Smoking behaviours among pregnant women in the Baffin Region of Nunavut

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Abstract

This thesis examined three integrated research questions using mixed methods to help build a knowledge base for future intervention strategies by better understanding the reasons behind smoking amongst pregnant women in Nunavut. Recent statistics show that Nunavut has the highest reported prevalence of pregnant smokers in Canada. To date, there is little available research to help explain this high rate in smoking behaviour.

The first manuscript was focused at the individual level and investigated the socio-demographic and clinical factors associated with processes and stages of change for smoking cessation among pregnant women in Nunavut by an interviewer-administered survey. The data revealed that smoking behaviour among pregnant women in the Baffin region is higher than in previously reported estimates. Overall most women were not considering quitting smoking. Decisional balance scores indicated that these women were ambivalent about continuing to smoke during their pregnancy. Situational temptation values indicated that those women who did quit may be at high risk for relapse in the future, particularly in social settings. Lastly, the results show that it is feasible to conduct a larger survey of smoking behaviour in this population, however some of the proposed measures were not sufficiently reliable to be used in a larger study.

The second manuscript focused on the social interactions levels, by way of semi-structured qualitative interviews, and identified a wider range of factors influencing smoking and barriers and facilitators to smoking cessation among Inuit women. Daily smoking was exacerbated by the pregnancy experience, particularly for those women who were required to leave their smaller communities to give birth. Housing instability, financial issues, single parenting and issues with spouses/partners were factors that contributed to increased daily

cigarette consumption. The social environment was the most significant influence on the smoking behaviours of Inuit women.

The third manuscript examined the structural level by exploring the influence of the health care system on the smoking behaviour of pregnant women as perceived by HCPs via a structured interview. This study revealed that HCPs were aware of existing resources for smoking cessation in their communities; however, none were specific to pregnant women. Although some of the HCPs stated that they recommended behavioural therapy to help women quit smoking, most of them did not know where women could go for help or therapy aside from the Quit Line. Most HCPs felt that addressing smoking cessation was necessary, however none were formally trained to do so.

It is hoped that the findings from this thesis will help generate a knowledge base that can more appropriately address the smoking cessation needs of Inuit pregnant women.

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LIST OF ACRONYMS

CCHS Canadian Community Health Survey

CHR Community health representative

CIHR Canadian Institute for Health Research

COPD Chronic obstructive pulmonary disorder

CTUMS Canadian Tobacco Use Monitoring Survey

ETS environmental tobacco smoke

HCP Health care provider

HIV Human Immunodeficiency Virus

ITK Inuit Tapiriit Kanatami

MAEAS Maternal Antenatal Emotional Attachment Scale

MD Medical doctor

NPHS National Population Health Survey

NRI Nunavut Research Institute

NRT Nicotine replacement therapy

OCAP Ownership, control, access and possesion

RN Registered nurse

SES Socioeconomic status

TTM Transtheoretical Model

UOHI University of Ottawa Heart Institute UOHI

1.0 Introduction

1.1 Statement of the problem

Smoking cessation during pregnancy is a public health priority as smoking is detrimental for the health of both the mother and the foetus. Although less than 15% of pregnant women in Canada smoke, it has been estimated that up to 64% of pregnant women in Nunavut do so (1). The health effects of smoking in pregnancy are well known and include increased risk of the mother developing cardiovascular disease, respiratory disease, and cancer (2). The baby has a higher probability of being born prematurely, and/or at a lower birth weight, which predisposes them to a myriad of health complications later in life (3). Smoking during pregnancy has been linked to adverse birth outcomes such as preterm birth, small-for-gestational-age, respiratory distress, congenital anomalies, and stillbirth (3). Nunavut has the highest reported prevalence of babies born small-for-gestational-age and preterm deliveries in Canada (3).

There are a number of studies investigating why women smoke during pregnancy. Briefly, the literature suggests that increased stress, single parenthood, financial constraints and having a partner who smokes are some of the factors that predict continued cigarette consumption during pregnancy (4-7). There is, however, very little literature specifically focused on smoking behaviour during pregnancy in Nunavut, particularly among Inuit, and therefore little knowledge about how to intervene to curb these high smoking rates.

In this thesis, three different research questions were examined:

1. What are the socio-demographic and clinical factors associated with stages of change processes and for smoking cessation among pregnant women in Nunavut?
2. What are the perceived barriers and facilitators to smoking cessation among pregnant women who smoke in Nunavut?

3. What resources exist for health care providers to address smoking cessation among pregnant women, and what factors need to be considered for future intervention strategies in the Baffin Region of Nunavut?

To interpret the findings of these studies, a broader population health perspective is adopted, which can be defined as an approach to health that aims to improve the health of the entire population and to reduce health inequities among population groups (8). This broader conceptualization recognizes that social, economic, and physical environmental factors affect a person's health (8). The social ecological framework, which looks at different layers of influence on a person's health (interpersonal, community, organizational, public policy) and the interactions between each layer, was used to examine the individual to society level factors that contribute to smoking behaviours. This perspective allows for a critical examination of how women in Nunavut may be particularly vulnerable to smoking behaviours in comparison to the general population of Canada. This overarching perspective guides the discussions and helps frame the arguments as to why smoking rates are so much higher among pregnant women in Nunavut, and what social conditions, policies, and other factors may contribute to this high rate.

In the first study, the results suggest that the prevalence of smoking among a consecutive series of pregnant women is higher than previously thought and that women reported moderate-to high heaviness of smoking index scores and high levels of stress; these issues are likely important barriers to quitting in this population. In the second study, nicotine addiction and stress are the most commonly reported reasons for continued smoking during pregnancy; however there is a clear social influence of family and friends to continue smoking. And lastly, in reference to the third study, it is argued that health care providers acknowledge the need for more tailored smoking cessation intervention strategies, but are limited by the availability of resources to deal with

smoking cessation both among pregnant women specifically.

1.2 Nunavut: a brief description

Nunavut, meaning "our land", was created in 1999 making it the largest and newest federal territory of Canada (1). Nunavut is one of the most remote, sparsely settled regions in the world, with a population of 33,330 (1). As of 2011, 86.3% of the total population of Nunavut identified themselves as Inuit (1).

Nunavut is comprised of three regions: the Kivalliq Region (formerly the Keewatin Region), Kitikmeot Region, and the Qikigtani region. The Qikiqtani Region (formerly called the Baffin Region) consists of Baffin Island, Devon Island, Ellesmere Island, plus smaller islands in the Arctic Archipelago (1).

The capital of Nunavut is Iqaluit (formerly Frobisher Bay) located on Baffin Island in the east of the Territory. There are 25 communities spread throughout the three regions (1). According to recent statistics, the population growth rate of Nunavut has been well above the Canadian average for several decades, mostly due to birth rates, which are significantly higher than the Canadian average (2).

1.2.1 Factors influencing health among Inuit

Inuit Tapiriit Kanatami (ITK), a national advocacy group which represents and promotes the interests of Inuit, drafted an in-depth report on the Social Determinants of Health of Inuit in 2007. They covered a range of topics such as health status, housing, education, food security and other determinants of health. The report states that Inuit suffer poorer health than other Canadians on a number of key indicators, which will be outlined below (71).

First, Inuit communities have a high number of youth suicides, with a rate of 135 per 100,000 between 1999 to 2003, which is 11 times higher than the rest of Canada (9). Inuit infants and children have higher rates of chronic illness and infectious disease, higher rates of respiratory infections such as bronchiolitis, and anaemia (9,10). Contributing factors were crowded and poor quality housing, unemployment, limited access to health services, food insecurity, as well as behavioural and environmental factors (9).

Second, many Inuit reported food insecurity with 58% of Inuit between the ages of 20 and 40 reporting that their family could not afford to buy all the food they needed from the store (9,11). In Nunavut, 49% of households reported having "often" or "sometimes" not enough to eat during the year prior to the study (9,12) in comparison to 7% for Canadian households overall. Furthermore, 60% of babies aged 9-14 months are anaemic, primarily due to insufficient nutrition (9).

Third, the high prevalence of risk behaviours such as alcohol abuse and smoking in Inuit communities is symptomatic of deeper social and economic problems (9). Literature shows that women who were smokers during pregnancy had a higher rate of smoking partners, and they reported higher levels of daily stress (13). The underlying socioeconomic inequalities causing chronic stress and unhealthy coping behaviours are viewed as fundamental determinants of health (9).

Inuit also have limited access to health services for reasons including, but not limited to, geography, program design and funding, capacity and resources, and language and culture (9). Most Inuit communities only have primary health care services, so Inuit must travel to regional centres or southern cities to consult medical specialists, have operations, and deliver babies (9). Many Inuit report that medical transfers to the south can be "isolating and demoralizing

experiences" (53, p.17), because they are separated from their families and their communities during a time when they are most in need of support (9).

There are also significant differences in education levels between Inuit and non-Inuit Canadians. Data from the 2006 Census show that approximately half (51%) of Inuit aged 25-64 had not completed high school (14), in comparison to approximately 9% of the general Canadian population (15). Between 1981 and 2001, the proportion of Inuit adults who had completed post-secondary education rose from 10% to 24% (9,16), but it is still lower than the 59% of the general Canadian population who completed post-secondary education (17). Furthermore, a substantial proportion of Canadian Inuit attended residential schools in their youth (14,16). These schools were run by missionaries and located hundreds or thousands of kilometres from home. This meant many Inuit children lost their familial, communal, and socio-cultural connections, had no opportunity to eat traditional foods, were banned from speaking Inuit languages, and were forced to follow southern norms (9). Although the residential school system ended in the mid-1970s, it is often cited as a source of 'community trauma' that continues to affect Inuit health and mental wellbeing today (9).

Inuit also suffer from having the most insufficient housing in Canada, which leads to overcrowding, deficient sanitation and ventilation, the spread of infectious diseases, psychosocial stresses, and violence (9). Among Inuit, housing problems have been associated with low achievement levels in schools, spousal abuse, respiratory tract infections among infants, depression, and substance abuse (9). It is reported that the majority of Inuit live in social housing units and it is estimated that 53% of Inuit households are overcrowded; it is not uncommon for seven or more people to inhabit a single household (9). Currently, it is estimated that 15% of Nunavut's population are on waiting lists for public housing (79).

The lack of employment and income disparities are also significant issues contributing to the poorer health status of Inuit. In Nunavut, the average annual income for an Inuit male was $19,686 (18) compared to $33,500 for a non-elderly male in Canada (19). Unemployment rates for Inuit men (22%) are three times higher than those for non-Inuit Canadian men (7%) (9,16). In the 2001 Aboriginal Peoples Survey, 79% of Inuit reported unemployment as the main problem in their communities (18). A study in Nunavut found that the most common reason given by Inuit for not being employed was that jobs matching their skills were unavailable (9,16).

