates of obesity and diabetes, especially among young people.

A5: I'm not sure if it was just lack of awareness, but I don't recall diabetes running as rampant as it is now. I didn't notice, but I mean maybe it was my age, about the obesity, the overweight kids.

A2: Yes, you have obesity, diabetes rates even amongst young people.

A8: I know children will get more diabetes in the future because of that [change in eating patterns]. ... *There will be more young people with diabetes ... the trend of young people, Aboriginal kids is higher.*

FG5 Female 1: That's why the nurses are coming around here. The majority of it is young people now, hitting youth, native youth and diabetes is hitting them really hard.

A parent of youth spoke of the high numbers of Aboriginal people having diabetes and expressed concern for her own children.

A9: There's lots of Aboriginals that are sick, like diabetic... there's so many. That's the one for Aboriginals; even youth are getting that too, young adults. I'm scared for my youths, my two older ones.

Youth were asked what diabetes is, by asking questions such as "what do you think of when you think of diabetes", or "what can you tell me about diabetes"?

Responses included examples of physical aspects resulting from having diabetes such as "*high blood pressure*" (FG3) or "*it can kill you*" (FG2).

> *FG2 Female 2: I forget what that's called, where there's a new kidney, that's what my Kookum* [grandmother] *has ... dialysis.*
> *C: Why do people have to have dialysis?*
> *FG2 Female 2: I don't know, they have bad blood or something.*

> *FG3 Female 3: People have too much sugar.*
> *C: What does that mean? Does that mean they eat too much sugar?*
> *FG3 Female 3: Yeah, they eat too much sugar and fast food and junk food.*

Concepts of Causation

One of the main reasons given as to the cause of diabetes was related to the types of foods being consumed today. Three adults spoke specifically about the lack of wild foods available today as a cause for diabetes.

> *A8: Well genetically we couldn't handle the change with the food chain. The food chain has changed because the food today is mass produced and there's a lot of chemicals... The wild food has been contaminated, so that's another reason too. Because of the fact of lifestyle and the food has changed. And as more western influences continue today, the more, we're beginning to see now, there's more Aboriginal people having diabetes. So that to me is one reason is because of the change that comes with the lifestyle and how we are as a community.*

> *A3: Yah, we ate that all our lives, when my kids were growing they ate all that* [wild] *food, so I think from there we didn't get, none of the family got diabetes.*

> *A1: So our wild meat is definitely a problem. We cannot have the clean healthy animals that we used to be able to eat. ... When we were placed on these reserves we had to line up for our food. They'd give us flour and sugar and salt and lard. All of these white, no good for you foods and that's what we had to eat. And the result of that hundreds of years later, after eating a diet of sugar and salt and flour and lard, of course we're going to develop some diseases, you know and diabetes is the main one.*

A youth in one of the focus groups also suggested the change in food patterns as a cause for diabetes.

> *FG2 Female 1: Cause in adjusting to sugar.*
> *FG2 Female 1: They're more immune to* [diabetes]... *maybe because they're* ["white people"] *used to having greasy foods and sugar and that, and our body can't handle that because we're not used to it.*

Several youth made the link between low physical activity levels or being overweight and an increased risk of developing diabetes. Youth in two focus groups indicated that "*being lazy*" (FG1) and "*not exercising*" (FG3) may be a cause for diabetes. Also, as cited in the previous section on weight issues, youth in two focus groups (FG2 and FG4) said that being overweight may lead to "*sugar diabetes*" and that "*you're more at risk to diabetes when you're overweight*".

"*Not eating right*" (FG3) or "*not eating healthy*" (FG1) were mentioned by several youth as a possible cause for developing the disease. More specifically, youth in all the focus groups cited consumption of "*sugar*" and "*junk food*" such as "*pop and chips*" as a cause for diabetes.

> *FG4 Female 2: Too much junk food.*

> *FG2 Female 2: They're at high risk for diabetes and when they take the Boost, it has so much sugar and it causes them to have it* [diabetes].

> *FG1 Male 1: Sugar.*
> *FG1 Male 4: Sugar.*
> *C: How is sugar a concern or an issue?*
> *FG1 Male 2: Diabetes.*
> *FG1 Male 1: Because it's no good for you.*
> *C: Why do you think diabetes might be a problem now or a concern?*
> *FG1 Male 4: Because there's sugar and junk food.*
> *FG1 Male 2: All the junk food.*
> *FG1 Male 1: Lots of fat foods.*

The connection between sugar, soft drinks and potato chips and diabetes was explained further by youth in an older focus group.

> *FG5 Female 2: I see it as when sugar was introduced and pop or chips and other sources of food that the Aboriginals tried it out and right away they liked it but they didn't know the side effects so they just kept eating it and eating it and yet they didn't know about diabetes. ...But the past generation, it's slowing down, but it's catching up again because the youth today ... they don't know the side effects and they go, "it can't happen to me".*

> *FG5 Male 1: While I was attending a dinner for an awards ceremony, Arctic Beverages, they gave a kid a year long of Pepsi and they gave another person a year long of Pepsi. I always think, because they said they were number two in the world for selling Pepsi. I was thinking about it eh, because we're also the second leading for the highest diabetes in the world. Because people don't know the true facts about Pepsi. They think it's just a drink eh but actually that drink's about 35% sugar... People don't know that they're* [soft drinks] *actually like the poison in our society, even though it seems harmless and innocent. I wish there was e more advertising about how bad these drinks really are.*

Youth in three focus groups also pointed to hereditary characteristics as being responsible for diabetes.

> *FG2 Male 1: Because it can get passed on, like from their moms.*
> *FG2 Male 2: From generation to generation.*
> *FG2 Male 1: From birth.*

> *FG4 Female 2: Or being passed on through families, like it could be passed on from generation to generation.*

> *FG5 Male 1: It's in our blood.*

Effects of Diabetes

Youth in all the focus groups named various effects of having diabetes including food restrictions, medications and physical problems.

Several youth mentioned that *"they're not allowed to eat too much sugar"* (FG2 and FG3) *"and when they have too much sugar they shake"* (FG4).

> *FG4 Male 1: It affects their daily life and families. Like if there's a party on and they buy a bunch of sugars, sugary goods and bring them to the party and the person comes over and that person can't eat those. So you've got to make like separate stuff.*

Youth in two focus groups (FG1, FG2) talked about the possible need for someone with diabetes to *"take pills everyday"*, *"take insulin"* and that *"some people have to take needles, mostly every day"*. Another youth indicated that *"sometimes they get immune to their medication"*.

There were numerous examples of physical difficulties that may result from having diabetes. *They get weak* (FG1, FG3, and FG4) and may have *"failures in their body"* (FG3). *"Diabetes, I know a lot of people they lose weight basically from that"* (FG5, FG4). Other youth indicated that *"their eyes get blurry"*, *"they get sicker"* and *"they get drowsy"* (FG1). Some youth also said *"when you have diabetes and you get a surgery, it takes longer for you to heal than a regular person"*, *"they get nosebleeds"*, *" and my mom can't get cut, like she can't have stitches"* (FG2).

Youth in three focus (FG3, FG4, FG5) groups spoke of the possibility that someone with diabetes may *"lose limbs"* or require *"amputations"*. Discussions among youth in two focus groups implied there was a connection between not taking care of oneself and requiring amputations.

> *FG4 Male 1: Some family members, like I've never heard of some, but some like don't care and they keep on eating sugars and they loose like pieces of fingers and toes.*

FG5 Male 1: Lose limbs.
FG5 Female 1: Those who don't take care of themselves, they just let themselves go and don't care what happens to them.

Participants in two focus groups (FG3, FG4) also indicated that one of the potential outcomes for someone with diabetes was that *"they could die"*.

Perspectives on Diabetes Prevention

During the interviews, youth participants were asked for comments pertaining to diabetes prevention. Some adults also made comments on this topic.

Barriers to Diabetes Prevention

Numerous comments by both youth and adults were made regarding the barriers that make it difficult to prevent diabetes. One adult indicated that in some families, there is a mind-set of the inevitability that everyone will develop diabetes in the future.

A8: I look at it and well yah they take measures to prevent it, but at the same time I think they know they'll still get it. It's that type of mentality now they have with certain family members.... So that's how real this diabetes is.

Youth in one focus group indicated that preventing diabetes was likely not possible because *"there are so many options out there, stuff like pop and chips." "Lots of candy." "It's hard to resist."*

C: Do you think diabetes can be prevented?
FG4 Female 1: No
FG4 Female 3: No, there's just too much, too much junk food, sugar, even in cereals.
FG4 Female 1: Maybe if you ate healthy everyday, a little bit of candy here and there.
FG4 Female 2: Yeah but when you go to the grocery store you see a whole bunch of juices that are beverages and you look at the ingredients and it'll probably be 30 grams of sugar in there or something, most of them will have lots of sugar in it.

And so now these days when you look around the grocery store there's practically sugar in every product.
FG4 Male 1: And they're cheaper. All the healthy foods are really expensive and the sugar food is like really cheap. You can go to the store and buy candy, a bag of candy for a dollar and if you buy something healthy it's like two dollars or three.

Two adult participants mentioned additional economic, social or cultural factors that may present barriers to prevention of diabetes or its complications.

A8: We as a community have to come together and be honest when looking at why is diabetes so rampant is our community. Of course not eating properly, not exercising, but there's another side to it and that's the cost of living, and the amount of resources that are available for certain families.

A10: I know that for our people here when they go to the diabetes education resource in town, all the people that are employed there, they're all non-native. And our people that have gone there, they don't understand. When they come back, they say "I don't understand what they said. They gave me all the information over two, three hours, all in one day, and I don't remember or understand anything they told me".

Suggestions for Diabetes Prevention

Participants in the present study were asked for their ideas on improving health and preventing diabetes. An adult participant and youth in one focus group commented that in past generations, people had little knowledge of what diabetes was or how it could be prevented or managed. Information and knowledge about diabetes was said to be more common today.

FG5 Male 2: The last generation, like our parents, they went through it [diabetes] *the most I think, because they had no knowledge of sugars and what's in drinks and all that because they were the ones that were affected the most. Nowadays, we know a lot about it now.*

A6: Well it's out there now, like there's so much you can do to prevent yourself from getting sick and stuff, so I think it's way better now because people didn't

know how to manage their cholesterol or their diabetes or they didn't know about diabetes.

One adult suggested that diabetes could be prevented if certain efforts were made.

A6: Diabetes is another big issue. It can be beaten if you look after yourself. Watch your sugar intake and eating right and even just walking to work would make all the difference.

