RESILIENCY FACTORS AND SUBSTANCE USE AMONG MANITOBA FIRST NATION GIRLS LIVING ON RESERVE

by

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ABSTRACT

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The purpose of this study was to examine the relationships between adversity, resiliency and substance use among Manitoba First Nation girls living on reserve, ages 12 to 17 years. Five hundred and fifty girls completed an in-person survey of 138 items on a variety of health and well-being issues. The results of this study indicate that the prevalence of substance use is disturbingly high among First Nation girls. A logistic regression analysis determined that age, family discord, and parental substance abuse were all significant predictors of increased substance use among First Nation girls. Family connectedness, visiting and spending time with family were protective against substance use. Surprisingly, high cultural engagement was not protective against substance use in this study, but beliefs in the importance of cultural activities were protective. In conclusion, this study showed that taking a resiliency approach to examine health behaviors among First Nation girls is beneficial and can best inform policies and programs to reduce substance use.

TABLE OF CONTENTS

List of Statistical Tables

List of Figures

CHAPTER 1: INTRODUCTION

Statement of Problem

In Canada, substance use such as tobacco, alcohol, and illicit drug use among adolescents in Aboriginal communities is a significant public health and economic concern (Health Canada 2005; National Aboriginal Health Organization [NAHO] 2004). The cost of substance abuse in Canada, as of 2002, was estimated at $39.8 billion. This cost was based on the burden on services such as health care and law enforcement, and the loss of productivity in the workplace or at home resulting from premature death and disability (Rehm, 2006). Given this high cost and the significant concern among Aboriginal[1] youth, substance use demands a holistic perspective to understand the myriad of risks and protective factors in order to develop effective intervention and prevention strategies at the individual, family, community, provincial, and national levels.

In Canada, Aboriginal youth are more likely to live in an adverse environment where they are exposed to risk factors that lead to risky behaviors and poor health outcomes (Trovato, 2001; Health Canada, 2005). Existing literature has demonstrated that risk factors, such as family discord, parental alcoholism, and low socioeconomic status contribute to engaging in substance use (Stiffman et al., 2007; O'Connel et al., 2007). Not all children and adolescents, however, engage in risky behaviors when confronted with adversity. Why is it that some children and adolescents endure and overcome negative life trajectories and live in a self-governing and health promoting way of life? To understand

[1] Aboriginal is an umbrella term used to describe all three groups of Indigenous people in Canada that are First Nations, Métis, and Inuit people. First Nations (FN) people are registered under the Indian Act. These terms of Aboriginal and First Nations will be used interchangeably in this thesis.

this paradox, it is imperative to use a population lens to unpack risk and protective factors of substance use among Aboriginal youth.

Problem or risk behavior theories are predominant in the literature to frame understandings of substance use among diverse adolescent populations (Steinberg & Morris 2001). This approach, which focuses primarily on examining risk factors, pathologizes minority adolescents without understanding the dynamics of risk and resilience (Benard, 2004). Risk behavior based models tend to maintain a historical way of viewing young people as inherently deviant, labeling them as such, and maintaining their marginality in society (Brown, J. H., D'emidio-Caston, M., & Benard, B., 2001). Theoretical frameworks that only examine risk factors and individual deficits perpetuate the notion that populations living in adverse environments are destined to fail (Swadner, B. & Lubeck, S., 1993). While identifying risk is important, it is equally important to examine the strengths and capacities within diverse populations where individuals and families overcome adversity and live a health promoting way of life. This is particularly relevant when examining such behaviors like substance use among Aboriginal youth.

In the last two decades, there has been a shift towards examining substance use among minority adolescents from a more positive perspective. Werner and Smith's (2001) seminal study of the children of Kauai has demonstrated that, despite adversity, one third of the children and youth lead positive life trajectories into adulthood. A more recent study conducted by Silmere and Rubin-Stiffman (2007) has focused on factors associated with successful functioning in American Indian youth measured by good mental health, being alcohol and drug free, having a clean police record, and positive psychological functioning. Benard (2004) has postulated that protective factors are more influential on health and

social outcomes rather than risk factors. Her framework on resiliency includes internal personal strengths, such as social competency, autonomy, sense of purpose, and problem solving, are protective and foster resiliency. Other protective factors include external resources or assets that are in a youth's environment, such as caring relationships, high expectations, and opportunities to participate in the family, school, or community. Recent research has demonstrated that protective factors at the individual, family, peer, and school levels may help deter early engagement in substance use which may lead to adverse life trajectories (DeVore & Ginsberg, 2005; Kumpfer & Alvarado, 2003; Rew & Horner, 2003; Siqueira & Diaz, 2004). Little is known, however, about these protective factors in a First Nations context, or the way this knowledge can help inform evidence-based policies and programs for health promotion and risk reduction programs for First Nation youth.

Currently, the Canadian government has a national plan of action for children to improve the health and social conditions of Canadian children and youth (Government of Canada, 2004). While this national plan acknowledges that Aboriginal children and youth are at risk and that their health needs be given priority, more research-guided approaches are required. For example, identifying risk and protective factors in this population would help inform policies and programs to promote the health and social conditions of Aboriginal children and youth.

This study addresses this gap by investigating the association between adversity, resiliency and substance use among Manitoba First Nations youth. Of particular interest is substance use among female youth, given the recent increase in rates of substance use among girls.

Study Objectives

The purpose of this study is to determine the association between adversity, internal and external resiliency factors and substance use (tobacco, alcohol, drug use and polysubstance use) among First Nations female adolescents living on reserves in Manitoba. The specific objectives of this research are:

1. To describe the prevalence rates of tobacco, alcohol, drug use and polysubstance use among Manitoba First Nation adolescents by sex.
2. To describe the adversity versus internal and external protective factors among Manitoba First Nation female adolescents.
3. To explore the association between adversity and internal and external protective factors and substance use among Manitoba First Nation female adolescents.

Summary

This study addresses a major gap in the resiliency literature by investigating the association between adversity, resiliency and substance use among Manitoba First Nation girls living on reserve. The thesis is organized in the following way. Chapter two is a review of 1) the theories of adolescent development; 2) what we currently know about the First Nation adolescent population; 3) the extent and etiology of substance use among Aboriginal people; 4) the determinants of substance use among youth, and 5) a conceptual model derived from Benard's work on resiliency, which will frame our understanding of substance use among Manitoba First Nation girls. Chapter three is a description of the methods used to undertake this study. Chapter four describes the findings of the study. Chapter five includes a discussion of the findings, a summary of study limitations, of

potential pathways for interventions to combat the issue of substance use among First Nations adolescent girls, and identifies areas for future research.

CHAPTER 2: LITERATURE REVIEW

Adolescence as a Developmental Period

Adolescence is a period of high risk for the initiation of tobacco, alcohol and illicit drug use. To understand the link between resiliency and health promoting ways, it is important to understand the concept of adolescence. Adolescence is described as the second major period of rapid growth and development in life, following infancy. According to Smetana, Campione-Barr and Metzger (2006), adolescence is defined by three stages: early adolescence (ages 10 -13), middle adolescence (ages 14-17), and late adolescence (18 until the early twenties). During adolescence, significant biological and psychological changes occur. Maturational changes in neurobiology of the brain occur, and the effects of pubertal transitions may contribute to substance use among adolescents (Chassen, Hussong, and Beltran, 2009). A number of theories, as discussed below, support research that describes this period of development.

Adolescent problem behavior theory frames this period of life as one that can be turbulent, troubled, and predictive of negative outcomes. Other paradigms describe this developmental period as one of storm and stress, hormonal influences, and parental conflict (Steinberg & Morris, 2001). Consequently, adolescent development research tends to focus on problematic behaviors in both dominant and minority cultures, rather than normative development. The result is that there has been much research directed at explaining dysfunction and mal-adaptation in adolescence (Steinberg & Morris, 2001).

While there has been much focus on problem behavior, Steinberg and Morris (2001) also reached some very positive conclusions. First, adolescent experimentation with certain

behaviors does not lead to enduring patterns of dangerous behavior. Secondly, one has to distinguish problems that have origins and onset during adolescence from those that have their roots in earlier periods. As well, many of the problem behaviors experienced by adolescents are relatively transitory in nature and are resolved in early adulthood. In summary, while there are some adolescents who face enduring challenges, other youth seem to emerge from this period in a positive way. Why is that the case?

Challenges of adolescence

Developing a positive self-identity is a significant developmental task in this period of life, and a challenging one for some youth. Adolescents can exhibit a myriad of problems, such as body dissatisfaction, rising substance use, academic underachievement, sexually transmitted infections, pregnancy, and high rates of depression and hopelessness (DeLeel et al., 2009; Jayaraman et al., 2009; Katon et al., 2010; Luong, 2008; Statistics Canada, 2004). Adolescents, depending on their environment and opportunities, are exposed to risky behaviors at a much earlier age than adolescents in the past. According to Lecoy and Mann (2006) experimentation with smoking, alcohol, sex and other high risk behaviors can create challenges for a young adolescent who is not cognitively mature or may have a biologically based drive for risk taking. Indeed, young adolescents are more likely to take greater risks because they are more susceptible to peer pressure, more oriented to the present than the future, and are less able to regulate their emotions. Other challenges include physical maturation. Lecoy and Mann (2006) contend that girls more than boys tend to have more negative experiences, and they found this to be true across cultures. Younger adolescent girls are more prone to be dissatisfied with their bodies and to dislike changes

associated with puberty, factors often linked to low self-esteem. The likelihood of depression also increases with the onset of puberty, and in fact, is the most prevalent disorder in adolescents, occurring two times more often in females than in males. What this means is that some girls entering adolescence may have developed an avoidant coping style, which is associated with substance use (Lecoy and Mann 2006). While such sex differences exist, there are other issues that complicate the developmental process in some populations.

Enculturation, biculturalism and minority populations

Enculturation, for one, is defined as a process by which individuals learn about and identify with their ethnic minority culture (Zimmerman et al., 1996). Minority adolescents, as a result, must work through a process of developing a personal identity, while developing a positive cultural identity, unique from the dominant culture. This process of enculturation, however, may complicate the development of a positive identity for minority youth, such as indigenous North Americans.

Zimmerman et al. (1996), drawing on enculturation theory, hypothesized that Native American youth who feel pride in their cultural heritage, feel a strong Native American identity, and participate in traditional activities will have improved psychological well-being and reduced problem behaviors. Marsiglia et al. (2004) also reported that positive ethnic identity (strong ethnic affiliation, attachment, and pride) was associated with less substance use among 4365 mostly Mexican Americans in seventh grade. A review conducted by Steinberg and Morris' (2001) indicated that a strong ethnic identity is associated with higher self-esteem and self-efficacy among minority adolescents. Yu and

Stiffman (2007) also reported that pride in being an American Indian were associated with fewer alcohol symptoms among a sample of 401 American Indian youth. Bates et al. (1997), however, found that cultural identity, defined as participation in American Indian traditions and rituals, affiliate patterns, self-identification as American Indian, parental identification as American Indian, and acculturative status (Trimble, 1991) was not protective against substance use among adolescents in a cross-sectional study of 202 American Indian adolescents between the ages of 12 and 21 years. In summary, enculturation models tend to examine minority groups from a more positive perspective as opposed to approaches based on problem behavior theory. As noted, some studies support the positive effects of enculturation, whereas other studies do not.

While enculturation frameworks focus on social norms and values of the minority group, bicultural frameworks emphasize maintaining ties to both cultures. From this latter perspective, the research suggests better psychological adjustment. For instance, a retrospective study of factors associated with success among 100 adults from two Native American tribes concluded that successful adults were bicultural, participated in traditional community events and were proud of their Indian heritage. For women, 71% were considered successful based on maintaining a good job, doing well in their work, and being bicultural (Neumann et al., 1991).

First Nations youth

Given these findings in minority populations, who are our First Nations youth? In the 2006 Canadian census, approximately 1,172,785 people identified as Aboriginal and 623,780 people claimed to be Registered First Nations (Statistics Canada, 2006). The

Aboriginal population, as of 2006, was much younger than the non-Aboriginal population. The median age for the Registered First Nations population was 23.7 years, while that of the non-Aboriginal population was at an all-time high of 37.7 years. This means that 50% of the First Nation population was less than 23.7 years old. As well, First Nation youth are a diverse population living in different geographic locations, speaking different languages, and associated with different tribal groups (Statistics Canada, 2006).

In Canada, First Nation youth face the historical traumas associated with loss of land, forced relocation, assimilation, colonization and residential school (Waldram, Herring & Young, 2006). They must endure the loss of traditional languages, spiritual and social customs, all of which have had a devastating impact on Aboriginal people (Dion-Stout and Kipling, 2003). The current state of health and well being of First Nation youth reflects the adverse environments in which they live. Many First Nation youth contend with disadvantaged socioeconomic environments, limited educational opportunities, and low availability of resources. High rates of substance use, mental health problems, suicide, teenage pregnancy, gang involvement, incarceration, and high school dropouts are negative outcomes of living in such adversity.

Despite living in challenging environments, a large number of Aboriginal youth go on to develop into successful young adults (Silmere and Stiffman, 2006; Stiffman et al., 2007). These youth, who have had to negotiate development amid a changing and disparate environment, were able to develop a high degree of competence and stability. Cultural environments, which are rich and engaging, seem to promote healthy behaviors for many of these youth. Cultural buffers, as elements of tribal life, seem to promote social, emotional, psychological and physical strength and capacities. As a result, many Aboriginal youth

develop strong cultural identities through learning and practicing cultural ceremonies and through spirituality and traditional methods of health and healing. These cultural resources are what Aboriginal youth may draw upon to help them develop and maintain healthy decisions. Not all youth, however, have access to such positive environments, which prompts the question is it a lack of access/exposure that may be contributing to rates of substance use and abuse in Aboriginal communities?

Substance use Among Aboriginal People

As already noted, there are some adolescents who face enduriug challenges, while other youth seem to emerge as healthy adults. First Nation youth are more likely to live in challenging environments, but a large number of youth develop into successful young adults. Some youth, however, may not have access or exposure to a positive environment, which may contribute to increasing rates of substance use and abuse. The following discussion summarizes the extent and magnitude of substance use in Aboriginal communities, which supports the "why" we need to investigate protective factors in addition to risk factors in this population.

Smoking

Statistics Canada (2001) reported that 57% of Aboriginal adults are current smokers and daily smoking rates are double those of the general Canadian population. Health Canada (1999) has reported that smoking prevalence was higher among the Aboriginal population for every age group when compared to the general Canadian population. Over half (54%) of these Aboriginal adolescents were smokers. These statistics are consistent

with other studies on tobacco use among Canadian First Nation youth and American Indian youth (FNRLHS 2002-03; Caraballo et al., 2006) and adults (Gohdes 2002).

Data from the National First Nations Regional Longitudinal Health Survey 2002-03 report (FN-RHS) demonstrated a smoking prevalence rate of 37.8% among youth, and contrary to other reports, females had higher rates of smoking, particularly among girls 13 years of age (64.5%). In the Manitoba First Nation Regional Health Survey (MFN-RHS), 42% of youth indicated that they were current smokers and the average age of initiation was 13 years of age (AMC-HIRGC, Elias et al., 2006). Other research confirms this finding. In an exploratory cross-sectional survey among 570 participants attending an Indigenous youth gathering in Canada, Richie and Reading (2003) found that First Nation adolescents start using tobacco at an earlier age than other groups, and rates of smoking into adulthood is significantly higher. The prevalence rate of smoking was 32% among the participants with an initiation to tobacco use at a disturbing age of 6 years. A report by NAHO (2004) found that while smoking initiation begins as early as 6 to 8 years it rapidly increases at age 11 to 12 with a peak initiation at about 16 years of age.

Alcohol and drug use

Alcohol and drug use among Aboriginal populations in Canada also appears to be higher in comparison to the general population. Results from the FN-RHS 2002/03 showed that 42% of youth in First Nations communities consumed alcohol in the last year and among those youth who drank alcohol, 65% consumed five or more drinks at one time at least once a month. A third of youth used marijuana (33%) in the previous year. Similar findings were reported in the Manitoba RHS (2002/03) report. In the preceding 12 months,

37% of Manitoba First Nation youth consumed alcohol, and 28% reported using marijuana in the last12 months. High prevalence rates of substance use have also been documented among American Indian youth. Beauvais et al. (2004) conducted an annual school based survey on a representative sample of American Indian youth from various communities in the United States for over 25 years. Questions addressed included lifetime, annual, and 30-day prevalence and frequency of use within those periods for 18 different drugs, including alcohol and cigarettes. Findings demonstrated elevated levels of drug use for most illicit drugs when compared to non-Indian youth. Other research conducted on Native American adolescents indicates that early initiation to substance use may lead to more serious and enduring problems later in life (Bates et al., 1997). Novins (2001) conducted a school-based survey on the use of alcohol and other substances among 1562 American Indian students between grades 9 to 12. Findings showed a high prevalence of substance use among these youth; that is, 73.5% reported alcohol use and 57.9% reported marijuana use at age 13. In an earlier study by Beauvais (1992), which compared three groups, Indian youth living on reservations, Indian youth not living on a reservation and Anglo youth, found that those living on a reservation were three times more likely to engage in smokeless tobacco use, marijuana use, and hallucinogens. Rates for being intoxicated, cigarette use, and inhalant use were two times higher among youth living on a reservation. An interesting finding was that there was little difference in rates of drug use among on reservation males and females.

Polysubstance use

Polysubstance use is defined as the regular use of at least two psychoactive substances, such as tobacco and alcohol; tobacco and cannabis; alcohol and cannabis or tobacco and alcohol and cannabis. Other definitions have also been used to describe polysubstance use and poly-drug use in research and clinical practice. Most definitions were developed for an adult population, and their applicability has not been clarified for adolescents. Accordingly, the DSM-IV describes substance use disorder as substance abuse and dependence with abuse rather than dependence the more common manifestation in adolescents.

Polysubstance use has been identified as an issue in both American and Canadian Aboriginal youth. Not all youth, however, engage in this behavior. Research suggests that adolescent girls are less likely to engage in poly-drug use, while older males are more at risk for developing this behavior (Collins et al., 1999). A study conducted in France among 1333 youth age 12 to 26 years found that age was significantly associated with lifetime and regular binge drinking. Also, polysubstance use was consistently more frequent among males than among females in the 19 to 21 year age group (Melchoir et al., 2008). Another study conducted among 2,227 students in grades 6 to 8 in North Carolina demonstrated that early age of initial substance use was associated with engaging in multiple risk behaviors, including polysubstance use (DuRant et al. 1999). Kunitz (2008) also reported that among 1086 Navajo adults between the ages of 21 to 65 living on or adjacent to a reservation, the younger the age at first drink was associated with increased risk of alcohol dependence and with greater severity of alcoholism among those who were alcohol dependent.

A secondary analysis of the 2004 Canadian Addiction Survey, which examined risks associated with tobacco use among Canadian youth ages 15 to 19 years, illustrated that smokers, regardless of age, were somewhat more likely than non-smokers to report consuming alcohol in the past year (Relm, 2006). Smokers were 14 times more likely to consume alcohol than were their non-smoking peers. This effect was consistent across both genders. Also, there was a significant association between tobacco smoking and cannabis use. Smokers, regardless of gender, were more than 20 times more likely to use cannabis than their non-smoking peers. These findings indicate that tobacco use in youth is a powerful and effective marker of other substance use. Another pathway considered involved alcohol and entry-level drugs like marijuana and inhalants. Among Native American adolescents, for example, alcohol, marijuana, and inhalants were all equally likely to lead to the use of cocaine and other illicit drugs (Novins, Beals and Mitchell, 2004).

Summary

Research has consistently shown that substance use in the Native American Indian and Canadian Aboriginal youth population is a significant problem. Smoking studies clearly support an urgent need to understand initiation and cessation of tobacco use among Aboriginal youth. The social and cultural determinants of substance use among Aboriginal adolescents must be considered in order to develop early interventions, as early alcohol and drug use can lead to problems with school performance or dropping out of school, thereby affecting future educational and economic well-being (Health Canada, 2005).

Understanding contributing factors to substance abuse among the Canadian First Nation youth population is critical to inform intervention and prevention strategies, policies and programs. Particularly, there is a need to investigate risk factors for substance use that may stem from individual characteristics, family dynamics, deviant peer relationships, and lack of supports in school. As well, it is equally as important to identify protective factors that persuade youth from engaging in unhealthy behaviors that may become life-long. The following section identifies what potential factors we need to consider in this study.

Determinants of Substance Use

Age, gender and psychosocial characteristics

Individual factors, such as age, gender and psychosocial characteristics (personal competence; poor self-identity; emotional distress; and acculturation stress) have been examined in relation to risky health behaviors among the general adolescent population and multi-ethnic groups. The following studies suggest that gender as a social construct may promote risky behaviors. Feldman et al. (1999) found in a school-based survey of students in grades 9 to 13 that older self-described Canadian and Canadian-born male adolescents were at higher risk for heavy drinking than other ethnic/gender age groups. These adolescents were also more likely to smoke cigarettes daily. Manicini and Huebner (2004) in a study of 2701 rural ethnically diverse youth in grades 7 to 12 also found that being male was related to more risk behavior. Another significant finding was the greater the age the greater the participation in risk behaviors, such as substance use. A growing concern in the Canadian Aboriginal women population is that they continue to have higher rates of smoking and substance abuse when compared to the general Canadian population, which

prompts the question what factors promote these behaviors in adolescence (Native Women's Association of Canada, 1996).

Linked to age and gender is psychosocial states, which also is a factor associated with substance use. Oetting et al. (1997) reported that among multi-ethnic youth females at grades seven to eight and eleven to twelve were more likely than males to suffer from depression and low self-esteem. They found that these mental health states were higher among female drug users than nonusers, whereas there was little difference among males. The authors suggested that for young female adolescents depression might be a risk factor for drug use, but also found that rural girls who used drugs were more likely than other girls to experience low self-esteem. Griffin et al. (2002) demonstrated that repeated experiences with failure may lead to low self-esteem, poor self-confidence, feelings of hopelessness and distress, and problems related to psychological adjustment. In other words, youth with poor social and personal competence skills are apt to feel overwhelmed when faced with new tasks, stressful circumstances, or daily hassles. This in turn may contribute to ineffective decision-making in which problems are solved using short-term, incomplete, or maladaptive solutions, including drug use and other problem behaviors. Oetting et al. (1989) explored alcohol use and emotional distress among Native American adolescents in grades eleven and twelve, and found no significant relationship between the two factors. Instead, they found that peer cluster influence was a stronger predicator of substance use than emotional distress in this population.

Adverse family environments

Substance use among adolescents is also thought to be a social contextual behavior, as opposed to a response to the addictive properties of substances. A United States study of 1656 students in grades 7 and 8 and 1205 students in grades 11 and 12 from rural communities found that adolescent drug use is predominantly a social contextual behavior, meaning that as risk factors increase in family, school, and peer contexts so does the risk for drug use (Oetting et al. (1997). Other contextual risk factors include poor socioeconomic environment, family discord and parental substance use. The following section illustrates the association of a poor socioeconomic environment with increased substance use, how family conflict engenders problem behaviors among youth, and how parental substance increases substance use among adolescents.

Poor socioeconomic environment

The socioeconomic environment of families is a key factor investigated in relation to substance use among youth. Socioeconomic status (SES) is often measured by income and education to determine its effect on behaviors. Youth living in family environments plagued by poverty, high unemployment, and low educational opportunities are at more risk for engaging in risky health behaviors (Jarvis and Wardle, 2006). Recently, Chassen et al. (2009) found that youth living in affluent environments engage in substance use behaviors much like youth living in impoverished settings. When education was used as a marker for SES, they found that youth residing in homes where parental education was low, tobacco use was higher. In a study of 2,198 students' ages 14 to 20 in rural Nova Scotia, Langille et al. (2003) found that smoking was most associated with variables indicative of lower

parental SES. Conversely, high maternal education was associated with lower smoking behavior among these rural adolescents.