Lastly, the Inuit have experienced dramatic socio-cultural changes, which affect long-term health in several ways. In the 1950's the Canadian government began to actively encourage Inuit to settle in permanent communities where cheap housing, medical facilities, and modern stores were built (9,16). This lead to overall improvements in health, however, today fewer Inuit live solely off the land and the transition from traditional forms of subsistence to a dependence on a wage economy has forever changed Inuit social and environmental relationships (9). This contributes to social marginalization, stress and higher rates of suicide (9).

1.3 Prevalence of smoking during pregnancy in Canada

In 2008, the Maternal Health Report issued by the Public Health Agency of Canada estimated that 13.4% of all Canadian women ages 15-54 smoked during their pregnancy (20). This trend showed a decline from 17.7% reported in 2000-2001, and 21.3% reported in 1996-1997. Women under 20 were more likely to report smoking during pregnancy than older women in Canada (3). Although the overall prevalence of smoking during pregnancy has changed and continues to decline nationally, the trend among young mothers aged 16-24 is rising and represents the largest group of women smoking during pregnancy within the last 10 years (3).

Reports vary for the current prevalence of smoking among pregnant women in Nunavut, with estimates of 59.9% to approximately 64.0% (1, 20); however all sources were in agreement that Nunavut has highest prevalence of pregnant women who smoke in Canada (1, 20) Nunavut also has the highest proportion of mothers under the age of 25 nationally (3), which may account for some of the regional variation in smoking prevalence during pregnancy, as young women tend to smoke more than older women.

In addition to the declining prevalence of smoking overall, research in North America has shown that pregnant women who smoke consumed an average of seven cigarettes a day in 2010 (4), which is a decline from reports of 12.1 cigarettes a day in 2000 (22), and 11 cigarettes a day in 2002 (23). This is significantly lower in comparison to older research stating that over 58.0% of pregnant women who smoke reported smoking more than one pack a day (approximately 25 cigarettes) in 1990 (24). Despite the overall decline in smoking prevalence, women who succeed in quitting in any stage of their pregnancy are faced with high rates of post-partum relapse (25).

1.3.1 Health effects of smoking during pregnancy

The negative effects of smoking during pregnancy are two-fold as it affects both the mother and child (26). Smoking affects the health of the mother negatively by increasing her chances of developing certain types of cancer (such as lung and throat cancers), cardiovascular and respiratory disease, and other health complications (26). In the unborn child and infants, pre-and post-natal exposure to tobacco can produce serious adverse health outcomes such as sudden infant death syndrome (SIDS), lower birth weight, respiratory infections, and a predisposition to asthma; recent research has found a positive link between in-utero exposure to nicotine and psychosocial disorders (27,28). Pregnant women who smoke expose their unborn

children to nicotine (29) as it readily crosses the placenta, and nicotine concentrations in the foetus can be as much as 15% higher than maternal levels (30). Depending on the severity of the nicotine addiction, the foetus may also suffer withdrawal symptoms at birth (31).

The current leading causes of death among men and women in Nunavut are cancer, respiratory disease and heart disease; lung cancer rates among Canada's Inuit are the highest in the world (32). These causes of death have all been linked to smoking in both men and women. In addition, tuberculosis (TB) rates are 185 times higher for Inuit than others in Canada; Canada's four main Inuit regions have a TB incidence rate of 157.5 for every 100,000 people, whereas the rate in southern Canada is 0.8 per 100,000 (33). There is a body of evidence that suggests TB is linked to exposure to second hand smoke, exposure to smoking in utero and active smoking (28, 30). Smoking during pregnancy has been linked to an increase in risk of pre-term deliveries, and small for gestational age, which are contributing factors to an increased infant mortality (28,34,35). Nunavut has the highest rate of pre-term and small-for-gestational-age babies in Canada (36). The infant mortality rates for the years 1986 to 1990 were, 16.3 per 1000 among Inuit infants, and only 7.3 per 1000 among all Canadian infants (37).

1.3.2 Reasons for smoking among pregnant women

The reasons underlying women's smoking patterns are complex, which reflect multiple and interacting biological, social, cultural, and economic influences (38). First, with respect to biological influences, nicotine is highly addictive (31). Nicotine’s pharmacokinetic properties facilitate addiction. Cigarette smoking produces a rapid distribution of nicotine to the brain, with drug levels peaking within 10 seconds of inhalation (30).

The acute effects of nicotine dissipate quickly, as do the associated feelings of reward,

which causes the smoker to continue dosing to maintain the drug's pleasurable effects and prevent withdrawal (30). Nicotine acts on the brain to produce a number of effects. According to the National Institute of Drug Addiction, nicotine activates reward pathways—the brain circuitry that regulates feelings of pleasure (30) by increasing levels of dopamine in the brain. For many tobacco users, the long-term brain changes induced by continued nicotine exposure result in addiction. This component is crucial to understand why it may be so difficult for some women to quit smoking during their pregnancy. Recent statistics show that almost half of Inuit (46%) who smoke started smoking at age 14 or younger (39), which can influence the severity of the addiction.

There are clear social and behaviour differences among women who smoke and women who do not. Recent research demonstrated that most women were aware of the health risks to the foetus associated with smoking; however the knowledge of potential health risks was not sufficient to motivate them to quit (40). Reasons that were identified for continued smoking included lack of willpower, the personal role and meaning of smoking, issues with cessation provision, changes in relationship interactions, understanding of facts related to smoking, changes in smell and taste, and the influence of family and friends (40). Current literature suggests that women who are more concerned about post-cessation weight gain may be less likely to quit smoking during pregnancy (41), particularly if they have a history of depression (42). Key determinants of socioeconomic status such as education, income, employment, and social networks are also consistently documented to have an inverse relationship with smoking in pregnancy (43).

Finally, differences in the smoking behaviours of women are also suggested to be a result of different socio-cultural environments, life trajectories and social circumstances (44). The

literature suggests that in Canada, Aboriginal women are over-represented in regards to domestic violence, drug abuse, alcohol dependence, tobacco use and other serious health issues such as Human Immunodeficiency Virus (HIV) when compared to the general population (14,37,39,45-48).

1.4Theoretical Considerations

1.4.1 Population health approach

Population health can be defined as an approach to health that aims to improve the health of the entire population and to reduce health inequities among population groups (8). This broader perspective recognizes that social, economic and physical environmental factors affect a person's health (8). According to Etches et al (49), the belief that the environmental (social and physical), early life conditions, individual actions, and medical care all contribute to health long predate the availability of quantitative data to support these views. Current concepts of population health recognize that many interconnected aspects of society, the environment, and individuals all contribute to health (49).

The field of social ecology emerged in the 1970's as in interdisciplinary approach to health that did not solely rely on a medical model perspective (50). Social ecology theory emphasizes the interdependence of environmental conditions, personal attributes (genetics, psychological situations), situational and behavioural factors, and political situations and how this interdependence affects a person's health (50). Dahlgren and Whitehead (51), for example, created a model to illustrate the multiple influences of health on an individual and how these interdependent relationships play a role in an individual's health (see appendix A).

The social ecology theory provides a useful framework for addressing tobacco use as the theory assumes that appropriate changes in the social environment will produce changes in individual's behaviour, and that change in individual's behaviour in the population is essential for implementing environmental changes (52). The social ecology perspective highlights the levels of influences on tobacco initiation, addiction, and maintenance, and is useful for framing prevention approaches as well (50). This perspective shows that multiple levels of influence are important for understanding tobacco initiation, and to create interventions to prevent uptake and the development of dependency (53). This approach recognizes micro- to macro-level factors operate in a synergistic fashion at the level of individuals, groups, organizations, communities, and populations (53). As such, it accommodates factors that influence individuals through the socio-physical environment.

Social and environmental factors need to be emphasized to understand the relationship among disparities, social context, diversity, and inequities in the utilization of tobacco (54). There are clearly broader social and environmental factors that need to be considered, as social context is highly influential in promoting or negating health behaviours.

A key concept in population health is "health inequity". Such inequities are systematic differences in health status between different socioeconomic groups. According to Whitehead (51), health inequities are systematic, socially produced and unfair (51). For example, research has shown growing disparities in smoking prevalence by occupation (15). A recent analysis of data found that smoking prevalence was highest among persons with working-class jobs, low education, and low income and that each of these indicators of socioeconomic position was independently and positively associated with smoking prevalence (55). This same study found that there was no socioeconomic gradient in attempts to quit, but the success with quitting was

highest among those with the most socioeconomic resources (55). Behaviours such as smoking are associated with low income and cluster with social-contextual factors such as unemployment, lack of social support, living in unsafe neighbourhoods, and having unmet needs for food and medical care (55).

Equity in health implies that ideally everyone could attain their full health potential and that no one should be disadvantaged from achieving this potential because of their social position or other socially determined circumstances (51). Using an equity lens, the social ecology model allows for a comprehensive critical look at the influences affecting health, and considers the cultural context in which health behaviours occur.

1.4.2 Social ecology framework

A clear conceptual framework for the study of selected indicators (tobacco use, socio-demographic status) may help identify the dimensions of population health, and lead to more balanced discussions about what indicators should be targeted by interventions in order to impact population health (49). A framework for measuring population health, the social ecological framework, looks from the individual to a society and the interactions between each layer of influence (individual, interpersonal, community, organizational, public policy) on a person's health. A conceptual framework, as part of a population health theory, helps structure ideas to explain possible connections between, within, and across specified domains (49). As this paper examines the population health perspective, the social ecology framework helps structure the identified influences on health.

1.4.3 The transtheoretical model

The transtheoretical model (TTM) is a model of behaviour change, which has been a basis for developing effective individual-level interventions to promote health behaviour changes (56). The TTM offers a detailed explanation of smoking behaviour, providing a framework in which 'change' of smoking behaviour can be measured as a process along a continuum (57). While the model has been extensively researched in relation to smoking in the general population, only limited attempts have been made to understand the relevance of these concepts in pregnancy (57), and thus far, none have examined this model in an Inuit population.

Central to the model are the five stages of change (58): pre-contemplation, contemplation, preparation, action and maintenance. Behaviour change is rarely a discrete, single event, as the person moves gradually from being uninterested (pre-contemplation stage) to considering a change (contemplation stage) to deciding and preparing to make a change (59). The stages are defined as follows:

- Pre-contemplation- In the pre-contemplation stage, a person does not believe that smoking is a problem or refuses to consider smoking cessation.
- Contemplation- In the contemplation stage, the person recognizes that smoking is a problem and wants to stop.
- Preparation- During the preparation stage, the person makes specific plans to stop smoking, such as setting a quit date and determining how smoking cessation will be accomplished.
- Action- In the action stage, the person stops smoking.
- Maintenance- Finally, the maintenance stage is marked by the person's continued abstinence from smoking.

Relapse to smoking behaviour is common. People often cycle through the stages of change

several times before reaching stable abstinence (59).

The TTM contains other key constructs, such as the decisional balance, which reflects the individual's weighing of the pros and cons of smoking. The pros of smoking tend to outweigh the cons in the early stages, but around the contemplation stage, a crossover occurs when the cons begin to outweigh the pros (60,61). Some studies suggest that decisional balance is one of the best predictors of future change, among all the other TTM constructs (61,62). Consistent relationships between the movement through the stages and the decisional balance have been found depending on which stage of change the individual is in (62).