Youth in one focus group (FG4) expressed concern for developing diabetes in the future "*because there's so much options on these days, there's so much candy stores and stuff like that*", but said "*it can probably be prevented, yes*".

Youth in other focus groups suggested diabetes could be prevented by "*exercising more*", "*trying to get people to eat more healthy*" and "*eating vegetables*" (FG1). Other youth indicated they could "*have a health day*". They went on to suggest that presentations could be given and gave ideas on what a successful presentation to youth would involve.

FG4 Female 1: Smother you with like a whole bunch of presentations.
C: Sure. So do kids listen to presentations?
FG4 Female 1: Yes.
C: Does it make a difference who is doing the presenting?
FG4 Male 1: Yes, because if the person talks all quiet and everything everybody will start talking.
FG4 Female 2: You've got to make it interesting.
C: OK, so someone who speaks out, someone who's loud and makes it interesting.
FG4 Female 1: Makes it fun.
FG4 Female 2: And someone who's healthy.
FG4 Female 2: Yeah, because it would be more better if a nurse or a nutritionist or an athlete [made the presentation], *because they're healthy, they know what to do.*

Youth in two focus groups mentioned the idea of increasing prices of junk foods and sugary foods or closing the factories that produce them.

FG4 Male 1: Starting a group, like a group that people stop it, like a group like WWF, it's ah World Wildlife Foundation, like they're based on protecting animals all over the world ...and starting a group to protect people from getting diabetes.
C: So do you have any ideas for what the group might do?
FG4 Male 1: Like they'll raise prices on candy and stuff like that, sugars and lower prices on diet food.

FG5 Female 2: Shut down the chip and pop factories.
FG5 Male 1: Put super taxes on them like they do the alcohol.
FG5 Female 2: And they [chips and pop] *should be more expensive because they'd be harder to get a hold of and you could only have it at certain points.*

There were discussions among youth in two focus groups suggesting that prevention efforts should be directed towards helping people realize what the effects of having diabetes are and that "*we have to think more realistic*".

FG4 Female 1: Try and make people realize what's really going to happen, like to see it for themselves, so they'll know. Make them realize what they can do to themselves by eating all that junk and candy.
C: Do you have any suggestions on how you could help people realize?
FG4 Female 3: Commercials, health groups.
FG4 Female 2: Or you could get a dead corpse and show them their teeth or whatever.

FG5 Male 1: My friend, she has type 2 diabetes. She's 18. I don't think she sees what, well she knows the effects of diabetes and what can happen but I don't think she has really seen anything because some people they need visual contact in order to remember. Seeing the aftermath of it.... Someone that had let go of themselves.

In response to comments by adults regarding the importance of community members receiving health information, youth were asked if they were receiving adequate information about diabetes prevention and health. They were also asked if they thought their parents would like more information on these topics.

Most youth indicated they were getting appropriate information for healthful living and diabetes prevention. In contrast, youth in four focus groups thought their

parents would like more information for their whole family about diabetes prevention and how to stay physically fit.

C: What do you think they'd like to know more about?
FG2 Male 1: Like how to stay fit.
C: Would that be for themselves?
FG2 Male 1: I think for everybody.

C: Do you think that maybe your parents would like to know more about diabetes prevention or health in general?
FG3 Female 2: Yes.
FG3 Female 1: Yes.
FG3 Male: Yes.
C: So would that be for themselves or for their children?
FG3 Male: For their parents.
C: Oh for their parents, so why do you think that would be?
FG3 Female 4: Because their parents might have diabetes.
FG3 Female 2: Or grandparents, or aunts or uncles.
FG3 Male: Or for like their whole family.

FG4 Female 2: Yeah, if they don't want their kids to get diabetes.

One of the adults interviewed, who was a parent of youth indicated that she would like more information about healthful eating and diabetes prevention.

A9: Like take care of yourself, how to eat and how much amounts you can eat. That information I want, [for] *staying healthy.*
C: What about for your children, would you like to have more information on how to prevent or what you can do to prevent diabetes?
A9: Yes, for my children I try to like help them not to, prevent them to get diabetic. Not enough, I only get the information from the health nurses and I don't know much more, I don't know much about diabetic, just partly. I would like to know more about diabetic to be healthy, stay healthy, not to go over that limit ... trying not to get diabetes.

When asked how she would like to receive the information she indicated a preference for "meetings" as opposed to pamphlets.

A9: I'll go to; like they have meetings for prevention they call that, diabetic.
C: OK, so are meetings more helpful to you than getting a pamphlet, is that a better thing?
A9: Yes, like when you read that pamphlet, when you finish reading you forget

what you read. I think it's good if somebody goes to meetings for that, diabetic meetings, instead of reading that pamphlet and put it on the side and you won't read it again.

The preference for presentations instead of pamphlets was also mentioned by youth.

C: So what do you think is more effective, pamphlets being sent home or presentations?
FG4 Female 1: Presentations.
FG4 Female 3: Presentations.
FG4 Female 2: Pamphlets, if you go around handing out pamphlets, "stay healthy", they'll just throw them away.
FG4 Female 1: They're not interesting.

Youth participants were also asked where they thought the information on healthful living and diabetes prevention should come from and who should be giving the presentations. They suggested, "*the health centre*", "*school*" or "*the hospitals*" and "*from the health workers*", "*a specialist*"," or *a doctor*".

Summary and Discussion

Opaskwayak Cree Nation youth indicated the importance of maintaining a healthy body weight and seem to be aware of the implications of over and underweight. They are also aware of the probable causes of overweight and obesity such as "eating too much" and possible repercussions such as reduced physical energy, high blood pressure, heart attacks, diabetes and death. The association between overweight and obesity and chronic disease such as diabetes has been expressed by other youth. One hundred and forty-one 14-18 year-old Israeli high school students participated in a survey with questions asking about overweight, obese people and dieting (Brook & Tepper, 1997). Ninety-one percent of these students believed obesity was a risk factor for health. This attitude was most

common among those participating in sports. Similarly, the majority of 53 urban Native American youth aged 5 – 18 living in Minneapolis, Minnesota acknowledged that overweight was associated with an increased risk of developing diabetes (Rinderknecht & Smith, 2002). Fifty-five percent of 11 and 12 year-olds, and 60 percent of 13-18 year-olds selected the heaviest of eight culturally appropriate silhouettes of different body sizes as most at risk for diabetes. Interestingly, overweight girls were more likely to choose heavier silhouettes than normal or slightly overweight girls, suggesting that thinner girls may not understand the connection between obesity and diabetes or perhaps heavier girls have been warned more (Rinderknecht & Smith, 2002; p.325).

Diabetes is a very real and current concern in the OCN community as indicated by both youth and adults. The recent increase in prevalence of diabetes particularly among Aboriginal young people was mentioned by many participants. Multiple explanations of causation of diabetes were given. Several adults and youth in one focus group in this study attributed the increasing prevalence of diabetes among their people to the change in food patterns they have experienced over the years. There is wide-spread belief among Aboriginal people that the increasing rates of diabetes among their people is partly due to societal and environmental changes that have occurred over the last century (Bruyere & Garro, 2000; Garro, 1995; Hernandez et al., 1999). With these changes, the way of life for Aboriginal people has also changed from hunting of wild meats and fish and gathering local plant foods to consumption of more store-bought foods (Bruyere & Garro, 2000; Garro, 1995). Many Aboriginal people believe that wild meat is more healthful than domestically raised meats and feel that eating wild meat is beneficial for those with diabetes (Bruyere, 1998; Cosby & Houlden, 1995).

Another common explanation given by youth and adult participants in the current study was that diabetes can develop from too much sugar in the body or eating too much sugar or junk food. Similar concepts of causation have been reported by other researchers who spoke with Aboriginal people. First Nations adults in Manitoba as well as American Indian youth in Arizona pointed to consumption of too much sugar or junk food as being a cause for diabetes (Bruyere & Garro, 2000; Garro, 1995; Joe, 1993; Neufeld, 2003).

Youth in three focus groups mentioned that diabetes could be passed on from one generation to the next. Numerous qualitative investigators have reported heredity or a predisposition to diabetes as a common explanation for diabetes among Aboriginal people (Bruyere & Garro, 2000; Garro, 1995; Joe, 1993; Neufeld, 2003). Twenty percent of the 34 adults interviewed in a southern Manitoba First Nations community by Garro (1995), pointed towards a hereditary cause for diabetes. Joe (1993) indicated that 43% of the southern Arizona American Indian youth surveyed believed diabetes could be inherited.

Youth in all the focus groups spoke about various effects of having diabetes such as physical complications, food restrictions and the need for medications. American Indian youth who were asked about their perceptions of diabetes held similar, although more limited, beliefs about possible effects of diabetes (Joe, 1993). For example, most agreed that someone with diabetes may have vision problems or kidney damage. More than 90% of youth who had family members with diabetes, and 75% who did not, recognized that "diabetics take shots" (p.344).

OCN youth are aware of numerous effects, particularly the damaging physical complications that are often evident in those with diabetes. Youth's knowledge and awareness of the various aspects of diabetes may be due to their personal experience with

diabetes through family members who have the disease. Alternatively it may due to health education efforts provided by the school and health centre.

OCN youth suggested that a major barrier to preventing diabetes was the pervasiveness and low cost of junk foods and high-sugar foods. Fast food and the high cost of nutritious foods were also listed as barriers for diabetes prevention by numerous adult participants representing five diverse American populations (Satterfield et al., 2003).

Several OCN adults stated that one of the barriers to preventing diabetes and its associated complications was receiving confusing instructions from health professionals. Canadian urban Manitoba (Gregory et al., 1999) and rural Quebec (Boston et al, 1997) Aboriginal adults, who participated in qualitative explorations of living with diabetes, expressed similar frustrations in their interactions with health care workers. These participants reported feeling rushed during physician visits and indicated that teaching and learning was limited during this time. Language was also cited as a barrier to understanding medical information and reading food labels (Boston et al, 1997).

The barriers to prevention mentioned by participants seem to associate diabetes with issues that are out of the control of the individual. Addressing the social, environmental and communication barriers mentioned is a substantial challenge; however, numerous suggestions for health promotion strategies were given by participants, such as community health fairs, health groups or clubs for raising awareness of diabetes or lobbying for closure of junk food factories as well as increased media advertising displaying the effects of living with diabetes. Youth participants suggested health promotion presentations should be given within recognized institutions such as

schools and health centres by knowledgeable professionals. They also mentioned other avenues, such as advertisements within their community as well as beyond, such as through the media. Similar to OCN youth, adult participants in a multi-ethnic study in the United States suggested various media resources such as television, radio, magazines, the internet, posters and billboards as a method of advertising suggestions for diabetes prevention (Satterfield et al., 2003). Seventy-seven percent of 141 Israeli high school students indicated the most important sources of information from which they learn about nutrition and weight issues are the media. Parents were considered by 69% to be an important source of information, while physicians and schools were important sources for 42 and 28% of students, respectively (Brooke & Tepper, 1997).