Family discord

Among diverse populations, the following studies show that family discord and parental substance abuse are significant risk factors associated with adolescent substance use. Baer et al. (1987) examined family conflict in relation to alcohol use among seventh graders (n=425) and found that more family conflict was associated with greater adolescent alcohol use. In a stratified random sample of 205 reservation and 196 urban American Indian adolescents, Yu and colleagues (2005) found that problem behaviors, such as mental health problems, family discord, and peer misbehavior influenced tobacco use among youth. In yet another study, Barrera et al. (2001) examined a multi-ethnic sample of 7th grade students in Oregon (Caucasians n=500; Hispanic n=546; and American Indians n=404) found that family conflict had a strong inverse association with positive family relationships. Adolescent conflict with parents and family members, particularly open expressions of anger and hostility, were also incompatible with feelings of togetherness and support among multi-ethnic youth. They found that greater family conflict predicted greater alcohol use, and for girls, life events and family conflict resulted in more alcohol use.

Lemaster et al. (2002) examined survey data of Native American Indian adolescents (13 to 20 years) and found that stressful life events influenced cigarette and/or smokeless tobacco use. A study conducted by Teufel-Shone et al. (2005) explored family cohesion and conflict among of 440 American Indian families, but did not test whether this experience and coping process was associated with risk behaviors. The significance of this

study is that they found that family environments scored average in expressiveness and cohesion, and above average in conflict (openly expressed anger). The authors speculated that this adaptation or coping process was associated with the stress created by a socio-historical experience.

Parental substance use

Parental substance use has also been associated with adolescent substance use. Feldman et al. (1999), in a study of grade 9 to 13 students attending a Canadian urban school, found that when either parent drank alcohol daily their child was more likely to be heavy drinker (i.e., student drinks five or more drinks on one occasion at least once a month). In a cross national study comparing white and non-white 12 to 17 year old students in the U.S. and one southern Australian state, Beyers et al. (2004) identified several risk factors strongly associated with increased risk for cigarette, alcohol, and marijuana use. The risk factors identified included family history of substance use, parental attitudes favorable to drug use, but also low school commitment (cigarettes and marijuana only), favorable attitudes towards antisocial behavior, interaction with antisocial peers, and friends' drug use. De Wit et al. (1997) also examined data from a Native Ontario reserve community (n=876 adults) and a sample from the Ontario Health Survey Supplement in order to compare and contrast the importance of family attributes such as parent-child attachment to native and non-native patterns of drug and marijuana only, favorable attitudes towards antisocial behavior, interaction with antisocial peers, and friends drug use. The authors found that parental substance abuse appears to be associated with onset for both natives and non-native illicit drug use. Yu and Stiffman (2007) assessed 401 American

Indian youth and found that substance problems among family members and peer misbehaviors predicted alcohol abuse/dependence symptoms among youth.

Summary

As discussed, individual risk factors, such as age, gender, and psychosocial factors are potential risk factors for substance use among minority adolescents. Risk factors for substance use among the general adolescent population supports the theory that low socio-economic status, family discord and parental substance use contributes significantly to substance use. Although such risk factors have been used to identify potential risk behaviors, it is paramount that protective factors against substance use be examined. There are very few studies that have explored individual normative adolescence developmental challenges, such as self-concept, autonomy, and coping behaviors among Aboriginal adolescents. Family caring and connectedness are other factors to consider, since these family attributes appear to be protective against substance use among adolescents. The following section outlines why studies should consider resiliency approaches, in addition to the effects of adverse environments, to understanding risk behaviors.

Resiliency measures

A protective factor, as defined by Mancini and Huebner (2004), is "one that decreases the odds of participating in risk behaviors, that lessens the chances of experiencing negative outcomes from participation in risk behaviors, and that buffers against being exposed to risk factors or exhibiting risky behaviors (p. 467)." Mancini and Huebner (2004) derived this definition from Jessor's work on problem behavior theory. Werner and Smith's (2001) classic study of the children of Kauai clearly illustrated how

most minority children and youth successfully adapted despite adversity. This study documented the cumulative effects of poverty, prenatal stress, and a disorganized caretaking environment on the development of children from birth to 10 years of age. This longitudinal study examined the roots of resiliency in children who successfully coped with such biological and psychological risk factors. Most importantly, this study brought to life how protective factors aided in the recovery of troubled children and youths, as they made their transition into adulthood. The following review, albeit limited, demonstrates the role of individual and environmental protective factors in lessening the risk for substance use in an adolescent population.

Internal resiliency

Psychosocial skills

Positive psychosocial skills are viewed as protective factors that reduce substance use among adolescents. Griffens et al. (2001) explored personal competence skills (decision making skills, self control, and self regulation skills), psychological distress and psychological well being among 849 multi-ethnic participants from grade 7 to 9. Their findings suggest that personal competence skills may be an important precursor for the development of positive outcomes during early adolescence. This study also reported that early distress did not significantly predict later substance use. Another study conducted by Griffen et al. (2002) on personal competence skills among 1184 urban minority youth supported the hypothesis that competence skills and well being mitigated substance use. Clinton-Sherrod et al. (2005), in a study of grade 6 urban minority adolescents (n=621) conducted at two waves during a school year, had found that non-users of alcohol and

cigarettes had better decision-making skills, higher self-efficacy and a positive attitude towards school.

Two noteworthy resiliency studies on American Indian youth also demonstrated the importance of accounting for gender. Lemaster et al. (2002) examined data from the Voices of Indian Teens Project of 2390 adolescents ages 13 to 20 and found that being of the female gender was predictive of decreased odds in the use of tobacco, as well as being more academically oriented. In another study, Gray and Winterowd (2002) analyzed data from a sample of 243 rural, non-reservation American Indian adolescents in grades 9 through 12 and found that Indian girls were more inclined to have better health behaviors (less tobacco, alcohol, and drug use) than boys. Achieving a higher perceived grade and having future academic expectations also appeared to be protective. While being female appears to be protective against problem behaviors when compared to males, no study has explored what protects some girls, as opposed to other girls, from problem behaviors.

Cultural and spiritual resiliency

A few studies have explored the positive contribution that ethnic/cultural identity and biculturalism plays in deterring substance use. Harris and McFarland (2000) in a study among the Nez Perce adult and youth populations hypothesized that culture would be protective against substance use. They discovered that adults who identified with mainstream culture consumed more alcohol in a 30-day period. For youth, greater biculturalism was associated with a greater frequency of drug use. Bates et al. (1997), who explored American Indian identification and alcohol use using structural equation modeling in a study of 202 NAI youth, found that ethnic identity did not predict alcohol involvement

among this group. Whitbeck et al. (2004) studied the protective effect of enculturation, which they defined as the degree to which an individual is embedded in traditional cultural practices, such as language, everyday spiritual activities and a strong cultural identity. They conducted a three-year longitudinal study of two American Indian reservations and one Canadian First Nation reserve. Study participants included 401 families, and families were comprised of parents/caretakers and children age 10 to 12 years. They found that enculturation had a protective effect against alcohol use. In a study of 94 Native American youth between the ages of 7 and 18 (with a mean age of 11.5), Zimmerman et al. (1998) found that youth with the highest level of self-esteem and cultural identity were more likely to report low levels of alcohol and substance use. The essence of this study is that having a positive ethnic or cultural identity may lead to less substance use. They also found that ethnic or cultural identity could also be positively or negatively influenced by outside factors, such as family, peers and schools.

Research looking into the protective role of religion in limiting adolescent risk behaviors is also showing much promise. Religiosity was found to be protective for non-Hispanics adolescents in that they were less likely to use tobacco, alcohol, or illicit drugs (Beyers et al., 2004). Vakalahi (2002) studied 5,000 multiethnic adolescents age 12 to 17 (including American Indians) and found that adolescents, who are involved with their families and affiliated with a religion, were less likely to use alcohol and marijuana. Religion also proved to be the greatest protective factor against tobacco use among inner city youth between the ages of 13 and 19 (Atkins et al., 2002). Resnick et al. (1997) examined a cross-sectional panel from the National Longitudinal Study of Adolescent Health (students grade 7 to 12; n=11,572) and found that when youth placed a high level of

importance on religion and prayer this factor was protective against the use of cigarettes, alcohol, and marijuana. Similarly, youth from the Nez Perce tribe who reported less spirituality had a greater frequency of drug use (Harris and McFarland, 2000). This research demonstrates the protective role of religion/spirituality in relation to substance use among youth generally and specifically among Native American youth. However, no research has explored this relationship among Aboriginal youth living in Canada.

External resiliency

Family environment

As noted, research has demonstrated that a protective family environment promotes positive development and successful outcomes suggesting that positive family characteristics and connectedness can be protective against risky behaviors among adolescents. For instance, Resnick et al. (1997) has shown that high levels of parent and family member connectedness (closeness to mother and/or father, perceived caring by mother and/or father, satisfaction with relationship to mother and/or father, feeling loved and wanted by family members) is associated with somewhat less frequent cigarette, alcohol, and marijuana use among a national school sample of adolescents in the United States. In a multi-ethnic study of adolescents, Atkins et al. (2002) confirmed that youth with certain developmental assets, such as positive family communication patterns were protective against tobacco use. These findings remained significant when controlling for age, race, parental income, family structure, and parental education. Aronowitz and Morrison-Beady (2004) further examined data from the National Longitudinal Survey of Youth (Grades 7 to 12), and found that maternal-daughter connectedness, particularly

among African American female adolescents, was a protective factor against negative health behaviors despite living in an impoverished environment. Nash et al. (2005) investigated the importance of the family environment and positive parenting practices in the direct and indirect reduction of adolescent alcohol use among multi-ethnic adolescents belonging to low to middle class, blue-collar working families (n=2573). Although the influence of peers on alcohol use was greater than family influence, a positive family environment attenuated the potentially negative impact of peers and friends who drink alcohol. Furthermore, a positive family environment was also related to increased self-efficacy for refusing alcohol. In short, positive parental expectations were found to be protective against subsequent alcohol use among adolescents. Cummins and associate's (1999) analysis of the National American Indian and Alaskan Health Survey of Adolescents [n=13454] (1991-1992) found that the strongest correlate of emotional health among Native American female youth was family caring. In a study of 300 urban and 300 reservation-based youths between the ages of 12 and 19, Silmere and Rubin-Stiffman (2007) found that the family was a significant positive predictor of successful functioning (a score of good mental health, alcohol and drug free, and positive psychosocial functioning). Wang et al. (2005) conducted a study of 790 minority adolescents' age 11 to 16 years to explore the pathway of latent constructs of social support, family involvement, and family supervision on self-control and its effect on school connectedness and substance use. This model when tested supported the theory that positive influence of family protective factors limited youth substance use.

Overall, the research suggests that family protective factors mitigate risk factors and protect against substance use in the adolescent population.

Peer relationships

Peer relationships can also act as a protective factor for youth living in adverse environments. Positive peer relationships contribute to pro-social behaviors rather than deviant behaviors. In one of the very few studies to examine peer support among low-income adolescents, it was found that peer enriching and supportive networks appear to buffer adolescent environmental stressors (Stanton-Salazar & Spina, 2005). In a study conducted among inner city youth, Atkins et al. (2001) examined the effects of 10 youth developmental assets on adolescent tobacco use, and positive peer role models appeared to have the greatest protective effect.

Adolescents, in general, depend heavily on their friends for multiple forms of social support and for staying psychologically healthy. While there is a paucity of research examining the protective effects of peers among the general adolescent population, the few studies conducted among multi-ethnic groups has demonstrated that pro-social peers can be considered a developmental asset (Benson, 2006). Stanton-Salaza and Spina (2005), for instance, examined adolescent peer networks as a context for social and emotional support, and found that peers were not a negative force but were protective.

School environment

Another protective factor is the power of schools, especially teachers, to ameliorate life trajectories among children living in adverse environments (Benard, 2004). A school environment characterized by having caring relationships, high expectations, and opportunities to participate promotes resiliency among youth stressed by adverse environments (Benard, 1991; 2004; Werner & Smith, 2001). For instance, Rutter et al.

(1982) found that for disadvantaged students, well-organized schools, with high levels of teacher commitment lowered rates of truancy, dropout, and delinquency. In a large U.S. multi-ethnic study, Shears et al. (2006) demonstrated that school bonding was protective against substance use among girls living in rural areas. The protective effect of schools is illustrated further in a study of 243 seventh grade students who identified as American Indian (Napoli et al., 2003). In this study, students who indicated a sense of belonging in school reported a lower lifetime use of alcohol and cigarettes and currently drank less alcohol, smoked few cigarettes, and used fewer illicit drugs. Swaim et al. (1997) further examined the effect of school dropout rates on estimates of alcohol substance use among three racial/ethnic groups (211 Native Americans, 387 Mexican Americans, and 176 white non-Hispanics dropouts from school). The investigators found that school dropouts were 1.3 to 3.0 more likely to have tried substances than those students in school. More importantly, current use of substances by school dropouts was 1.2 to 6.4 times more than those reported by students still in school.

This research, while limited, strongly suggests that a positive school environment has a protective effect in adolescent risk behavior among multi-ethnic groups. The protective effects of caring relationships, high expectations, and opportunities to participate in the family, peers and schools cannot be over emphasized. These external resources are essential for fostering personal resiliency, which leads to positive health development in youth. Given these findings there is a need to examine First Nation adolescents and the effects of these protective factors.

A Need for Resiliency Research in First Nations Adolescent Female Populations

To date, all the research on resiliency has been conducted in U.S. adolesceut populations. Consequently, there is a great need for resiliency research among Aboriginal adolescents in Canada.

According to Luther and Cicchetti (2000) the construct of resilience is "a dynamic process wherein individuals display positive adaptation despite experiences of significant adversity or trauma" (p.858). They contend that the central objective of resilience research is to identify risk and protective factors that might modify the negative effects of adverse life circumstances, and more importantly, to identify mechanisms or processes that might underlie associations found between these two constructs. Risk factors or markers encompass those indices that exacerbate the negative effects of the risk condition. Protective factors are those that modify the effects of risk in a positive direction. Risk and protective factors can each derive from multiple levels of influence: the community, family and individual.

Employing a resilience framework implies a focus on positive outcomes and not just negative ones. The emphasis is not only on deficits, but also on areas of strengths. Using such a framework also demonstrates a commitment to understand the processes that underlie the effects of vulnerability and protective factors with the aim to direct interventions at the micro and macro levels. Fergus and Zimmerman (2005) identified three models of resilience -- compensatory, protective, and challenge -- to explain how protective factors operate to alter the trajectory from risk exposure to negative outcomes. A compensatory model is defined when a protective factor counteracts or operates in an opposite direction of a risk factor. For example, youth living in poverty are more likely to

commit violent crimes, however with parental monitoring this may compensate for the negative effects of poverty. The protective model includes assets or resources that moderate or reduce the effects of a risk on a negative outcome. An example is youth who do not have parental monitoring or an adult mentor may exhibit problem behaviors, whereas those with a non-parental adult mentor may not. The third model of resilience is the challenge model. In this model the association between a risk factor and an outcome are curvilinear. That is, exposure to low levels and high levels of risk factors are associated with negative outcomes, whereas moderate levels of the risk are related to less negative (or positive) outcomes. For instance, too little family conflict may not prepare youth with an opportunity to learn how to cope with or solve interpersonal conflicts outside of the home. At the other end of the spectrum, too much conflict may be debilitating and lead youth to feel hopeless and distressed. On the other hand, a moderate amount of conflict may provide youth with the skills of healthy conflict resolution. Another model to consider is Benard's model of resiliency. The theoretical framework developed by Benard (2004) allows for the examination of resiliency factors among adolescents living in adverse environments to demonstrate how they avoid negative life trajectories, such as participating in substance use.

Study conceptual model

For this study, we draw on Benard's framework (2004) to investigate the importance of individual and environmental protective factors in deterring substance use, and they are discussed below as internal factors and external factors.

Internal factors

Social competence is an internal factor and includes the characteristics, skills, and attitudes essential to forming relationships and positive attachments to others. According to Benard (2004), social competence includes healthy communication patterns, displaying empathy and caring, and being compassionate or altruistic. Autonomy is another internal factor and includes many inter-related and overlapping subcategories of attributes revolving around the development of one's sense self, identity, and power. Positive identity, internal locus of control, self-efficacy, adaptive distancing, self-awareness, and humor are characteristics of autonomy. Furthermore, having a strong positive ethnic identity is associated with having high self-esteem, a strong commitment to do well in school, and high academic achievement (Benard 2004).

A sense of purpose and bright future are other internal assets and are viewed as having a positive and strong future focus, which has consistently been identified with academic success, a positive self-identity, and few health risk behaviors. Goal direction, achievement motivation, and educational aspirations are future-oriented resilience strengths that are attributed to young people who succeed in school, who do not get into trouble with alcohol and other drugs, and with lower rates of teen pregnancy or school dropout, even in the face of multiple risks and challenges. Other internal characteristics involve problem solving, which include planning, flexibility, and resourcefulness. It has been hypothesized that planning is a critical skill learned at age three or four. Flexibility entails the ability to see alternatives and attempt alternative solutions to both cognitive and social problems.

Being resourceful is a critical survival skill that involves the ability to identify external resources and alternative sources of support (Benard, 2004).

External factors

Other protective factors, according to Benard (2004), can be found in a young person's environment, such as families, schools, and communities. Three common environmental factors that foster resiliency in youth are caring relationships, high expectations, and opportunities to participate and contribute. Caring relationships convey loving support, and the message of being there for youth. In particular, caring relationships are characterized by a sense of compassion nonjudgmental love that looks beneath negative behaviors. Having a caregiver who actively listens to and gets to know the gifts of their young people and, most important, conveys that message of importance to youth. High expectations within the family are demonstrated by clear, positive, and youth-centered expectations. Clear expectations are a means to creating a sense of structure and safety through rules and disciplinary approaches that are not only perceived as fair by young people but also include youth in creating expectations. Positive expectations in a family also help to communicate to youth that they have the innate ability to succeed in their endeavors (Benard 2004).

This perspective was supported by Aronowitz (2005) who stressed the importance of having a caring, responsible, and competent adult who believes in the young person's potential and coaches him/her to set high expectations, and when taken together, promotes resilience. Providing youth the chance to participate in engaging, challenging and interesting activities also promotes a range of personal resilience strengths. Benard (2004)

succinctly summarized the significance of having youth participate in important decisions at home, school and community:

> "... through having the opportunities to be heard, to voice one's opinion, to make choices, to have responsibilities, to engage in active problem-solving and to give back to the community promotes competencies characteristic of healthy development and successful learning." (p. 48)

In summary, Benard's resiliency framework, when combined with the potential challenges created by adversity, provides a means to understand better why some First Nations girls engage in substance use, while other girls do not.

Applying a resiliency model to understand substance use

As reviewed, rates of substance use among American Indian and Canadian Aboriginal youth are high. Among Manitoba First Nations youth living on reserves (MFN-RHS), 20.5% reported using marijuana more than once a month. Very few reported hard drug use (1.4%), and only 2% reported illegal prescription drug use. More First Nation youth, however, indicated that he/she drank alcohol in the past 12 months (37.1%). When assessed for binge drinking (5 more or more drinks), 24.1% reported that he/she binged drank less than once a month. Also, 41% of First Nation youth smoked currently (AMC-HIRGC, Elias et al., 2006).

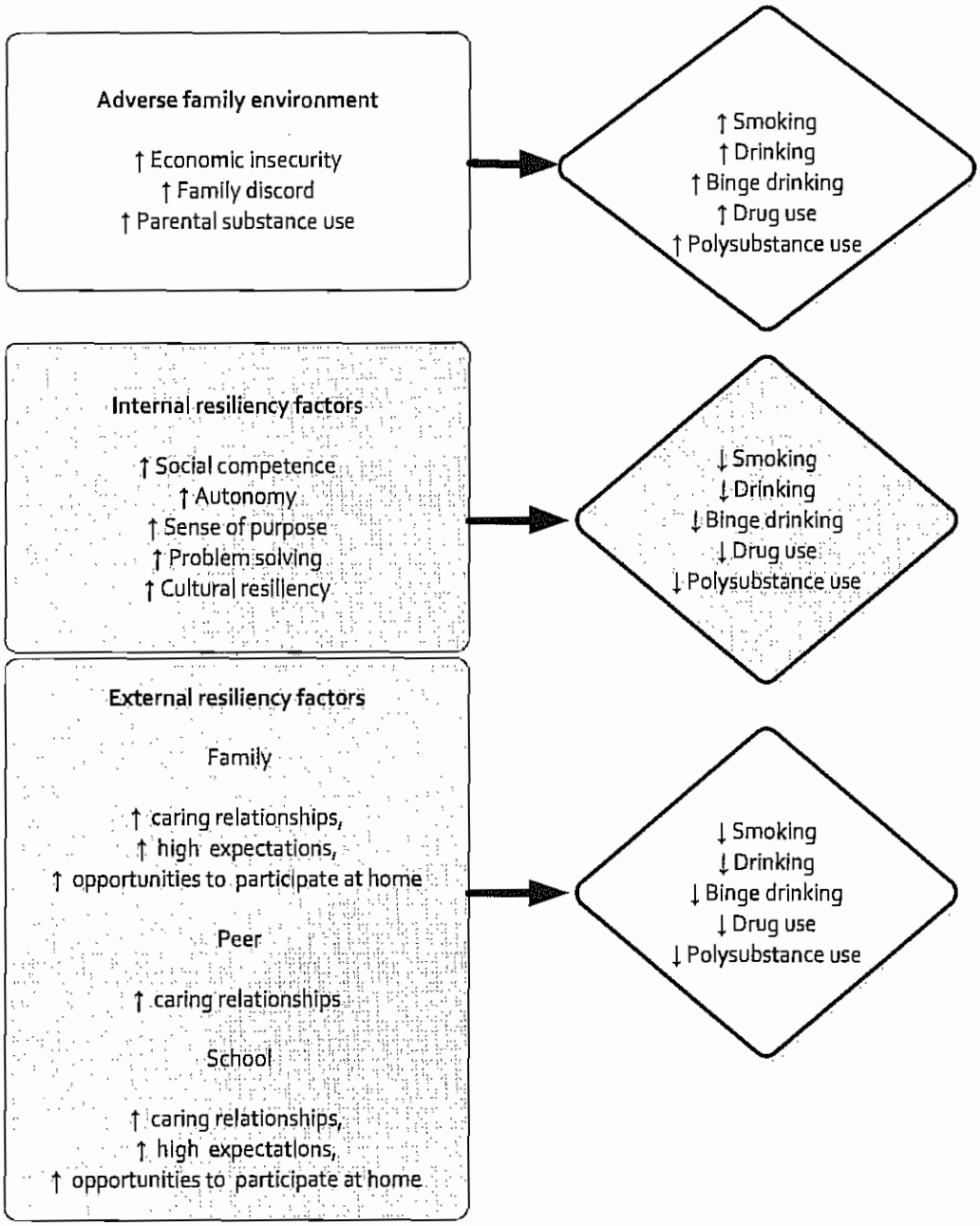
By applying Benard's resiliency framework, we will broaden our understanding of the prevalence of substance use in the Manitoba First Nations population, particularly among First Nation girls. Given the higher rates of substance use among aboriginal women

generally, it is critical to understand this behavior at an earlier age. As well, we know little about the health behaviors of First Nation girls in positive versus disadvantaged environments. Emerging literature on substance use among adolescent girls is showing an alarming trend (Friesen et al., 2008; Health Canada 2008/09). Wallace et al. (2009) has recently reported that among a national representative (n=35,394) sample of girls in grade 8 American Indian girls had the highest smoking rates. Also, across ethnic groups, drug use was the highest among North American Indian girls in a sample of 40,416 grade 8-10 students, which included boys (Wallace et al., 2003). This research, while limited, signifies the urgency to examine what factors are associated with substance use among First Nation girls in Canada.