A second construct, the processes of change, explains how an individual uses conscious and subconscious strategies used to help them progress through the stages of change (57). These strategies are grouped as experiential (consciousness raising, dramatic relief, environmental re-evaluation, social liberation, and self-reevaluation) and behavioural processes (helping relationships, stimulus control, counter-conditioning, reinforcement management, and self-liberation) (61). Prochaska and DiClemente (63) report that experiential processes of change such as recalling information about the benefits of quitting are used more in the earlier stages of change (contemplation and preparation). Behavioural processes describe the interactions a person has with the environment, and the conscious process of removing objects or finding sources of support; these are used more in the later stages of change (action and maintenance) (57). Research has shown an overall trend whereby experiential processes are used more extensively earlier in the stage progression, and behavioral processes tend to peak later in the stage continuum, around the time of action and maintenance (61).

The third significant construct is self-efficacy, which refers to a person's perceived ability to complete a task (64). The self-efficacy construct represents the situation specific confidence

that people have that they can cope with high-risk situations without relapsing to smoking. This is an important predictor of behaviour change and previous studies of smokers found that those most likely to progress from the preparation stage were those with higher levels of self-efficacy (65,66). Research shows that there are three factors reflecting the most common types of tempting situations among smokers attempting to quit: negative affect or emotional distress, positive social situations, and cravings (56). The self-efficacy measures are particularly sensitive to the changes that are involved in progress in the later stages and are good predictors of relapse (56).

In general, the TTM postulates that for an individual to progress through the stages of change, a certain order of events needs to occur. An increase in awareness that the "pros" of quitting smoking outweigh the "cons" (decisional balance); an increase in confidence that the individual can make and maintain changes in situations that tempt them to smoke (self-efficacy); and strategies that help an individual start and maintain smoking cessation (processes of change).

Overall, the TTM provides a clear framework for understanding the process of smoking cessation, and this can be particularly useful among pregnant Inuit women to be used as a base for future interventions.

1.5 Overview of Relevant Literature

1.5.1 Social ecology and the pregnant smoker

The social ecology perspective highlights the levels of influences, which include interpersonal, environmental (social and physical), and political, to name a few, on tobacco initiation and addiction. The following provides a brief overview of the substantial and ever-

growing body of literature to suggest that social environments in particular are influential in smoking behaviours of pregnant women.

A study of socioeconomically deprived women revealed that patterns of experiential and behavioural processes, which are constructs of the stages of change theory, are similar throughout the stages of change for pregnant and non-pregnant women who smoke (62), suggesting that, socioeconomic status is a more accurate predictor of smoking behaviour than pregnancy status.

Social-contextual factors associated with low income are particularly relevant for smoking patterns, as different factors influence patterns of tobacco use among low-income women compared to women in the middle and upper classes (17). Among low-income women, higher smoking rates are associated with having fewer resources and greater role responsibilities such as work and child care (17). Another socio-economic analysis showed that the smoking rate among low socioeconomic status (SES) Aboriginal mothers was approximately two and a half times higher than that of high SES Aboriginal women, which is similar to the gradient comparing them to non-Aboriginal women (37).

Another component of the social ecological framework, the physical environment, is also important. Evidence suggests that neighbourhood factors may influence the birth weight of a baby by shaping maternal behavioural risks, such as smoking and utilization of prenatal care (67). In regards to health care, several indicators are used to assess inequity in accessing health services, two of which are geographic access and cultural access. Geographic access refers to the location and, therefore, physical availability of health services in different parts of a country, and cultural access relates to acceptability and respect of different cultures and ethnicities (51). For women in Nunavut, these two particular indicators are relevant, as recent data show that

residents in Canada's North had the least access to a regular physician in 2005, with 84% of residents not having a family doctor compared to 14.3% for the rest of Canada (13). Furthermore, there are language barriers that exist, particularly among medical staff who primarily speak English, and the residents in Nunavut, who primarily speak Inuktitut. A recent article highlighted this dilemma from a physician's perspective and stated that most interpreters are hired by the Department of Health because of their ability to speak both Inuktitut and English, however, they have no medical background or training and they may be ill equipped to function efficiently in a doctor's office (68). There is also controversy about the interpreter's role and responsibility when cultural differences or sensitivities exist. As the author states, there is debate about whether the interpreter should convey the exact content and intent of the physician's message, or rephrase a statement when it may be culturally inappropriate or insensitive (68). These challenges in access can limit women's utilization of health care services, which has also been documented to be influential in continued smoking during pregnancy (69).

1.5.2 Transtheoretical model and the pregnant smoker

A previous study among pregnant women who smoke measured the stages of change among women with different economic circumstances. The researchers found that women smoking in early pregnancy were more likely to already be a mother (i.e. not first pregnancy), be in a lower socio-economic class and be in the pre-contemplation stage, compared to those who were in a higher income group, who were more likely to be in the contemplation stage (70). Other research suggests that a woman's first pregnancy may have an "intervention-like effect" as first time mothers were more likely to be in contemplation phase, regardless of their income levels (57).

Research suggests that the perceived risks of smoking appear to vary systematically with stages of change in pregnant women who smoke; women in the pre-contemplation stage are less likely to consider the health risks of smoking than those in the contemplation stage (71). As Slade et al (57) noted, one obvious and important difference between the pregnant and non-pregnant groups is the presence of a developing baby and the health related behaviours used to protect the well-being of the developing baby. This suggests that as the baby develops (i.e. later stages of pregnancy) the mother will likely adopt healthier practices for her and her baby, and is more likely to progress through the stages of change. Some evidence suggests that if women do not quit in the first trimester, they are not likely to quit at all during their pregnancy even with the presence of a developing baby (40).

Lawrence and Haslam conducted a review of literature on stage-based counselling for pregnant women and found that the stage of change model has the potential to provide a good evidence-base from which effective interventions can be developed (71,72). The stages of change are important for future research in a pregnant population and they suggest that standardized training in stage-based intervention strategies is necessary for health care providers. Furthermore, the findings of other studies support the use of the transtheoretical model with pregnant women who smoke in that smoking cessation is associated with engagement in both behavioural and experiential processes of change (57).

The TTM is a model of individual behavioural change, with various constructs that help explain their progress through the stages. The social ecology theory is a broader perspective that puts the individual into a larger context and looks at the external factors such as physical and social environments, policies, and social circumstances that may influence the adoption of individual behavioural change.

1.5.3 Maternal attachment and the pregnant smoker

Maternal attachment theory may provide another useful perspective for investigating smoking during pregnancy. Research by Lindgren (73) suggests that low maternal foetal attachment might be linked with poorer health practices such as smoking and lack of prenatal care, particularly in socially deprived women. Deliberate harm towards the foetus ranging from passive abuse (e.g., poor antenatal care, continued alcohol misuse) through to active physical violence (e.g., punching one's stomach) has been detected in previous studies on pregnant women (74-76). Research found that mothers who had attempted to harm their foetus were more likely to be suffering from mental health issues such as depression and anxiety, had ambivalent feelings towards the foetus and had unstable relationships with their partners (76). Moreover, although women typically seek health care during their pregnancy, this does not mean they are receptive to all the prenatal advice that they are given. Slade et al. (57) argue that "it is not the provision of information" which differs in pregnancy but "the attachment may influence the saliency of this information" (57). This suggests that the mother's attachment to her unborn child may influence how she perceives the risks of smoking among other health behaviours.

1.5.4 Smoking cessation intervention strategies

Current smoking cessation strategies for the general population include advice to quit, counselling, behaviour modification, self-help materials and pharmacotherapy. A recent meta-analysis on smoking cessation interventions reviewed studies evaluating the efficacy of cessation strategies, such as self-help, counselling, single pharmaceutical agents, combined pharmacotherapy, and pharmacotherapy combined with psychological counselling (77). The

findings show that self-help strategies alone are ineffective, but counselling and pharmacotherapy used either alone or in combination can improve rates of success with quit attempts (77), which is consistent with another systematic review (78).

To date, most tobacco-related research refers to the general population with growing emphasis on differences such as gender, race/ethnicity, socioeconomic status and pregnancy (27). This research provides insight on factors associated with tobacco use in the general population; however, research targeting Aboriginal women who smoke during pregnancy is lacking.

There are many interventions available for smokers, from self-help, counselling, groups, and pharmacotherapy, and many of these interventions can be used to help pregnant smokers quit as well. However, to increase the success of the intervention, it is helpful to understand the unique dilemma that pregnant women face when thinking about quitting and tailoring those interventions to address these issues (79). Most women know that smoking can cause problems for their pregnancy and their baby, but pregnancy introduces other challenges that may make quitting more difficult (79). Traditional cessation approaches are more useful for highly motivated, light smokers with social support, but not as effective in heavily nicotine-dependent smokers. Therefore more effective treatment is necessary for pregnant smokers (79), as they may require more intense interventions to help them overcome their addictions.

First-line smoking cessation medications such as nicotine replacement therapies, bupropion and varenicline are not well researched in pregnant women making it difficult for some women to use these medications to quit smoking if they require interventions to help with their nicotine addiction (80).

Some experts believe that smaller, titrated doses of nicotine are less harmful to a foetus

than having several cigarettes a day (29), as it avoids the thousands of compounds found in cigarettes. Nicotine replacement therapy (NRT) has shown to be effective in pregnancy, with increased abstinence rates of approximately 30% (81-83) compared to those who did not use pharmacotherapy. There is controversy whether NRT in the form of the patch increases the rates of congenital anomalies, even more so than that of smoking (84). A recent study found that pregnant women who used an NRT patch had higher risks of lower birth weight babies and a higher risk of pre-term birth than smokers or non-smokers (85), suggesting that the patch may be unsafe in pregnancy.

Bupropion emerged on the market in 1989 in the United States as a smoking cessation medication to be used in the general population. Animal studies revealed that there was no impaired fertility or foetal harm (90) using Bupropion, and that malformation rates (congenital anomalies) did not differ than rates normally expected during pregnancy in the general population (86). Another study with pregnant women using Bupropion suggested that taking the medication after the first trimester is a safer alternative, as women who took the medication during the first trimester experienced a higher level of malformations among their foetuses than those who started after the first trimester (87). Left outflow heart defects were found more commonly among the babies of mothers who took Bupropion in the early stages of the first trimester (88). A prospective observational control study revealed that women who took Bupropion had significantly higher quit rates (45%) than the control group (13.6%) (89). Current Health Canada guidelines restrict the use of Bupropion during pregnancy (39).

Varenicline is another common type of pharmacotherapy prescribed for smoking cessation among the general population; however there is little data to support its safety and efficacy among pregnant women. Animal studies show that at 50 times the human dose, rabbits exhibited

lower foetal weight (90). At 36 times the human dose, rats experienced decreased fertility and increased auditory startle response in rat pups (90). Lastly, varenicline was transferred through breast milk to rat pups (91,92) suggesting that this type of medication may be unsafe for pregnant women.