The responses from Aboriginal adults in Winnipeg as to the effectiveness of pamphlets on health information closely resembled the comments of one of the participants of the present study. First Nations participants in two other qualitative studies in Canada have described their views on receiving pamphlets on diabetes following visits with physicians. They talked about trying to read and understand them and then "I put it somewhere on top of the fridge, and that's where they stay, really" (Gregory et al.; p.109). For most of the participants, reading was not the preferred method of learning. Instead they preferred to interact personally with health-care workers or better yet, with other Aboriginal people living with diabetes. In general, most said they would like to be taught about diabetes through what the authors termed "sharing and showing" which is consistent with Native ways of teaching (Hernandez et al., 1999).

Receiving additional health information was said to be more important for OCN parents than for youth, as youth indicated they were already receiving adequate

information on diabetes prevention. This view is consistent with comments from adult participants cited in the previous chapter where they indicated a need for increased education on healthful choices for community parents. At the same time, youth had suggestions for health promotion strategies. OCN youth and adults suggested diabetes prevention strategies that include sharing of information in an interactive environment which is consistent with Aboriginal traditions.

As indicated by the comments of the study participants, improving health and preventing diabetes is more than an individual issue. It requires the cooperation and initiative of entire families and communities. The responses and recommendations from study participants on improving health and preventing diabetes in Opaskwayak Cree Nation could perhaps be summarized by the comments of an adult participant:

> *A8: There's a lot of work to be done, hopefully we can have that awareness within our community, but the action part has to be there, within our government structure and working with the families. So that needs to be done first, to reduce youth diabetes.*

CHAPTER SEVEN

Surroundings Important for Health

In the previous chapter, participants' understandings of the cause and effect of diabetes and their suggestions for preventing diabetes and promoting healthful living in OCN were presented and discussed. With these suggestions in mind, it is useful to explore the perceptions of OCN residents who participated in the study, as to the current opportunities, barriers and recommendations for healthful living in their community.

Participants indicated that healthful living was more than an individual matter, and that support from within the larger community was also important. As one adult said: *"That's probably the most important, family and your physical surroundings, your housing and all that"* (A8). Utilizing frameworks presented earlier in the thesis, this chapter will follow the principles of the Medicine Wheel by discussing the emotional, spiritual, physical and mental aspects of the surroundings important for health in OCN.

Family and Community Support

Building on former references that youth and adults made to the importance of having positive role models for youth to follow, later, when asked about surroundings that were important for health, some spoke of present role models both within the community and beyond and also gave ideas for others who could be role models for them (A1, A4, A5, FG4, and FG5).

A5: But then we do have our own role models here too... he's an avid runner, he loves sports ... and I know a lot of the students look up to him. So he's seen as an influence.

Youth indicated that *...yeah there are some role models around here*, but also suggested *...more role models for them* [youth] *like "do not do drugs, it's bad"* (FG4). Other youth said they could *"show role models eating healthy"*, for example *"maybe the chief"*.

One member of an older focus group indicated that First Nations youth do have role models outside the community, but also that older OCN youth themselves were now role models for the younger generation in their community.

FG5 Male 1: Since us right now we have role models. Like people might look up to Jordan Tootoo making it to the NHL, and some people look up to Sharon Firth, some people look up to Adam Beach ...
C: These are ...?
Male 1: Actors and people, Aboriginal people who make a stance in the world and us, since we're more ...
FG5 Female 2: Modernized.
FG5 Male 1: ...yeah modernized, like self-development like pretty much advanced. We try to portray ourselves as role models for the younger generation, so they have more role models than just those three. Maybe that number might Double. It might be six.

Families and community members can provide strong emotional support for healthful living and play an integral role in disease prevention activities (Monge-Rojas et al., 2005; Satterfield et al., 2003). Several adults spoke about the significance of providing parents with knowledge about coaching and athletics so they could help their youth in this way.

A2: Increase coaching opportunities. There are a lot of people out there that coach and would like to coach. Some of them are just not educated as far as coaching.

> *A4: It* [health promotion] *just has to kind of go beyond our school and kind of go more to the parents, so maybe knowing how to help their children who are athletic.*

One of the adult participants spoke about incorporating a parenting class for students into the school curriculum.

> *A2: We're talking about making parenting skills a mandatory high school credit here in our school. So if we did that we'd talk about, "how do you get your kid to stop watching TV", "how do you get your kid to go to bed on time", "how do you get your kid to not cry for a bag of chips and Coke instead of apple or banana and carrots", things like that. That would be part of the parenting skills class. So that's probably one of the best ways* [to improve youth's health].

When asked for ideas for keeping youth healthy, five adult participants indicated that it was important for parents to be educated and knowledgeable about healthful living so that they could support and guide their children (A1, A2, A5, A9, and A10).

> *A1: You know the school can only do so much, and parents need to be educated because, we should have more parenting classes. ... We have to educate our parents, make them aware. "You know it's up to you to provide your child with a healthy lifestyle, teach them how to live healthy". And we're not doing that. We're doing things for parents.*

> *A5: It's OK to get to the kids but they also need their parents to know too, so they can enforce it or help the kids out with it. I don't know if we could help with newsletters. I don't know how we would reach the parents.*

Cultural Values and Health

For some Aboriginal people, spiritual health is central to all other aspects of health (PWHCE, 2004). Spiritual health can mean different things to different people. It may include exploring spiritual heritage, participating in ceremonies or gaining traditional

knowledge (RCAP, 1996b). Traditional practices and belief systems may also provide opportunity for developing other aspects of health. As one adult participant shared,

> *A5: I have friends who are traditional and I know that their mind, their body, their spirit, their emotion is very strong. One man I worked with went to a lot of sweats, a lot of sun dances, fasts. And I noticed in the spring when he goes on his fast and sun dances he prepares himself.* [He'll] *slowly cut back on the coffee to the point where he's not drinking coffee. He'll cut back on the cigarettes, he'll do a little bit of walking and so he's preparing himself. I think you have to be mentally strong, healthy to do what you do. You know they're dancing for three days. It shows perseverance and determination.*

The architectural design of the OCN community school provides an opportunity to promote traditional First Nations symbols and values to the students. An adult participant gave a detailed description of specific aspects of the building and what they represented.

> *A10: The school is shaped into the four directions. When walk in it's like the wings of an eagle. That's what the entrance represents on top with those two things that are spread out; those are like the wings of an eagle spread out. And the pillars represent an individual walking into their stages of life. And when you first go into the school as a child, you're going through those different stages of life, that's what those pillars are. And when you go in those little circles that are there, those represent the talking circles that are really what we did as First Nations people. We sat in talking circles. We always tried to sit in a circular fashion, where everybody was at the same level. And if a child and an adult are sitting there, they're more at the same level instead of one person being above another. And that's the concept or idea that's always been there. It creates an atmosphere of comfort for the child and for everyone.*

The participant went on to explain how creating environments for children, such as the school described above, could help to develop an understanding of traditional native teachings which could nurture self-confidence.

> *A10: So everything is seen in those different ideas and those are the kind of teachings that we wanted to promote with the kids and help them to understand that and recognize that so that they can be healthier as children and healthier as adults. Once you start teaching kids those kinds of things then I think that you build positive self esteem. You build their confidence and then they're more, they*

have that thinking that yes, they can do whatever, or achieve whatever goal they set for themselves as long as they're given that support and information.

When asked for suggestions on improving the health of youth, two adults indicated that teaching young children about traditional ways could provide also support other aspects of health.

A6: Well you could start them off young, like to let them know what's going on. "This is what happens if you don't look after yourself now". As you get older you're more prone to more diseases. And by Pow-wow dancing and/or singing or whatever, you could benefit from [them], *because you're not doing drugs or alcohol.*

A10: We need to start teaching the kids at a very early age. And I think it's also important for them to recognize and look at their own traditional values and see how important that is to us, so that they can develop a really good self esteem and be proud of who they are and where they've come from, and [see] *the positive contributions that we as First Nations people have made to our community and the world in general.*

One adult participant commented on how traditional native values, such as sharing and respect for life may be confusing or present conflicts with current advice from health professionals. For example, children are often told not to share clothing or hair combs because of the risk of spreading lice, or women may be advised to terminate a pregnancy because of possible complications or fetal abnormalities.

A10: Sharing is a really important value in our community. And sometimes those kinds of things are really confusing for our kids too, the values that we have.

A10: Within our culture, our people are very respectful of life. And often times some of the direction that they're given from medical personnel is conflicting with their belief in that respect for life.

Opportunities for and Barriers to Physical Health

Expanding on previous comments about physical health today compared to the past, youth and adults spoke about the current opportunities for physical activity in their community and the barriers to healthful eating and participating in physical activity.

"Getting into sports" (FG1) and *"exercising"* (FG3) either through school or community was mentioned by half the adults (A2, A4, A5, A7, A9) and youth in four focus groups (FG1, FG2, FG3 and FG4) as being important for enhancing health. When asked for examples of what kept them healthy, youth responded with suggestions such as, *"track and field", "exercising"* and *"going to the* [fitness] *gym, by the arena"*. These activities were said to be supportive of health because *"it keeps you in shape"*. Youth indicated that *"there's a few, a couple sports"* that were currently available through the school that could function as enhancing health, such as *"volleyball, basketball, badminton, tennis"*. Sports available through the OCN community include *"hockey, soccer and swimming"*.

Adults also commented on the opportunity for youth to participate in community sports such as soccer and hockey as well as other activities available in The Pas.

> *A7: They've got a brand new soccer field there* [Big Eddy – part of OCN 5 km from town centre] *which is big, soccer is huge here. Yes it'd be community soccer, and I know during the summer there are numerous leagues. There are youth leagues and everything else, tournaments and games. So it's really big and OCN will run the hockey.*
>
> *A5: We have a skate park in The Pas, not in OCN. It's a roller blade and bike park, and a lot of the kids from here go over there. It's well used. We have the Winton Pool in The Pas.*

Two adults mentioned how participation in sports may sometimes be cost-prohibitive for some youth. Efforts were being made by local organizations to subsidize these costs or have equipment swaps to make involvement in local activities more feasible for all.