To frame this study, a graphical representation of Benard's (2004) theoretical framework, with additional constructs, has been created and is presented in Figure 1 on the next page. The framework includes the main constructs that tap into the interrelationship of adversity, protective factors, and successful outcomes. In this proposed study, the effects of internal protective factors and/or external protective resources operate to reduce the risk of engaging in substance use. The adverse family environment will consist of measures of family discord, parental substance use, and economic insecurity. The adverse family environment is expected to increase the prevalence rates of substance use. Protective youth indicators for internal assets include measures of social competence, autonomy, problem solving ability, sense of purpose, and cultural and spirituality resiliency factors. These protective factors are expected to reduce engagement in substance use. Youth external assets that consist of caring, high expectations, and opportunities to participate at the family, peer, and school levels will function as protective factors.

In summary, this study will determine whether internal and external resiliency factors are associated with substance use among First Nation female adolescents living on reserve in Manitoba. The central hypothesis is that First Nation adolescent females who report higher internal resiliency and external resiliency and less family adversity are more likely to report less substance use.

Figure 1: Internal and external factors in relation to substance use



CHAPTER 3: METHODS

This study is a secondary analysis of data from the Manitoba First Nations Regional Longitudinal Health Survey of Children, Youth and Adults. In 1997, the first wave of the First Nations Regional Longitudinal Health Survey (MFN-RHS) was launched in response to the exclusion of First Nations living on reserves from other Canadian surveys. The first and second wave of the survey included a national core set of questions and a set of regional questions in order to create a regional and national health profile of the First Nations population (Elias, 2003).

In Manitoba, the Manitoba First Nations Centre for Aboriginal Health Research (MFN-CAHR) and the Assembly of Manitoba Chiefs Health Information and Research Governance Committee had joined forces for the second wave of the MFN-RHS to develop comprehensive social determinant health survey to address community, tribal council and regional health policy and program development needs. The second wave of the survey is the Manitoba First Nations Regional Longitudinal Health Survey of Children, Youth and Adults (2002/3).

All three surveys (children, youth and adults) have a set of "National Core Questions" that all participants answered. To make these surveys more applicable to Manitoba First Nation communities, Manitoba specific questions were added to address a broad range of health issues and factors associated with the health of Manitoba First Nations people. The national and Manitoba regional survey included measures used in internationally validated studies. MFN-CAHR and a committee of Manitoba First Nations health directors reviewed these measures and additional measures were added for cultural

relevance. The health and social determinant areas covered in these surveys include questions on general well-being, health conditions, diabetes, health conditions of women, dental health, disabilities, physical activity, health behaviors, early childhood development, non-insured health benefits, health service utilization, spirituality, residential school issues, housing, environmental health, economic issues, youth resiliency, education issues, community well-being, and other social factors related to health. The inclusion of youth resiliency questions had set the Manitoba survey apart from the national survey. It is the only survey that has questions complementing Benards's work (resiliency versus adversity) and additional questions that tap into cultural/spiritual grounding of youth.

Study Design

A multi-stage stratified random sampling approach (tribal community affiliation and community size) was used to select a representative sample of Manitoba on-reserve First Nations Communities (AMC-HIRGC, Elias et al., 2006; Elias, 2006). Small (population<500), medium (population 500-999), and large communities (population>1000) were randomly selected from seven Tribal Council regions. The sample in each community was stratified by age and sex: child survey: 0 to11 years; youth survey: 12 to 17 years; adult survey: 18 to 54 years; and, 55 years and over. This survey was implemented in 26 communities for the adult/children surveys and 23 communities for the youth survey. In each community, interviewers randomly selected households and interviewed, where possible, two adults living in the household (1 male and 1 female, and all adults age 55 years and older). In each household, one child or youth under 18 years of age were selected. All respondents aged 14 and over provided written consent and a legal

guardian consented for youth and children under the age of 14 years. Interviewers administered the survey to adults and youth, and a primary caregiver answered on behalf of the child (proxy interview). For more sensitive questions or in less private settings, respondents read the questions and selected responses. In these cases, the interviewer only assisted the respondent when they had a question.

Study Sample

For the youth survey (12-17 years), the response rate was 70.1% (n=1139 sample; 1636 target sample; n=23 communities), with nearly 60% of the communities achieving a response rate of over 70%. Slightly more females (54%) than males (46%) participated in the survey. Forty-two percent of youth were between ages 12 and 14 years, and 59% were 15 years or older. For this study 550 girls completed the survey with 38.9% between the ages of 12 and 14 years old and 61.1% between the ages of 15 to 17 years.

Measures

Dependent Variables

The following outcome measures were selected to represent substance use: tobacco use, alcohol use, binge drinking, drug use and polysubstance use. The measures for substance use were obtained from several items in the questionnaire. To measure smoking, participants were asked, "At the present time, do you smoke cigarettes, daily, occasionally or not at all?" Responses included, not at all, daily, occasionally. Responses were recoded as 'no' (not at all) and 'yes' (daily/occasionally). Alcohol use was measured in the following questions, participants were asked, "During the past 12 months have you had a

drink of beer, wine, liquor or other alcoholic beverages?" Responses were coded as yes or no. One question specifically addressed binge drinking among individuals who reported alcohol use in the past year. "During the past year, how often have you had 5 or more drinks on one occasion?" Responses were combined 1 = ' never,' and 0 = 'once per month, once per week, everyday, less than once per month, 2-3 times per month, more than once per week.' Then they were recoded to 'yes' or 'no.' Several items on the survey measured drug use: "Have you used any of the following substances in the last 12 months (without a prescription)" a) marijuana (weed, grass), hash, b) Phencyclidine (PCP), angel dust, c) Lysergic acid diethylamide (LCD), amphetamines, d) ecstasy, e) sedatives, downers (valium, etc), f) cocaine, crack, freebase, g) codeine, morphine, opiates (percodan, Tylenol 3, etc.), and h) heroin. Responses for each of these items included never, about 2-3 times a year, about once a month, about 2-3 times a week, about once a day. Responses were combined 1 = 'never,' and 0 = 'once per month, once per week, everyday, less than once per month, 2-3 times per month, once per week.' A global indictor for drug use combining all the above items was then created, where 0 = 'no,' 1 = 'use of any illegal drug.' From these variables, a measure of polysubstance use, as opposed to polysubstance abuse[2], was created by combining the dichotomous variables of smoking, binge drinking and drug use in order to determine the number of youth engaging in any two of smoking, binge drinking and drug use.

[2] There is no consistent definition in the literature on polysubstance use. Polysubstance abuse is defined as abuse of three or more substances over a period of 12 months. The decision was made to go with polysubstance use as a means to get a sense of youth engagement with substances that may result in dependence.

Independent Variables

Age and internal resiliency factors

Seven independent variables were created from a range of questions asked in the youth survey. These variables represent age, social competence, autonomy, problem solving, and sense of purpose, cultural and spiritual resiliency. For this study, age was divided into two groups: 12 to 14 years of age and 15 to 17 years of age. Internal protective factors representing social competence, problem solving, sense of purpose, autonomy, enculturation, and spirituality were created from a variety of items.

To create the measure of social competence, several items from the questionnaire were used. For instance, the respondents were asked, "Please continue to mark how true you feel the statements below are for you." Statements included, "I can work with someone who has different opinions" and "I can stand up for myself without putting others down." The response categories were 1 = 'Not at all true', 2 = 'A little true', 3 = 'Pretty much true', 4 = 'Very much true'. Empathy/caring was measured from the following items, "I feel bad when someone gets their feelings hurt" and "I try to understand what other people go through." The response categories were 1 = 'Not at all true', 2 = 'A little true', 3 = 'Pretty much true', 4 = 'Very much true'. Compassion was measured with the following item: "Outside my home, I help people." The response categories were 1 = 'Not at all true', 2 = 'A little true', 3 = 'Pretty much true', 4 = 'Very much true'. In order to determine whether these variables clustered together to form a unique attribute, a principle component factor analysis was conducted. The variables that came together as one factor included, "I can work with someone who had different opinions than mine", "I can stand up for myself without putting others down", "I feel bad when someone gets their feelings hurt", "I try to

understand what other people go through", and "Outside my home I help other people." These variables came together as one factor with a Cronbach's Alpha of 76.3%. These variables were then collapsed into one variable dichotomized to represent high/low social competence.

Items to measure problem solving included "I know where to go for help with a problem," "I can work out my problems," and "I can do most things if I try." The response categories were 1 = 'Not at all true', 2 = 'A little true', 3 = 'Pretty much true', 4 = 'Very much true'. Factor analysis was conducted to determine if they came together as a factor representing problem solving. The variables that came together included "I know where to go for help with a problem," "I can work out my problems," and "I can do most things if I try." These variables came together with a Cronbach's Alpha of 77.4%. These variables were then collapsed into one variable dichotomized to represent high/low problem solving.

To measure sense of purpose, participants were asked to respond to the following statement: "Please continue to mark how true you feel the statements below are for you." Statements included "There is a purpose to my life," "I have goals and plans for the future," "I plan to graduate," and "I plan to go to college." The response categories were 1 = 'Not at all true', 2 = 'A little true', 3 = 'Pretty much true', 4 = 'Very much true.' Factor analysis was conducted to assess if these variables clustered together to represent a sense of purpose. The variables that came together included, "There is a purpose to my life," "I have goals and plans for the future," "I plan to graduate from high school," and "I plan to go to college or some other school after high school." These variables came together as a factor with a Cronbach's Alpha of 80.4%. These variables were then collapsed into one variable dichotomized to represent high/low sense of purpose.

Autonomy was measured with several items in the questionnaire. To assess self-esteem, youth were asked to respond to the following statement: "Please indicate how strongly you agree or disagree with the following statements." The following statements were, in general, "I like the way I am," "I have a lot to be proud of," "A lot of things about me are good," and "When I do something, I do it well." Responses categories were 1 = 'strongly agree,' 2 = 'agree,' 3 = 'neither agree nor disagree,' 4 = 'disagree,' and 5 = 'strongly disagree.' Factor analysis was conducted to determine which of these variables clustered together to represent self-esteem. The variables included "I like the way I am," "I have a lot to be proud of," "A lot of things about me are good," and "When I do something I do it well." These variables came together as a factor with a Cronbach's Alpha of 82.7%. These variables were then collapsed into one variable dichotomized to represent high/low self-esteem (autonomy).

To measure internal locus of control, participants responded to the following statements: "I have control over the things that happen," "I can do anything I set my mind to," "What happens in the future depends on me," and "There is little I can do to change important things in my life." Responses categories were 1 = 'strongly agree,' 2 = 'agree,' 3 = 'neither agree or disagree,' 4 = 'disagree,' and 5 = 'strongly disagree.' A factor analysis was conducted to determine which variables clustered together to represent internal locus of control. The variables included, "I have control over the things that happen to me," "I can do anything I really set my mind to," and "What happens to me in the future depends on me." These variables came together as a factor with a Cronbach's Alpha of 67.6%, which approximates the cut-off and is acceptable. These variables were then collapsed into one variable dichotomized to represent high/low locus of control (autonomy).

Self-awareness or mindfulness was assessed using the following items: "I understand my moods and feelings" and "I understand why I do what I do." Self-efficacy was measured in the following item: "There are many things I do well." The response categories were 1 = 'Not at all true', 2 = 'A little true', 3 = 'Pretty much true', 4 = 'Very much true'. A factor analysis was conducted and assessed how these variables clustered together for a variable representing self-awareness/self efficacy. The variables included, "I understand my moods and feelings," "I understand why I do what I do," and "There are many things that I do well." These variables came together as a factor with a Cronbach's Alpha of 75.5%. These variables were collapsed into one variable dichotomized to represent high/low self-efficacy (autonomy).

Several items were selected from the survey to represent cultural engagement, which is supported by the literature as a protective factor (Zimmerman et al. 1998, Whitbeck et al. 2004, Beauvais & Oetting 1991). One item selected assessed language, whereby participants were asked, "How important is it for you speak your First Nations language?" Responses included 1 = 'very important,' 2 ='somewhat important,' 3 = 'not very important,' 4 = 'not important.' To assess youths' participation in traditional cultural engagement, respondents were asked to respond to the following statement: "The following questions ask about your participation in traditional, spiritual and cultural activities." The following questions were, "Do you go out on the land with family or friends to hunt, trap, fish or gather plants?" "Do you go to pow-wows?" "Do you participate in spiritual activities?" "Do you participate in community feasts?" "Do you use traditional medicines to prevent or cure sickness?" and "Do you attend church activities?" These variables were collapsed together into one variable and coded as high/low to represent cultural

engagement. To assess participants' beliefs in traditional activities, they were asked, "How important are traditional cultural events in your life?" Responses categories were 1 = 'very important,' 2 = 'somewhat important,' 3 = 'not very important, 4 = 'not important.' The responses were dichotomized (0/1) to represent how important is traditional cultural events in your life, where '1' denoted somewhat important/very important.

To measure spiritual engagement, youth were asked to respond to the following statement: "The next few questions ask you about your spirituality and healing." Responses categories were 1 = 'strongly agree,' 2 = 'agree,' 3 = 'neither agree nor disagree,' 4 = 'disagree,' and 5 = 'strongly disagree.' The following statements were "My spirituality (faith) has made me a stronger person," "By connecting with my spiritual side helps me feel more balanced in my life," "Praying helps me," "My spirituality (faith) helps me through each day," and "Spirituality (faith) helps in my healing." A factor analysis was conducted and the following variables came together to represent one factor: "Spirituality has made me a stronger person," "Spirituality helps me feel more balanced in my life," "Praying helps me," "Spirituality helps me through each day," and "Spirituality helps in my healing." These variables came together with a Cronbach's Alpha of 92.7%. These variables were then collapsed into one variable dichotomized to represent high/low spirituality engagement.

External resiliency factors

Family relationships

To assess family connectedness, youth were asked to answer the following question: "How satisfied are you with your family life?" and "How satisfied are you with your relationship with your family?" The response categories were 1 = 'Very satisfied', 2 =

'Somewhat satisfied', 3 = 'Somewhat unsatisfied', 4 = 'Very unsatisfied'. These two variables were then collapse into a high/low variable to represent family connectedness. Other variables were used to assess family connectedness but focused on time spent with family members: "Look forward to spending time with family members", "Look forward to visiting with family/other special person". The response categories were 0 = 'No' and 1 = 'Yes'. These variables were then combined to represent visit/spend time with family.

A family caring relationships measure was derived from several items. In the survey, youth were asked to respond to the following statements "There is a parent/adult at home who is interested in my school work," "Who talks to me about my problems," and "Who listens to me when I have something to say." Responses included, 1 = 'not at all true', 2 = 'a little true', 3 = 'pretty much true' 4 = 'very much true'. A factor analysis was conducted. These variables were loaded into one factor with a Cronbach's Alpha of 77.7%. These variables were then collapsed into one variable dichotomized to represent high/low family caring relationships.

To measure family high expectations, youth were asked to respond to the following questions: In my home, there is a parent or other adult, "Who expects me to follow the rules," "Who believes that I will be a success," and "Who always wants me to do my best." The response categories were 1 = 'Not at all true', 2 = 'A little true', 3 = 'Pretty much true', 4 = 'Very much true'. These variables were loaded into one factor with a Cronbach's Alpha of 76%. These variables were then collapsed into one variable to represent high/low family high expectations.

To assess opportunities to participate in the home, two variables were combined. The first variable was "I do things at home that make a difference," and the second was "I

help make decisions with my family." The response categories were 1 = 'Not at all true', 2 = 'A little true', 3 = 'Pretty much true', 4 = 'Very much true'. These variables were combined together into one variable to represent high/low family opportunities to participate.

Peer caring relationships

To assess peer caring relationships, youths were asked to respond to the following statements: "I have a friend about my own age that really cares about me," "Who talks to me about my problems," "Who jokes around with me," and "Who makes me laugh." The response categories were 1 = 'Not at all true', 2 = 'A little true', 3 = 'Pretty much true', 4 = 'Very much true'. A factor analysis produced one factor with a Cronbach's Alpha of 86%. These variables were then collapsed into one variable dichotomized to represent high/low peer caring relationships.

School relationships

To measure caring relationships in the school setting, participants were asked the following questions, "In school, there is a teacher or some other adult in school who really did care about me," "Who told me when I did a good job," "Who noticed when I'm not there," "Who listen to me when I had something to say", "Who made me laugh." The response categories were 1 = 'Not at all true', 2 = 'A little true', 3 = 'Pretty much true', 4 = 'Very much true'. A factor analysis was conducted to assess the groupings of these variables. These variables came together as a factor with a Cronbach's Alpha of 88.8%. These variables were then combined together into one variable to represent high/low school-caring relationships.

Items to measure high expectations in school included statements: "In school there is a teacher or adult who believes I will be a success" and "Who always wanted me to do my best." The response categories were 1 = 'Not at all true', 2 = 'A little true', 3 = 'Pretty much true', 4 = 'Very much true'. These variables were collapsed together into one variable to represent high/low school high expectations. To assess opportunities to participate, the variable "I help decide things like class activities or rules" was dichotomized (0/1) with 1 denoting pretty true/very true.

Adverse family environment

To assess adverse family environment, measures selected from the survey covered economic insecurity, family discord, and parental substance use. To measure economic insecurity, proxy items were used. Respondents were asked, "During the past 30 days was enough food in the house so everyone could eat?" Responses included, always, sometimes, and never. The second item was, "During the past 30 days, did you ever go to bed hungry because there was not enough food to eat?" Responses included, all the time, sometimes, and never. The third item used was, "In the last month, did people argue in this house because there was not enough money to buy food, to buy other things or to pay bills?" Responses included all the time, sometimes, and never. All of these measures were collapsed together into one variable to represent 'yes/no' economic insecurity.

To assess family discord, participants were asked, "Have you ever experienced any of the following events or situations that caused you a great amount of worry or unhappiness?" Responses included conflict between family members or conflict between parents in the house. Items were combined and dichotomized to represent 'yes/no'.

To measure parental alcoholism, youth were asked, "Have you ever experienced any of the following events or situations that caused you a great amount of worry or unhappiness?" One item covered alcoholism in the family. This variable was recoded to yes or no. The other item used to measure parental alcoholism was "Has drinking caused any problems (arguments, fights, unhappiness) for anyone living in this house?" Responses included, always, sometimes, and never. These variables were combined into one variable to represent 'yes/no' parental substance use.

Statistical Analysis

All analyses were conducted with SPSS version 16. Descriptive statistics were first conducted to report on frequencies and percentages of the outcome measures smoking, drinking, binge drinking, drug use and polysubstance for males and females. Cross tabulations were then produced between the independent factors and each outcome measure for girls only. Tests of significant associations between independent variables and outcome measures were based on the Pearson's chi-square test. Statistical significance was defined as $p < 0.05$.

Adjusting for age, block logistic regression analysis was conducted between the independent variables and dependent variables for girls only. The covariates were classified into three blocks: adverse family environment, internal resiliency factors and external resiliency factors. Within each block, first a backward elimination logistic regression was conducted with a 0.1 significance level in order to identify important covariates. After identifying the most important variables within each block, a block logistic regression was run sequentially with the most important block entered into the first

model, followed by the less important ones. The blocks that had the most significant contribution to the model, at a $P < 0.05$ level of significance, were retained.

CHAPTER 4: RESULTS

Descriptive Analysis

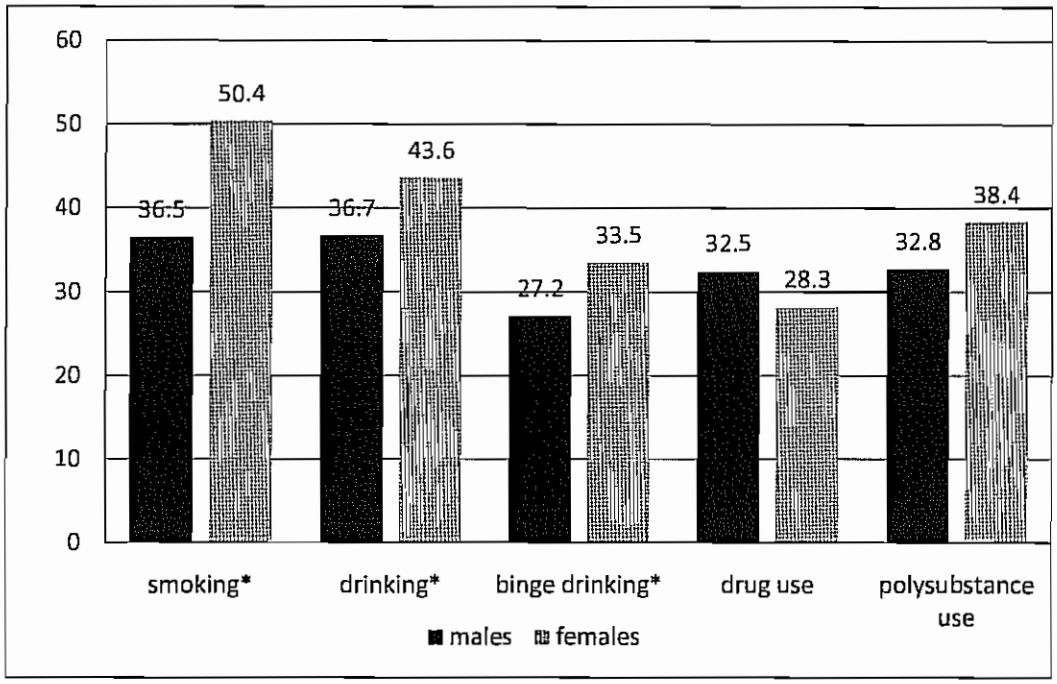
Outcome frequencies

Univariate analyses were conducted to determine the prevalence of tobacco use, alcohol use, binge drinking, drug use and polysubstance use among girls and boys. The overall prevalence of smoking among First Nation youth age 12 to 17 years of age is 43.3%. Alcohol use in the past 12 months among First Nation youth was 40% and the binge drinking prevalence rate was 30.2%. Drug use among First Nation youth is 30.5%. The overall prevalence rate for polysubstance use was documented at 35.5%.

Sex differences

Sex differences were then investigated for each outcome measure. In the Manitoba First Nation on-reserve population, we found that girls are participating in more risky behaviors than boys (Table 1). Approximately more girls currently smoke (50.4%), which was significantly higher than the number of boys smoking (36.5%). Significantly more girls reported drinking alcohol in the past 12 months compared to boys (43.5% versus 36.7% respectively). The prevalence rate for binge drinking, defined by "how often have you had 5 or more drinks on one occasion," was also significantly higher for girls (33.5%) than boys (27.1%). Boys reported more drug use compared to girls (32.5% versus 28.4%), but the difference was not significant. For polysubstance use, which was defined by use of 2 or more substances, slightly more girls than boys were engaged in this complex behavior (38.4% versus 32.8%), but the difference was not significant.

Table 1: Prevalence of substance use by gender



***Significant at P < .05**

Description of independent characteristics of girls

In Table 2, 38.9 % of girls who participated in the survey were between 12 to 14 years of age, and 61.1% were 15 to 17 years of age. Adverse family environment was assessed using 3 categories: economic insecurity, family discord and parental substance use in the home. We found that the majority of girls did not experience economic insecurity (61.7%). Just over three quarters (77.2%) of girls also reported that they did not experience family discord. However, 40.2% of girls reported that there is parental substance abuse in their home.

As for internal resiliency factors, just over 71% of girls indicated a high level of social competence. Seventy one percent had a high level of problem solving. A large majority of First Nation girls had a high level of self-esteem (85.6%). As for mindfulness/efficacy, 74.6% of girls reported this attribute. A large number of First Nation girls had a high level of sense of purpose (82.6%). Surprisingly, almost three quarters (69.2%) of First Nation girls had low participation in cultural engagement. However, spiritual engagement demonstrated high at 62.2%.

For external resiliency factors, such as being connected to family, 85.6% of girls reported high family connectedness, and 57.6 % enjoyed visiting with family. Seventy-two percent reported high family caring relationships at home. Moreover, high expectations at home were reported to be high at 85.3%. Conversely, having opportunities to participate at home was low at 34.5%. A great number of girls indicated that they have caring friend relationships (86.7%), followed by school caring relationships (67.9%). More girls reported having high expectations at school than not (59.8% versus 40.2%). However, almost 70% of girls reported not having opportunities to participate in school.