Harm reduction refers to the application of policies, programs, methods, and products aimed at reducing or minimizing the impact of harm associated with certain behaviours (76). A harm-reduction approach to tobacco use with pregnant women has the potential to reduce harm to both the woman and her foetus (93,94). Harm-reduction strategies include reducing the number of cigarettes smoked, stopping smoking for brief periods of time at critical points in pregnancy and around delivery, engaging in health protection behaviours such as taking vitamins and exercising, reducing environmental tobacco smoke exposure, and addressing partner smoking (95). Nicotine gum has been shown to be an effective harm-reduction strategy, as a study among pregnant women found that those who took gum versus a placebo smoked on average two fewer cigarettes per day, had babies with higher birth weights, and delivered on average 0.9 weeks later than those who did not take nicotine gum (96).

Behaviour therapy interventions usually include either one-on-one counselling or group counselling. Results vary on the efficacy of behavioural therapy interventions. A meta-analysis of eight randomized controlled trials showed no difference in quit rates among those receiving individual counselling versus a control group (usual care) (97). A study examining the efficacy of weekly phone calls by a trained cessation specialist showed no difference in post-partum abstinence rates among those receiving the intervention (98). A meta-analysis of smoking cessation programs for pregnant women found that programs in which the mothers received

individualized, pregnancy-specific counselling resulted in a 50% increase in cessation rates and improvements in infant birth weight (84).

The most effective interventions for the general population are those that combine NRT and behavioural therapy (99). Several meta-analyses have shown that by combining individual counselling with a form of NRT, such as the patch, results in the highest quit rates and long term abstinence among women (100). Similar results were shown for pregnant women; however the sample sizes within these studies were small and may limit the interpretation of the results (101).

The Department of Health and Social Services in Nunavut announced the introduction of its Tobacco Reduction Campaign in December of 2001. This campaign includes: television and radio public service announcements, posters, and training of local people to be involved in cessation programs (in partnership with Pauktuutit, an Inuit women's advocacy group). In addition to the tobacco reduction campaign, under the Non-Insured Health Benefits of Canadian Medicare, tobacco cessation aids are available to Inuit beneficiaries (102). A smoker's help-line is also available to Nunavut residences. At the time of this submission, no specific approaches to smoking cessation for pregnant women in Nunavut have been identified.

1.5.5 The role of health care providers in smoking cessation

Health Canada has created best practice guidelines for health care providers to address smoking cessation among pregnant women. These best practices include providing brief advice to quit smoking, recommending a harm reduction approach, and providing intervention support (39). Brief physician advice has been shown to be effective for smoking cessation (Odds Ratio: 1.66; 95% CI 1.42 to 1.94) versus usual care/no advice (103). However, a recent study has

shown that the frequency of smoking cessation interventions delivered by physicians has not changed substantially since the 1990s in the United States (104), and Canada (105).

Wilson et al (106) demonstrated that brief advice from physicians trained in stage-based counselling was effective in promoting cessation behaviours among the general population. Research among pregnant women has also shown that offering stage-based counselling throughout pregnancy was helpful as women felt they had support, until they were able to sustain their personal behaviour change through contemplation to action to maintenance (71). This is particularly important during the post-natal period when relapse rates are high (71).

The intervention itself can be brief; the literature suggests that minimal intervention may encourage a committed person who smokes to think about their smoking and to start to look at the disadvantages as well as the benefits (107). It has also been stated that for patients not ready to quit at a particular time, providing self-help material will increase their awareness and motivation to quit (108).

The delivery of the intervention is not limited to physicians. Nurses constitute 65 percent of the healthcare workforce and are well placed to share the health promotion message with a large proportion of the population (108). Education about the health risks of tobacco, assessing clients' nicotine dependency and motivation to cease smoking are necessary to include in nursing curricula (108). All healthcare personnel should treat inquiries about tobacco use and smoking cessation as a standard assessment question at every visit, recording current use, history and amount (109). This can be incorporated as a routine standard of care, and increase the likelihood of delivering an intervention.

There is wide support for the inclusion of education and training in tobacco dependence treatments in the required curricula of all clinical disciplines (92). Recent research states that

more resources should be provided for health care facilities serving low-income populations to deal with smoking cessation (110). Clinical practice guidelines need extended or augmented interventions for pregnant smokers that exceed minimal advice, wherever possible (110). Health care professionals require education and guidance so they can develop their understanding of and a positive view towards the effectiveness of smoking cessation programs (111).

In summary, health care providers play an integral role in providing smoking cessation advice to pregnant women, as they offer a source of support even if women are not ready to quit smoking. By providing smoking cessation advice at each prenatal visit, health care providers have the potential to open the lines of communication in regards to smoking; pregnancy-related visits may provide an ideal setting to discuss cessation strategies.

1.6 Plan of the thesis

This thesis examines three different research questions to help build a knowledge base for future intervention strategies by better understanding the reasons behind smoking among pregnant women in Nunavut. The first study focuses more at the individual level and investigates clinical and socioeconomic factors and their relationship to readiness to quit smoking. The second manuscript moves beyond the individual level to the broader social and structural environment to identify a broader range of barriers and facilitators to smoking and smoking cessation among Inuit women. This second manuscript draws upon in-depth interviews focusing on perceptions of smoking, and perceived barriers and facilitators of smoking behaviours. Finally, the third manuscript investigates the perspectives of health care providers regarding the barriers and facilitators of smoking cessation for pregnant women in the Baffin Region of

Nunavut and describes perceptions of smoking cessation resources available to health care providers in the Baffin Region.

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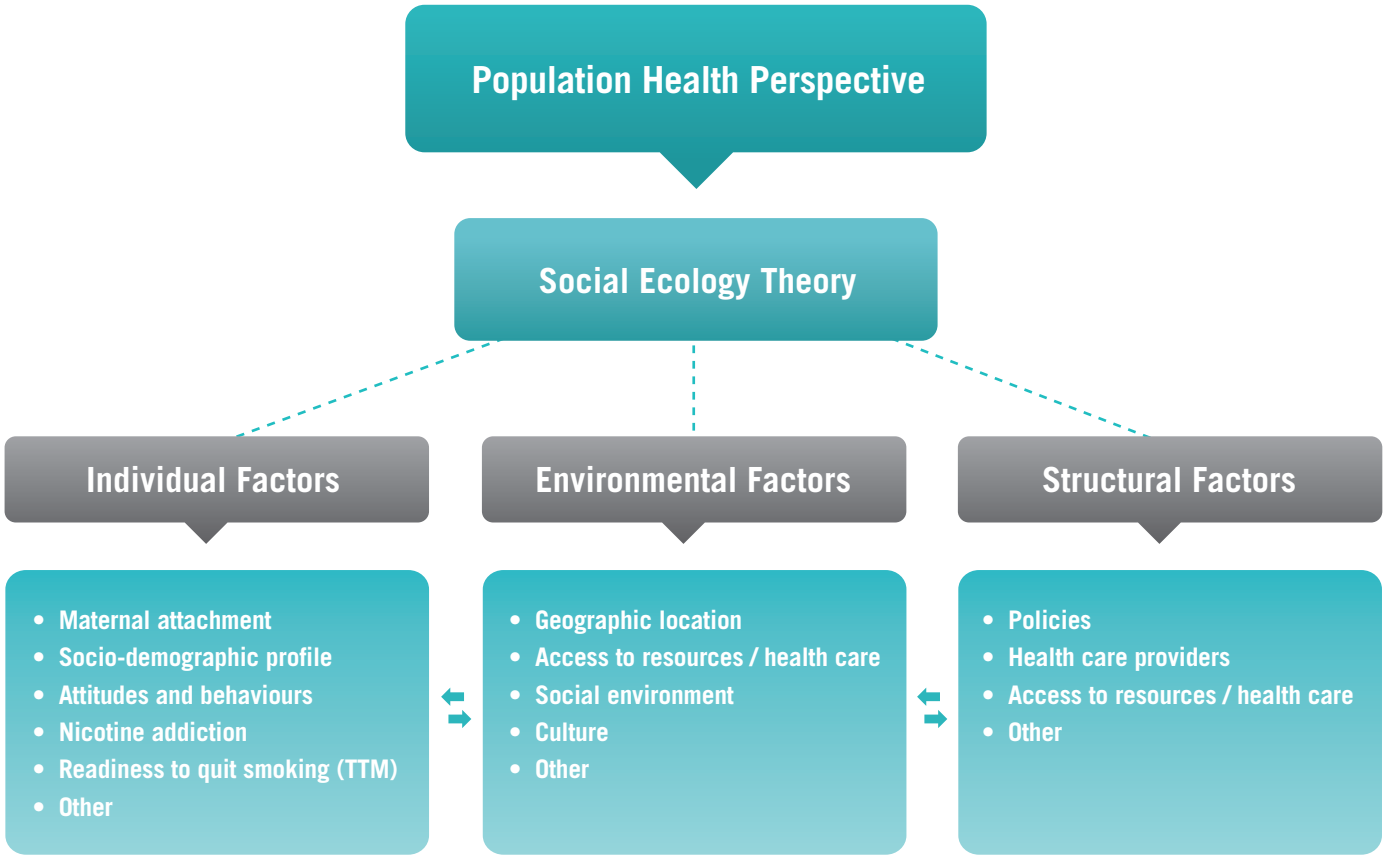
Figure 1: Conceptual model



Manuscript 1:

Socio-demographic and clinical factors associated with stages of change processes and for smoking cessation among pregnant women in Nunavut: A feasibility study

Abstract

Objectives: Tobacco smoking is common among pregnant women in Nunavut and has been identified by community leaders as a priority for tobacco-related research. A pilot study was performed to assess the feasibility of conducting a larger, Nunavut-wide survey of smoking behaviour during pregnancy.

Methods: A cross-sectional survey was conducted with sixty-six pregnant smokers attending a pre-natal clinic at a hospital and/or living at a medical boarding home in Iqaluit. Assessment of feasibility was based on: willingness to be screened for inclusion; the participation rate of eligible women; the completeness of responses to survey items; and the internal consistency of selected measures in the survey.

Results: The prevalence of smoking among a consecutive series of pregnant women was 87.5%. Respondents provided responses to an average of 96% of survey items. Internal consistency scores (Cronbach's alpha) ranged from 0.30 to 0.88. The percentage of participants in the precontemplation, contemplation, preparation, action and maintenance stages of change were 48.5%, 28.8%, 12.1%, 6.1%, and 4.5%, respectively. Values for the TTM constructs of decisional balance and processes of change were in line with expected values based on theory however, situational-temptation values were higher than expected among women in the action and maintenance stages.

Conclusions: It would be feasible to conduct a larger survey of smoking behaviour in this population. The TTM appears to be a useful framework to create a description of smoking behaviour and activities used to modify smoking behaviour in this population. Some of the proposed measures are not sufficiently reliable to recommend their use in a larger study.