> *A7: You know the big thing is with anywhere you go is cost. What does it cost to have my child in this thing? So soccer is pretty inexpensive. A pair of shoes and shorts and a shirt and you're good to go. Throw in a ball. It's pretty inexpensive. Maybe that's part of the reason why it's so popular. Hockey's popular too. They have skate swaps, equipment swaps, and the same thing they're doing all over. So slowly it's getting less and less* [costly], *and more kids maybe will be involved.*
>
> *A5: Otineka Health pays swimming costs for people who want to go public swimming who are OCN Band members. I think its three dollars for public swimming. You just have to go to Otineka Health and get swim passes. One thing I do like is apparently OCN, if you're a Band member you automatically get $200.00 a year per child to pay for something for a sport. So that's $200.00 towards hockey registration or hockey equipment, soccer, bowling when we have it. I think that's neat because it's expensive.*

While some environments provide opportunities for health, others create barriers to healthful living. Youth and adult participants discussed numerous barriers relating to healthful eating and participation in physical activity.

Junk food or fast food was previously cited by many participants as a reason for poorer health now than in the past. Later in the interviews, fast food was frequently mentioned again as a barrier to healthful living. Several adults (A4, A5, A6, and A9) gave examples of readily available *"unhealthy foods"* which they considered to be a danger to their own health:

> *A6: Not eating right, is going to the mall and getting a pizza or ... drinking coffee (laughs).*
>
> *A5: The food we eat, the packaged food, the deep fried food we eat in our family, the fried foods, unhealthy foods.*

In addition, six adults and all of the youth spoke of *"junk food"* as being a threat to their youth's health:

A5: I think the food they eat.

A3: Maybe if they [youth] *ate less junk food (ha ha).*

Participants in two focus groups had discussions relating to the hazards and easy accessibility of junk food.

FG1 Male 5: Chips.
C: How do chips have a bad effect on your health?
FG1 Male 5: I know they have a lot of grease.
FG1 Male 2: Candies.
FG1 Male 1: McDonald's food.
C: McDonald's food, candy, greasy chips. OK, so what do they do to you, what do they do to your body?
FG1 Male 1: They make you get fat.

FG5 Male 1: They make fast food, you know that's the whole point of it, [to] *make it so accessible.*
FG5 Female 1: Accessible and fast. You can't take that time to make your own vegetable platter or fruit platter or something like that.

Another barrier to youth's health proposed by one adult was the lack of a school lunch room or cafeteria.

A5: There's no lunch room in our school. There's no cafeteria. When they built this school ... they never dreamed they'd have this many students. So these kids if they don't get someone at home to pack them a good lunch, I don't know what they're eating.

This participant continued by commenting on where some students go to eat their lunch.

A5: They go to the mall for lunch which is Donuts and Deli. They could have pizza and donuts. They can go to the Chinese Restaurant or they can go to the Burger Ranch and have hamburgers, hotdogs, deep fried perogies and deep fried chicken. And then they go to the grocery store in the mall and they have a little hot deli there, and they offer pizza pops, corn dogs, chicken wings and wedges and you get a pop with it, so it's all a special deal. Yes, so I don't think that's very healthy either.

In addition, youth and adults identified various emotional, social and physical barriers to participating in physical activity in their community.

One focus group brought up the issue of bullying in relation to threats to youth's participation in sports.

FG4 Male 1: Some of them are scared of other kids.
FG4 Female 2: Too many bullies.
FG4 Male 1: Like if they want to join basketball there might be another kid there that picks on them, because they're fat or something.

A similar discussion came up in the same focus group later in the interview.

FG4 Female 2: Not much people are into sports.
C: Why do you think that is?
FG4 Female 2: I don't know, they're too afraid to run.
C: Do you think there's a lack of interest?
FG4 Female 2: Yeah.
C: Is there enough opportunity, to get involved in sports, whether it's school or community?
FG4 Female 3: Yeah, there's a lot of ways to get fit but most students have a fear of humiliation.

Previous comments by participants pointed to advances in technology such as television, computers and video games for poorer health today than in the past. Later in the interviews, youth and adult participants identified these same advances as inhibiting youth's participation in physical activity.

A2: The biggest threat is just the whole kind of laziness that seeps in with kids playing Nintendo and watching TV and doing that and the parents think that's OK. And us pushing computers like the school for example. ... So the kids are doing really badly. But if we get money we'll buy a bunch of new computers and sit all the kids down and say "learn all these programs".

FG1 Male 3: Television.
C: television, Why would television keep youth from being healthy?
FG1 Male 3: It keeps you entertained, but it doesn't do you any good.

When youth and adults were asked what they perceived as a threat or risk to their health, widespread concern was expressed by the majority of both youth and adults about

substance abuse. As one youth said, *"It's basically Tolko* [local pulp and paper mill] *and drugs and alcohol and smoking"*. In particular smoking, second-hand smoke, alcohol consumption and use of illegal drugs were said to pose a danger to health.

> *FG5 Male 1: Of course there's the usual stuff like drinking, drugs and alcohol, pretty much substance abuse.*

"Smoking" and "*second-hand smoke"* were discussed by youth in most focus groups.

> *FG3 Male: The bingo hall.*
> *C: Bingo halls OK, because...?*
> *FG3 Male: Smoking, second hand smoke.*

> *FG5 Female 1: Like smoking for example there's second hand and the person taking a drag.*

Adults expressed concerns about the risks of smoking for the community in general and particularly for their youth (A1, A5, A6; for youth – A4, A6, A9).

> *A4: Well, specifically I think of things like smoking, the youth.*

> *A5: Smoking is a danger to our health, to our kids' health.*

Alcohol consumption or *"alcohol"* or *"drinking"* was another dominant concern that was expressed by both adults (A1, A6, A8; for youth – A1, A3, A6, A9) and youth (FG1, FG3, FG4, FG5). In addition, several participants often mentioned smoking or illegal drugs along with alcohol as a threat to health. As one adult commented, the greatest threats to youth's health are *"probably the drinking and the drugs that goes on, with the smoking, those three things"*. Other adults involved with youth had similar perspectives.

> *A3: They use alcohol and drugs too much I think. That makes young people go down in health if they use alcohol too much.*

A5: The drug use, maybe the needles, the 'meth' [crystal methamphetamine]. *It will all affect their health.*

A9: Youth nowadays they're drinking and smoking, that's hard if you want to be healthy.

Participants were asked to make recommendations for improving the health of youth in OCN. Youth and adults gave various suggestions, mostly in relation to increased sporting and recreational opportunities for youth.

A suggestion for improving health mentioned by half the adults, and youth in three focus groups was to increase local opportunities for physical activity (A2, A4, A5, A6, A9, FG1, FG2, and FG5). "*I think that just the whole community attitude towards sport is important because I think Aboriginal people value sport and I think that's always been there*".

Youth in several focus groups suggested it would be helpful to "*make more sports teams*". They recommended sports such as "*football, dodge ball, wrestling, and Tai Kwan Do*". When asked how these activities would affect health for youth they indicated "*it would get them healthier and they'd stay out of trouble*". Adult participants also proposed more opportunity for a greater variety and accessibility of sports for youth.

A2: Like say sporting opportunities. Say there's a kid that wants to play lacrosse and there's no lacrosse team. The kid could just absolutely really want to play lacrosse, but if there's no lacrosse team he won't have that opportunity, and it could be that kid would be, if he played lacrosse he could be the best player that ever lived but he doesn't have that chance to ever find out.

A5: I think having affordable stuff for the kids to do. Or maybe even a bus [that] *meets at the OCN Youth Centre picks up all your kids if you want to go swimming for the hour on Wednesdays and then drops them back off. So maybe some more organized activities, more affordable activities, and easier accessibility to these things.*

Youth in one focus group suggested school and community organizers "*make up more programs for us*" such as "*more volleyball tournaments, basketball tournaments, baseball tournaments, golf tournaments, more soccer tournaments, and more hockey*".

There were other suggestions by youth that included individual participation. For example:

> *FG1 Male 3: Go camping. You get to catch healthy foods.*
> *FG1 Male 5: Go fishing.*

> *FG2 Female 2: Walking poker derbies.*

> *FG4 Male 1: I was thinking of a ping pong program where everyone can join ping pong. A swimming program... maybe a pool here on this reserve. It would make it easier for kids around here to go there.*

A similar thought was echoed by one of the adult participants.

> *A2: We have a big emphasis on team sports here and to me the team sports are oriented towards making the NHL, like say hockey as an example. So as soon as they can't make it past the level they're at, they completely quit whatever sport they're in. So if they're playing volleyball and they can't make it to university level they quit and then they just totally stop exercising altogether. But if we concentrate more on individual sports like running and swimming, things like that, then those are sports that can be continued a whole lifetime because you don't need a team to play them.*

Several adults put forward the idea of increasing physical activity classes during school hours to improve youth's health.

> *A2: Increasing the activity levels in the school, which would be easy because if you just say that kids have to have 30 minutes a day or 45 minutes a day of activity it wouldn't even have to be the Phys. Ed teacher that did it. It could be the teachers. You could teach all teachers how to do basic physical activity classes. ... How hard is it to take kids for a walk, everyday, or make them do jumping jacks?*

A4: Continuing to make things like Phys Ed. and health classes compulsory. And things like even in the lower grades, gym class more than once in a whole six day cycle. They always seem to be cutting out stuff like music and gym and that. You know between recess and gym there should be ...I can't remember the formulas but they should be out a half hour and hour at least a day doing something physically active, because lots of them aren't going to get it when they get home. So we've got to keep them busy when they're at school.

There were also several other ideas for improving the health of youth by increasing other community and school programs for youth, which may provide alternatives to sedentary activities.

A6: We're supposed to create a program that would give back to the community. We have a travel club and we're trying to get the youth involved in like walking derbies. ... We're trying to create a program for the kids, something active that we could all enjoy.

A2: Just increased opportunities, like even drama clubs and things like that just to get them away from playing video games.

A7: We've changed to a technology stage, and media and everything else is so readily available that I say, "you know what?" "You can be doing crunches while you're watching TV. You can be reading a book and doing crunches or sit ups or whatever, even leg lifts. There's a lot of different ways you can exercise while watching TV. If you have a stationary bike, well ride the bike, listen to music."

Learning about Healthful Choices

Having opportunities for enhancing physical health are important for youth, however, knowledge of what the healthful choices are, and why they are good choices is also key. Health educators and promoters can play a central role in providing individuals and families with such information.

In chapter five, youth and adults identified making good choices as an important component of health. Both youth and adults identified the health promotion activities occurring in the OCN community as being an important component of their health. Three adults and youth in the oldest focus group (A1, A4, A7, and FG5) spoke about the various community health promotion activities being organized by staff at the local health centre, Otineka Health. They spoke of health promotion activities such as presentations in the community on Fetal Alcohol Syndrome and diabetes prevention. In addition, Health Fairs held in the local mall, "*where they have a bunch of booths set up about the effects of alcohol and drugs and diabetes, your sugar level and stuff like that, your blood pressure*" (FG5) were mentioned as a positive actions providing awareness and hands-on learning of current health issues.