In summary, First Nation girls are experiencing some challenges and adversity at home as demonstrated by the parental substance use. However, the majority of girls have a lot of internal and external resources to draw upon to face this adversity and overcome the odds of making poor decisions about substance use.

Table 2: Frequencies of Independent variables

Independent variables					
Age	**(n)**	**12-14**		**15-17**	
	550	38.9% (214)		61.1% (336)	
Adverse	**(n)**	**No**		**Yes**	
Family environment		%	(Freq)	%	(Freq)
Economic insecurity	477	61.7	295	38.3	183
Family discord	537	77.2	414	22.8	122
Parental substance use	537	59.8	321	40.2	216
Internal resiliency factors	**(n)**	**Low**		**High**	
		%	(Freq)	%	(Freq)
Social competence	508	28.2	144	71.6	364
Problem solving	505	27.4	138	72.6	367
Autonomy (self-esteem)	503	14.2	71	85.6	432
Autonomy (locus of control)	493	13.3	65	86.8	428
Autonomy (mindfulness/efficacy)	496	25.4	126	74.6	370
Sense of purpose	490	17.4	85	82.6	404
Cultural engagement	532	69.2	369	30.8	164
Spiritual engagement	426	37.8	161	62.2	265
External resiliency factors	**(n)**	**Low**		**High**	
		%	(Freq)	%	(Freq)
Family connectedness	467	14.4	67	85.6	400
Visit/spend time with family	491	42.4	208	57.6	283
Family caring relationships	502	28.0	141	72.0	362
Family high expectations	502	14.7	74	85.3	428
Opportunities to participate at home	494	65.5	324	34.5	170
Peer caring relationships	505	13.3	67	86.7	438
School caring relationships	481	32.1	154	67.9	326
School high expectations	475	40.2	191	59.8	284
Opportunities to participate at school	**(n)**	**Not true**		**True**	
		%	(Freq)	%	(Freq)
	483	69.4	335	30.6	148

Bivariate Analysis

Significant associations between an adverse family environment and substance use are illustrated in Table 3. Girls who reported experiencing economic insecurity had a higher proportion of drug use (34.8%) and polysubstance use (46.2%) compared to those who reported no economic insecurity at home. First Nation girls who reported family discord in the home had higher levels of smoking, drug use and polysubstance use (61.8%, 46.2%, and 51.7% respectively). There was no association between binge drinking and drug use with family discord. In terms of parental substance use, First Nation girls reported a higher proportion of substance use in all outcomes (63%, 58.2%, 48%, 43%, and 56.7%).

Table 3: Adverse family environment by substance use among First Nation girls, age 12 to 17 years.

Adverse family environment	Smoking		Alcohol use		Binge drinking		Drug use		Polysubstance use	
	No%	Yes%	No%	Yes%	No%	Yes%	No%	Yes%	No%	Yes%
Economic insecurity	(n=390)		(n=454)		(n=442)		(n=464)		(n=474)	
No	52.6	47.4	59.3	40.7	69.5	30.5	73.9	26.1	63.7	36.3
Yes	44.3	55.7	50.0	50.0	58.8	41.2	65.2	34.8	53.8	46.2
X^2, P value	2.580, .108		3.750, .053		5.254, **.022***		3.977, **.046***		4.532, **.033***	
Family discord	(n=390)		(n=455)		(n=442)		(n=463)		(n=474)	
No	53.6	46.4	58.0	42.0	68.0	32.0	76.5	23.5	63.8	36.2
Yes	38.2	61.8	48.7	51.3	57.9	41.9	53.8	46.2	48.3	51.7
X^2, P value	7.483, **.006***		3.026, .082		3.808, .051		21.907, **.000***		8.975, **.003***	
Parental substance use	(n=390)		(n=353)		(n=443)		(n=464)		(n=474)	
No	61.5	38.5	66.7	33.3	76.5	23.5	81.3	18.7	72.9	27.1
Yes	37.0	63.0	41.8	58.2	52.0	48.0	57.0	43.0	43.3	56.7
X^2, P value	27,336, **.000***		28.031, **.000***		29.229, **.000***		32.585, **.000***		42.765, **.000***	

***Significance level, P < .05**

A significant relationship between internal resiliency factors and substance use among First Nation girls, age 12 to 17, is illustrated in Table 4. First Nation girls, who reported higher self-esteem than girls who reported low on self esteem variables, reported less smoking (49.8% vs. 69.2%), drug use (27.9% vs. 50%), and polysubstance use (40.3% vs. 61.5%). There was no other significant association between the five outcome measures and internal resiliency factors: social competence, sense of purpose, problem solving, self-awareness and efficacy, or internal locus of control.

Table 4: Internal resiliency factors by substance use among First Nation girls, age 12 to 17 years

Internal Resilieucy Factors	Smoking		Alcohol nse		Binge drinking		Drug use		Polysubstance use	
	No%	Yes%	No%	Yes%	No%	Yes%	No%	Yes%	No%	Yes%
Social competence	(n=321)		(n=315)		(n=308)		(n=320)		(n=325)	
Low	38.0	62.0	45.0	55.0	52.7	47.3	64.2	35.8	50.0	50.0
High	50.0	50.0	55.7	44.3	64.5	35.5	70.3	29.7	58.4	41.6
X^2, P value	3.457, .063		2.766, .096		3.328, .068		1.046, .306		1.774, .183	
Sense of Purpose	(n=321)		(n=314)		(n=309)		(n=322)		(n=325)	
Low	48.9	51.1	45.8	54.2	60.0	40.0	72.0	28.0	57.1	42.9
High	46.7	53.3	54.1	45.9	62.1	37.9	68.0	32.0	56.2	43.7
X^2, P value	.079, .778		1.125, .289		.073, .787		.312, .577		.016, .898	
Problem solving	(n=321)		(n=314)		(n=309)		(n=320)		(n=325)	
Low	44.9	55.1	53.8	46.2	62.2	37.8	70.4	29.6	58.0	42.0
High	47.7	52.3	52.5	47.5	61.7	38.3	68.2	31.8	55.7	44.3
X^2, P value	.195, .659		.040, .841		.005, .943		.133, .716		.129, .719	
Autonomy (self-esteem)	(n=321)		(n=314)		(n=309)		(n=321)		(n=325)	
Low	30.8	69.2	46.2	53.8	51.9	48.1	50.0	50.0	38.5	61.5
High	50.2	49.8	54.2	45.8	63.8	36.2	72.1	27.9	59.7	40.3
X^2, P value	6.595, **.010***		1.127, .288		2.590, .108		9.887, **.002***		8.014, **.005***	
Mindfulness / self efficacy	(n=321)		(n=314)		(n=309)		(n=321)		(n=325)	
Low	38.5	61.5	48.1	51.9	59.7	40.3	62.0	38.0	53.2	46.8
High	49.8	50.2	54.4	45.6	62.0	38.0	71.1	28.9	57.7	42.3
X^2, P value	3.044, .081		.949, .330		.124, .725		2.274, .132		.506, .477	
Internal locus of control	(n=321)		(n=315)		(n=309)		(n=320)		(n=325)	
Low	54.8	45.2	55.8	44.2	68.4	31.6	60.5	39.5	60.4	39.5
High	45.9	54.1	52.6	47.0	60.9	39.1	70.0	30.0	55.7	44.3
X^2, P value	1.156, .282		.157, .692		.802, .371		1.587, .208		.348, .555	

***Significance level P < .05**

A single significant relationship between cultural resiliency factors and substance use among First Nation girls, age 12 to 17, is demonstrated in Table 5. Girls who reported "importance of cultural events" had a lower proportion of alcohol use (40.3%) and binge drinking (30.1%) than those who reported cultural events as not important (52.6% and 45.2%, respectively). There were no associations found for the other cultural factors - spiritual engagement, cultural engagement, and importance of speaking a First Nation language.

Table 5: Cultural resiliency factors and substance use among First Nation girls, age 12 to 17 years

Cultural resiliency factors	Smoking		Drinking		Binge drinking		Drug use		Polysubstance use	
	No%	Yes%	No%	Yes%	No%	Yes%	No%	Yes%	No%	Yes%
Spiritual engagement	(n=321)		(n=315)		(n=308)		(n=320)		(n=325)	
Low	45.7	54.3	47.8	52.2	58.3	41.7	69.6	30.4	60.2	39.8
High	47.8	52.2	55.9	44.1	63.2	36.8	68.3	31.7	54.1	45.9
X^2, P value	.133, .715		1.934, .164		.698, .403		.056, .814		1.123, .289	
Important to speak FN	(n=321)		(n=314)		(n=309)		(n=320)		(n=325)	
Not important	39.4	60.6	57.1	42.9	61.5	38.5	65.2	34.8	53.7	46.3
Very important	49.0	51.0	51.8	48.2	61.9	38.1	69.7	30.3	57.0	43.0
X^2, P value	1.950, .163		.578, .447		.003, .959		.501, .479		.228, .633	
Cultural engagement	(n=321)		(n=314)		(n=308)		(n=320)		(n=325)	
Low	48.1	51.9	55.2	44.8	63.8	36.2	72.2	27.8	59.0	41.0
High	45.2	54.8	48.6	51.4	57.8	42.2	62.6	37.4	51.3	48.7
X^2, P value	.239, .625		1.226, .268		1.080, .299		3.151, .076		1.811, .178	
Importance of cultural events	(n=321)		(n=315)		(n=309)		(n=321)		(n=324)	
Not important	44.9	55.1	47.4	52.6	54.8	45.2	72.2	27.8	53.9	46.1
Very important	49.7	50.3	59.7	40.3	69.9	30.1	64.1	35.9	59.6	40.4
X^2, P value	.726, .394		4.790, **.029***		7.431, **.006***		2.372, .124		1.044, .307	

***Significance level, P < .05**

Several significant relationships were found between family and peer resiliency factors and substance use as displayed in Table 6. First Nation girls who reported having family connectedness had lower rates of drug use (27.6%) and polysubstance use (38.8%). Girls who reported that they enjoyed spending time with family and visiting with family members had reported less smoking (43.8%), binge drinking (30.7%), drug use (25.3%), and polysubstance use (35.2%). Furthermore, smoking was lower among girls who reported high on family caring relationships (47.7% versus 58.9%). As well, smoking rates were lower among girls who had opportunities to participate at home (41.0% versus 55.6%). There was no association between girls who reported having family high expectations and having peer caring relationships with substance use.

Table 6: Family and peer resiliency factors and substance use among First Nation girls, age 12 to 17 years

Family& Peer Resiliency Factors	Smoking		Drinking		Binge drinking		Drug use		Polysubstance use	
	No%	Yes%	No%	Yes%	No%	Yes%	No%	Yes%	No%	Yes%
Family connecteduess	(n=410)		(n=406)		(n=395)		(n=415)		(n=422)	
No	37.7	62.3	47.3	52.7	59.6	40.4	56.6	43.4	46.4	53.6
Yes	51.0	49.0	56.1	43.9	65.5	34.5	72.4	27.6	61.2	38.8
X^2,P value	3.239, .072		1.5.5, .220		.641, .423		5.515, **.019***		4.390,**.036***	
Visit/spend time with family	(n=410)		(n=406)		(n=395)		(n=415)		(n=421)	
No	38.4	61.6	48.7	51.3	57.8	42.2	63.6	36.4	50.3	49.7
Yes	56.2	43.8	58.9	41.1	69.3	30.7	74.7	25.3	64.8	35.2
X^2,P value	12.354,**.000***		4.006, .145		35.451,**.020***		5.860, **.015***		8.779, **.003***	
Family caring relationships	(n=409)		(n=406)		(n=396)		(n=415)		(n=421)	
Low	41.1	58.9	54.7	45.3	63.0	37.0	64.2	35.8	54.5	45.5
High	52.3	47.7	55.0	45.0	65.5	34.5	72.5	27.5	60.8	39.2
X^2,P value	3.962, **.047***		.003, .960		.212, .645		2.673, .102		1.304, .254	
Family High expectations	(n=411)		(n=404)		(n=395)		(n=415)		(n=422)	
Low	48.1	51.9	62.3	37.7	73.5	26.5	69.1	30.9	62.5	37.5
High	49.6	50.4	53.8	46.2	63.6	36.4	70.6	29.4	58.7	41.3
X^2,P value	.038, .845		1.318, .251		1.839, .175		.049, .825		.284, .594	
Family Opportunity to participate	(n=410)		(n=405)		(n=396)		(n=415)		(n=421)	
No	44.4	55.6	54.1	45.9	62.5	37.5	68.8	31.2	56.0	44.0
Yes	59.0	41.0	56.8	43.2	69.3	30.7	73.4	26.6	65.1	34.9
X^2,P value	8.040, **.005***		.269, .604		1.829, .176		.983, .321		3.246, .072	
Peer caring relationships	(n=411)		(n=406)		(n=396)		(n=415)		(n=423)	
Low	52.0	48.0	60.8	39.2	68.8	31.2	76.9	23.1	66.0	34.0
High	49.0	51.0	54.1	45.9	64.4	35.6	69.4	30.6	58.1	41.9
X^2,P value	.155, .694		.809, .369		.356, .551		1.227, .268		1.206, .272	

***Significance level P < .05**

A few significant relationships were found between school resiliency factors and substance use among First Nation girls, age 12 to 17 years, as shown in Table 7. Smoking rates were lower among girls who reported having opportunities to participate at school (41.9% versus 54.6%). Binge drinking was also lower for girls who had an opportunity to participate (24.8%) than girls who did not (40.2%). There were no significant findings between school caring relationships and school high expectations and substance use.

Table 7: School resiliency factors and substance use among First Nation girls, age 12 to 17 years

School resiliency factors	Smoking		Drinking		Binge drinking		Drug use		Polysubstauce use	
	No%	Yes%	No%	Yes%	No%	Yes%	No%	Yes%	No%	Yes%
School caring relationships	(n=411)		(n=405)		(n=396)		(n=415)		(n=422)	
Low	43.3	56.7	50.0	50.0	61.2	38.8	67.9	32.1	56.2	43.8
High	52.3	47.7	57.5	42.5	66.5	33.5	71.5	28.5	60.7	39.3
X^2, P value	2.968, .085		2.028, .154		1.071, .301		.804, .370		.775, .379	
School high expectations	(n=411)		(n=406)		(n=396)		(n=315)		(n=421)	
Low	46.9	53.1	54.0	46.0	64.2	35.8	70.4	29.6	60.0	40.0
High	51.0	49.0	55.5	44.5	65.3	34.7	70.4	29.6	58.6	41.4
X^2, P value	.657, .418		.085, .770		.047, .829		.000, .997		.082, .774	
School opportunities to participate	(n=409)		(n=405)		(n=396)		(n=315)		(n=421)	
Not true	45.4	54.6	52.3	47.7	59.8	40.2	69.2	30.8	56.7	43.3
Very true	58.1	41.9	61.5	38.5	75.2	24.8	73.0	27.0	64.6	35.4
X^2=, P value	5,773 **.016***		2.903, .088		8.901, **.003***		.611, .434		2.329, .127	

***Significance level P < .05**

Logistic Regression Analysis

The final model (Table 8) shows the significant findings for all five outcomes. The final model for smoking included age (15-17), family discord, parental substance use, and visit/spend time with family, and opportunities to participate at home. Older girls (15-17) were 6.6 times more likely to be smokers. Girls who experienced family discord were 1.85 times more likely to smoke. Also, girls who experienced parental substance abuse in their home were 2.38 more likely to smoke. On the other hand, girls who enjoyed spending time and visiting with family were 1.64 times less likely to smoke, while girls who had opportunities to participate at home were 1.68 times less likely to smoke.

The final model for drinking included age (15-17), parental substance use, importance of cultural events, cultural engagement, and family high expectations. Girls who were older were more likely to drink alcohol in the past 12 months (5.97 times). Also, girls who experienced living in a home with parental substance abuse were 2.2 times more likely to drink. While girls who believed cultural events were important were 1.67 times less likely to drink than girls who did not think cultural events were important, we found that girls who had a high level of cultural engagement were 1.76 times more likely to drink.

The final model for binge drinking included parental substance use, high social competence, importance of cultural events, cultural engagement, and visit/spend time with family, and opportunities to participate at school. Girls who experienced parental substance abuse were 2.5 times more likely to binge drink. Whereas, girls who deemed the importance of cultural events were 1.74 times less likely to binge drink. Surprisingly high cultural engagement resulted in girls engaging in more binge drinking (OR 1.9). On a positive note, spending time and visiting with family was protective with an OR of 1.37

times less likely to binge drink, and girls who had opportunities to participate at school were 1.89 times less likely to binge drink.

The final model for drug use included age (15-17 years), family discord, parental substance use, family connectedness, and visiting/spending time with family. Older girls (15-17 years of age) were 1.45 times more likely to use drugs. Girls who experienced family discord were 2.42 times more likely to engage in drug use and girls who experienced parental substance abuse were 2.46 times more likely to use drugs. On the other hand, girls who reported family connectedness were 1.37 times less likely to engage in drug use, and spending time and visiting with family resulted in less drug use for girls (OR of 1.88).

The final model for polysubstance use included age (15-17 years), parental substance use, family connectedness, and spending time and visiting with family. Older girls (15-17 years) were 3.72 times more likely to engage in polysubstance use than younger girls (12-14 years). Girls who experienced parental substance abuse at home were 3.1 times more likely to engage in polysubstance use. Finally, girls who demonstrated family connectedness were 1.48 times less likely to use many substances, and spending time and visiting with family was protective for polysubstance use (OR 0.58).

Table 8: Final model - Backward block logistic regression analysis of substance use among First Nation girls, age 12 to 17 years

Outcome	Independent variable	*B*	SE	OR	(95% CI)	Wald Statistic	P Value
Smoking n=483	Age (15-17)	1.890	.243	6.618	(4.110,10.658)	60.425	.000
	Family discord	.618	.265	1.856	(1.103, 3.122)	5.434	.020
	Parental substance abuse	.869	.228	2.384	(1.524, 3.730)	14.483	.000
	Visit/spend time	-.499	.299	.607	(.388, .951)	4.755	.002
	Opportunities to participate at home	-.524	.236	.592	(.373, .940)	4.944	.026
Drinking n=464	Age (15-17)	1.788	.249	5.977	(3.671, 9.733)	51.657	.000
	Parental substance abuse	.799	.219	2.224	(1.448, 3.416)	13.314	.000
	Importance of cultural events	-.556	.242	.598	(.384, .930)	5.210	.022
	Cultural engagement	.568	.237	1.765	(1.108, 2.810)	5.724	.017
Binge drinking n=417	Parental substance abuse	.992	.241	2.513	(1.566, 4.035)	14.565	.000
	High social competence	-.050	.297	.951	(.531, 1.703)	.028	.867
	Importance of cultural events	-.556	.255	.574	(.348, .946)	4.742	.029
	Cultural engagement	.640	.275	1.897	(1.107, 3.249)	5.433	.020
	Visit/spend time	-.318	.263	.728	(.435, 1.218)	1.465	.226
	School opportunities to participate	-.637	.310	.529	(.288, .971)	4.229	.040
Drng use n=480	Age (15-17)	.373	.244	1.452	(.899, 2.343)	2.329	.127
	Family discord	.884	.246	2.421	(1.495, 3.920)	12.914	.000
	Parental substance abuse	.900	.232	2.460	(1.562, 3.872)	15.113	.000
	Family connectedness	-.316	.311	.729	(.396, 1.342)	1.030	.310
	Visit/spend time	-.635	.231	.530	(.337, .833)	7.558	.006
Poly-substance use n=491	Age (15-17)	1.315	.239	3.723	(2.331, 5.946)	30.286	.000
	Parental substance abuse	1.137	.214	3.118	(2.050, 4.744)	28.228	.000
	Family connectedness	-.357	.305	.700	(.385, 1.274)	6.266	.243
	Visit/spend time	-.542	.217	.581	(.380, .889)	6.266	.012

CHAPTER 5: DISCUSSION AND CONCLUSION

Discussion

This study is the first to explore the relationships between resilience, adversity and substance use among Canadian First Nation girls. It is also the only study to explore First Nation girls' challenges, internal capacities, and external resources in a Canadian First Nation adolescent population. The initial univariate analyses demonstrated the prevalence of substance use is disturbingly high, particular among girls. First Nation girls exceeded boys in reporting higher tobacco use, alcohol in the past 12 months, and binge drinking in the previous 12 months. This finding is in stark contrast to the lower smoking prevalence rates (26.7%) among Canadian adolescent population, age 15 to 19 years old (Davis 2006). The alcohol use and binge drinking rates we found were also reflective of an emerging and alarming pattern among aboriginal girls (Friesen et al. 2008; Health Canada 2008/09; Wallace et al. 2009). In the multiple regression analysis, age was a significant factor for engaging in risky behaviors. First Nation girls, age 15 to 17, were 6.6 times more likely to smoke, 5.97 times more likely to drink, and 3.7 times more likely to engage in polysubstance use. This finding is consistent with other data, as older adolescents tend to engage in higher rates of substance use (Feldman et al., 1999; Mamcini & Huebner, 2004). While most studies report a higher rate of smoking, alcohol and polysubstance use among adolescent males generally and within ethnic minority groups (Beauvais, 1992; 2004; Richie & Reading, 2003), this study showed that First Nation girls, much like boys, are engaging in this behavior.

Living in an adverse environment was a major risk factor for unhealthy risk behaviors. First Nation girls who reported living in an economically insecure environment, defined by experiencing going to bed hungry, arguing over not having enough money to buy food or pay bills, tended to report a higher proportion of polysubstance use. Interestingly, there was no association between economic insecure environments and smoking, which previous research reported (Langille, 2003). Another aspect of adversity investigated was family discord. Consistent with other studies, girls reported higher use of tobacco, drug use and polysubstance use when they experienced conflict in their homes (Barrera et al. 2001). We found those girls who experienced family discord at home was also 1.8 times more likely to smoke and 2.4 times more likely to use drugs. The question we cannot address in this study is whether this behavior is a coping mechanism to deal with family conflict (Kodjo & Klein, 2002). The third adverse environment element explored was parental substance abuse. First Nation girls, who reported that drinking causes a problem at home or that they worried about parental alcoholism at home, had higher rates of smoking, alcohol use, binge drinking, drug use and poly-substance use. That is, First Nation girls who reported that they have a parent who abuses substances were 2.3 times more likely to smoke, 2.2 times more likely to drink alcohol in the past 12 months, 2.5 times more likely to binge drink, 2.5 times more likely to use drugs, and 3.1 times more likely to engage in polysubstance use. These findings clearly demonstrate, as noted in previous research, that parental substance abuse is associated with increased risky behaviors among adolescents who reside in these setting (Feldman et al., 1999; Beyers et al., 2004).

Research also suggests that youth that possess positive personal competencies and skills are more likely to engage in health enhancing activities and are less likely to engage

in activities potentially harmful to their health (Griffens et al., 2001;2002). In our study, a large proportion of girls between the ages of 12 and 17 reported high levels of social competency skills. Girls who had indicated that they were competent in communication skills, empathy and compassion had demonstrated lower rates of smoking than those who had low social competency skills. This finding is consistent with the literature in that adolescents with assertive communication skills have lower smoking rates (Benard, 2004). However, a more rigorous analysis showed that social competency was not independently protective in reducing substance use.

As well, girls who demonstrated high self-esteem (autonomy), as defined by having a lot to be proud of, a lot of things are good about me, when I do things I do it well, and liking themselves, did not engage in tobacco, drug or polysubstance use at the bivariate level. A more rigorous analysis, however, demonstrated that self-esteem (autonomy) was not a significant factor in protecting girls from these substances. This finding was inconsistent with previous research conducted on multi-ethnic groups that demonstrated that youth with positive self-esteem engaged in more pro-social behaviors and were able to avoid risky behaviors (Benard, 2004, Epstein et al., 1995).