Introduction

Nunavut was created in 1999 making it the largest and newest federal territory of Canada (1). As of 2011, 86.3% of the total population of Nunavut identified themselves as Inuit (1). Tobacco use is very prevalent in the territory of Nunavut in northern Canada; national surveys suggest that smoking rates are up to 4 times higher in Nunavut compared to southern provinces (2). Tobacco-related research in Nunavut needs to be conducted using principles of participatory research that emphasize researchers work with community members and leaders to identify research priorities and questions, and implement culturally appropriate methodologies. During a consultation in Nunavut, community leaders identified tobacco smoking by pregnant women was a priority for tobacco-related research.

Tobacco smoking appears to be very common among pregnant women in Nunavut; estimates suggest that 59.9%-64.0% of pregnant women are tobacco smokers at some time during their pregnancy (3, 4). This is unfortunate, as tobacco use is consistently associated with lower birth weight, preterm birth, and earlier preterm births (5-8). Not surprisingly, Nunavut has the highest rates of pre-term delivery and low birth weight babies in Canada (9).

Reasons for the high prevalence of smoking during pregnancy in Nunavut are unclear. Differences in the smoking behaviours of women have often been attributed to different socio-cultural environments, life trajectories and social circumstances (10). Women who smoke during pregnancy are more likely to have partners who smoke, and report higher levels of daily stress (11). Many pregnant smokers indicate that smoking improves their mood, reduces anger, reduces tension and anxiety, and reduces stress (12).

Mothers who smoke during pregnancy are more likely to be: of low socio-economic status; non-immigrants; and single parents (13). Not attending prenatal classes and experiencing stressful events before/during pregnancy also increase the mothers' odds of smoking during pregnancy (OR: 1.73, 95% CI: 1.08-2.78) (14). Although these other studies provide insight about why the prevalence of smoking during pregnancy may be high in Nunavut, specific reasons have not been identified since little research has been conducted to adequately describe smoking behaviours in this population.

New approaches to minimizing tobacco use among pregnant smokers are needed, but little is known about the tobacco use characteristics, intentions to change smoking behaviours and change activities employed by women who smoke during pregnancy. The transtheoretical model (TTM) of behaviour change has previously been used to describe how people modify their smoking behaviour and/or quit smoking. The TTM has been shown to be useful in describing smoking cessation in the general population, as well as among pregnant women (12, 13). The central organizing construct of the model are five descriptive *stages of change* which include precontemplation (not really thinking about quitting), contemplation (considering quitting in the near future), preparation (getting ready to quit), action (quitting smoking) and maintenance (relapse prevention). Finally, the model includes outcome measures, including *processes of change*, *decisional balance* and *situational-temptation* scales.

The feasibility of conducting a study to provide a better description of smoking among pregnant women in Nunavut is unknown. As well, the reliability/validity of TTM constructs in Aboriginal populations, and Inuit populations specifically, have not been established. Only one study provided empirical support for the predictive utility of the

stage-of-change construct among Aboriginal adolescents admitted to an inpatient substance-abuse treatment program (15) and none have examined this model in an Inuit population.

A Nunavut-wide study of smoking during pregnancy is required to gain a greater understanding of the process of quitting among these women and to identify potential barriers and facilitators to quitting. Knowledge of these factors could be useful in designing new approaches to help women quit smoking or reduce the amount they smoke during pregnancy. Conducting research in Nunavut can be challenging for cultural, language, and logistical reasons. Therefore, a pilot study to assess the feasibility of conducting a larger, Nunavut-wide survey of smoking behaviour during pregnancy was warranted.

Methods

Study Design

A cross-sectional survey design was used to gather data from pregnant smokers concerning: theoretical constructs of intentional change in smoking behaviour drawn from the TTM (including stage of changes, decisional balance, processes of change and situational-temptation); socio-demographic characteristics; pregnancy-related variables; smoking history and heaviness of smoking index; perceived stress; symptoms of anxiety and depression; and social support.

Setting

In the Baffin region, the care of pregnant women varies between women living in Iqaluit and women living in outlying communities. In Iqaluit, women have access to physicians, nurse practitioners, nurses and midwives. Women in Iqaluit who suspect they are pregnant typically present themselves to their family physician and are followed throughout pregnancy by a physician or by a mid-wife (if they choose). They may attend pre-natal classes offered by the Department of Public Health and they attend a pre-natal clinic at the Qikiqtani General Hospital. They give birth at the Regional Hospital. In 13 outlying communities situated around Baffin Island, women who suspect they are pregnant typically present themselves at the nursing station at which time the pregnancy can be confirmed. Women are seen monthly by nurses at the nursing station and by the physician who flies into the community on a quarterly basis. These women are then flown to Iqaluit for the last 4 weeks of their pregnancy; in Iqaluit they may stay with family or friends, or, more frequently, they stay at a Tammaativvik medical boarding home operated by the Department of Health. They attend the pre-natal clinic and give birth to their babies at the Qikiqtani General Hospital. High-risk pregnancies (e.g., multiple births) are usually flown to Ottawa for care. There are also a small proportion of pregnancies that are completed outside the formal health care system (estimated at 5-10% of all births). These women continue to have their babies in their own communities, aided by friends and family (and traditional providers in the community).

Eligibility criteria

Women were eligible to participate in the study if they: were pregnant; were 16 years of age or older (women between the ages of 16 and 18 required parental consent);

had smoked at least one cigarette since learning they were pregnant; and were able to communicate their experiences with tobacco and pregnancy in either Inuktitut or English.

Source of participants

Women were recruited at the pre-natal clinic at Qikiqtani General Hospital and/or at the Tammaativvik medical boarding home in Iqaluit.

Method of selection

At the pre-natal clinic, clinic nurses asked women attending appointments if they had smoked any cigarettes since learning they were pregnant. Those women who had smoked had the study explained to them by the pre-natal nurse and those that were interested in participating were directed to a study coordinator located in the clinic. Once informed consent was obtained, the study coordinator administered the survey in a private area of the clinic.

As well, pregnant women staying at the medical boarding home were approached by a study coordinator and asked if they were willing to complete a survey concerning smoking during pregnancy. Those who were interested had the study explained in more detail; informed consent was obtained from those women who were eligible and willing to participate. An interviewer-administered survey was then completed in a private area of the medical boarding home. If noise levels at the boarding home were too high, women were asked to complete the survey the following day in the private area located in the hospital. All women participating in the survey were given a gift basket with baby supplies (approximate value of $25) once the survey was completed.

Periods of participant recruitment

Recruitment began in January 2009. A part-time study coordinator was hired to complete study recruitment and administer surveys to participants. Recruitment was very slow and there was turnover in the study coordinator position. In the period between January 2009 and September 2010, only 17 women were recruited to the study. Eventually, the primary author traveled to Iqaluit in October 2010 and, serving as the study coordinator, recruited an additional 49 women to the study over a three-week period.

Objectives

A Nunavut-wide study is needed to create an understanding of smoking behaviour during pregnancy. Since research in Nunavut can be challenging for cultural, linguistic, and logistical reasons, this pilot study was conducted to assess the feasibility of the larger study. The objectives of both the main study and the feasibility study are described below.

Objectives of the main study

1. To gain a greater understanding of the process of quitting among pregnant smokers in Nunavut; and
2. To identify potential barriers and facilitators to quitting.

Objectives of the feasibility study

1. To determine the interest of pregnant women in participating in a study of tobacco use during pregnancy;
2. To assess the potential recruitment rate;
3. To determine the completeness of data collection using the survey instrument;
4. To assess the internal consistency of selected scales included in the survey instrument;
5. To generate preliminary descriptions of smoking behaviour among pregnant women and determine the variability of measures used in the survey.

Outcomes

Stage of change for smoking

Participants were categorized in the following stages according to their current smoking status and/or intentions to change their smoking behaviour. *Precontemplation:* currently a smoker and not seriously considering quitting within the next 6 months; *Contemplation:* seriously considering quitting smoking within the next 6 months or considering quitting within the next 30 days, but had not made any quit attempts (lasting ≥ 24 hours) in the past year; *Preparation:* planning to quit within the next 30 days and had made at least one 24-hour quit attempt in the past year; *Action:* quit smoking within the past 6 months; *Maintenance:* quit smoking more than 6 months ago (16).

Decisional balance

Decisional balance refers to a smoker's relative weighing of the advantages and disadvantages (or pros and cons) of continued smoking. As people progress from not intending to change to maintaining change, perceptions of the pros of smoking decrease and perceptions of the cons of smoking increase (17). Participants completed a pregnancy-tailored, 12-item decisional balance measure that measured four constructs: general pros, pregnancy pros, cons related to disapproval of others, and health-related cons (18). Items were answered in terms of importance for making a decision to smoke. A 5-point Likert scale was used which ranged from *not important* (1) to *extremely important* (5). Responses were scored for each of the four constructs, summed, then divided by their respective denominator (general pros=4, pregnancy pros=2, cons related to disapproval=4, and health-related cons=2). Overall pros and cons were each summed and divided by six. The overall cons were subtracted from the overall pros to provide the decisional balance score. If the number is positive, the individual is endorsing more pros than cons for smoking. If the number is negative, the individual is endorsing more cons than pros for smoking. The pregnancy-tailored scale, which includes the four-construct model, has been shown to be a valid and reliable scale (19, 20).

Processes of change

Processes of change (POC) are covert and overt activities that people use to progress through the stages of change. Ten processes have received the most empirical support to date (21-23). The first five are classified as *experiential processes* and are used

primarily for the early stage transitions. The last five are labeled *behavioural processes* and are used primarily for later stage transitions.

Process use is at a minimum in precontemplation, increases over the middle stages, and then declines over the last stages. The processes differ in the stage where use reaches a peak. Typically, the experiential processes reach peak use in early stages of change and the behavioural processes reach peak use in later stages of change. A 20-item questionnaire measured the 10 processes of change with 2 items each. Participants indicated the frequency of these 20 activities or events within the last month on a 5-point Likert scale from (1) *never* to (5) *repeatedly.* This instrument has demonstrated high reliability, internal validity, discriminative validity and predictive validity, and has been used in previous studies with pregnant women (24).

To obtain mean scores for individual subscales, the item scores for each subscale were summed and divided by 2. To obtain a mean experiential POC score, the item scores for all experiential subscales were summed and divided by 10. To obtain a mean behavioural POC score, the item scores for all behavioural subscales were summed and divided by 10.

Situational-temptation

Situational-temptation refers to tempting situations a person may experience and their ability to refrain from relapsing to smoking (25) . Situational-temptation is measured across the most common types of tempting situations: negative affect or emotional distress, positive social situations, and craving. The situational-temptation measures are particularly sensitive to the changes that are involved in progress in the later

stages of change and have been found to be good predictors of relapse (25).