Both students and school staff mentioned the health promotion activities occurring at the school. For example:

> *A4: We have a lot of health promotion going on in our school... We have things like our breakfast program, because lots of the kids come without proper breakfasts, so Maslow's Hierarchy of learning, they're not going to learn anything if all they can concentrate on is the rumbling in their tummy. So we deal with that.*
>
> *A5: He also works hard to bring in people* [to the school] *like Olympic swimmers that are First Nations or runners, or dashers, he tries to bring them in and bring them around the school.*
>
> *FG5 Female 2: They have people come in to classes.*
> *FG5 Male 2: Speakers.*
> *FG5 Female 2: Yeah guest speakers who talk to us about health, emotionally and physically. People come, like Aurora House* [local support centre for women], *dentists.*
> *FG5 Female 1: Local nurses.*
> *FG5 Female 1: Because lately they've been saying that diabetes is hitting,*
> *FG5 Male 2: Natives.*

FG5 Female 1: Our native, more native people every year. So they get nurses to check your blood pressure or sugar level or whatever.

One adult commented on the positive influence of providing students with health education, and that the students were relaying what they learned in school to their caregivers.

A10: They [students] *go and then they'll discuss things* [health topics] *that we've talked to them about with their parents, with their grandparents. So I can see the impact and the influence, the education that's being delivered to them is having on them. And they're actually the ones that are passing on that to their parents, their grandparents.*

There were also several references made by participants to school policies which were health-promoting. For example, the removal of soft drink machines, junk food not being served in the school, a breakfast program, smoking not allowed on school grounds and a "Virtues of the Month" series.

A5: I think the pop machines, taking them out was a good thing. I don't think we need to have pop in the school. I think something like the breakfast program with healthy food for these kids, first thing in the morning so they get something in their tummies and their brain.

Youth in the oldest focus group also discussed several of these positive initiatives.

FG5 Male 1: Each year the schools always do something to make you more strong I guess mentally, by having like little stuff, like they all add up to something huge. Like for instance we have "Virtues of the Month". This year we're looking at virtues.

FG5 Female 2: And as well too there's no smoking on school grounds, so students can't just walk outside the door and smoke.

FG5 Female 1: And there's no junk food. They don't sell junk food it's all healthy food and stuff like that, nutrition bars.
FG5 Female 2: Most of the grades that sell stuff in the younger part of the school, they sell nutritious bars, or juice. They don't sell pop or chips and they're doing that to fund raise. So at least they're helping out with people's health.
FG5 Female 1: Even when they hold sports tournaments here they have canteen,

but not like the other schools, they have chips and pop. But here we can only serve nutritious food.
FG5 Female 2: They give out apples, sandwiches.

Youth in two focus groups also discussed other programs that would be helpful for improving health such as health programs, presentations or conferences.

FG2 Female 1: Have more programs.
C: More programs, like what kind of programs?
FG2 Male 1: Like this, like on disease, conferences.
C: So how is that giving an opportunity for staying healthy?
FG2 Female 2: To get our ideas out there.
C: How can that help to make it easier to stay healthy?
FG2 Female 1: Because some kids might be interested in what you have to say and they might go try a different sport.
C: Anything else?
FG2 Male 2: They might stop being couch potatoes.

C: What about someone who could come here to your community and maybe like you said make a presentation?
FG4 Female 2: An Elder.
FG4 Female 1: Or the Blizzards [OCN Blizzards 'Junior A' Hockey team].

FG5 Female 1: I think more conferences or similar to those Health Fairs.
FG5 Male 1: Yeah seminars, it can be the littlest thing, like a poster, like "eat healthy have an apple". Like grade ones can do that, to the huge stuff like seminars in Winnipeg or even at the Kikiwak [hotel].
FG5 Female 1: Maybe get someone from the outside like from a bigger city to come in here and sit and talk to us.

The discussion in one focus group included ideas for incorporating the teachings of the Medicine Wheel into school health programs.

FG5 Male 1: There's four points in the cycle, so that's three months of one area, like mental [health] *for three months and then something else. That'd be awesome!*
FG5 Female 2: So through the whole school year you could have the ...
FG5 Male 1: We could have our social development and, yeah I think that's a good idea. [You] *just need someone to take initiative.*

Summary and Discussion

As mentioned earlier, youth and adults identified the importance of role models for emotional health. Later in the interviews, participants mentioned specific people in OCN who were, or could be role models for youth. However, there was also a call for community adults, particularly prominent community members such as elders and the chief to be role models for their youth by displaying healthful lifestyle behaviours. Parental and family support and involvement has been stated as being key to positive and healthful life choices by adolescents (Monge-Rojas et al., 2005; O'Dea, 2003; Story et al., 2002). The significance of Aboriginal role models portraying healthful lifestyles has been reported in other studies as well (Turton, 1997; Wilson, A., 2004; Satterfield, 2003). In particular they noted the absence and/or importance of spokespersons who "look like me" (Satterfield, 2003; p.S61). The Royal Commission on Aboriginal Peoples (1996b) named the National Native Role Model Program, as a promotional tool to help motivate young people. The program includes events and speaking tours where Aboriginal athletes discuss topics such as drug and alcohol awareness and education.

Spiritual health is considered by some to be central to all other aspects of health. It may include participating in a spiritual life, practicing traditional activities or sharing with others (Bartlett, 2005; PWHCE, 2004). Several adults identified community individuals or institutions that used traditional practices. The structural symbolism of the OCN school, which incorporates numerous traditional values was described by one adult participant as a way to promote cultural identity for the students. In addition, other aspects of health could be nurtured by the traditional values imbedded in the architecture. For example, several locations for "talking circles" provide opportunity for emotional

health. Mental and physical health are fostered through classroom teaching and physical education. In a similar way, other cultural symbols such as sweat lodges have been described as contributing to health. The healing properties of a sweat lodge can also contribute to positive mental and emotional health (Wilson, K., 2003).

Several adults indicated the importance of teaching traditional values to children when they were young so they could learn about their culture which could in turn provide support for other components of health. The positive connections between cultural ways of knowing and doing things and health have also been reported elsewhere. Adults from diverse American populations indicated that applying cultural traditions or adaptations of them could be motivating for making positive lifestyle changes (Satterfield et al, 2003). Similarly, youth involved in the Royal Commission on Aboriginal Peoples (1996b) indicated that they youth wanted to learn traditional values and be able to apply them to their lives. "Giving Aboriginal youth the opportunity to learn about their language, culture and traditional values teaches them that they are valid and valued individuals and that they can be proud – not ashamed – of their culture and the contributions Aboriginal people have made" (RCAP, 1996b; p.155). The opportunity for First Nations youth to understand themselves and their culture can positively affect their self-worth and provide motivation for future endeavours.

OCN youth and adults mentioned numerous barriers to healthful living in their community including the low cost and accessibility of junk foods, the lack of a school cafeteria. This has been found elsewhere also. Students in Australian, American (St. Paul Minnesota) and Costa Rican high schools identified the convenience of less healthful alternatives as a barrier to healthful eating. (Croll et al., 2001: O'Dea, 2003; Monge-Rojas

et al., 2005). Urban Costa Rican adolescents pointed to the unavailability of healthful food choices in their school and home environments as a barrier to healthful eating habits. They indicated that many high schools do not have cafeterias and if they do, the foods served were unappealing to youth because of lack of variety or taste (Monge-Rojas et al., 2005). Adolescents may consume a large part of their daily food intake at school and thus the school food environment plays a large part in their food choices (Story et al., 2002).

Adults and youth in this study said that one of the major barriers to youth's participation in physical activity was the pervasiveness of computers and televisions, both at home and in the school. Students in grades 2 – 11 representing schools from across Australia expressed similar views (O'Dea, 2003). Through 38 focus group discussions, children and adolescents indicated that a preference for television, videos and playing on the computer was one of the major barriers to physical activity.

There was widespread concern among OCN adults and youth about the perceived high incidence of cigarette, drug and alcohol use by youth in their community. The notion of high rates of smoking among youth at OCN may be similar to what has been reported previously. It has been documented that First Nations youth have considerably higher rates of smoking than non-First Nations youth (Ritchie & Reading, 2003). The Aboriginal Peoples Survey 1991 reported that 46% of First Nations youth over 15 years of age were daily smokers (Stephens, 1994). In a survey of participants and spectators at the 2002 North American Indigenous Games, held in Winnipeg, Manitoba, 32% indicated they were regular smokers (Ritchie & Reading, 2003). In comparison, in a cross-national study, it was reported that, of over 6,000 Canadian youth surveyed, 17% of grade 10 boys and 23% of Canadian grade 10 girls were daily smokers (King et al., 1999).

There is a significant concern about alcohol and drug use among Native youth (National Health and Welfare, 1988). However, there is limited information about the level and patterns of use among Canadian Aboriginal youth (MacMillan et al., 1997). A Canadian survey compared the rates of substance use among urban Native and non-Native youth. A larger proportion of Native youth reported use of substances such as marijuana and LSD, but not alcohol, over a four year period (Gfellner & Hundleby, 1995). Authors of a study examining alcohol use among American Indian youth reported that frequency of use was also similar to non-Native youth; however the age of first involvement and amount were greater among American Indian youth (May & Moran, 1995). Compared to Canadian youth in general, 40% of grade 10 students surveyed indicated they had been drunk at least twice and 40% had also used marijuana in the last year (King et al., 1999). OCN youth are aware of health-promoting behaviours such as healthful eating and physical activity, as well as non-healthful behaviours such as smoking, and drug and alcohol consumption. However they need the support and modelling of their parents, families and community members to adopt and engage in healthful lifestyle behaviours.

Many participants mentioned that an increase in opportunities for physical and recreational activities could improve the health of OCN youth. Youth who appeared before the Royal Commission on Aboriginal Peoples (1996b) also stressed the need for opportunities for sport and recreation in their communities. As one Inuvik youth noted "there are many problems surrounding us, one of which is that there seems to be nowhere to go or nothing to do" (RCAP, 1996b; p.171). Other Canadian (Groft et al., 2005) and

Australian (O'Dea, 2003) teenagers have also suggested that a greater variety of options for both competitive and individual physical activities could improve youth's health.