Multiple studies have reported that certain aspects of culture are protective against risky behaviors. Zimmerman's (1998) study on enculturation demonstrated that positive ethnic identity was protective against substance use. While our study did not measure cultural identity in the same way, we did look at certain cultural aspects such as participation in cultural activities and beliefs. Our results showed that among girls aged 12 to 17, who reported that cultural events were important to them, had less drinking and binge drinking behaviors as opposed to those who reported non-importance. Indeed, girls who

indicated importance for cultural events were 1.7 times less likely to drink and 1.74 times less likely to binge drink. Surprisingly, FN girls who demonstrated high on cultural engagement were 1.76 times more likely to drink alcohol in the past 12 months and 1.89 times more likely to binge drink. While previous studies have demonstrated that enculturation leads to less substance use among Native American adolescents and adults (Zimmerman et al., 1998; Whitbeck et al., 2004), this study found contradictory results; that is, engagement was associated with problem drinking while beliefs in the importance of cultural events were protective.

Religiosity or spirituality has also been documented as a protective factor against risky behaviors among multi-ethnic adolescents (Beyers et al., 2004; Vakalahi, 2002; Resnick et al., 1997). In our study, however, there were no significant findings to support the theory that high levels of spiritual engagement are protective for girls against substance use.

Feelings of connectedness also play a pivotal role in healthy development among youth (Aronowitz, 2005). Theoretically, caring and connectedness at home, with positive peer relationships and schools, are considered essential in protecting youth from engaging in risky behaviors and promoting healthy choices when faced with adversity. In our study, girls who reported family connectedness were less likely to engage in drug use and polysubstance use. Girls, who felt more connected to family life and relationships, such as enjoying spending time with family and visiting them were less likely to smoke, binge drink, use drugs, and engage in polysubstance use. Furthermore, girls who had high levels of family connectedness were 1.37 times less likely to use drugs and 1.43 times less likely to participate in polysubstance use. Also, girls who enjoyed visiting and spending time

with family were 1.67 times less likely to smoke, 1.37 times less likely to binge drink, 1.88 times less likely to use drugs and 2.4 times less likely to engage in polysubstance use. Our study findings are consistent with other research that demonstrates that family connectedness where parental monitoring is more likely to occur is protective against substance use (Tragesser et al., 2007; Branstetter, Furman & Cottrell, 2009). While this study did not examine the direct effects of parental monitoring, our study did show that spending time with family members provided protection, resulting in adolescent girls avoiding risky behaviors. While spending time and feeling connected to one's family offered protection, so did having opportunities to participate at home, particularly against smoking. For instance, girls who indicated that they do things at home that make a difference were 1.68 times less likely to smoke.

As noted earlier, friendships are very important, as young people get older, as adolescent friendships provide a space to develop social and emotional skills. Peers, however, can influence adolescents in both positive and negative ways. This study examined the relationship between having caring relationships with peers and substance use and found no association between having peer caring relationships and substance use among girls.

The school environment is another key element of the adolescent developmental process. In this environment, youth develop essential skills and competencies to help them make healthy choices and reduce risk activities. An overwhelming amount of research supports the theory that the school environment and experience is critical in shaping young peoples' development (Benard 1991 and 2004; Werner and Smith 2001; Rutter et al. 1982). According to Benard (2004), high expectations at school are an active ingredient in

instilling resiliency among youth. In this study there was no association between school caring relationships, high expectations at school, and substance use among girls. At the bivariate level, girls who reported having opportunities to participate at school, however, had less smoking and binge drinking behaviors. A more rigorous analysis showed that this was only the case for binge drinking; that is, girls who reported that they had opportunities to participate at school were 1.89 times less likely to binge drink. Although these findings are restricted to binge drinking behaviors, our study has demonstrated a relationship between the school environment and alcohol use, suggesting that a participatory school environment is protective against extreme substance use.

In summary, the hypothesis of this study was partially confirmed by the bivariate and regression analyses. Some aspects of internal resiliency factors at the bivariate level did prove to be associated with lower rates of engaging in unhealthy risk behaviors. For instance, high self-esteem resulted in lower rates of smoking, drug use, and polysubstance use. However, high social competence was not significant in the final analysis. Cultural indicators did have some conflicting results with higher rates of substance use for girls who actually engaged in cultural activities. Further analysis is needed to explain these results. Items on spirituality were not associated with the outcome measures. External resiliency factors were protective against risky behaviors. Family and participatory school environments are critical in shaping behaviors. High caring relationships had a protective effect against smoking. Also, girls who reported being satisfied with family relationships and enjoyed spending time with family had lower rates of smoking, binge drinking, drug use and polysubstance use at the bivariate level. High family caring relationships and having opportunities to participate at home were associated with less smoking. Moreover,

girls who had enjoyed spending time and visiting with family time were 1.64 times less likely to smoke, 1.88 times less likely drug use, and 1.7 times less likely to engage in polysubstance use.

A participatory school environment resulted in less substance use. These findings are supported by previous research conducted on Native American Indian adolescents in different settings (Napoli et al., 2003; Swaim et al., 1997). While research suggests that positive peer relationships help to reduce negative behaviors among youth, this study did not show evidence among First Nations girls.

Overall, this research provided critical evidence that taking a resiliency approach to preventing and intervening with substance use among First Nation girls may be beneficial. There are multiple indicators that can be targeted to promote healthy behaviors. For example, the significance of an adverse family environment and its impact on girls' use of substances clearing demonstrates the need for family intervention programs to address family substance abuse issues. While the effects of peers did not play a role in girls' use of substances, having opportunities to participate at home and school did. Despite the lack of an association for peer relationships in relation to substance use, it is still important to develop peer level interventions that deter risky behaviors and enhances the peer school environment to support healthy choices among First Nation girls. As well, communities need to consider that while engagement in cultural activities confers knowledge about how to undertake cultural activities, it is the belief in the importance of these activities that is important in protecting girls from engaging in risky behaviors.

Study Limitations

There are several limitations to this study that need to be mentioned. Cross sectional study designs provide a "snapshot" view of the current issue at a particular time. Therefore, trends cannot be observed over time. Also, in cross sectional surveys one cannot make inferences of causation between variables. The cross sectional nature of the study does not distinguish if the exposure resulted or preceded the outcome measure. Spatial and temporal limitations affect the generalizability of the results. In short, the findings cannot be generalized to all Aboriginal adolescent females living in Manitoba, as the study population was limited to First Nation adolescents living on reserve. The sub-sample size for girls was only 550 so a larger sample size would have given more power to the study. That is, the probability of both Type I and Type II errors decreases as the sample size increases, primarily because the estimates obtained from larger samples are more reliable (have less random sampling variation).

Measurement issues, which may affect reliability and validity, may exist in the questionnaire. As a structured survey, it was designed to collect unequivocal and easy to quantify answers adaptable to statistical analysis. It was pre-tested to ensure that the questions made sense culturally and to minimize bias. In pretesting instruments, the reliability of the survey variables are evaluated to ensure the same question yields the same results at different times, that different people collecting the data on the same questions get comparable answers, and that different questions that are assumed to tap the same underlying concept are correlated. However, the pre-coded questions may have focused respondents to choose answers that may not have represented their views. Question wording and ordering may not have been clear to all respondents, as they may not have

shared the same perspective as the design team. As a result, the question wording, terms, or concepts may not have elicited the same response from different respondents. The respondent's replies may be influenced by the pre-coded design. Also, translation bias (questions translated into a First Nations language may not precisely reflect the question asked) could have occurred. Another limitation of this study is that outcome definitions (e.g. question or wording) and information bias or a misclassification of a subject's response (e.g. self-report or recall bias) could have resulted in definitions (example, binge drinking) may have different meaning for different people and then there is the problem of not being able to accurately remember an event. Social desirability bias is one possible bias in this survey, as an interviewer may ask a question of a participant and the individual provides the most positive response. This bias is highly possible for questions addressing challenging behaviors (e.g., alcohol us, binge drinking, drug use). Reporting bias (failure to provide information on sensitive issues on drug use or binge drinking or financial difficulties at home), response style bias (e.g. putting a positive spin on things) and mood bias (e.g., overestimating substance use) are potential limitations in the survey. Another potential measurement limitation is with the measures of cultural engagement and beliefs. While these measures were not specifically developed to tap into enculturation and cultural resiliency, the contradictory findings of this study suggest a study dedicated to developing and testing measures of cultural resiliency and enculturation is required for the adolescent population, given the emphasis placed on cultural continuity as a protective factor (Chandler and Lalonde, 1998).

Potential Pathways for Interventions

This study provides health, social and education policy analysts, providers and program managers and developers with essential information on the nature and extent of substance use among First Nations female adolescents living in Manitoba. A social determinant of health behavior approach also provides information on who to target and helps inform what resources may be required to prevent and treat substance use among Aboriginal adolescents. Prevention programs that focus on the individual strengths and external resources of youth would be highly beneficial in addressing substance use among First Nations girls.

This study has shown that FN communities should adopt a resiliency approach to promoting healthy behaviors among FN girls, particularly an approach that addresses family adversity and promotes healthy families and school environments. Risk factors such as living in an adverse family environment defined by economic insecurity, family discord and parental substance abuse all contribute to risky behaviors. Positive programming is needed to also enhance such protective factors as personal and social competencies.

Indeed, governments locally and regionally need to support programs that help engender positive internal competencies and build and support positive environments at home and schools. These initiatives need to begin in the early years of life, as research has shown that early adolescent girls are prone to internalizing problems, such as depression, that may lead to poor coping mechanisms. Prevention and intervention programs and services must also address negative family environments in order to deal with substance use among First Nation girls. The role of family connectedness as a protective factor against substance use among Aboriginal adolescents may be essential in designing effective

policies and programs. Caring family relationships prevent youth from associating with deviant peers and engaging in problem behaviors. Building resilient families appears to be a key factor in fostering resiliency in youth. In Canada, we have the First Nation pilot maternal child health program, and its main objective is to promote healthy families in order to ameliorate adversity or trauma at home. Building family resiliency through such a program could help foster the protective and positive environments children and youth require to thrive and to develop into self-sufficient individuals and future parents. A new program, however, is urgently required for families and adolescents who have not had the opportunity to benefit from a maternal child health program. As well, the educational system has a critical role to play in fostering healthy decision-making through participating with children and youth. Teachers and other adults in school settings should be supported in promoting and fostering resiliency in First Nations youth.

Future Research

Future research considerations include the need for life-course and longitudinal studies that examine the challenges and opportunities faced by First Nation youth in Canada. First Nation girls living in other settings, such as urban areas also need to be given priority. Studies on First Nation boys have documented high rates of substance use. So more research is required to examine factors that are contributing to such behaviors. Different Aboriginal youth, such as the Métis and Inuit, also need to be given attention as well. Research into polysubstance use among Canadian Aboriginal youth is also necessary; as recent research suggests that early initiation and problem behaviors may be factors leading to such patterns. Qualitative research is essential to determine aspects of cultural

resiliency, as well as cultural aspects of internal resiliency. Indeed, research is required to perhaps extend our understanding of internal resiliency as a family characteristic given the highly level of protection that the family offers First Nation youth.

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Appendix – 1

Ethics Approval and Study Consent

UNIVERSITY OF MANITOBA

BANNATYNE CAMPUS
Research Ethics Boards

P126-770 Bannatyne Avenue
Winnipeg, Manitoba
Canada R3E 0W3
Tel: (204) 789-3255
Fax: (204) 789-3414

APPROVAL FORM

Principal Investigator: Ms. R. Campbell
Sponsor: CIHR

Protocol Reference Number: H2007:119
Date of Approval: May 16, 2007
Date of Expiry: May 16, 2008

Protocol Title: CIHR HOA 80062 "Internal and External Resiliency Factors Among Adolescent Manitoba First Nations Females and Substance Use" Linked to H2002:063

The following is/are approved for use:

- **Protocol dated May 14, 2007**
- **Youth Participant Sampling Log dated March 2002**
- **Manitoba First Nations Regional Longitudinal Health Survey dated October 18, 2002**

The above underwent expedited review and was **approved as submitted** on May 16, 2007 by Dr. John Arnett, Ph.D., C. Psych., Health Research Ethics Board, Bannatyne Campus, University of Manitoba on behalf of the committee per your letter dated May 8, 2007. The Research Ethics Board is organized and operates according to Health Canada/ICH Good Clinical Practices, Tri-Council Policy Statement, and the applicable laws and regulations of Manitoba. The membership of this Research Ethics Board complies with the membership requirements for Research Ethics Boards defined in Division 5 of the *Food and Drug Regulations*.

This approval is valid for one year only. A study status report must be submitted annually and must accompany your request for re-approval. Any significant changes of the protocol and informed consent form should be reported to the Chair for consideration in advance of implementation of such changes. The REB must be notified regarding discontinuation or study closure.

This approval is for the ethics of human use only. For the logistics of performing the study, approval must be sought form the relevant institution, if required.

Sincerely yours,

John Arnett, Ph.D., C. Psych.
Chair, Health Research Ethics Board
Bannatyne Campus

Please quote the above protocol reference number on all correspondence.
Inquiries should be directed to REB Secretary
Telephone: (204) 789-3883 / Fax: (204) 789-3414

Assembly of Manitoba Chiefs

Study Copy

CENTRE for Aboriginal Health RESEARCH

Manitoba First Nations Regional Longitudinal Health Study

Joint Initiative of the Assembly of Manitoba Chiefs and the
Manitoba First Nations Centre for Aboriginal Health Research, University of Manitoba.

Youth Participant Information and Interview Consent Form

STUDY TEAM

MFN-CAHR Prineiple Investigators: Brenda Elias, Associate Director (Research) and Dr. John O'Neil, Director

Regional Coordinator: Janet Longclaws, MFN-CAHR

Address: *Manitoba First Nations* Centre for Aboriginal Health Research
University of Manitoba
Dept. Community Health Sciences, Faculty of Medicine
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Manitoba First Nations Health Information and Research (HIR) Committee:

Doreen Sanderson, Policy Analyst-Health, Assembly of Manitoba Chiefs
Joseph Pereb, Manitoba Keewatinowi Okimakanak
Gary Munroe, Cree Nation Tribal Health Centre
Emile Garson, Keewatin Tribal Council
Andy Wood, Island Lake Tribal Council
Larry Starr, Southeast Resource Development Council
Gloria Cameron, West Region Tribal Council
Cecelia Stevenson, Fisher River Health Centre
Tracy Scott, Anishinaabe Mino-Ayaawin Inc.
Jeannie Daniels, Dakota Ojibway Health Services
Mike Burdett, Norway House Cree Nation

Address: Assembly of Manitoba Chiefs
Health Information and Research Committee
200 – 260 St. Mary Avenue
Winnipeg, Manitoba R3C 0M6
Ph: (204) 956-0610 Fax (204) 956-2109

You are being asked to participate in a research study. Please take your time to review this consent form and discuss any questions you may have with the research study team or staff. You may take your time to make your decision about participating in this study and you may discuss it with your friends or family before you make your decision. This consent form may contain words that you do not understand. Please ask the community interviewer to explain any words or information that you do not clearly understand.

PURPOSE OF THE STUDY

The Manitoba First Nations Regional Longitudinal Health Study is a joint project of the Assembly of Manitoba Chiefs and the Manitoba First Nations Centre for Aboriginal Health Research at the University of Manitoba. This study is part of a larger national study being conducted by the National Aboriginal Health Organization in First Nation and Inuit communities throughout Canada. The objective of the survey is to develop a better understanding of the many important factors that determine the health of Manitoba First Nations' children, youth and adults. The areas covered in the study include health conditions, dental health, disabilities, general wellbeing, physical activity, health behaviors, non-insured health benefits, health service utilization, residential school issues, housing, environmental health, and other social factors related to health. Information from this study will help assist First Nation policy makers in improving the health of First Nations people through the development of health care programs and policies.

STUDY PROCEDURES

In this study, we will ask to interview you, which would involve asking you a number of questions on your health status, health behaviors, health service utilization, and other factors linked to health. The interviews will take place in the language of your choice. The interviews will be entered into a computer database. We would like to assure you that all information you provide in this interview will be kept strictly confidential and will only be used to create a general picture of health.

As part of this study, we will also seek your permission to link the interview information you provide to government health service utilization databases for the period of April 1985 to March 2020 for adults and to the date of birth for children participating in the survey. The purpose of this linkage is to develop a general picture of what determines health, the use of health care services, and the way doctors and hospitals provide health care to Manitoba First Nations' people. To link the interview information to the health service utilization databases, we will need your full name (First, Middle, and Last Name), address (including postal code), and your personal and family health numbers from your Manitoba Health card. This personal information will be kept separate from the interview data and the health service utilization data to ensure that you will not be identified in any way. We would like to assure you that all personal information you provide would be kept strictly confidential and the linked study information will only be used to develop a general picture of health and health services.

As part of this study, we will also ask you if you would like to be contacted at another time to participate in another wave of this survey and to participate in other research studies. This survey will take place over a twelve-month period (March 2002 to April 2003) and other studies will occur between the years 2003 and 2020. To assist us in contacting you at a later time, we will also ask you to provide your name, address, and phone number, as well as the name of a contact person who may be able to help us contact you in case you move or your telephone number changes. We would like to assure you that all personal information you provide would be kept strictly confidential. The identifying information you provide will be retained in a database from March 2002 to December 2020, which is the duration of the survey. At the conclusion of this project, in December 1, 2020, we will destroy all computer records containing your identifying information.

To ensure that you will not be identified in any way, your name, address, phone number(s), personal health information, and contact information will be kept separate from the interview data and the linked health service utilization database. Access to personal information will be restricted to investigators and research associates only and will be secured electronically and physically from public access. **No staff from First Nation organizations or communities will have direct access to your personal information.** The same confidentiality will apply if students and other researchers later use the data for a research project.

The interview is approximately one hour long. You can stop participating at any time. However, if you decide to stop participating in the study, we encourage you to talk to the research study staff first.

RISKS AND DISCOMFORTS

We will make every effort to make certain that there will be no way that people can identify you in the study. However, we cannot guarantee you absolute confidentiality.

COSTS

The study procedures are conducted at no cost to you. You will receive no direct payment, and you will not receive reimbursement for any expense related to taking part in this study.

BENEFITS

There may or may not be direct benefit to you from participating in this study. When the research is completed, it will help First Nation policy makers and program developers understand the many factors that determine the health of Manitoba First Nations' children, youth, and adults.

PAYMENTS FOR PARTICIPATION

You will receive no payment or reimbursement for any expenses related to taking part in this study.

CONFIDENTIALITY

Information gathered in this research study may be published or presented in public forums; however, your name or other identifying information will not be used or revealed. Despite efforts to keep your personal information confidential, absolute confidentiality cannot be guaranteed. Your personal information may be disclosed if required by law. The University of Manitoba Research Ethics Board may review records related to the study for quality assurance purposes.

VOLUNTARY PARTICIPATION/WITHDRAWAL FROM THE STUDY

Your decision to take part in this study is voluntary. You may refuse to participate or you may withdraw from the study at any time. Your decision not to participate or to withdraw from the study will not affect the health care you receive. If the research study-team and-staff feel that it is in your best interest to withdraw you from the study, they will remove you without your consent. We will also tell you about any new information that may affect your health, welfare, or willingness to stay in this study.

QUESTIONS

You are free to ask any questions that you may have about your rights as a research participant. If any questions come up during or after the study, contact the research team/staff, Brenda Elias from the Manitoba First Nations Centre for Aboriginal Health Research, University of Manitoba at (204) 789-3358.

For questions about your rights as a research participant, you may contact the University of Manitoba, Bannatyne Campus Research Ethics Board at (204) 789-3389.

Do not sign this consent form unless you have had a chance to ask questions and have received satisfactory answers to all of your questions.

STATEMENT OF CONSENT

Youth Participant: (14 years and older)

I have read this consent form. I have had the opportunity to discuss this research study with a staff member or investigator of the research study team. I have had my questions answered by them in the language I understand. The risk and benefits have been explained to me. I understand that I will be given a copy of this consent form after signing it. I understand that my participation in this study is voluntary and that I may choose to withdraw at any time. I freely agree to participate in this research study. I understand that information regarding my personal identity will be kept confidential, but that confidentiality is not guaranteed.

I *(check)* ☐ **consent** to participate in the Manitoba First Nations Regional Longitudinal Health Study.

I *(check one only)* ☐ **consent** ☐ **do not consent** to having the information I provide in the survey linked to personal health information using the personal health number(s) provided.

I *(check one only)* ☐ **consent** ☐ **do not consent** to being contacted at a later time for other studies.

I *(check one only)* ☐ **consent** ☐ **do not consent** to providing the name, address, and phone number of contact people for the study team to contact in the event of a move or if a phone number changes.

I authorize the inspection of any of my records that relate to this study by the University of Manitoba Research Ethics Board for quality assurance purposes.

By signing this consent form, I have not waived any of the legal rights that I have as a participant in a research study.

Youth's Name (please print):	Date Completed:		
	Month	Day	Year
Youth's Signature:			

Consent from the parent or legal guardian and assent for participant who is under the age of <u>FOURTEEN YEARS</u>:

By signing this consent form, I have not waived any of the legal rights that I have or the child as a participant in a research study.

Parent/Legal Guardian's Name (please print):	Date Completed:		
	Month	Day	Year
Parent/Legal Guardian's Signature:			

Research Staff

I, the undersigned, have fully explained the relevant details of this research study to the participant named above and believed that the participant has understood and has knowingly given their consent.

Printed Name:	Date Completed:		
	Month	Day	Year
Signature:			
Role in the Study:			

Appendix – 2

Survey Instrument

Assembly of Manitoba Chiefs

CENTRE for Aboriginal Health RESEARCH

FIRST NATIONS AND INUIT REGIONAL LONGITUDINAL HEALTH SURVEY

MANITOBA FIRST NATIONS REGIONAL LONGITUDINAL HEALTH SURVEY

A joint initiative of the Assembly of Manitoba Chiefs and the Centre for Aboriginal Health Research at the University of Manitoba.

2002 ADOLESCENT SURVEY

(for youth aged 12 to 17 years)

- **Youth aged 12 and 13 years REQUIRE parent/legal guardian consent**
- Youth 14 to 17 years can participate without their parents consent

BECAUSE WHAT YOU THINK MATTERS ...
OUR VOICE, OUR SURVEY, OUR FUTURE

Name of Community ➔	
Community Interviewer ID ➔	mb
Enter Consent ID Number ➔	

B. PERSONAL BACKGROUND INFORMATION

1. Date of birth

DAY ☐☐ MONTH ☐☐ YEAR ☐☐☐☐

If unknown or refused, please give an approximate age	01	☐☐

2. Sex

02 ◯ Male 03 ◯ Female

3. Name of First Nation or Inuit community where you currently live

C. HOUSEHOLD AND LIVING ENVIRONMENT INFORMATION

4. How many rooms are in your home? Include kitchen, bedrooms, living rooms and finished basement rooms. Do not count bathrooms, halls, laundry rooms and attached sheds.

04 ◯ 1	05 ◯ 2	06 ◯ 3	07 ◯ 4	08 ◯ 5
09 ◯ 6	10 ◯ 7	11 ◯ 8	12 ◯ 9	13 ◯ 10
14 ◯ 11	15 ◯ 12	16 ◯ 13 or more	17 ◯ Don't know	18 ◯ Refused

5. Including yourself, how many children and youth usually live in this household?
Include all children under 18 who reside in the household at least half of the time. If none, mark "0".

19 ☐☐ Number of children under 6 years old (5 years and younger)

20 ☐☐ Number of children 6-11 years old

21 ☐☐ Number of children 12-17 years old (less than 18)

22 ☐☐ **Total** (add up 3 numbers above)

23 ◯ Refused

6. **How many adults usually live in this household?**
Include all adults, 18 years and over, who reside in the household at least half of the time.