A 9-item situational-temptation measure assessed the smoker's level of temptation that she may refrain from smoking in various challenging situations. Level of temptation was indicated on a 5-point Likert scale from (1) *not at all tempted* to (5) *extremely tempted.* This scale has predicted maintenance for both therapy changers and self-changers (26) and movement from contemplation into action and maintenance stages of change (27). To obtain a mean overall situational-temptation score, all the items were summed and divided by nine. Each of the subscale items (positive affect, negative affect and craving) were scored and divided by three. As the score increases (minimum of 1 to maximum of 5), so does the individual's temptation to engage in smoking behaviours. The situation-temptation scale for smoking has demonstrated good internal consistency (Cronbach alpha = 0.88-0.92) and both construct and predictive validity (25, 28). This scale has been shown to be reliable in populations of pregnant smokers (29, 30).

Covariates

Socio-demographic characteristics

Socio-demographic characteristics were self-reported and included: age (in years), marital status, education, and income. Marital status categories included: single/never married, married, living common-law, divorced/separated, widowed, and refused. Education based on the highest level of formal education completed and included: received high school diploma or equivalent or less, completed some college and/or university courses, completed post-secondary education and refused. Income categories

were as follows: Less than $19,999, $20,000- $39,999, $40,000- $79,999, more than $80,000, and refused.

Heaviness of smoking index

The Heaviness of Smoking Index (HSI) is a reliable and valid measure of nicotine dependence (31, 32). The HSI is a six-point scale calculated from the number of cigarettes smoked per day (1–10, 11–20, 21–30, 31+ cigarettes) and the time to first cigarette after waking (≤5, 6–30, 31–60, and 61+ min) (31,33). HSI scores are categorized as follows: low (0–1), medium (2–4) and high (5–6) nicotine dependence.

Pregnancy-related characteristics

Pregnancy-related characteristics included: number of previous births; intentions regarding adopting out (intending to place unborn child up for adoption, intending to keep unborn child, or undecided); had prenatal care; maternal antenatal attachment as measured by the Maternal Antenatal Attachment Scale (MAEAS); and number of children living at home.

The MAEAS was developed by Condon and Cokindale (34) to assess the mother's emotional attachment to her fetus. The MAEAS consists of 19 items that consist of statements and different response options that are then rated on a scale of 1 to 5. The responses are summed to give a total attachment score, with is a maximum of 95. Those scoring ≥76 are considered to have a high attachment style, whereas those who score ≤75 are considered to have low attachment styles. This scale has been shown to yield high

levels of internal consistency with Cronbach' alpha above 0.8 (35) in pregnant women of European origins.

Smoking-related characteristics

Smoking-related characteristics were self-reported and included: age of smoking initiation; number of years smoking ; number of cigarettes smoked per day; time to first cigarette (in minutes); motivation to quit smoking (1-10 scale); confidence in ability to quit smoking and remain smoke-free (1-10 scale); number of quit attempts (lasting > 24 hours) in the past year.

Use of alcohol and other drugs

These questions addressed the possibility of past or current co-addictions to other harmful substances based on a previously published study by Kapur et al (36). Current and past drug use were queried by having participants respond "yes, in the past 30 days", "yes, in the past year" and "no" and whether or not the participant may have experienced, or is currently experiencing, a dependence problem with either alcohol or other drugs (e.g., cocaine, marijuana, heroin).

Perceived stress, and symptoms of anxiety and depression

The Perceived stress scale (PSS-4) is designed to assess how unpredictable, uncontrollable, and overloaded respondents find their lives. It is considered a global measure of how much perceived stress participants have experienced within the past

month. This scale is summed using a reverse-scoring schema, with the lowest possible score=0 and the highest score=16. Higher scores correlate to more stress.

The Hospital Anxiety and Depression Scale (HADS) is a 14-item scale with seven items measuring anxiety and seven questions measuring depression. Scores range from 0 to 21 for each scale; higher scores represent more distress. Scores between 0-7 for either anxiety or depression indicate a non-case, 8-10 indicate a borderline case, and 11+ a case. The time frame refers to mood during the past week. Two-month test-retest reliability was 0.79 for the anxiety scale, 0.63 for depression, and 0.78 for the full scale (37). Reliability was 0.74 for the full scale. Validity has been established with significant correlations with clinical ratings for anxiety and depression. The scale also is significantly correlated with other measures of depression (e.g., Beck Depression Inventory) and Anxiety (e.g. State-Trait Anxiety Inventory).

Social support

Social support was measured using the 8-item Social Support Scale, used by Ross and Richmond in an Inuit population (38). This series of questions addresses how often the pregnant woman has contact with friends, family or community of a regular basis. This scale has been used in previous studies with pregnant women and was considered a reliable instrument to measure social support in pregnant women (39). The scale used for this questionnaire was the same version used by Richmond et al (2007) (38) where they studied social support in Inuit and Aboriginal communities in Canada. Responses to each question are scored on a 1 to 5 scale. The scores from all eight questions are summed

(maximum 40) and then divided by 8 to get an average score. The higher the average score (minimum of 1, maximum of 5), the greater the perceived social support (40).

Internal consistency of selected survey measures

Cronbach's alpha served as the measure of internal consistency. Internal consistency scores were determined for the following scales and subscales: decisional balance; total processes of change; experiential processes of change; behavioural processes of change; total situational-temptation; situational-temptation in positive affect situations; situational temptation in negative affect; situational-temptation in craving situations; heaviness of smoking index; maternal antenatal attachment; total hospital anxiety and depression scale which include the anxiety scale and the depression scale; perceived stress scale; and the social support scale.

Feasibility outcomes

Screened for eligibility

The proportion of women screened for eligibility was operationally defined as the number of pregnant women agreeing to be screened for eligibility divided by the total number of pregnant women seen in the pre-natal clinic at the hospital and the total number of pregnant women staying at the Medical Boarding Home during the three-week recruitment period when the investigator was in Iqaluit.

Recruitment rate

The recruitment rate was operationally defined as the number of eligible women consenting to participate in the study divided by the total number of eligible women identified during the second recruitment wave. The criterion for the recruitment rate was that 80% or more of eligible pregnant smokers would consent to participate in the study.

Completeness of data collected

The completeness rate of the data collected was operationally defined as the number of questions with valid responses divided by the total number of questions in the survey.

Feasibility Criteria

Feasibility criteria were established a priori. If all of the criteria were met it suggests that the larger study is feasible using the methodology of the pilot study.

Assessed for eligibility rate

The criterion for the eligibility rate was that 90% or more of pregnant women would consent to be screened for eligibility.

Completeness rate for data collection

The criterion for the completion rate for data collection was that 90% or more of survey questions would have valid responses.

Internal consistency

Cronbach's alpha scores should be greater than 0.60 and less than 0.95 (41).

Study Size

For feasibility studies, sample size calculations may not be required, but it is important that the sample be representative of the target study population (42). 2007 data showed that 686 births were reported from the QI Hospital (43), and approximately 500 women attend the medical boarding home per year. A 10% sample was thought to be representative for the purposes of this study, which would yield a sample of approximately 50. As Thabane et al state (42), a pilot study should be large enough to provide useful information about the aspects that are being assessed for feasibility.

Statistical Methods

Data analysis was performed using SPSS Version 19.0 (SPSS Inc. Chicago, Illinois). Feasibility outcomes for agreement to be screened for eligibility and participation in the study were examined first using response frequencies (yes/no) and by comparing the outcomes to the pre-defined feasibility criteria. Next, the completeness of data gathering was examined and the pattern of missing data was examined. Cronbach's alpha statistics for various sub-scales were then calculated using the "reliability analysis" function in SPSS.

Next, the objectives of the main study were examined. Respondents were organized into groups based on stage of change using the staging definitions of stages described earlier. Demographic characteristics were compared between stages of change

groups to determine which variables should be included as covariates in subsequent analyses based on one-way ANOVAs (for continuous variables) and chi-square tests (for categorical variables). Multivariate analysis was performed to test for differences in decisional balance, use of processes of change, and situational-temptation between groups. Post-hoc analyses were performed to see between which groups significant differences occurred.

Results

Demographic, social, clinical and smoking-related characteristics

A total of 66 participants were recruited between January 2008 and October 2010. Demographic, social, clinical and smoking-related characteristics of all participants and participants in each of the stages of change are shown in Table 1 and 2.

Participants had a mean age of 24.9 years, more than 90% were Inuk, 15% had more than a high school education, and 69% were married or living in a common-law relationship. The mean number of weeks pregnant at the time of recruitment was 35 weeks and the vast majority of the sample (84.4%) had been pregnant previously. Participants who were current smokers (i.e. those in the precontemplation, contemplation and preparation stages of change) smoked a mean of 10.9 cigarettes per day at the time of their recruitment. More than 80% of the sample was exposed to smoke at home.

Main study outcomes

Point estimates for decisional balance, processes of change, and situational-temptation are shown in Table 3.

Stage of change

The distribution of the survey respondents among the stages of change for smoking cessation was as follows: 32 (48.5%) were in precontemplation; 19 (28.8%) were in **c**ontemplation; 8 (12.1%) were in preparation; 4 (6.1%) were in action; and 3 (4.5%) were in maintenance. No significant differences were observed among the stages of change for any of the socioeconomic or demographic variables.

Decisional balance

The pros and cons of smoking across the stages of change are displayed in Figure 1. Pros were categorized as general pros or pregnancy pros. Cons were categorized as cons related to the disapproval of others or health-related cons. The perceived pros of smoking decreased across the stages; they were highest in the precontemplation stage and lowest in the maintenance stage. The cons of smoking were higher in women in the contemplation and preparation stages compared to the precontemplation stage. In all stages, except precontemplation, the cons of smoking were greater than the pros of smoking.

Situational-temptation

Situational-temptation in social, negative affect and craving situations across the stages of change are shown in Figure 2. Situational-temptation scores were significantly higher in social situations among women in the action and maintenance stages compared to women in the precontemplation, contemplation and preparation stages ($p=0.02$).

Processes of change

Processes of change used by women in the different stages of change are displayed in Figure 3. As expected, experiential processes were used less in the precontemplation group than the contemplation or preparation groups. There were higher levels of use of behavioural processes among those in preparation and action stages compared to those in precontemplation, contemplation or maintenance.

Feasibility outcomes

Feasibility outcomes are summarized in Table 4.

Participant recruitment and study flow

The first 17 participants were recruited by one of two research coordinators between January 2008 and April 2010; the principal investigator recruited the remaining 49 participants during a three-week period in May 2010. Records concerning the number of pregnant women attending the pre-natal clinic or living at the medical boarding home during the recruitment periods supervised by the research coordinators were incomplete. As a result, the numbers of women assessed for eligibility and consenting to participate

are based solely on the recruitment period supervised by the principal investigator (Figure 4).

During the investigator-supervised recruitment period, a consecutive series of 47 women attended the pre-natal clinic at the hospital and 9 pregnant women stayed at the medical boarding home. Of these 56 women, all (56/56; 100%) agreed to be assessed for eligibility and provided information on their smoking status. Seven women (12.5%) reported they were non-smokers and had not smoked since learning they were pregnant and therefore were ineligible to participate and excluded from the study. The remaining 49 women (87.5%) were current smokers who met all other eligibility criteria. All of these women (49/49; 100%) agreed to participate in the study completed the interviewer-administered survey.