Recreation and sport can be valuable channels for youth through which they may contribute to their communities. Sports, and in particular running has traditional significance for Aboriginals. Running was a way of communicating over long distances and also part of hunting and fighting. At the same time it was a game and a way of encouraging traditional values and developing personal strength (RCAP, 1996b). Parental involvement in their children's sporting activities may increase or maintain adolescent participation in school and community sports. Sports and recreation have been stated as being critical for Aboriginal youth:

> *"The most critical area of sports for Native peoples is still the development of leadership.... There is still a great need to develop sports administrators, coaches, officials and recreation directors that would serve the unique concerns of Native communities"* (Littlechild, 1981).

Both youth and adults identified three significant factors that posed a threat to youth's health .The accessibility of junk food and fast food in OCN and the surrounding community may contribute to reduced physical activity among youth. Eating junk food commonly occurs with watching television or playing computer games, which were mentioned by OCN participants as a barrier to physical activity. A perceived lack of opportunity for physical activity may increase risky behaviours among youth such as smoking, alcohol and drug misuse (Quine et al., 2003).

Health promotion within the school and the community health centre was cited as part of the current surroundings important for health at OCN. Some adults and older youth mentioned numerous examples of efforts being made by these local institutions that

were important for maintaining health. As indicated by the participants in this study, communities and schools have an important place in the lives of youth and provide a prime opportunity and environment for health promotion and even health services. Canadian (Groft et al., 2005) and Costa Rican (Monge-Rojas, et al., 2005) youth pointed out that the school had a significant function in facilitating access to information and skills that would lead to better health status for youth. Costa Rican participants suggested that having information about nutrition and healthful eating was a motivating factor, and if given appropriate information about how to choose better foods, they could act as potential educators for their parents (Monge-Rojas, et al., 2005). Youth interviewed in the study indicated a desire for more health-based programming, including the addition of traditional teachings encompassing all areas of health.

In conclusion, the community of Opaskwayak Cree Nation is making significant efforts towards providing a supportive environment for health. There are a range of opportunities for healthful living in the community. Youth were interested in learning about and discussing health issues that are currently a reality in their community. Increased opportunities for personal development for youth as well as dedicated support from parents and community adults, has the potential to positively benefit OCN youth's health.

CHAPTER EIGHT

Final Summary and Conclusions

Qualitative research provides an opportunity to explore underlying values and unique perspectives that may explain the 'what, how and why' of an issue (Giacomini & Cook, 2000; Lucasey, 2000). According to Morse and Field, qualitative methodologies seek to develop new theories in an area of research where previously little was known. This is in contrast to quantitative research where hypotheses or trends that have been previously established can be tested (Morse & Field, 1995). The variable purposes also affect the choice of methods. Qualitative methods require in-depth exploration of an issue without reducing the data to statistical analysis (Patton, 2002). A qualitative approach was selected for this study because it provides the best fit for addressing the research objective of exploring the perspectives of Canadian First Nations youth and adults working with them. For this project, qualitative methods allowed for an in-depth exploration of participants' perceptions on the meaning of health, weight and diabetes, and the opportunities for and barriers to improving health and preventing diabetes. The use of various data collection methods, known as triangulation, was intended to enhance the quality and credibility of the research by checking information gathered from participants and researcher observations (Guba, 1981).

Given these strengths, there are also limitations to this study. The researcher only spent a short time (8 days) in the community which limited opportunity for additional observations and informal discussions with other community members. There were also only a small number of adult and youth participants (10 and 29) which may have limited

the range of perspectives presented. Only one of the focus groups was conducted in a gender-specific manner which may have inhibited discussion in the mixed-gender groups. In addition, the perspectives of participants are specific to the OCN community and therefore may not be generalized. Finally, the researcher's own perceptions and biases will influence results or interpretation of the data, which may be a strength as well as a limitation (Lincoln & Guba, 1985).

The results of this study are intended to provide insight into the issues concerning health that are important to members of Opaskwayak Cree Nation. Therefore it is valuable to analyse them and begin to develop theories and recommendations based on these results, starting with the environmental scan.

The community of Opaskwayak Cree Nation has seen considerable changes over the last half century. Some have had detrimental effects while others have been positive. The traditional way of life based on subsistence from the land has decreased while community-based developments providing employment and autonomy have increased (Bruyere & Garro, 2000; OCN, 2005b). These changes may have affected both the dietary and physical activity patterns of local residents. According to study participants, consumption of store-purchased or fast foods, which are often of lower nutritional quality, has replaced wild game and fish to a large extent. Reduced hunting, fishing and trapping and increased sedentary lifestyles due to technological advances were said by participants to have caused a general decline in the amount and type of physical activity. In this study, these factors were largely blamed for the recent increase in diabetes among community members. Bruyere and Garro, (2000) have reported similar perceptions from members based on earlier research in OCN. The promotion of community kitchens and of growing

and gathering wild berries, and other garden produce would provide nutritious and economical food choice alternatives as well as reintroduce the harvesting of traditional plant foods. In addition, as shown by the results of the food costing data, most foods with the exception of milk are of similar price in OCN as Winnipeg. If incomes and the cost of living were similar in both locations, cost would not be more of a barrier for selection of healthful foods in OCN.

There were three main topics that were explored when looking at the interview data: 1) meanings of health, 2) perspectives on weight and diabetes and 3) opportunities for and barriers to improving health. The concept of health was described explicitly by adults in terms of the Medicine Wheel, particularly the aspect of needing to have balance between emotional, spiritual, physical and mental health. According to some participants, health is more than the absence of illness; it is the continuous effort to maintain wellbeing to the best of one's ability in all four areas. Youth also described being healthy as more than just being physically healthy, although in a more implicit manner. Physical health was discussed at length by the youth; however, they also spoke about emotional, spiritual and mental health issues. Given the importance the participants placed on a broad and balanced view of health, the following summary and implications of the research are organized according to the four aspects of health as depicted in the Medicine Wheel.

The emotional component of health was referred to by participants in various parts of the interviews. The importance of role models was conveyed by both youth and adults as a way to promote and support their emotional health. Youth pointed to adult role models such as parents as important in displaying positive lifestyle choices and conversely, lack of such adult modelling as a barrier to healthful living. Participants

readily identified community members displaying a healthful lifestyle and well-known Aboriginal athletes and actors as positive role models. Most notable, however, was the call for more community leaders and adults to be role models for their youth. Participants in this study noted increasing numbers of Aboriginal role models visible in the broader community as being important. OCN youth and adults advocated continued and increased role modeling by parents, community members and leaders. In order for youth to adopt healthful lifestyle practices, it is important for them to visibly witness these behaviours in the significant adults in their lives. There is some research support for these ideas. Modelling of positive lifestyle behaviours as well as adequate support was found to improve positive behaviours among American adolescents (Scales, 1999). Satterfield and colleagues (2003) noted that in their conversations with people of diverse populations, health promotion messages were thought to be most effective and encouraging if adopted and demonstrated by community leaders. The Royal Commission on Aboriginal Peoples (1996b) also has stated that positive role models are important for Aboriginal youth and can provide motivation and inspiration for young people. Development of awareness among parents and community adults through discussion forums with youth would communicate the importance of positive role modelling.

Discussions of body weight and diabetes also touched on emotional health. One youth indicated that being overweight may cause emotional distress and could lead to low self-esteem. Urban American preteens interviewed on their attitudes and perspectives of healthful lifestyles and overweight indicated they needed the help and support of their parents to make healthful choices (Borra et al., 2003).

Family and social support were mentioned by adults as an integral component of a healthful environment. They spoke of the need for emotional support from home to sustain youth in difficult times. The social support of the larger community also appears to be important. Coaching clinics would provide opportunity for parents to become knowledgeable about athletic activities and also give opportunity to offer emotional support to their youth.

Participants described traditional native practices as key to the spiritual health of individuals and the community. Descriptions of traditional practices included ceremonies such as Pow-wows and sweat lodges, activities such as hunting, fishing and trapping or common values such as sharing and respect. Collective Aboriginal values such as sharing were suggested by several adults to be a significant aspect of spiritual health. Sharing was also put forward as a suggestion for preventing diabetes strategies. Participants indicated that sharing of information and experiences in an interactive group environment may be helpful to community members. Youth were less familiar with the specifics of traditional ceremonies and other traditional practices, yet still supported their connection with health. They spoke of how the physical aspects of participating in traditional ways, such as sweating in sweat lodges, and running while hunting could have a positive effect on health. References were made by adults to the benefit of using traditional practices such as canoeing or outdoor activities to increase physical activity for youth. The positive contribution of traditional practices to spiritual health was most clearly conveyed by adults in relation to their perceived benefit on the reduction of substance misuse. Participation was said to provide healing and inner strength. Inclusion of traditional

practices in health promotion strategies could influence OCN community members to adopt healthful lifestyle practices because they are in harmony with cultural values.

Physical activity and sport is valued by Aboriginal people and continues to be an important aspect of physical health. Although there are opportunities for physical activity in OCN, youth and adults suggested a wider variety of less common activities for youth, such as non-team sports, drama or fine arts. Technological advances such as cars and all-terrain vehicles as well as television and computers were partly to blame for the recent decline in physical activity and were identified as a barrier to health. Adults linked environmental interference and destruction of the land and water by local industrial development to these changes. Substance misuse, including alcohol, tobacco and illegal drugs, was named as one of the major barriers to healthful living.

Participants spoke about the changes in availability of food from the traditional wild foods to the current processed and "junk foods" as responsible for the declining physical health and increase in chronic diseases, such as diabetes, in the community. Gardens are virtually non-existent in the OCN community, and hunting and fishing for wild game is less common due to hunting regulations and reduced availability. Food insecurity was also mentioned as a barrier to health. Comments by adults suggested OCN youth in general were making poor food choices and were not engaging in adequate physical activity. Addition of a cafeteria in the school could provide healthful alternatives to the fast foods often purchased by youth. Practical and interactive programs and activities geared towards education for parents and caregivers on healthful food and lifestyle choices would be beneficial to support the physical health of youth.

A significant aspect of mental health that was discussed by both youth and adults was the value of making good choices both for the individual and the community. Knowing what the healthy choices are and why they are important can support positive diet and exercise selections. Increased parental education of health-promoting lifestyle choices and increased knowledge of how to support youth in their activities was mentioned as being particularly crucial for improving health. Youth in most of the focus groups also thought their parents would like more information on improving health and preventing diabetes. Health promotion efforts by the local health centre as well as the school were mentioned by numerous adults and youth as an important context for maintaining and improving health.

The influence of peers and family members on making choices appeared to be of importance to youth. This could be either negative or positive influences. Youth and adults cited parental knowledge of healthful choices and involvement with and support of their children's activities as important for maintaining and improving their health. Some participants suggested many parents do not have adequate knowledge of nutritious food choices or the benefits of physical exercise to pass on to their children. Knowledge of healthful living practices was not assessed in this study. However the issue appeared to be important to participants and could be further investigated in future studies.