24 ☐☐ Number of adults 18-64 years of age

25 ☐☐ Number of adults 65 years and over

26 ☐☐ **Total** (add up 2 numbers above)

27 ◯ Refused

7. **Who do you live with most of the time?** *Read the whole list. Check all that apply*

28 ◯ My biological mother (birth mother)
29 ◯ My biological father
30 ◯ The mother that adopted me
31 ◯ The father that adopted me
32 ◯ My stepfather
33 ◯ My stepmother
34 ◯ My foster parent(s)
35 ◯ Aunt/ uncle/ cousins
36 ◯ Brother(s)/ sisters(s)
37 ◯ Step-brother(s)/ step-sister(s)
38 ◯ Unrelated children
39 ◯ Grandparent(s)
40 ◯ I live in a boarding home
41 ◯ A man I am not related to
42 ◯ A woman I am not related to
43 ◯ My child(ren)
44 ◯ My boyfriend/ girlfriend/ spouse
45 ◯ Other (specify) _____
46 ◯ Don't know
47 ◯ Refused

8. **Are your birth (biological) parents**
Check the answer that best describes their situation.

48 ◯ Living together/ married
49 ◯ Not living together / Separated
50 ◯ Don't Know
51 ◯ Living together/ not married
52 ◯ One of my parents is deceased
53 ◯ Refused
54 ◯ Divorced
55 ◯ Both of my parents are deceased

D. LANGUAGE AND TRADITIONAL CULTURE

9. What language do you most often use in daily life?

01	◯	English	02	◯	Mi'kmaq
03	◯	French	04	◯	Mohawk
05	◯	Sign language	06	◯	Montagnais
07	◯	Algonquin	08	◯	Naskapi
09	◯	Assiniboine	10	◯	Nisgà
11	◯	Attikamekw	12	◯	North Slave
13	◯	Blackfoot	14	◯	Ojibway
15	◯	Cayuga	16	◯	Oji-Cree
17	◯	Chipewyan	18	◯	Oneida
19	◯	Chippewa	20	◯	Onondaga
21	◯	Cree	22	◯	Potawatomi
23	◯	Dakota	24	◯	Salish
25	◯	Dogrib	26	◯	Saulteaux
27	◯	Gitksan	28	◯	South Slave
29	◯	Gwich'in	30	◯	Stoney
31	◯	Haida	32	◯	Tuscorora
33	◯	Inuktitut	34	◯	Wet'su'weten
35	◯	Lakota			
36	◯	Malecite			
37	◯	Other (specify)			
38	◯	Other (specify)			

10. How important is it to you to speak your First Nations/ Inuit language?

39	◯	Very important	40	◯	Not important
41	◯	Somewhat important	42	◯	Don't know
43	◯	Not very important	44	◯	Refused

11. What languages do you understand?
Mark all that apply

	Fluently	Relatively well	A few words	Don't understand		Fluently	Relatively well	A few words	Don't understand
English	01 ○	02 ○	03 ○	04 ○	Mi'kmaq	05 ○	06 ○	07 ○	08 ○
French	09 ○	10 ○	11 ○	12 ○	Mohawk	13 ○	14 ○	15 ○	16 ○
Sign language	17 ○	18 ○	19 ○	20 ○	Montagnais	21 ○	22 ○	23 ○	24 ○
Algonquin	25 ○	26 ○	27 ○	28 ○	Naskapi	29 ○	30 ○	31 ○	32 ○
Assiniboine	33 ○	34 ○	35 ○	36 ○	Nisgà	37 ○	38 ○	39 ○	40 ○
Attikamekw	41 ○	42 ○	43 ○	44 ○	North Slave	45 ○	46 ○	47 ○	48 ○
Blackfoot	49 ○	50 ○	51 ○	52 ○	Ojibway	53 ○	54 ○	55 ○	56 ○
Cayuga	57 ○	58 ○	59 ○	60 ○	Oji-Cree	61 ○	62 ○	63 ○	64 ○
Chipewyan	65 ○	66 ○	67 ○	68 ○	Oneida	69 ○	70 ○	71 ○	72 ○
Chippewa	73 ○	74 ○	75 ○	76 ○	Onondaga	77 ○	78 ○	79 ○	80 ○
Cree	81 ○	82 ○	83 ○	84 ○	Potawatomi	85 ○	86 ○	87 ○	88 ○
Dakota	89 ○	90 ○	91 ○	92 ○	Salish	93 ○	94 ○	95 ○	96 ○
Dogrib	97 ○	98 ○	99 ○	100 ○	Saulteaux	101 ○	102 ○	103 ○	104 ○
Gitksan	105 ○	106 ○	107 ○	108 ○	South Slave	109 ○	110 ○	111 ○	112 ○
Gwich'in	113 ○	114 ○	115 ○	116 ○	Stoney	117 ○	118 ○	119 ○	120 ○
Haida	121 ○	122 ○	123 ○	124 ○	Tuscorora	125 ○	126 ○	127 ○	128 ○
Inuktitut	129 ○	130 ○	131 ○	132 ○	Wet'su'weten	133 ○	134 ○	135 ○	136 ○
Malecite	137 ○	138 ○	139 ○	140 ○					

Others (specify)

	141 ○	142 ○	143 ○	144 ○	
	145 ○	146 ○	147 ○	148 ○	

12. What languages do you speak?
Mark all that apply

	Fluently	Relatively well	A few words	Don't understand		Fluently	Relatively well	A few words	Don't understand
English	149 ○	150 ○	151 ○	152 ○	Mi'kmaq	153 ○	154 ○	155 ○	156 ○
French	157 ○	158 ○	159 ○	160 ○	Mohawk	161 ○	162 ○	163 ○	164 ○
Sign language	165 ○	166 ○	167 ○	168 ○	Montagnais	169 ○	170 ○	171 ○	172 ○
Algonquin	173 ○	174 ○	175 ○	176 ○	Naskapi	177 ○	178 ○	179 ○	180 ○
Assiniboine	181 ○	182 ○	183 ○	184 ○	Nisgà	185 ○	186 ○	187 ○	188 ○
Attikamekw	189 ○	190 ○	191 ○	192 ○	North Slave	193 ○	194 ○	195 ○	196 ○
Blackfoot	197 ○	198 ○	199 ○	200 ○	Ojibway	201 ○	202 ○	203 ○	204 ○
Cayuga	205 ○	206 ○	207 ○	208 ○	Oji-Cree	209 ○	210 ○	211 ○	212 ○
Chipewyan	213 ○	214 ○	215 ○	216 ○	Oneida	217 ○	218 ○	219 ○	220 ○
Chippewa	221 ○	222 ○	223 ○	224 ○	Onondaga	225 ○	226 ○	227 ○	228 ○
Cree	229 ○	230 ○	231 ○	232 ○	Potawatomi	233 ○	234 ○	235 ○	236 ○
Dakota	237 ○	238 ○	239 ○	240 ○	Salish	241 ○	242 ○	243 ○	244 ○
Dogrib	245 ○	246 ○	247 ○	248 ○	Saulteaux	249 ○	250 ○	251 ○	252 ○
Gitksan	253 ○	254 ○	255 ○	256 ○	South Slave	257 ○	258 ○	259 ○	260 ○
Gwich'in	261 ○	262 ○	263 ○	264 ○	Stoney	265 ○	266 ○	267 ○	268 ○
Haida	269 ○	270 ○	271 ○	272 ○	Tuscorora	273 ○	274 ○	275 ○	276 ○
Inuktitut	277 ○	278 ○	279 ○	280 ○	Wet'su'weten	281 ○	282 ○	283 ○	284 ○
Malecite	285 ○	286 ○	287 ○	288 ○					

Others (specify)

	289 ○	290 ○	291 ○	292 ○	
	293 ○	294 ○	295 ○	296 ○	

13. How important are traditional cultural events in your life?
Each place has different types of traditional activities and different events are important to different people. Some examples are powwows, sweat lodges, pipe ceremonies and community feasts.

01 ◯ Very important
02 ◯ Not important
03 ◯ Somewhat important
04 ◯ Don't know
05 ◯ Not very important
06 ◯ Refused

14. Who helps you in understanding your culture?
Check all that apply.

07 ◯ My grandparents
08 ◯ My parents
09 ◯ My aunts and uncles
10 ◯ Other relatives
11 ◯ My friends
12 ◯ My school teachers
13 ◯ Community elders
14 ◯ Other community members
15 ◯ Someone else ____
16 ◯ No one
17 ◯ Don't know
18 ◯ Refused

E. EDUCATION

15. Are you currently attending school?

19 ◯ Yes
20 ◯ No → *Go to question 18*
21 ◯ Don't know
22 ◯ Refused

16. What grade are you in?

23 ◯ 4
24 ◯ 5
25 ◯ 6
26 ◯ 7
27 ◯ 8
28 ◯ 9
29 ◯ 10
30 ◯ 11
31 ◯ 12
32 ◯ 13
33 Other (please specify) ____
34 ◯ Don't know
35 ◯ Refused

17. How do you feel about going to school?

I like school very much	I like school somewhat	Unsure	I dislike school somewhat	I dislike school very much	Refused
36 ◯	37 ◯	38 ◯	39 ◯	40 ◯	41 ◯

18. What is the highest level of schooling you have completed?

42 ◯ Pre-K 43 ◯ K 44 ◯ 1 45 ◯ 2 46 ◯ 3
47 ◯ 4 48 ◯ 5 49 ◯ 6 50 ◯ 7 51 ◯ 8
52 ◯ 9 53 ◯ 10 54 ◯ 11 55 ◯ 12 56 ◯ 13
57 Other (please specify) _____
58 ◯ Don't know 59 ◯ Refused

19. Have you ever skipped or advanced a grade, as a result of academic performance?

60 ◯ Yes 61 ◯ No 62 ◯ Don't know 63 ◯ Refused

20. Have you had any problems learning in school?

64 ◯ Yes 65 ◯ No → *Go to Q 22* 66 ◯ Don't know 67 ◯ Refused

21. What kind(s) of problems have you had?
Check all that apply.

68 ◯ Reading 69 ◯ Writing 70 ◯ Don't know
71 ◯ Short attention span 72 ◯ Math 73 ◯ Refused
74 ◯ Too many distractions 75 ◯ Difficulty understanding teacher 76 Other _____

22. Have you ever repeated a grade?

77 ◯ Yes 78 ◯ No 79 ◯ Don't know 80 ◯ Refused

23. What is the highest level of school that you <u>would like</u> to complete?

81 ◯ High school diploma
82 ◯ Doctorate degree (PhD)
83 ◯ College or CEGEP (in Quebec) diploma
84 ◯ Not sure
85 ◯ Trade, technical or vocational school
86 ◯ Refused
87 ◯ University degree
88 ◯ Don't know
89 ◯ Master's degree
90 Other _____

F. GENERAL HEALTH

24. In general, would you say that your health is:

01 ◯ Excellent
02 ◯ Very Good

→ ***If excellent or very good, go Q 25***

03 ◯ Good
04 ◯ Fair
05 ◯ Poor

→ ***If good, fair or poor, go to Q 26***

25. What things make you so healthy?
Mark all that apply.

06 ◯ Good diet (low fat, high fibre, fruits, vegetables, etc)
07 ◯ Regular exercise/ Active in sports
08 ◯ Reduced stress
09 ◯ In balance (physical, emotional, mental, spiritual)
10 ◯ Good social supports (family, friends, co-workers)
11 ◯ Other ☐
12 ◯ Good sleep / Proper rest
13 ◯ Don't' know
14 ◯ Happy, content
15 ◯ Refused

26. How tall are you without shoes on?

16 ☐ Feet 17 ☐ Inches 18 ☐ Centimetres
19 ◯ Don't Know 20 ◯ Refused

27. How much do you weigh?

21 ☐ Pounds 22 ☐ Kilograms
23 ◯ Don't Know 24 ◯ Refused

28. How satisfied are you with your weight?

Very satisfied	Somewhat satisfied	Neither satisfied nor dissatisfied	Somewhat dissatisfied	Very dissatisfied	Don't know	Refused
25 ◯	26 ◯	27 ◯	28 ◯	29 ◯	30 ◯	31 ◯

G. FOOD AND NUTRITION

29. Do you eat a nutritious balanced diet?

32	◯	Always/almost always	33	◯	Never
34	◯	Sometimes	35	◯	Don't know
36	◯	Rarely	37	◯	Refused

30. On average, how often do you eat or drink the following foods:
Choose the answer that best describes the way that you usually eat.

	Never / Hardly ever	Less than once a week	A few times a week	Once a day	Several times a day
Coffee/Tea	38 ◯	39 ◯	40 ◯	◯	41 ◯
Soft Drinks/Pop	42 ◯	43 ◯	44 ◯	◯	45 ◯
Fast food (e.g. burgers, pizza, hotdogs)	46 ◯	47 ◯	48 ◯	◯	49 ◯
Cakes/Pies/Cookies/Candy/Chocolate	50 ◯	51 ◯	52 ◯	◯	53 ◯
French Fries, Potato chips/ Pretzels, Fry Bread, etc.	54 ◯	55 ◯	56 ◯	◯	57 ◯
Added salt (e.g. from salt shaker)	58 ◯	59 ◯	60 ◯	◯	61 ◯
Added sugar (e.g. on cereal or in coffee/tea)	62 ◯	63 ◯	64 ◯	◯	65 ◯

31. In the past 12 months, how often have you eaten the following traditional foods?

	Not at all	A few times	Often
Land based animals (moose, caribou, bear, deer, etc.)	66 ◯	67 ◯	68 ◯
Fresh water fish	69 ◯	70 ◯	71 ◯
Salt water fish	72 ◯	73 ◯	74 ◯
Other water based foods (shellfish, eels, clams, sea weed, urchins, etc.)	75 ◯	76 ◯	77 ◯
Sea-based animals (whale, seal, walrus, etc.)	78 ◯	79 ◯	80 ◯
Game birds (goose, duck, partridge, etc.)	81 ◯	82 ◯	83 ◯
Small game (rabbit, muskrat, etc.)	84 ◯	85 ◯	86 ◯
Berries or other wild vegetation	87 ◯	88 ◯	89 ◯
Bannock / Fry Bread	90 ◯	91 ◯	92 ◯
Corn soup	93 ◯	94 ◯	95 ◯
Don't know	96 ◯	97 ◯	98 ◯
Refused	99 ◯	100 ◯	101 ◯
Other _____	102 ◯	103 ◯	104 ◯
Other _____	105 ◯	106 ◯	107 ◯

32. In the past 12 months, how often did someone share traditional food with your household?

Often	Sometimes	Never	Don't know	Refused
108 ◯	109 ◯	110 ◯	111 ◯	112 ◯

H. PHYSICAL ACTIVITY

33. How often do you participate in any kind of physical activity (either at school, at home, or in your free time)?

01 ◯ Never
02 ◯ Less than once a week
03 ◯ Once a week
04 ◯ 2-3 times a week
05 ◯ 4-6 times a week
06 ◯ Every day
07 ◯ Don't know
08 ◯ Refused

34. In a typical week, how <u>much</u> time do you spend in any kind of physical activity (either at school, home, or in your free time) that results in an increase in your heart rate and breathing?

09 ◯ None
10 ◯ Less than 1 hour
11 ◯ From 1-5 hours
12 ◯ From 6-10 hours
13 ◯ From 11-20 hours
14 ◯ More than 20 hours
15 ◯ Don't know
16 ◯ Refused

35. What types of physical activities have you participated in during the last 12 months?
Read list. Mark all that apply.

17 ◯ Hunting, trapping
18 ◯ Competitive or group sports (e.g. hockey, basketball, baseball, lacrosse, volleyball)
19 ◯ Fishing
20 ◯ Weights, exercise equipment
21 ◯ Bicycle riding
22 ◯ Golf
23 ◯ Walking
24 ◯ Bowling
25 ◯ Aerobics/Fitness class
26 ◯ Canoeing
27 ◯ Dancing (aerobic, traditional, modern etc.)
28 ◯ Martial arts (Karate, Judo etc.)
29 ◯ Running
30 ◯ Skiing
31 ◯ Hiking
32 ◯ Swimming
33 ◯ Skating
34 ◯ Skateboarding
35 ◯ Rollerblading / Inline skating / Rollerskating
36 ◯ Don't know
37 ◯ Berry picking or other food gathering
38 ◯ Refused
39 ◯ Snow-shoeing
40 Other ☐
41 Other ☐
42 Other ☐

I. HEALTH CONDITIONS

36. Have you been told by a health care professional that you have any of the following health conditions?

Only include conditions that have lasted at least 6 months or are expected to last at least 6 months.

Have you been told that you have :	No	Yes	If yes, at what age were you first told (years) ? Age	Are you currently undergoing treatment or taking medication for this condition? No	Yes	Has this limited the kinds of or amount of activity you do? No	Yes
Asthma	01 ○	02 ○	03 ☐☐	04 ○	05 ○	06 ○	07 ○
	Don't Know ○		Don't Know ○	Don't Know ○		Don't Know ○	
	Refused ○		Refused ○	Refused ○		Refused ○	
Have you had an asthma attack in the past 12 months?	08 ○	09 ○					
Chronic Bronchitis	10 ○	11 ○	12 ☐☐	13 ○	14 ○	15 ○	16 ○
	Don't Know ○		Don't Know ○	Don't Know ○		Don't Know ○	
	Refused ○		Refused ○	Refused ○		Refused ○	
Allergies	17 ○	18 ○	19 ☐☐	20 ○	21 ○	22 ○	23 ○
	Don't Know ○		Don't Know ○	Don't Know ○		Don't Know ○	
	Refused ○		Refused ○	Refused ○		Refused ○	
Blindness or other serios vision problem (can't be corrected with glasses).....	24 ○	25 ○	26 ☐☐	27 ○	28 ○	29 ○	30 ○
	Don't Know ○		Don't Know ○	Don't Know ○		Don't Know ○	
	Refused ○		Refused ○	Refused ○		Refused ○	
Chronic ear infectionsor ear problems	31 ○	32 ○	33 ☐☐	34 ○	35 ○	36 ○	37 ○
	Don't Know ○		Don't Know ○	Don't Know ○		Don't Know ○	
	Refused ○		Refused ○	Refused ○		Refused ○	
Hearing Impairment	38 ○	39 ○	40 ☐☐	41 ○	42 ○	43 ○	44 ○
	Don't Know ○		Don't Know ○	Don't Know ○		Don't Know ○	
	Refused ○		Refused ○	Refused ○		Refused ○	
Difficulty hearing conversation with one person	45 ○	46 ○					
Hepatitis	47 ○	48 ○	49 ☐☐	50 ○	51 ○	52 ○	53 ○
	Don't Know ○		Don't Know ○	Don't Know ○		Don't Know ○	
	Refused ○		Refused ○	Refused ○		Refused ○	

What type of hepatitis?	Type A	Type B	Type C	Don't Know
	54 ○	55 ○	56 ○	57 ○

HIV/AIDS	58 ○	59 ○	60 ☐☐	61 ○	62 ○	63 ○	64 ○
	Don't Know ○		Don't Know ○	Don't Know ○		Don't Know ○	
	Refused ○		Refused ○	Refused ○		Refused ○	
Tuberculosis (TB)	65 ○	66 ○	67 ☐☐	68 ○	69 ○	70 ○	71 ○

Have you been told that you have :	No	Yes	If yes, at what age were you first told (years) ? Age	Are you currently undergoing treatment or taking medication for this condition? No	Yes	Has this limited the kinds of or amount of activity you do? No	Yes
	Don't Know ○ Refused ○		Don't Know ○ Refused ○	Don't Know ○ Refused ○		Don't Know ○ Refused ○	
Is your tuberculosis active or inactive?	**Active** 72 ○	**Inactive** 73 ○	**Don't Know** 74 ○				
Epilepsy	75 ○	76 ○	77 ☐☐	78 ○	79 ○	80 ○	81 ○
	Don't Know ○ Refused ○		Don't Know ○ Refused ○	Don't Know ○ Refused ○		Don't Know ○ Refused ○	
Psychological or nervous disorders	82 ○	83 ○	84 ☐☐	85 ○	86 ○	87 ○	88 ○
	Don't Know ○ Refused ○		Don't Know ○ Refused ○	Don't Know ○ Refused ○		Don't Know ○ Refused ○	
Learning disability	89 ○	90 ○	91 ☐☐	92 ○	93 ○	94 ○	95 ○
	Don't Know ○ Refused ○		Don't Know ○ Refused ○	Don't Know ○ Refused ○		Don't Know ○ Refused ○	
Cognitive or mental disability	96 ○	97 ○	98 ☐☐	99 ○	100 ○	101 ○	102 ○
	Don't Know ○ Refused ○		Don't Know ○ Refused ○	Don't Know ○ Refused ○		Don't Know ○ Refused ○	
Attention deficit disorder/Attention deficit hyperactivity disorder (ADD/ADHD)	103 ○	104 ○	105 ☐☐	106 ○	107 ○	108 ○	109 ○
	Don't Know ○ Refused ○		Don't Know ○ Refused ○	Don't Know ○ Refused ○		Don't Know ○ Refused ○	
Cerebral palsy	110 ○	111 ○	112 ☐☐	113 ○	114 ○	115 ○	116 ○
	Don't Know ○ Refused ○		Don't Know ○ Refused ○	Don't Know ○ Refused ○		Don't Know ○ Refused ○	
Physical disability other than cerebral palsy	117 ○	118 ○	119 ☐☐	120 ○	121 ○	122 ○	123 ○
	Don't Know ○ Refused ○		Don't Know ○ Refused ○	Don't Know ○ Refused ○		Don't Know ○ Refused ○	
Liver disease	124 ○	125 ○	126 ☐☐	127 ○	128 ○	129 ○	130 ○
	Don't Know ○ Refused ○		Don't Know ○ Refused ○	Don't Know ○ Refused ○		Don't Know ○ Refused ○	
Kidney disease	131 ○	132 ○	133 ☐☐	134 ○	135 ○	136 ○	137 ○
	Don't Know ○ Refused ○		Don't Know ○ Refused ○	Don't Know ○ Refused ○		Don't Know ○ Refused ○	
Diabetes **(if no, go to Q. 39)**	138 ○	139 ○	140 ☐☐	141 ○	142 ○	143 ○	144 ○
	Don't Know ○ Refused ○		Don't Know ○ Refused ○	Don't Know ○ Refused ○		Don't Know ○ Refused ○	
Other ☐	145 ○	146 ○	147 ☐☐	148 ○	149 ○	150 ○	151 ○
	Don't Know ○ Refused ○		Don't Know ○ Refused ○	Don't Know ○ Refused ○		Don't Know ○ Refused ○	

Have you been told that you have :			If yes, at what age were you first told (years) ?		Are you currently undergoing treatment or taking medication for this condition?		Has this limited the kinds of or amount of activity you do?	
	No	Yes	Age		No	Yes	No	Yes
Other [ ]	152 ○	153 ○	154 [ ][ ]		155 ○	156 ○	157 ○	158 ○
	Don't Know ○		Don't Know ○		Don't Know ○		Don't Know ○	
	Refused ○		Refused ○		Refused ○		Refused ○	

if you have been told you have diabetes, go to Q 37 if not, go to Q 39.

37. Which type(s) of diabetes have you been diagnosed with in your lifetime?
Include all diagnoses you have received. Refer to definitions below, if necessary.

01 ○ Type 1 02 ○ Pre-diabetic state 03 ○ Don't know

04 ○ Type 2 05 ○ Gestational 06 ○ Refused

Type 1 diabetes (previously known as insulin-dependent diabetes) typically occurs in childhood or adolescence and requires multiple daily injections for survival. Insulin treatment begins immediately after diagnosis.

Type 2 diabetes (previously known as non-insulin dependent diabetes) usually begins after age 30. Type 2 diabetes is more common in First Nation and Inuit populations. There are risk factors for this type of diabetes such as obesity and lack of exercise. This type of diabetes can be prevented and effectively managed by eating healthy foods and engaging in regular exercise.

Gestational diabetes: is limited to pregnancy.

Pre-diabetic state: includes impaired fasting glucose and impaired glucose intolerance. Both are determined by tests that reveal high blood glucose levels. The levels are not high enough to be diagnosed as type 1 or type 2 diabetes. This is sometime referred to as "borderline" diabetes.