Missing data

The amount of missing data for outcomes, potential confounders and characteristics of participants are summarized in Table5. Valid responses were provided for 98.6% of the survey items.

Discussion

Statement of principal findings

This study provides a preliminary description of the smoking behaviour of pregnant women in Nunavut and insights into the processes in which these women engage to alter their smoking behaviour. The prevalence of smoking was very high. TTM seems to provide a good framework for understanding the smoking behaviour of

these women. In general, women tended to be mostly in the earlier stages of change. Decisional balance scores indicated that these women were very ambivalent about continuing to smoke during their pregnancy. Some processes of change were underutilized and could be the focus of new initiatives and interventions aimed at this population. Situational-temptation values were high in social situations among women who had quit smoking indicating that they may be at high risk for relapse in the future. The results support the feasibility of conducting a study of smoking behaviour among pregnant women in Nunavut using a methodology similar to that utilized in the present study. The interest level and participation rate among the women were extremely high.

The results of this study are consistent with the literature on smoking during pregnancy in regards to the distribution among the stages of change. Research done on low-income pregnant women suggests that women who had already experienced a pregnancy were more likely to fall in the precontemplation and contemplation stages (44) than the latter stages. There were however, fewer women in the preparation stage in this study sample than what has been reported in the literature (44, 45). In terms of decisional balance, women in precontemplation saw disapproval of others as less important in the decision to smoke than women in contemplation and preparation (17). As well, women in preparation perceived cons related to disapproval of others as more important in the decision to smoke than did women in action which is consistent with the literature (18). Situational-temptation patterns were different than previously published studies, as women in action and maintenance stages reported higher temptation scores than those in the earlier stages of change in social situations (24, 46). This finding may be an indication that women who have quit experience difficulty remaining smoke-free and are

susceptible to relapse in social settings. A study on processes of change among pregnant women who quit smoking during their pregnancy revealed that women were not engaging in experiential and behavioural processes at levels associated with the action stage of change, suggesting that women would most likely relapse post-partum (47). By comparison, in a study by Ruggerio et al (48), pregnant women displayed a pattern of increased use of the processes of change with increasingly advanced stage of change. This is further supported by previous research which suggests that experiential processes may be more important in earlier or pre-action stages (22, 48). Ruggerio et al (45) found that pregnant women were lower on three key experiential processes: consciousness raising, dramatic relief, and environmental re-evaluation (45). This study found that women were low on dramatic relief, and lower on the behavioural processes, which usually follow the latter stages of change and include: helping relationships, stimulus control and counter conditioning.

Strengths and weaknesses of the study

The strengths of this study included: the high participation rate, suggesting that the recruited participants were likely very representative of the population of interest; the use of validated measures, allowing comparison with previous studies; the measurement of wide variety of potential confounders, allowing adjustment for these confounders; and the completeness of the data collected, meaning that there was little need to replace missing values. The weaknesses of this study included: the reliance on self-reports measures of smoking behaviour, and other variables of interest (which may lead to misclassification with respect to stage of change, and misleading indications of decisional

balance, processes of change, and situational-temptation); the small sample size (although adequate to assess feasibility, it was not sufficient to provide an adequate number of women in each stage of change); and the cross-sectional study design (making it impossible to determine cause and effect relationships). As well, we only looked at women who were near the end of their pregnancy, and were unable to assess readiness to quit smoking earlier in the pregnancy.

Strengths and weaknesses in relation to other studies

This is the first study to assess the feasibility of conducting research on smoking behaviour during pregnancy in Nunavut. We recruited a high percentage of the population of interest, achieving a participation rate of 100% in a consecutive series of pregnant women. Other studies of smoking during pregnancy have reported lower participation rates ranging from 24% to 75% (49-52). This is also the first study to provide a preliminary description of smoking behaviour in this population. We measured important covariates such as levels of stress, depression, anxiety and social support using validated instruments.

The TTM was used as an organizational framework to provide a description of smoking behaviour and the processes pregnant woman in Nunavut use to change their smoking behaviour during pregnancy. The TTM has been criticized because there are still some questions about the extent to which such variables are actually predictive of change (53). It has been argued that cross-sectional designs are not appropriate for testing such influences on the *movement* of people across stages because they only allow

comparisons of the different constructs between people *in* different stages, and only provide snapshot of the stage theory (54).

Other authors have used a longitudinal study design to examine changes in readiness to quit smoking during pregnancy and have used objective measures of smoking behaviour (55). Smoking behaviour observed in this study is comparable to what has been described in other studies. Unfortunately, we were not able to observe changes over time, or recruit an on-going sample for a more rigorous analysis. Although other studies of smoking during pregnancy have been conducted in disadvantaged populations (44), none have focused exclusively on an Inuit population.

Discussion of important differences in results

Previous studies completed in large representative samples of pregnant women have found almost identical distributions of smokers across the first three stages of change (22, 56). Approximately 40% of the smokers were in the precontemplation stage, 40% were in the contemplation stage, and 20% were in the preparation stage. Comparatively, in this study the majority of women (48%) fall in the precontemplation stage, 29% in the contemplation stages and only small percentages were found in the later stages of change.

Other studies in non-North American samples suggest that the distributions across the stages may differ between countries. A recent paper (57) summarized the stage distributions from four samples among the general population from different countries in Europe (one each from Spain and the Netherlands, and two from Switzerland). The distributions were very similar across the European samples but very different from the

American samples. In the European samples, approximately 70% of the smokers were in the precontemplation stage, 20% were in the contemplation stage, and 10% were in the preparation stage, whereas American samples had distributions of 40%, 40%, and 20%, respectively. In this study, 48.5% of women were in the precontemplation stage, 28.8% were in the contemplation stage and 6.1% were in the preparation stage, suggesting that women in this sample were less ready to quit smoking than women in other studies. Research completed in a sample of English, low-income pregnant smokers found 25% were in precontemplation, 15% in contemplation, and 20% in preparation (44). The same study showed that among the women who were pregnant for the first time, 24% were in the precontemplation stage, 32% in contemplation and 44% in preparation (44). Among the women who had already experienced a pregnancy, 53% were in precontemplation, 20% in contemplation and 27% in preparation indicating that parity lessens the intention to change smoking behaviour than the first pregnancy experience (44).

Research suggests that the perceived risks of smoking appear to increase linearly as the baby develops (i.e. later stages of pregnancy); the mother will likely adopt healthier practices for her and her baby, and is more likely to progress through the stages of change (24). This pattern was not observed within this study sample, as the majority of women were seen in their third trimester of pregnancy. However, as Bane et al (18) suggest, the approval from others becomes increasingly important during pregnancy, when women are concerned about being perceived as a good parent (16); this pattern was reflected in the decisional balance results (18). Overall, the results of this study are consistent with the notion that if women do not quit in the first trimester, they are not

likely to quit at all during their pregnancy (58), even with the presence of a developing baby.

Women reported low socioeconomic status and high levels of stress and depressive symptoms. Social disadvantage has been linked to mental health issues, such as increased, anxiety, stress and depression (59-62). Depression and stress can interfere with quitting smoking and can be an important barrier of health behaviour change. These indicators are consistent within the literature, as women reporting less education and income and poorer prenatal care were more likely to smoke during pregnancy (63-66) . A key finding with this study sample is that a higher proportion of women were in the low socioeconomic group than those in previously published studies (27). A smaller percentage of women did not complete high school in other studies (23.1%) (67), in comparison to this study sample in which 74.2% did not finish high school. Furthermore, a study of women who smoke revealed that patterns of experiential and behavioural processes were similar throughout the stages of change for pregnant and non-pregnant women (33), suggesting that, socioeconomic status is a more accurate predictor of readiness to quit smoking than the pregnancy experience.

In the present study, situational-temptation increased among women in the later stages of change and this is contrary to the pattern that would have been expected, based on what has been reported previously in the literature. It may be that the women in the earlier stages of change were over-confident in their ability to abstain from smoking in tempting situations. One source of situational-temptation is vicarious learning, and there appear to be few role models of women who have successfully quit smoking during

pregnancy (or at any other time for that matter). The vast majority of women are exposed to smoke where they live.

Significance of the study

It would be feasible to conduct a study of smoking behaviour among pregnant women in Nunavut using the methods outlined in the present study.

For the most part, the measures used in this study were found to have good internal consistency to assess smoking behaviours. The MAEAS however, did not show high internal consistency and therefore is not recommended for use in a larger survey, and it may not be culturally appropriate. There may be some benefit to trying a different type of anxiety and depression scale, as the HADS was found to have only modest internal consistency.

There is a need for awareness raising activities given the fact that most women are not ready to quit smoking. A number of the processes of change are underutilized. For example, this study revealed that women are less inclined to control situations and other causes that trigger smoking behaviours; less likely to substitute alternative behaviours for smoking; are less inclined to have the support of caring others during attempts to quit smoking; and lastly are less likely to express feelings about smoking. These behavioural and experiential processes should be incorporated into intervention strategies to increase awareness, in particular, having someone to talk to about smoking and having the support of others has been shown to be effective in promoting smoking cessation and helping smokers remain smoke free (68,69).

This study confirms that the prevalence of smoking among pregnant women in the Baffin region of Nunavut is extremely high; few studies in the literature report on populations where the smoking prevalence is so high. A study that looked at smoking behaviours in eight different countries (Austria, Denmark, Finland, France, United States, Poland, United Kingdom and Sweden) found prevalence of smoking ranged between 23%-39% (70), and another study found that globally, the prevalence of smoking ranged from 11%-34% overall (20%-62% for males, and 1%-22% for females) (71).

With 45.9% of pregnant women reporting marijuana use, the concomitant use of marijuana may be an issue in this population and something that needs to be assessed and addressed in new interventions. Other studies have found that pre-pregnancy marijuana use, parity, and stress were associated with continued smoking during pregnancy (72) and posed a barrier to smoking cessation as women with other addictions have difficulty quitting smoking at the same time as they quit other substances (73).

Conclusion

A consecutive sampling strategy revealed a high prevalence of smoking among pregnant women in the Baffin region. This study demonstrates that it would be feasible to conduct a larger survey of smoking behaviour in this population. The TTM appears to be a useful framework to create a description of smoking behaviour and activities used to modify smoking behaviour in this population. Some of the proposed measures are not sufficiently reliable to recommend their use in a larger study, such as the MAEAS. The

information gathered as part of this study should be used to inform the development of new interventions or research to be completed in this population.

Recommendations

Readiness to quit smoking, decisional balance, processes of change, and situational-temptation were examined at one time point during pregnancy, and this was late in the pregnancy process. It would be ideal to follow women throughout their entire pregnancy to understand what happens over time. This study did not consider the experiences of women who experienced high risk pregnancies or women that chose to have their babies without any interaction with the health care system (it is estimated that 5-10% of women in the North choose not to receive any prenatal care from the territorial health care system).

There is a need for intervention research in this population. For example, it is unclear whether women in the North would respond to financial or other incentives to quit smoking. If interventions were to be tested, it would make sense to initiate them much earlier in pregnancy (since there are indications that fetal health would be improved more if women were able to quit early in their pregnancy).