Participants provided examples of several institutions and organizations within the community that give support and opportunity for OCN youth to develop physically, mentally and socially. The local school and health centre provide numerous avenues for learning healthful lifestyle practices and disease prevention strategies through presentations and activities. The OCN Youth Centre offers opportunities for physical

activity and social interaction. Participants mentioned these as important for health. Rural Canadian high school students indicated that the school has a significant function in providing access to information and skills for healthful lifestyle choices (Groft et al., 2005). The reference to the health promotion efforts of the school and health centre implies that these are valued by OCN youth and adults and are contributing to health information. Continued efforts from the school and health centre using interactive presentations or dramas to support and promote the best possible health for youth may be beneficial.

Improving health and preventing diabetes encompasses more than physical health, as indicated by both youth and adults in this study. Making healthful food and physical activity choices remains important, however, components of emotional, spiritual and mental health are also tied to these goals. Positive role models, knowledgeable parents, community and social support as well as the impact of societal changes on food choices, physical activity and disease all play a role in promoting and achieving optimal health.

The implications of this research for Opaskwayak Cree Nation are broad and diverse, reaching into all aspects of health. Participants called for the development of new strategies for promoting health and continued support of existing strategies.

The participants in this study discussed health concerns using the Medicine Wheel to point toward a broad array of issues involving food choice, exercise behaviours, and emotional, mental and spiritual aspects of health. Given this significance, health promotion initiatives at OCN should include the traditional Aboriginal health perspectives founded on the Medicine Wheel. In addition, because the primary intent of this research was to focus on youth, it is appropriate in summarizing, to reflect on what was said by the

youth. OCN youth were hopeful for the future and identified themselves as role models for younger generations in their community. Youth longed to fit in and were looking for meaningful relationships with their parents and peers. They pointed out the importance of spiritual health by discussing traditional native practices they were familiar with and thus implicitly indicating that they value these customs. Aboriginal youth appreciate sport and physical activity as expressed through examples of their current involvement in and request for more opportunities for physical activity. They are social and relational beings, looking for meaningful experiences and interactions. OCN youth acknowledged the contribution that healthful food choices and physical activity make to maintaining health and preventing disease. For youth, it is not enough to know what the good choices are. It is also necessary to have opportunity to experience the benefits of them in their daily lives. Aboriginal youth have the potential to become the link for their communities between traditional and modern views, connecting the past with the future. In the words of one of the youth participants, "*our generation are going to actually become something in the world right now and have a stance*" (FG5 Male).

Several questions emerge as a result of this exploratory research. Are youth and adult comments typical of those in other northern Manitoba communities or of urban First Nations youth? What type and level of health knowledge do most OCN parents have? What are the actual dietary and physical activity patterns of OCN youth? What are the actual rates of type 2 diabetes in this community? How many children and youth have been diagnosed with diabetes? Further research into these questions would provide a more comprehensive assessment of the health concerns expressed by participants. In

addition it would be useful to implement some of the suggestions given by participants for improving health and then to test their effectiveness.

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APPENDICES

Appendix A

Environmental Scan Questions

How is the community laid out?

Where are homes, stores, the school, the health centre/nursing station, community centre, band office and other significant physical features of the community?

How does each of these promote or hinder healthful living?

How does each of these structures affect local behaviour?

What kind of food is available at the local stores? Cost?

What are the costs involved in obtaining home grown food?

Are there gardens?

Are there recreational facilities available in summer? In winter?

Does quality of housing support nutrition and activity efforts?

How does space available for food storage and preparation affect consumption?

Is sufficient clean water available?

Is there potential to alter community resources to support healthy living?

Appendix B-1

Interview Guide for Individual Interviews with Adults

1. What does being healthy mean to you?[1]

2. What is a healthy person like to you or look like to you?[1]

3. How does the health of youth in your community compare to your health when you were younger?

4. How does your health compare with your ancestors' health?

5. How have ways of staying healthy changed over the past years?

   Probe: What do you do differently from your ancestors to stay healthy? [1]

6. What would you identify about your surroundings as being important for health?

7. What do you perceive as a threat to your health? Youth's health?

8. What are some ideas for keeping youth healthy?

9. How do traditional practices affect health?

10. Is there anything else you would like to add to this discussion?

[1] (These questions were based on Hakim and Wegman's research questions in Hakim and Wegman, 2002)

Appendix B-2

Interview Guide for Focus Group Interviews with Youth

1. What does being healthy mean to you?[1] What are some examples of being healthy? Not being healthy?
2. How would you describe the health of people your age here at OCN?
3. How does your health compare to past generations' health?

   Probe: great-grandparents? 100 years ago?
4. What do you think causes people to be healthier now than in your parents' time?[2] Your grandparents' time? Great-grandparents' time? What do you think causes people to be *less* healthy now?[2]
5. Have you heard of any traditional practices or beliefs that might have an effect on health?
6. What do you perceive as a risk to your health?
7. What do you perceive as enhancing or protecting your health?
8. Are there any things in your life now that have a good effect on your health?[2] A bad effect?[2]
9. What could be done to provide opportunities for staying healthy at OCN?
10. What is diabetes?

[1] (These questions were based on Hakim and Wegman's research questions, in Hakim and Wegman, 2002).

[2] (These questions were based on Blaxter's research questions, in Blaxter, 1997).

11. What causes diabetes?

12. How does having diabetes affect a person?

13. Does body weight have anything to do with health? If so, what?

14. Do you think parents of youth at OCN would like to know more about health, diabetes prevention? From the school? From the health centre?

15. Is there anything else you would like to add to this discussion?

Appendix C

Record of Research Form

1. Date of Interview: Month/Day/Year_____

   Start time _____End time _____

   Length: _____ hours _____minutes

2. Physical setting: _____

   _____

3. Notes or Comments _____

   _____

   _____

Appendix D-1

Participant Consent Form

Research Project Title: **First Nations Youth's Perspectives on Improving Health**

Researcher(s): This research is being conducted by Corinne Isaak, a graduate student in the Department of Human Nutritional Sciences, Faculty of Human Ecology at the University of Manitoba. She can be reached at the Department of Human Nutritional Sciences, H505 Duff Roblin Building, Faculty of Human Ecology, University of Manitoba, Winnipeg, Manitoba, R3T 2N2. Ph: (204) 474-9901.

E-mail:

Sponsor: Dr. Gail Marchessault. She can be reached at the Department of Human Nutritional Sciences, Faculty of Human Ecology, University of Manitoba, Winnipeg, Manitoba, R3T 2N2. Ph: (204) 474-8070. E-mail: marchess@ms.umanitoba.ca

This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

Purpose: The purpose of this study is to learn how you think about health. This includes ideas about how to improve your health as well as things that make it difficult or easy to be healthy.

Procedures: This is an interview study. Group interviews will take place during school hours and will take between one and two hours. This study is not connected with the school or health centre and you will not be penalized in any way if you choose not to participate. The main purpose of the interview is to ask you some questions about what you think about health, suggestions for improving health and your ideas on things that help or make it difficult to live a healthy life. You will be asked some background questions such as your age, gender and grade in school. THERE ARE NO RIGHT OR WRONG ANSWERS. I am interested in what you think.

Recording devices: I would like your permission to tape record the interview because it is not possible to write as fast as people speak. The interview results will be more accurate if your actual words are taped. These tapes will be typed into transcripts so that your explanations can be studied. The tapes will not be used for any other purpose and will be erased at the end of the study.

Risks: In all studies carried out by the university, the person doing the project must point out any risks or discomforts for the study. I do not think this study will cause any problems for you other than taking up your time to answer questions, and although I don't think this will happen, asking questions that may bring up personal problems. You may refuse to answer questions that you do not wish to answer. Just let me know if you would like to skip any questions.

Benefits: I do not expect the study to have any direct benefits for you. You will not receive any money for taking part in the study, but a small gift will be offered to you for your participation. You may find the chance to think about what health means to you and share these ideas with others. The results of this study may be useful to health professionals who work in First Nations communities.

Incentives: A small gift such as a grocery store gift certificate (approximate value of $10.00) for adults or a movie pass (youth movie pass – approximate value $5.50) for youth will be offered to participants after the interviews have been completed.

Confidentiality: This consent form will be the only record with your name on it. The consent form and the interview tape will be kept in a locked cabinet in a locked room. Records of the interview with you will be coded only with a number or a fake name. Any reports written about this project will not mention your name or provide any description of you that would identify you.

Feedback: I will be pleased to mail you a copy of the report that is written up after the interviews are completed. If you would like a copy of this report, please print your address below:

Address: _____

_____

***

Your signature on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and /or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation. You can obtain further information about the study from: Corinne Isaak, (204) 474-9901 or Dr. Gail Marchessault, (204) 474-8070.

This research has been approved by the Joint-Faculty Research Ethics Board. If you have any concerns or complaints about this project you may contact any of the above-named persons or the Human Ethics Secretariat at 474-7122, or e-mail margaret_bowman@umanitoba.ca. A copy of this consent form has been given to you to keep for your records and reference.

_____

Participant's Signature Date

_____

Researcher and/or Delegate's Signature Date

Appendix D-2

Background Information for Adult Interviews

1. How long have you lived in Opaskwayak? Since birth, since childhood, since adolescence, since adulthood? _____
2. (If appropriate) Where else have you lived? _____

3. Do you have any children? If yes, how many? _____
   Any grandchildren? If yes, how many and are any of them teenagers? _____
4. How old are you? _____

5. How much formal education do you have? (Circle letter)
   a) NO FORMAL EDUCATION
   b) LESS THAN GRADE 7
   c) GRADE 7-9
   d) GRADE 10-12
   e) COMPLETED HIGH SCHOOL
   f) SOME COLLEGE OR UNIVERSITY
   g) COMPLETED COLLEGE OR UNDERGRADUATE DEGREE
   h) SOME GRADUATE WORK
   i) COMPLETED GRADUATE WORK Level: _____

6. Do you speak any language other than English? If yes, what other language(s) do you speak? _____

7. How would you describe your ethnic background (ancestry, nationality)?

8. Are you presently? (Circle letter)
a) WORKING FULL TIME
b) WORKING PART TIME
c) UNEMPLOYED
d) RETIRED
e) FULL-TIME HOMEMAKER
f) STUDENT

9. (If appropriate), what is/was your occupation? _____

Appendix E-1

Information letter to parents written by school administration

Joe A. Ross School

"Where Eagles Soar High"

BOX 10160 OPASKWAYAK, MB R0B 2 J0

Phone 623-4286 Fax 623-4442

October 6, 2004

Dear Parent/Guardian:

We ask for your assistance with a student/researcher from the University of Manitoba. She will be interviewing adults as well as students for her study on **First Nations Youth Perspectives on Improving Health.**

Please read the attached information. By signing the parental permission form, you are allowing your student to participate in this worthwhile study. The study will require that your son/daughter participate in a focus group interview. The researcher will ask questions in a whole group setting. The researcher will use a cassette recorder to store all answers. The cassette interviews will be destroyed by the researcher when she has used the answers to complete her written study.