38. What kind of treatment or medicine, if any, are you taking to control your diabetes?
Check all that apply.

		Yes		No		Don't Know		Refused	
Traditional ceremonies, help from healer	07	◯	08	◯	09	◯	10	◯
Diet	11	◯	12	◯	13	◯	14	◯
Exercise	15	◯	16	◯	17	◯	18	◯
Traditional medicines	19	◯	20	◯	21	◯	22	◯
Insulin	23	◯	24	◯	25	◯	26	◯
Pills	27	◯	28	◯	29	◯	30	◯
Other	31							
No Treatment or Medicine	33	◯	34	◯	35	◯	36	◯

J. PHYSICAL INJURIES

39. In the past 12 months, have you experienced any of the following injuries <u>that required the attention of a health care professional</u>?
Check an answer for each type.

		Yes		No
Broken or fractured bones	01	◯	02	◯
Burns or scalds	03	◯	04	◯
Dislocation	05	◯	06	◯
Sprain or strain (major)	07	◯	08	◯
Cuts, scrapes, or bruises (major)	09	◯	10	◯
Concussion	11	◯	12	◯
Poisoning	13	◯	14	◯
Injury to internal organ	15	◯	16	◯
Dental injury	17	◯	18	◯
Hypothermia, frostbite, other injury due to cold exposure	19	◯	20	◯
Other	21			

40. What were the cause(s) of this injury (or injuries)?
Check all that apply.

Causes:	No	Yes	If yes, was it was alcohol or drug related? Yes	No	Don't know	Refused
Motor vehicle accident (car or truck): driver or passenger	22 ○	23 ○	24 ○	25 ○	26 ○	27 ○
Motor vehicle accident: pedestrian	28 ○	29 ○	30 ○	31 ○	32 ○	33 ○
Motor vehicle accident: while riding a bicycle	34 ○	35 ○	36 ○	37 ○	38 ○	39 ○
Other bicycle accident	40 ○	41 ○	42 ○	43 ○	44 ○	45 ○
Snowmobile accident	46 ○	47 ○	48 ○	49 ○	50 ○	51 ○
ATV (all terrain vehicle) accident	52 ○	53 ○	54 ○	55 ○	56 ○	57 ○
Hunting accident	58 ○	59 ○	60 ○	61 ○	62 ○	63 ○
Boating accident	64 ○	65 ○	66 ○	67 ○	68 ○	69 ○
Fall or trip (not including bicycle, sport or snowmobile)	70 ○	71 ○	72 ○	73 ○	74 ○	75 ○
Sport (not including bicycle or hunting)	76 ○	77 ○	78 ○	79 ○	80 ○	81 ○
Physical assault	82 ○	83 ○	84 ○	85 ○	86 ○	87 ○
Suicide attempt or self-inflicted injury	88 ○	89 ○	90 ○	91 ○	92 ○	93 ○
Dog bite	94 ○	95 ○	96 ○	97 ○	98 ○	99 ○
Bite by animal other than dog	100 ○	101 ○	102 ○	103 ○	104 ○	105 ○
Fire or flames or resulting fumes	106 ○	107 ○	108 ○	109 ○	110 ○	111 ○
Scalded by hot liquid or food	112 ○	113 ○	114 ○	115 ○	116 ○	117 ○
Natural environmental factors (sting, frostbite, etc.)	118 ○	119 ○	120 ○	121 ○	122 ○	123 ○
Near drowning	124 ○	125 ○	126 ○	127 ○	128 ○	129 ○
Asphyxia or other threats to breathing	130 ○	131 ○	132 ○	133 ○	134 ○	135 ○
Accidental poisoning	136 ○	137 ○	138 ○	139 ○	140 ○	141 ○
Other [ ]	142 ○	143 ○	144 ○	145 ○	146 ○	147 ○

L. LIFESTYLE

46. Have you used any of the following substances in the last 12 months (without a prescription)?
*For each, please select the answer that **best describes** your situation.*

Have you ever used:		Never	About 2-3 times a year	About once per month	About 2-3 times a month	About 2-3 times a week	About once a day	Refused
Chewing tobacco	59	◯	60 ◯	61 ◯	62 ◯	63 ◯	64 ◯	65 ◯
Marijuana (weed, grass)/ Hash	66	◯	67 ◯	68 ◯	69 ◯	70 ◯	71 ◯	72 ◯
PCP/ Angel dust	73	◯	74 ◯	75 ◯	76 ◯	77 ◯	78 ◯	79 ◯
Acid/ LSD/ Amphetamines	80	◯	81 ◯	82 ◯	83 ◯	84 ◯	85 ◯	86 ◯
Ecstasy	87	◯	88 ◯	89 ◯	90 ◯	91 ◯	92 ◯	93 ◯
Inhalants (glue, gas, paint)	94	◯	95 ◯	96 ◯	97 ◯	98 ◯	99 ◯	100 ◯
Sedatives/ Downers (Valium etc)	101	◯	102 ◯	103 ◯	104 ◯	105 ◯	106 ◯	107 ◯
Cocaine/Crack/Freebase	108	◯	109 ◯	110 ◯	111 ◯	112 ◯	113 ◯	114 ◯
Codeine/ Morphine/ Opiates (Percodan, Tylenol 3 etc.)	115	◯	116 ◯	117 ◯	118 ◯	119 ◯	120 ◯	121 ◯
Heroin	122	◯	123 ◯	124 ◯	125 ◯	126 ◯	127 ◯	128 ◯

47. During the past 12 months, have you had a drink of beer, wine, liquor or any other alcoholic beverage?
One drink includes one beer, or one glass of wine, or one shot (ounce) of hard liquor.

56 ◯ Yes 57 ◯ No → Go to Q 49 58 ◯ Don't know 59 ◯ Refused

48. During the past year, how often have you had 5 or more drinks on one occasion?
One drink includes one beer, or one glass of wine, or one shot (ounce) of hard liquor.

60 ◯ Never 61 ◯ Less than once per month
62 ◯ Once per month 63 ◯ 2-3 times per month
64 ◯ Once per week 65 ◯ More than once per week
66 ◯ Every day 67 ◯ Refused

49. At the present time, do you smoke cigarettes daily, occasionally or not at all?

68 ◯ Not at all → *Go to question 53.*

69 ◯ Daily

70 ◯ Occasionally

71 ◯ Refused

50. On average, how many cigarettes do you currently smoke each day?
Write in a number, even if approximate

72 ☐☐ *Number of cigarettes*

51. At what age did you begin smoking cigarettes?

73 ☐☐ *Age in years*

52. In the past 12 months, how many times have you tried to quit smoking?

74 ◯ 0 (never tried to quit)

75 ◯ 5 or more tries

76 ◯ 1-2 tries

77 ◯ Don't know

78 ◯ 3-4 tries

79 ◯ Refused

Skip to Question 57

53. Have you ever smoked cigarettes daily?

80 ◯ Yes ⟶ *Go to next question, 54*

81 ◯ No ⟶ *Go to question 57*

82 ◯ Don't know

83 ◯ Refused

54. At what age did you begin smoking cigarettes?

84 ☐☐ *Age in years.*

55. At what age did you quit smoking cigarettes?

85 ☐☐ *Age in years*

56. What were your reasons for quitting smoking?
Read the options and mark each response that applies

86 ◯ Respect for the cultural and traditional significance of tobacco

87 ◯ Chose a healthier lifestyle

88 ◯ Health condition

89 ◯ Doctor's orders

90 ◯ Peer pressure from friends or co-workers

91 ◯ Out of respect for loved ones

92 ◯ Greater awareness / education on ill effects of tobacco on my health

93 ◯ Pregnancy

94 ◯ Other

57. Do you have a smoke free home?

95 ◯ Yes 96 ◯ No 97 ◯ Don't know 98 ◯ Refused

The next questions ask about sex and birth control. These questions are being asked of people of different ages in various situations. They may not be about you.

58. Are you sexually active?

99 ◯ Yes 100 ◯ No 101 ◯ Refused

59. Have you had sexual intercourse in the last 12 months?

102 ◯ Yes 103 ◯ No → *Go to Q 65* 104 ◯ Don't know 105 ◯ Refused

60. How many people have you had sexual intercourse with in the past 12 months?

106 ◯ None 107 ◯ 7-10
108 ◯ 1-2 109 ◯ 11 or more
110 ◯ 3-4 111 ◯ Don't know
112 ◯ 5-6 113 ◯ Refused

61. Which of the following birth control or protection methods do you and/or your partner(s) use?
Read list. Check all that apply

114 ◯ Withdrawal 115 ◯ Rhythm (natural family planning)
116 ◯ Condom 117 ◯ IUD
118 ◯ Birth control pills 119 ◯ I/we don't use any (none) → *Go to Q 63*
120 ◯ Diaphragm 121 ◯ Other (specify) ☐
122 ◯ Sponges 123 ◯ Don't know
124 ◯ Depo Provera 125 ◯ Refused
126 ◯ Foam

62. What do you use that/those methods for?

127 ◯ Birth control (to avoid pregnancy)

128 ◯ Protection from sexually transmitted diseases including HIV/AIDS

129 ◯ Both (birth control and protection from sexually transmitted diseases including HIV/AIDS

130 ◯ Other (specify)

131 ◯ Don't' know

132 ◯ Refused

63. Do you use condoms to avoid getting sexually- transmitted diseases, like HIV or gonorrhea?

133 ◯ Always ⟶ *Go to 65*

134 ◯ Most of the time

135 ◯ Occasionally

136 ◯ Never

137 ◯ Refused

64. What is the main reason for not always using condoms?
Check the answer that best describes your situation.

138 ◯ Your partner did not want to use one

139 ◯ You did not want to use one

140 ◯ You were under the influence of alcohol or drugs

141 ◯ You do not have the HIV/ AIDS virus

142 ◯ Your partner does not have the HIV/ AIDS virus

143 ◯ You were with your steady partner

144 ◯ You (or your partner) wanted to get pregnant

145 ◯ You did not have a condom at the time

146 ◯ You could not afford to buy any condoms

147 ◯ You could not obtain condoms where you were

148 ◯ You were too embarrassed to get condoms

149 ◯ You did not think of using a condom

150 ◯ You could not talk to your partner about protection

151 ◯ You find condoms painful

152 ◯ You or your partner allergic to latex condoms

153 ◯ You thought you were safe

154 ◯ Religious reasons

155 ◯ Don't know

156 Other _____

157 ◯ Refused

65. Have you ever been pregnant or got someone pregnant?

158 ◯ Yes → **66. If yes, how old were you the first time?** 159 ☐☐ Years old

160 ◯ No

161 ◯ Don't Know

162 ◯ Refused

67. How many children have you given birth to or fathered?
If none, write "0".

163 ☐ Number of children

M. PERSONAL WELLNESS AND SUPPORT

68. Outside of school hours, how often do you:

	Never	Less than once per week	1-3 times per week	4 + times per week	Not Applicable
Take part in sports teams or lessons	01 ◯	02 ◯	03 ◯	04 ◯	05 ◯
Take part in art or music groups or lessons	06 ◯	07 ◯	08 ◯	09 ◯	10 ◯
Take part in traditional singing, drumming or dancing groups or lessons	11 ◯	12 ◯	13 ◯	14 ◯	15 ◯
Have a job such as baby-sitting, working at a store, tutoring?	16 ◯	17 ◯	18 ◯	19 ◯	20 ◯

69. On average, about how many hours per day do you:

	Not at all or less than 1 hour	1 to 2 hours	3 to 5 hours	6 hours or more	Don't know	Refused
Watch T.V.	21 ◯	22 ◯	23 ◯	24 ◯	25 ◯	26 ◯
Play video games	27 ◯	28 ◯	29 ◯	30 ◯	31 ◯	32 ◯
Use computer (other than video games)	33 ◯	34 ◯	35 ◯	36 ◯	37 ◯	38 ◯
Spend time outdoors	39 ◯	40 ◯	41 ◯	42 ◯	43 ◯	44 ◯
Assist in household chores	45 ◯	46 ◯	47 ◯	48 ◯	49 ◯	50 ◯

70. How often do you feel that you are in balance in the physical, emotional, mental and spiritual aspects of your life?
Please check a response for each aspect.

	All of the time	Most of the time	Some of the time	Almost none of the time	Don't know	Refused
Physical	51 ◯	52 ◯	53 ◯	54 ◯	55 ◯	56 ◯
Emotional.....	57 ◯	58 ◯	59 ◯	60 ◯	61 ◯	62 ◯
Mental.....	63 ◯	64 ◯	65 ◯	66 ◯	67 ◯	68 ◯
Spiritual.....	69 ◯	70 ◯	71 ◯	72 ◯	73 ◯	74 ◯

71. Please indicate how strongly you agree or disagree with the following statements:
Please check a response for each sentence.

	Strongly agree	Agree	Neither Agree nor disagree	Disagree	Strongly disagree	Don't know	Refused
In general, I like the way I am.....	75 ◯	76 ◯	77 ◯	78 ◯	79 ◯	80 ◯	81 ◯
Overall, I have a lot to be proud of	82 ◯	83 ◯	84 ◯	85 ◯	86 ◯	87 ◯	88 ◯
A lot of things about me are good.....	89 ◯	90 ◯	91 ◯	92 ◯	93 ◯	94 ◯	95 ◯
When I do something, I do it well.....	96 ◯	97 ◯	98 ◯	99 ◯	100 ◯	101 ◯	102 ◯

72. Please indicate how strongly you agree or disagree with the following statements:
Please check a response for each sentence.

	Strongly agree	Agree	Neither Agree nor disagree	Disagree	Strongly disagree	Don't know	Refused
I can solve the problems that I have.....	01 ◯	02 ◯	03 ◯	04 ◯	05 ◯	06 ◯	07 ◯
No one pushes me around in life.....	08 ◯	09 ◯	10 ◯	11 ◯	12 ◯	13 ◯	14 ◯
I have control over the things that happen to me	15 ◯	16 ◯	17 ◯	18 ◯	19 ◯	20 ◯	21 ◯
I can do just about anything I really set my mind to.....	22 ◯	23 ◯	24 ◯	25 ◯	26 ◯	27 ◯	28 ◯
I often feel helpless in dealing with the problems of life	29 ◯	30 ◯	31 ◯	32 ◯	33 ◯	34 ◯	35 ◯
What happens to me in the future mostly depends on me	36 ◯	37 ◯	38 ◯	39 ◯	40 ◯	41 ◯	42 ◯
There is little I can do to change to many of the important things in my life ..	43 ◯	44 ◯	45 ◯	46 ◯	47 ◯	48 ◯	49 ◯

73. Please indicate your level of agreement with the following questions:
Please check a response for each sentence.

	Not at all	A little	Moderately	Quite a bit	A lot	Don't know	Refused
How lonely do you feel? ..	50 ◯	51 ◯	52 ◯	53 ◯	54 ◯	55 ◯	56 ◯
How loved do you feel? ...	57 ◯	58 ◯	59 ◯	60 ◯	61 ◯	62 ◯	63 ◯
How stressed do you feel?.....	64 ◯	65 ◯	66 ◯	67 ◯	68 ◯	69 ◯	70 ◯

74. In the past 12 months, have you seen or talked on the telephone about your emotional or mental health to any of the following:

	Yes	No	Don't know	Refused
Friend	71 ◯	72 ◯	73 ◯	74 ◯
Immediate family member	75 ◯	76 ◯	77 ◯	78 ◯
Other family member	79 ◯	80 ◯	81 ◯	82 ◯
Traditional healer	83 ◯	84 ◯	85 ◯	86 ◯
Family doctor	87 ◯	88 ◯	89 ◯	90 ◯
Psychiatrist	91 ◯	92 ◯	93 ◯	94 ◯
CHR (community health representative)	95 ◯	96 ◯	97 ◯	98 ◯
Nurse	99 ◯	100 ◯	101 ◯	102 ◯
Counsellor	103 ◯	104 ◯	105 ◯	106 ◯
Psychologist	107 ◯	108 ◯	109 ◯	110 ◯
Social worker	111 ◯	112 ◯	113 ◯	114 ◯
Crisis line worker	115 ◯	116 ◯	117 ◯	118 ◯
Other	119 ◯	120 ◯	121 ◯	122 ◯

75. Have you ever thought about committing suicide?

01 ◯ Yes, when I was under 12 years of age

02 ◯ Yes, when I was an adolescent (12-17 years of age)

03 ◯ Yes, during the past year

04 ◯ Never

05 ◯ Don't know

06 ◯ Refused

76. Have you ever attempted suicide?

07 ◯ Yes, when I was under 12 years of age

08 ◯ Yes, when I was an adolescent (12-17 years of age)

09 ◯ Yes, during the past year

10 ◯ Never

11 ◯ Don't know

12 ◯ Refused

77. In the past 12 months, has a close friend or family member committed suicide?

13 ◯ Yes 14 ◯ No 15 ◯ Don't know 16 ◯ Refused

78. During the past 12 months, was there ever a time when you felt sad, blue or depressed for 2 weeks or more in a row?

17 ◯ Yes 18 ◯ No 19 ◯ Don't know 20 ◯ Refused

79. People sometimes look to others for companionship, assistance, guidance or other types of support. Could you tell me how often each of the following kinds of support is available to you when you need them.

Mark one response for each item.

	All of the time	Most of the time	Some of the time	Almost none of the time	Refused
Someone you can count on to listen to you talk when you need to talk	01 ◯	02 ◯	03 ◯	04 ◯	05 ◯
Someone you can count on when you need help	06 ◯	07 ◯	08 ◯	09 ◯	10 ◯
Someone to take you to the doctor if you needed it	11 ◯	12 ◯	13 ◯	14 ◯	15 ◯
Someone who shows you love and affection	16 ◯	17 ◯	18 ◯	19 ◯	20 ◯
Someone who can give you a break from your daily routines	21 ◯	22 ◯	23 ◯	24 ◯	25 ◯
Someone to have a good time with	26 ◯	27 ◯	28 ◯	29 ◯	30 ◯
Someone to confide in or talk about yourself or your problems	31 ◯	32 ◯	33 ◯	34 ◯	35 ◯
Someone to do something enjoyable with	36 ◯	37 ◯	38 ◯	39 ◯	40 ◯

80. Who would you go to <u>first</u> for help if you had a problem with:
Check only one answer for each problem.

	Parent/ Guardian	Other family member	Friends my age	Adult friend	Traditional healer	Doctor/ Nurse/ Health aide	Principal / School counsellor / Teacher	Other	No one	Don't Know	Refused
Family problems	01 ○	02 ○	03 ○	04 ○	05 ○	06 ○	07 ○	08 ○	09 ○	10 ○	11 ○
Relationships boyfriend/ girlfriend	12 ○	13 ○	14 ○	15 ○	16 ○	17 ○	18 ○	19 ○	20 ○	21 ○	22 ○
Financial problems	23 ○	24 ○	25 ○	26 ○	27 ○	28 ○	29 ○	30 ○	31 ○	32 ○	33 ○
Drugs/ Alcohol	34 ○	35 ○	36 ○	37 ○	38 ○	39 ○	40 ○	41 ○	42 ○	43 ○	44 ○
Anger/ Feeling out of control	45 ○	46 ○	47 ○	48 ○	49 ○	50 ○	51 ○	52 ○	53 ○	54 ○	55 ○
Depression	56 ○	57 ○	58 ○	59 ○	60 ○	61 ○	62 ○	63 ○	64 ○	65 ○	66 ○
Problem with friends	67 ○	68 ○	69 ○	70 ○	71 ○	72 ○	73 ○	74 ○	75 ○	76 ○	77 ○
Sexual/ Physical assault	78 ○	79 ○	80 ○	81 ○	82 ○	83 ○	84 ○	85 ○	86 ○	87 ○	88 ○
Sexually transmitted diseases	89 ○	90 ○	91 ○	92 ○	93 ○	94 ○	95 ○	96 ○	97 ○	98 ○	99 ○
Birth control	100 ○	101 ○	102 ○	103 ○	104 ○	105 ○	106 ○	107 ○	108 ○	109 ○	110 ○
Pregnancy	111 ○	112 ○	113 ○	114 ○	115 ○	116 ○	117 ○	118 ○	119 ○	120 ○	121 ○

N. RESIDENTIAL SCHOOLS

Residential schools— also referred to as boarding or industrial schools— are the federal and church run institutions that many Aboriginal children attended across Canada between 1860 and 1974.

81. Was your mother or father ever a student of a residential school?

	Yes	No	Don't know	Refused
Mother.....	01 ◯	02 ◯	03 ◯	04 ◯
Father	05 ◯	06 ◯	07 ◯	08 ◯

82. Were any of your grandparents students of a residential school?

	Yes	No	Don't know	Refused
Mother's mother.....	09 ◯	10 ◯	11 ◯	12 ◯
Mother's father.....	13 ◯	14 ◯	15 ◯	16 ◯
Father's mother.....	17 ◯	18 ◯	19 ◯	20 ◯
Father's father.....	21 ◯	22 ◯	23 ◯	24 ◯

83. Are there other issues affecting the well-being of teens in this community that should be asked about?

MANITOBA REGIONAL YOUTH SURVEY SUPPLEMENT © CAHR-AMC 2002

This section was specifically designed for Manitoba First Nations population in order to develop a holistic view of health and regional priorities.

YOUTH STRENGTH (RESILIENCY)

The following statements ask you about the people in your life and the things they do for you. For each statement, mark to show whether you feel that it is not at all true, a little true, pretty much true, or very much true.

1. **I have a friend about my own age...** (Mark one response for each statement)

	Not at all true	A little true	Pretty much true	Very Much true	Refused
who really cares about me.	O	O	O	O	O
who talks with me about my problems.	O	O	O	O	O
who jokes around with me.	O	O	O	O	O
who helps me when I'm having a hard time.	O	O	O	O	O
who makes me laugh	O	O	O	O	O
who teases me too much	O	O	O	O	O

2. **In my home, there is a parent or other adult...** (Mark one response for each statement)

	Not at all true	A little true	Pretty much true	Very much true	Refused
who expects me to follow the rules.	O	O	O	O	O
who is interested in my school work.	O	O	O	O	O
who believes that I will be a success.	O	O	O	O	O
who is too busy to pay much attention to me.	O	O	O	O	O
who talks with me about my problems.	O	O	O	O	O
who always wants me to do my best.	O	O	O	O	O
who listens to me when I have something to say.	O	O	O	O	O
who makes me laugh.	O	O	O	O	O

3. **Please continue to mark how true you feel the statements below are for you.** (Mark one response for each statement)

	Not at all true	A little true	Pretty much true	Very much true	Refused
I feel bad when someone gets their feelings hurt.	O	O	O	O	O
I do fun things or go fun places with my parents or other adults.	O	O	O	O	O
I try to understand what other people go through.	O	O	O	O	O
When I need help, I find someone to talk with.	O	O	O	O	O
Some kids I know hang out in a gang	O	O	O	O	O

	Not at all true	A little true	Pretty much true	Very much true	Refused
I know where to go for help with a problem	O	O	O	O	O
I try to work out problems by talking or writing about them.	O	O	O	O	O
My friends get into a lot of trouble.	O	O	O	O	O
I do interesting activities at school.	O	O	O	O	O
My friends try to do what is right.	O	O	O	O	O
I do things at home that make a difference.	O	O	O	O	O
My friends do well in school.	O	O	O	O	O
I help make decisions with my family.	O	O	O	O	O
At school, I help decide things like class activities or rules.	O	O	O	O	O
I do things in my community that make a difference.	O	O	O	O	O

4. **Please continue to mark how true you feel the statements below are for you. Outside of my home, there is an adult...** (Mark one response for each statement)

	Not at all true	A little true	Pretty much true	Very much true	Refused
who really cares about me.	O	O	O	O	O
who tells me when I do a good job.	O	O	O	O	O
who notices when I am upset about something.	O	O	O	O	O
who believes that I will be a success.	O	O	O	O	O
who always wants me to do my best.	O	O	O	O	O
whom I trust.	O	O	O	O	O

5. **In school, there is or was a teacher or some other adult...** (Mark one response for each statement)

	Not at all true	A little true	Pretty much true	Very much true	Refused
who really did care about me.	O	O	O	O	O
who told me when I did a good job.	O	O	O	O	O
who noticed when I'm not there.	O	O	O	O	O
who was mean to me.	O	O	O	O	O
who always wanted me to do my best.	O	O	O	O	O
who listened to me when I had something to say.	O	O	O	O	O
who believed that I will be a success.	O	O	O	O	O
who made me laugh.	O	O	O	O	O

6. **Please continue to mark how true you feel the statements below are for you.** (Mark one response for each statement)

	Not at all true	A little true	Pretty much true	Very much true	Refused
I can work out my problems.	O	O	O	O	O
I can do most things if I try.	O	O	O	O	O
I can work with someone who has different opinions than mine.	O	O	O	O	O
There are many things that I do well.	O	O	O	O	O
I enjoy working together with other students my age.	O	O	O	O	O
I stand up for myself without putting others down.	O	O	O	O	O
I try to understand how other people feel and think.	O	O	O	O	O
I feel like I am all alone in the world.	O	O	O	O	O
There is a purpose to my life.	O	O	O	O	O
I understand my moods and feelings.	O	O	O	O	O
I understand why I do what I do.	O	O	O	O	O
I am part of clubs, sports teams, church, or other group activities	O	O	O	O	O
Outside of my home, I participate in music, art, sports, hobbies, or traditional activities.	O	O	O	O	O
Outside of my home, I help other people.	O	O	O	O	O
I am confused about what I want out of life.	O	O	O	O	O
I have goals and plans for the future.	O	O	O	O	O
I plan to graduate from high school.	O	O	O	O	O
I plan to go to college or some other school after high school.	O	O	O	O	O

7. **Please continue to mark how true you feel the statements below are for you.** (Mark one response for each statement)

	Not at all true	A little true	Pretty much true	Very much true	Refused
All the different families in this community get along.	O	O	O	O	O
Youth in this community help the elders.	O	O	O	O	O
Only some families in this community are willing to help other families.	O	O	O	O	O
I trust the people who live next door.	O	O	O	O	O
People respect other people in this community.	O	O	O	O	O
Some people living in my community have problems trusting other community people.	O	O	O	O	O
Families in this community teach the youth how to trust.	O	O	O	O	O
People of this community make sure the youth get involved in community activities.	O	O	O	O	O
Men in this community work hard to make the community a better place to live	O	O	O	O	O
The elders in our community care about the future of the youth.	O	O	O	O	O
Women in this community work hard at making the community a better place to live.	O	O	O	O	O
Youth in this community work hard to make the community a better place to live.	O	O	O	O	O
My community has a lot of activities to keep youth busy.	O	O	O	O	O

8. **Please continue to mark how true you feel the statements below are for you.** (Mark one response for each statement)

	Not at all true	A little true	Pretty much true	Very much true	Refused
Overall, I think people in this Community are happy.	O	O	O	O	O
People here are not very proud of who they are.	O	O	O	O	O
My family is happy living in this community.	O	O	O	O	O
My friends do not like living in this community.	O	O	O	O	O
Overall, I like living in this community.	O	O	O	O	O
There is no gang activity in my community.	O	O	O	O	O
My community is a safe place to live.	O	O	O	O	O
Some people in my community break things of other people.	O	O	O	O	O
Some people in my community use illegal drugs.	O	O	O	O	O
Some people physically hurt other people in my community.	O	O	O	O	O
Some people steal from other people in this community	O	O	O	O	O
I trust the people in this community will not hurt me.	O	O	O	O	O
There are some people who sell drugs in my community.	O	O	O	O	O
Not many youth get into trouble in this community.	O	O	O	O	O

9. **Overall, do you feel your community is a safe place to bring up children? Is it ...** (Mark one response only).

- O always a safe place to bring up children
- O safe most of the time
- O never safe to bring up children
- O Don't know
- O Refused

WELLNESS

10. **Overall, would you say are ...** (Mark one response only)

O Extremely happy, delighted with life
O Generally happy and interested in life
O Somewhat happy
O Generally unhappy with little interest in life
O Feeling so unhappy that life is not worthwhile
O refused

11. **How would you describe your usual ability to think or solve day-to-day problems?** (Read list and mark one response only).

O Able to think clearly and solve problems
O Having a little difficulty
O Have some difficulty
O Have a great deal of difficulty
O Unable to think or solve problems?
O Refused

12. **Are you usually free of pain or discomfort?** (Mark one response only).

O Yes O No O Refused

13. **In the past year, approximately how many times have you seen or talked with any of the following about a physical, spiritual, emotional or mental health problem?** (Read list and mark one response for each)

	None	1 or 2 times	3 or 4 times	5 – 8 times	9 or more times	Don't know	Refused
Medical doctor	O	O	O	O	O	O	O
Pediatrician	O	O	O	O	O	O	O
Medical Specialist	O	O	O	O	O	O	O
Dentist	O	O	O	O	O	O	O
Nurse	O	O	O	O	O	O	O
CHR	O	O	O	O	O	O	O
Elder	O	O	O	O	O	O	O
Traditional healer	O	O	O	O	O	O	O
Mental health counselor	O	O	O	O	O	O	O
Psychiatrist or sychologist	O	O	O	O	O	O	O
Social worker	O	O	O	O	O	O	O
Crisis intervention worker	O	O	O	O	O	O	O
School counselor	O	O	O	O	O	O	O
Speech Therapist	O	O	O	O	O	O	O

14. **Thinking about the last five years, how many years have you received medical care from the same medical doctor?** (Mark one response only).

O 1 year out of 5
O 2 years out of 5
O 3 years out of 5
O 4 years out of 5
O Last five years
O Never, I always see a different doctor
O Don't know
O Refused

15. **When you see a medical doctor, does the doctor spend enough time talking to you about your health?** (Mark one response only)

O Always O Sometimes O Never O Don't Know O Refused

16. **In the last 12 months, have you been medi-vaced (ie., medical evacuation) out of the community?** (Mark one response only)

O Yes O No O Refused

17. **Approximately, how many days in total have you spent in hospital in the last 12 months?** (Mark one response only)

O None
O One
O Two
O Three
O Four or five
O Six or seven
O Eight to thirteen
O Fourteen or more
O Refused

18. **In the past year, have you had any of the following:** (Mark one response for each test)

	Yes	No	Refused
Eye test	O	O	O
Hearing test	O	O	O

19. **Do you take any of the following pills or vitamins on a regular basis?** (Read list and mark all that apply)

O Aspirin
O Ventolin, inhalers or puffers for asthma
O Ritalin
O Tranquilizers or nerve pills
O Tylenol
O Anti-convulsants or anti-epileptic pills?
O Vitamins
O Other prescription drugs for a health problem
O Refused

20. **Do you think young people in this community have enough access to birth control?** (Mark one response only)

O Yes O No O Don't know O Refused

21. **Do you think young people in this community have enough access to information about birth control?** (Mark one response only)

O Yes O No O Don't know O Refused

22. **Do you think young people in this community have enough information about sexually transmitted diseases?** (Mark one response only)

O Yes O No O Don't know O Refused

23. **How satisfied are you with the following...** (Read each statement and mark one response for each item)

	Very Satisfied	Somewha t Satisfied	Somewhat unsatisfied	Very unsatisfied	Refused
with your family life?	O	O	O	O	O
with your social life?	O	O	O	O	O
with the way you live your life?	O	O	O	O	O
with your relationship with your family?	O	O	O	O	O
with your relationship with your friends?	O	O	O	O	O

24. **Have you ever experienced any of the following events or situations that caused you a great amount of worry or unhappiness?** (Read list and mark all that apply)

O Death of parents
O Death in family
O Divorce/separation of parents
O Moving to another community or home
O Stay in hospital
O Stay in foster home
O Other separation from parents
O Personal injury or illness
O Illness/injury of a friend
O Illness/injury of a family member
O Abuse / fear of abuse
O Change in family members
O Alcoholism or mental health disorder in family
O Conflict between parents
O Conflict between family members
O Conflict between friends
O A fight with a friend
O A breakup with a boyfriend or girlfriend
O Don't know
O I haven't experienced any event or situation that caused me a great amount of worry or unhappiness
O Refused

25. **The following questions ask you how you feel all of the time, most of the time, some of the time, or none of time. Please answer as honestly as possible.** (Mark one response for each statement)

	None of the time	Some of the time	Most of the time	All of the time	Refused
I usually feel full of energy.	O	O	O	O	O
I'm usually happy and stress free	O	O	O	O	O
I have no problems handling my feelings.	O	O	O	O	O
Life is rather boring.	O	O	O	O	O
I express my feelings and needs often	O	O	O	O	O
I feel rather low.	O	O	O	O	O
I have trouble learning things in school	O	O	O	O	O
I feel tense.	O	O	O	O	O
I usually feel happy and light hearted.	O	O	O	O	O
I feel quite lonely	O	O	O	O	O
I have trouble remembering things	O	O	O	O	O
It takes some effort to keep my feelings under control.	O	O	O	O	O
Many interesting good things are happening in my life.	O	O	O	O	O
I feel somewhat withdrawn or quiet	O	O	O	O	O
I'm worried, stressed or sad	O	O	O	O	O
I have trouble concentrating	O	O	O	O	O
I feel tired or worn out.	O	O	O	O	O
I feel relaxed.	O	O	O	O	O
I feel loved and appreciated.	O	O	O	O	O

26. **As a whole, would you describe your life as ...** (Mark one response only)

O Very stressful O Not Very Stressful O Refused

O Fairly Stressful O Not at all Stressful

27. **In the past 30 days, did someone say awful things to you that caused you a lot of fear or pain?** (Mark one response only)

O Yes O No O Refused

28. **In the past 30 days, did someone physically hurt you?** (Mark one response only)

O Yes O No O Refused

29. **When people hurt you or do other bad things to you, do you tell someone?** (Mark one response only)

O Always O Sometimes O Never O Refused

YOUTH SPIRITUALITY, WELLNESS, AND TRADITIONAL ACTIVITIES

30. **At this time, what religion or belief do you follow?** (Read list and mark all that apply)

O Traditional Native
O Catholic
O Anglican
O United
O Methodist
O Pentecostal
O None
O Other
O Don't know
O Refused

31. **How important is spirituality / faith to you?** (Mark one response only)

O Very important
O Somewhat important
O Not very important
O Don't know
O Refuse

32. **The next few questions ask you about your spirituality and healing. For the following statements, do you "strongly disagree", "disagree", "neither agree" or "disagree", "agree" or "strongly agree".** (Mark one response for each statement).

	Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree	Refused
My spirituality (faith) has made me a stronger person	O	O	O	O	O	O
By connecting with my spiritual side helps me feel more balanced in my life	O	O	O	O	O	O
Praying helps me	O	O	O	O	O	O
My spirituality (faith) helps me through each day	O	O	O	O	O	O
Spirituality (faith) helps in my healing	O	O	O	O	O	O

33. **Do you think that spiritual well-being contributes to physical, mental and emotional health?** (Mark one response only).

O Yes O No O Don't Know O Refused

34. **The following questions ask about your participation in traditional, spiritual, and cultural activities.** Mark yes or no for each question asked.

	Yes	No	Refused
Do you go out on the land with family or friends to hunt, trap, fish or gather plants?	O	O	O
Do you go camping with family or friends?	O	O	O
Do you go on picnics with family or friends?	O	O	O
Do you help butcher animals, skin animals or clean fish?	O	O	O
Do you help clean or prepare animal hides?	O	O	O
Do you help prepare traditional foods for meals?	O	O	O
Do you do traditional crafts or clothing (like carving, beading, making baskets, clothing, etc.)	O	O	O
Do attend community meetings where adults talk about political or community issues?	O	O	O
Do you participate in community events like carnivals or celebrations?	O	O	O
Do you use any traditional medicines to prevent or cure sickness?	O	O	O
Do you gather traditional medicines for personal use or gather medicines for a family member or friend?	O	O	O
Have you ever been to a traditional medicine person / healer?	O	O	O
Do you go to pow-wows?	O	O	O
Do you participate in spiritual ceremonies?	O	O	O
Do you attend church activities?	O	O	O
Do you participate in community feasts?	O	O	O

LIFESTYLE PRACTICES

35. **How do you describe your weight?** (Mark one response only)

O Very underweight O About the right weight O Very overweight
O Slightly underweight O Slightly overweight O Refused

36. **Which of the following are you trying to do about your weight?** (Mark one response only)

O Lose weight O I am not trying to do anything about my weight
O Gain weight O Refused
O Stay the same weight

37. **During the past 30 days, did you exercise to lose weight or to keep from gaining weight?** (Mark one response only)

O Yes O No O Refused

38. **During the past 30 days, did you eat less food, fewer calories, or foods low in fat to lose weight or to keep from gaining weight?** (Mark one response only)

O Yes O No O Refused

39. **During the past 30 days, did you go without eating for 24 hours or more (also called fasting) to lose weight or to keep from gaining weight?** (Mark one response only)

O Yes O No O Refused

40. **The following questions ask you about what you eat each day.** (Read list and mark all that apply)

O I drink at least 4 glasses of water each day
O I eat fresh fruit, berries each day
O I drink pure fruit juice each day
O I eat fresh vegetables each day
O I eat meat, eggs, or beans each day
O I eat cheese or yogurt each day
O I drink milk each day
O I don't seem to get as much to eat as I need
O Refused

41. **Overall, to what extent do you feel gambling is a good way to make money?** (Mark one response only)

O Good O Somewhat good O Not good O Refused

42. **Have you ever gambled for money?** (Mark one response only)

O Yes O No O Refused

43. **Has gambling caused any problems (arguments, fights, unhappiness) for anyone living in this house?** (Mark one response only)

O Always O Sometimes O Never O Nobody gambles O Don't Know O Refused

44. **Has drinking caused any problems (arguments, fights, unhappiness) for anyone living in this house?** (Mark one response only)

O Always O Sometimes O Never O Nobody Drinks O Don't know O Refused

45. **Do you look forward to any of the following?** (Read list and mark all that apply).

O Spending time with family members
O Hunting/trapping
O Fishing
O Berry Picking
O Eating special foods
O Going on picnics
O Walking or spending time in nature
O Watching television or videos
O Drawing, painting, coloring
O Playing sports outdoors
O Dancing
O Playing music
O Carnivals and celebrations
O Hanging out with friends
O Sports/recreational activities
O Visiting with family/other special person
O Going to spiritual activities
O Cooking special foods
O Reading
O Helping around the house
O Playing video games
O Traveling
O Going to parties
O Getting out of the community for a holiday
O Spending time with elders
O Don't look forward to anything
O Refused

HOUSEHOLD INFORMATION

46. **Which of the following describe the general condition of your home?** (Read list and mark all that apply).

O Our home is warm and comfortable
O Our home is too cold in the winter
O There is mold in the house
O This home has good indoor plumbing
O This home has running water
O This house is safe proofed for children
O There is enough space in the home for privacy and quiet reflection
O Everyone has a warm and comfortable place to sleep
O The windows in the home keep the cold out
O This home gets lots of sunshine
O The air in the home seems to circulate well
O The air in the home seems stale
O We love our home just as it is
O Our home is in need of a lot of repair
O Refused

47. **During the past 30 days, was there enough food in the house so that everyone could eat?** (Mark one response only)

O Always O Sometimes O Never O Don't know O Refused

48. **During the past 30 days, did you ever go to bed hungry because there was not enough food to eat?** (Mark one response only)

O All the time O Sometimes O Never O Refused

49. **In the last month, did people living in this house argue because there was not enough money to buy food, to buy other things or to pay bills?** (Mark one response only)

O All the time O Sometimes O Never O Don't know O Refused

50. **In this house, who works at a job for money?** (Mark all that apply)

O Nobody in my house
O Mother /stepmother/foster mother/female guardian
O My father /stepfather/foster father/male guardian
O I do
O Other family members
O Refused

51. **Do you regularly do chores around the house?** (Mark one response only)

O Daily O Weekly O Occasionally O Never O Refused

52. **Do you regularly take care of your sisters, brothers, nephews, nieces, cousins, or other people's children?** (Mark one response only)

O Daily O Weekly O Occasionally O Never O Refused

53. **Do you get paid to take care of children (babysitting)?** (Mark one response only)

O Daily O Weekly O Occasionally O Never O Refused

54. **Do you regularly take care of elders?** (Mark one response only)

O Daily O Weekly O Occasionally O Never O Refused

55. **In the future, would you like to be asked your opinion about things that youth need to be successful and happy?** (Mark one response only)

O Yes O Not sure O No O Refused

ASSISTANCE

How much assistance did the respondent require in filling out the questionnaire?

01 ◯ None 02 ◯ Some 03 ◯ Very little 04 ◯ A lot

Did someone interpret (translate) the questions? (In whole or in part)

05 ◯ Yes 06 ◯ No 07 ◯ Don't know 08 ◯ Refused

Office use only:

Please re-enter the following information:

Name of Community ➔	
Community Interviewer ID ➔	
Enter Consent ID Number ➔	

Assembly of Manitoba Chiefs

Study Copy

CENTRE for Aboriginal Health RESEARCH

FIRST NATIONS AND INUIT REGIONAL LONGITUDINAL HEALTH SURVEY

Manitoba First Nations Regional Longitudinal Health Study

Joint Initiative of the Assembly of Manitoba Chiefs and the
Manitoba First Nations Centre for Aboriginal Health Research, University of Manitoba.

Youth Participant Information and Interview Consent Form

STUDY TEAM

MFN-CAHR Principle Investigators: Brenda Elias, Associate Director (Research) and Dr. John O'Neil, Director

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You are being asked to participate in a research study. Please take your time to review this consent form and discuss any questions you may have with the research study team or staff. You may take your time to make your decision about participating in this study and you may discuss it with your friends or family before you make your decision. This consent form may contain words that you do not understand. Please ask the community interviewer to explain any words or information that you do not clearly understand.

PURPOSE OF THE STUDY

The Manitoba First Nations Regional Longitudinal Health Study is a joint project of the Assembly of Manitoba Chiefs and the Manitoba First Nations Centre for Aboriginal Health Research at the University of Manitoba. This study is part of a larger national study being conducted by the National Aboriginal Health Organization in First Nation and Inuit communities throughout Canada. The objective of the survey is to develop a better understanding of the many important factors that determine the health of Manitoba First Nations' children, youth and adults. The areas covered in the study include health conditions, dental health, disabilities, general wellbeing, physical activity, health behaviors, non-insured health benefits, health service utilization, residential school issues, housing, environmental health, and other social factors related to health. Information from this study will help assist First Nation policy makers in improving the health of First Nations people through the development of health care programs and policies.

STUDY PROCEDURES

In this study, we will ask to interview you, which would involve asking you a number of questions on your health status, health behaviors, health service utilization, and other factors linked to health. The interviews will take place in the language of your choice. The interviews will be entered into a computer database. We would like to assure you that all information you provide in this interview will be kept strictly confidential and will only be used to create a general picture of health.

As part of this study, we will also seek your permission to link the interview information you provide to government health service utilization databases for the period of April 1985 to March 2020 for adults and to the date of birth for children participating in the survey. The purpose of this linkage is to develop a general picture of what determines health, the use of health care services, and the way doctors and hospitals provide health care to Manitoba First Nations' people. To link the interview information to the health service utilization databases, we will need your full name (First, Middle, and Last Name), address (including postal code), and your personal and family health numbers from your Manitoba Health card. This personal information will be kept separate from the interview data and the health service utilizatioo data to ensure that you will not be identified in any way. We would like to assure you that all personal information you provide would be kept strictly confidential and the linked study information will only be used to develop a general picture of health and health services.

As part of this study, we will also ask you if you would like to be contacted at another time to participate in another wave of this survey and to participate in other research studies. This survey will take place over a twelve-month period (March 2002 to April 2003) and other studies will occur between the years 2003 and 2020. To assist us in contacting you at a later time, we will also ask you to provide your name, address, and phone number, as well as the name of a contact person who may be able to help us contact you in case you move or your telephone number changes. We would like to assure you that all personal information you provide would be kept strictly confidential. The identifying information you provide will be retained in a database from March 2002 to December 2020, which is the duration of the survey. At the cooclusion of this project, in December 1, 2020, we will destroy all computer records containing your identifying information.

To ensure that you will not be identified in any way, your name, address, phone number(s), personal health information, and coolact information will be kept separate from the interview data and the linked health service utilization database. Access to personal information will be restricted to investigators and research associates only and will be secured electronically and physically from public access. **No staff from First Nation organizations or communities will have direct access to your personal information.** The same confidentiality will apply if students and other researchers later use the data for a research project.

The interview is approximately one hour long. You can stop participating at any time. However, if you decide to stop participating in the study, we encourage you to talk to the research study staff first.

RISKS AND DISCOMFORTS

We will make every effort to make certain that there will be no way that people can identify you in the study. However, we cannot guarantee you absolute confidentiality.

COSTS

The study procedures are conducted at no cost to you. You will receive no direct payment, and you will not receive reimbursement for any expense related to taking part in this study.

BENEFITS

There may or may not be direct benefit to you from participating in this study. When the research is completed, it will help First Natioo policy makers and program developers understand the many factors that determine the health of Manitoba First Nations' children, youth, and adults.

PAYMENTS FOR PARTICIPATION

You will receive no payment or reimbursement for any expeoses related to taking part in this study.

CONFIDENTIALITY

Information gathered in this research study may be published or presented in public forums; however, your name or other identifying information will not be used or revealed. Despite efforts to keep your personal information confidential, absolute confidentiality cannot be guaranteed. Your personal information may be disclosed if required by law. The University of Manitoba Research Ethics Board may review records related to the study for quality assurance purposes.

VOLUNTARY PARTICIPATION/WITHDRAWAL FROM THE STUDY

Your decision to take part in this study is voluntary. You may refuse to participate or you may withdraw from the study at any time. Your decision not to participate or to withdraw from the study will not affect the health care you receive. If the research study-team and-staff feel that it is in your best interest to withdraw you from the study, they will remove you without your consent. We will also tell you about any new information that may affect your health, welfare, or willingness to stay in this study.

QUESTIONS

You are free to ask any questions that you may have about your rights as a research participant. If any questions come up during or after the study, contact the research team/staff, Brenda Elias from the Manitoba First Nations Centre for Aboriginal Health Research, University of Manitoba at (204) 789-3358.

For questions about your rights as a research participant, you may contact the University of Manitoba, Bannatyne Campus Research Ethics Board at (204) 789-3389.

Do not sign this consent form unless you have had a chance to ask questions and have received satisfactory answers to all of your questions.

STATEMENT OF CONSENT

Youth Participant: (14 years and older)

I have read this consent form. I have had the opportunity to discuss this research study with a staff member or investigator of the research study team. I have had my questions answered by them in the language I understand. The risk and benefits have been explained to me. I understand that I will be given a copy of this consent form after signing it. I understand that my participation in this study is voluntary and that I may choose to withdraw at any time. I freely agree to participate in this research study. I understand that information regarding my personal identity will be kept confidential, but that confidentiality is not guaranteed.

I *(check)* ☐ **consent** to participate in the Manitoba First Nations Regional Longitudinal Health Study.

I *(check one only)* ☐ **consent** ☐ **do not consent** to having the information I provide in the survey linked to personal health information using the personal health number(s) provided.

I *(check one only)* ☐ **consent** ☐ **do not consent** to being contacted at a later time for other studies.

I *(check one only)* ☐ **consent** ☐ **do not consent** to providing the name, address, and phone number of contact people for the study team to contact in the event of a move or if a phone number changes.

I authorize the inspection of any of my records that relate to this study by the University of Manitoba Research Ethics Board for quality assurance purposes.

By signing this consent form, I have not waived any of the legal rights that I have as a participant in a research study.

Youth's Name (please print):	**Date Completed:**		
	Month	Day	Year
Youth's Signature:			

Consent from the parent or legal guardian and assent for participant who is under the age of <u>FOURTEEN YEARS</u>:

By signing this consent form, I have not waived any of the legal rights that I have or the child as a participant in a research study.

Parent/Legal Guardian's Name (please print):	**Date Completed:**		
	Month	Day	Year
Parent/Legal Guardian's Signature:			

Research Staff

I, the undersigned, have fully explained the relevant details of this research study to the participant named above and believed that the participant has understood and has knowingly given their consent.

Printed Name:	**Date Completed:**		
	Month	Day	Year
Signature:			
Role in the Study:			