All participants will be rewarded with a movie pass sponsored by the University of Manitoba.

Thanks to all who have taken the time to read through the purpose of the study and for allowing your student to participate. If you have any questions, please contact Brenda Delorme or Jamie Wilson for more information at

Please return the parental permission form before Friday, October 22, 2004. The Focus group interviews with students will begin on Monday, October 25 at the school and will take about 45 minutes out of their class schedule.

Respectfully,

School Administration

Appendix E-2

Sign-in sheet for Focus Group Interviews with Youth

BACKGROUND INFORMATION

Age: _____

Gender: (Circle one) FEMALE MALE

Grade in school: _____

Have you lived in this community since birth? _____ If not, how long have you lived here? _____ Where else have you lived?

_____

Do you speak any other language besides English? _____

How would you describe your ethnic background (ancestry, nationality)?

_____

Appendix E-3

Parent/ Guardian Consent Form for Son or Daughter's Participation

I understand that I am being asked to give permission for my son or daughter to take part in a study about health, called "First Nations Youth's Perspectives on Improving Health". The interviewer will ask him or her questions about what they think about health. This interview will be a group interview with between 5 and 7 youth of the same age and gender. The interview will last between one and two hours and will occur during school hours if possible. I have been given a written explanation of the study and the researcher's name, university address and phone number so that I can ask questions. I understand that I can ask more questions at any time.

I understand that my daughter or son can choose to take part, or not to take part in this study and that she can stop the interview at any time. This study is not being conducted for the school or the health centre and my child will not be penalized in any way if they choose not to participate. I have been told this study may not benefit us in any way. However, my child's participation will add to the knowledge about health concerns of First Nations youth.

I understand that my son or daughter's identity will not be revealed and his or her answers to all questions will be kept entirely confidential. I also understand that a summary of the results of the study will be sent to anyone who is interested, and a copy of the final report will be sent to the school and the health centre.

My signature on this page indicates that I understand and agree that my son or daughter can take part in the study if he or she chooses to participate.

Son or Daughter's Name: _____

Parent or Legal Guardian's Name: (Print) _____

Signature of parent of legal guardian: _____ Date: _____

Signature of witness: _____ Date: _____

***

I have explained to _____ the nature and purpose of this study as described on the information sheet which has been given to him or her. I have asked if this parent/guardian has any questions about the study and have answered these questions to the best of my ability.

Signature of Investigator: _____ Date: _____

Appendix F-1

Letter of approval from Opaskwayak Cree Nation Chief and Council

MEMORANDUM

JUN 0 4 2004

TO: Cecilia Ross, CEO, OCN Health Authority

FROM: Jerry Henderson, General Manager

DATE: June 4th, 2004

RE: OCN Health Authority Issues - May 31st, 2004

Please be advised that at the Chief and Council meeting held May 31st, 2004, Chief and Council approved the following;

- Diabetes Prevention Project - Request for Support
- Health Transfer Agreement Amendment #MB0000004-AO8

Please obtain the original documents for your perusal from Nancy Dorion, Chief's Office.

Yours truly,

Jerry Henderson
General Manager

xc Chief and Council
File

Appendix F-2

Letter of approval from Research Ethics Board

UNIVERSITY OF MANITOBA

RESEARCH SERVICES & PROGRAMS
Office of the Vice-President (Research)

244 Engineering Bldg.
Winnipeg, MB R3T 5V6
Telephone: (204) 474-8418
Fax: (204) 261-0325
www.umanitoba.ca/research

APPROVAL CERTIFICATE

06 August 2004

TO: **Corinne Isaak** (Advisor G. Marchessault)
Principal Investigator

FROM: **Wayne Taylor, Chair**
Joint-Faculty Research Ethics Board (JFREB)

Re: **Protocol #J2004:116**
"First Nations Youths' Perspectives on Improving Health: Barriers and Opportunities for Preventing Diabetes"

Please be advised that your above-referenced protocol has received human ethics approval by the **Joint-Faculty Research Ethics Board**, which is organized and operates according to the Tri-Council Policy Statement. This approval is valid for one year only.

Any significant changes of the protocol and/or informed consent form should be reported to the Human Ethics Secretariat in advance of implementation of such changes.

Please note that, if you have received multi-year funding for this research, responsibility lies with you to apply for and obtain Renewal Approval at the expiry of the initial one-year approval; otherwise the account will be locked.

Get to know Research ...at your University.

Appendix F-3

Letter to inform the Health and Information Research Committee

September 29, 2004

Monique Lavalee, A/Chair Health Information and Research Committee
c/o Dawn Stewart, Centre for Aboriginal Health Research
715 John Buhler Building
University of Manitoba
Winnipeg, Manitoba, R3E 3P4

Dear Ms. Lavalee,

I am writing to inform you of a graduate student project titled First Nations Youth's Perspectives on Improving Health: Barriers and Opportunities for Preventing Diabetes. This project is to be carried out at the Opaskwayak Cree Nation (OCN) community in The Pas, Manitoba by Corinne Isaak, a graduate student in the Department of Human Nutritional Sciences.

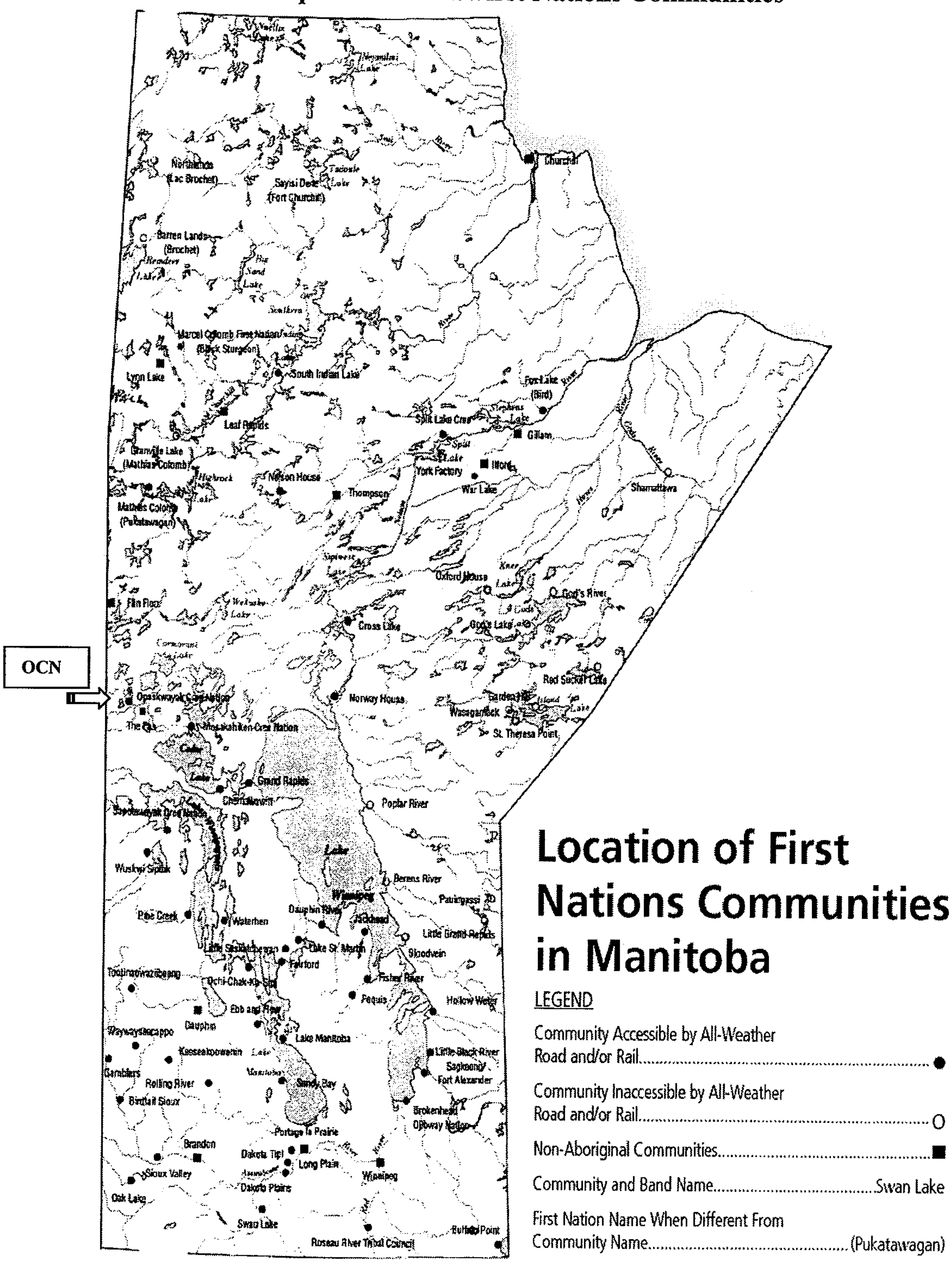
The purpose of this project is to explore the perspectives of First Nations youth on improving health and to understand how they see the barriers and opportunities for preventing diabetes. Both in-depth individual and focus group interviews with First Nations adults and youth living in Opaskwayak Cree Nation will be conducted. This is a qualitative research approach to increase our understanding of health issues from the perspective of First Nations youth. We hope that understanding the concerns of youth will assist in the development of culturally appropriate programs to address prevention of future health problems. If the community is interested in following up the results of this study, it is my intent to seek further funding to support participatory approach to research addressing relevant issues. Because it is important to address prevention efforts to youth, including First Nations youth's ideas on what the barriers and opportunities are for improving health and their suggestions for preventing diabetes is an important first step.

I have enclosed copies of the student's proposal, a letter of approval from the OCN Band and Council and the Approval certificate from the Joint-Faculty Research Ethics Board of the Fort Garry Campus of the University of Manitoba. If you have any questions, I would be pleased to provide additional information about this project.

Sincerely,
Gail Marchessault, PhD, PHEc, R.D.

Appendix G

Map of Manitoba First Nations Communities



(Manitoba Health, 1996)