This study provides little insight into the preferences of women with respect to quitting smoking. Some data regarding preferences were collected during a parallel qualitative study that ran alongside the present study. These results are reported separately.

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Table 1: Demographic and pregnancy-related characteristics of study participants

Variable	Pre-contemplation (n=32)	Contemplation (n=19)	Preparation (n=8)	Action (n=4)	Maintenance (n=3)	Total (n=66)	*P*-Value
Age, years (SD)	25.8 (6.4)	24.8 (6.0)	23.4 (6.3)	23.3 (5.3)	22.0 (6.1)	24.9 (6.1)	0.71
Weeks' gestation, mean (SD)	36.0 (7.3)	31.8 (9.5)	35.9 (7.4)	37.0 (4.1)	36.0 (4.5)	35.0 (7.7)	0.47
Race/Ethnicity, n (%)							
Inuk	30 (93.8)	17 (89.5)	7 (87.5)	3 (75.0)	3 (100)	60 (90.9)	
White	1 (3.1)	2 (10.5)	1 (12.5)	0	0	4 (6.1)	0.30
Inuk-White	1 (3.1)	0	0	1 (25.0)	0	2 (3.0)	
Marital status, n (%)							
Single	5 (15.6)	4 (21.1)	2 (28.6)	1 (25.0)	2 (66.7)	14 (21.5)	
Married/common-law	24 (75.0)	14 (73.7)	3 (42.9)	3 (75.0)	1 (33.3)	45 (69.2)	0.64
Separated/divorced	1 (3.1)	1 (5.3)	1 (14.3)	0	0	3 (4.6)	
Unknown/refused	2 (6.2)	0	1 (14.3)	0	0	3 (4.6)	
Highest education completed, n (%)							
High school or less							
Some college/university	31 (55.4)	13 (23.2)	7 (12.5)	3 (5.4)	2 (3.6)	56 (84.8)	
College/university graduate	0 (0.0)	2 (50.0)	1 (25.0)	0 (0.0)	1 (25.0)	4 (6.1)	0.06
	1 (16.7)	4 (66.7)	0 (0.0)	1 (16.7)	0 (0.0)	6 (9.1)	
Employment status, n (%)							
Employed	11 (35.5)	8 (42.1)	2 (25.0)	3 (75.0)	3 (100)	27 (41.5)	
Unemployed	18 (58.1)	9 (47.4)	3 (37.5)	1 (25.0)	0	31 (47.7)	0.36
On disability/social assistance	2 (6.5)	2 (10.5)	1 (12.5)	0	0	5 (7.7)	
Unknown/refused	0	0	2 (25.0)	0	0	2 (3.1)	
Household income, n (%)							
<$19,999	15 (46.9)	7 (36.8)	3 (37.5)	0	1 (33.3)	26 (39.4)	
$20,000-39,999	1 (3.1)	2 (10.5)	0	1 (25.0)	1 (33.3)	5 (7.6)	0.24
$40,000-79,999	1 (3.1)	4 (21.1)	1 (12.5)	0	1 (33.3)	7 (10.6)	
>$80,000	3 (9.4)	2 (10.5)	0	0	0	5 (7.6)	
Refused	12 (37.5)	4 (21.1)	4 (50.0)	3 (75.0)	0	23 (34.8)	
First pregnancy?							
Yes, n (%)	5 (15.6)	2 (10.5)	2 (25.0)	0	1 (33.3)	10 (15.2)	0.68
No, n (%)	26 (81.3)	16 (84.2)	6 (75.0)	4 (100)	2 (66.7)	54 (81.8)	

Refused, n	1 (3.1)	1 (5.3)	0	0	0	2 (3.0)	
Number of children, mean (SD)	2.1 (1.6)	1.9 (1.6)	1.5 (1.2)	1.0 (0.0)	0.7 (0.6)	1.8 (1.5)	0.32
Adoption intentions							
Keeping baby, n (%)	24 (75.0)	14 (73.7)	4 (50.0)	4 (100)	2 (66.7)	48 (72.7)	0.79
Adopting out, n (%)	5 (15.6)	4 (21.1)	3 (37.5)	0	1 (33.3)	13 (19.7)	
Undecided, n (%)	1 (3.1)	0	0	0	0	1 (1.5)	
Refused, n (%)	2 (6.3)	1 (5.2)	1 (12.5)	0	0	4 (6.1)	
Maternal antenatal attachment							
Overall score, mean (SD)	70.7 (10.1)	71.9 (10.4)	72.1 (10.9)	72.0 (3.6)	80.7 (9.3)	71.8 (9.9)	0.61
< 76, n (%)	24 (75.0)	11 (57.9)	6 (75.0)	3 (75.0)	1 (33.3)	45 (68.2)	
≥ 76, n (%)	8 (25.0)	8 (42.1)	2 (25.0)	1 (25.0)	2 (66.7)	21 (31.8)	

Table 2: Smoking-related characteristics and reported use of alcohol and other drugs by study participants

Variable	Pre-contemplation (n=32)	Contemplation (n=19)	Preparation (n=8)	Action (n=4)	Maintenance (n=3)	Total (n=66)	*P*-Value
Cigarettes/day (current or past)	12.1 (15.3)	11.9 (19.8)	7.4 (4.2)	4.7 (3.2)	7.0 (4.4)	10.9 (15.1)	0.85
Time to first cigarette (min)	32.6 (70.8)	44.8 (57.2)	58.3 (85.5)	---	---	38.2 (66.1)	0.80
Heaviness of smoking index, mean (SD)	4.4 (0.9)	3.9 (1.1)	4.1 (1.2)	---	---	4.2 (1.0)	0.19
Exposure to smoke at home							
Yes, n (%)	6 (18.8)	4 (21.1)	3 (37.5)	0	0	13 (19.7)	0.50
No, n (%)	26 (81.2)	15 (78.9)	5 (62.5)	4 (100)	3 (100)	53 (80.3)	
Exposure to smoke at work							
Yes, n (%)	4 (12.5)	5 (26.3)	1 (12.5)	0	2 (66.7)	12 (18.2)	0.19
No, n (%)	21 (65.6)	9 (47.4)	3 (37.5)	4 (100)	1 (33.3)	38 (57.6)	
Not applicable/Refused/ Unknown, n (%)	7 (21.9)	5 (26.3)	4 (50.0)	0	0	16 (24.2)	
Alcohol frequency (during pregnancy)							
2-3 times a week	1 (3.1)	0	0	1 (25.0)	0	2 (3.0)	0.21
Once a month	1 (3.1)	1 (5.3)	2 (25.0)	0	0	4 (6.1)	
Everyday	0	0	1 (12.5)	0	0	1 (1.5)	
Once a week	0	1 (5.3)	0	0	0	1 (1.5)	
< once a month	1 (3.1)	2 (10.5)	0	0	0	3 (4.5)	
Never	27 (84.4)	15 (78.9)	5 (62.5)	3 (75.0)	3 (100)	53 (80.3)	
Refused, n (%)	2 (6.3)	0	0	0	0	2 (3.0)	
Alcohol (drinks per day)							
1-2	2 (66.7)	3 (75.0)	0	0	0	5	0.30
3-5	0	1 (25.0)	2 (100)	1 (100)	0	4	
>10	1 (33.3)	0	0	0	0	1	

Other drug use, number (%) yes							
Marijuana	17 (58.6)	8 (44.4)	2 (28.6)	1 (25.0)	0	28(45.9)	0.60
Cocaine	0	0	0	0	0	0	-
Sedatives	1 (3.4)	0	0	0	0	1 (1.6)	0.89
Opiates	0	0	0	0	0	0	-
Stimulants	1	0	0	0	0	1 (1.6)	0.89
Other	0	2	1	0	0	3 (4.9)	0.33
Previous problems with alcohol or drug use, n (%)							
Yes	5 (15.6)	2 (10.5)	0	0	1 (33.3)	8 (12.1)	0.52
No	26 (81.3)	17 (89.5)	7 (87.5)	4 (100)	2 (66.7)	56 (84.8)	
Refused, n (%)	1 (3.1)	0	1 (12.5)	0	0	2 (3.0)	

Table 3: Transtheoretical constructs

Variable	Pre-contemplation (n=32)	Contemplation (n=19)	Preparation (n=8)	Action (n=4)	Maintenance (n=3)	Total	*P*-Value	Post Hoc Tukey
Decisional balance, mean (SD)								
General pros of smoking	2.7 (1.1)	2.2 (0.8)	2.0 (0.8)	1.4 (0.8)	1.1 (0.2)	2.3 (1.0)	0.02	PC>M
Pregnancy-related pros	2.9 (1.0)	2.6 (1.0)	2.4 (0.7)	1.0 (0.0)	1.0 (0.0)	2.6 (1.0)	0.000	PC>A.M; C>A,M;
Cons- disapproval from others	2.3 (0.8)	3.3 (1.2)	3.5 (1.0)	2.5 (1.7)	2.3 (1.4)	2.7 (1.1)	0.008	A<PC, C, P
Health-related cons	3.3 (1.3)	4.0 (1.1)	4.0 (1.1)	3.5 (2.1)	3.3 (2.1)	3.6 (1.3)	0.41	PC<C
Decisional balance	0.1 (1.1)	-1.2 (1.1)	-1.5 (1.4)	-1.6 (1.0)	-1.6 (1.5)	-0.6 (1.4)	0.000	PC>C,P,A
Processes of change, mean (SD)								
Consciousness raising	2.5 (0.9)	2.4 (0.6)	2.8 (0.6)	1.3 (0.6)	1.3 (0.6)	2.4 (0.8)	0.01	P>M;
Dramatic relief	2.0 (1.0)	2.7 (0.8)	3.0 (0.8)	2.0 (0.5)	2.8 (2.0)	2.3 (1.0)	0.03	PC<C<P
Environmental re-evaluation	2.5 (1.2)	3.1 (0.8)	3.7 (0.5)	3.7 (1.2)	3.2 (1.9)	2.9 (1.1)	0.03	PC<P
Social liberation	2.6 (0.9)	2.8 (0.8)	3.4 (0.9)	2.5 (0.5)	2.0 (0.9)	2.7 (0.9)	0.15	---
Self-re-evaluation	2.3 (1.2)	3.1 (0.7)	3.0 (1.5)	1.7 (1.2)	1.2 (0.3)	2.5 (1.2)	0.01	PC<C;C>PC,A,M
Stimulus control	1.7 (0.8)	2.1 (0.9)	2.1 (0.9)	1.3 (0.3)	1.5 (0.9)	1.8 (0.9)	0.40	---
Helping relationships	2.4 (1.2)	2.3 (0.9)	2.5 (0.9)	1.5 (0.9)	1.8 (1.4)	2.3 (1.1)	0.61	---
Counter-conditioning	2.4 (0.9)	3.2 (0.7)	3.2 (0.9)	2.5 (1.3)	3.2 (0.8)	2.7 (0.9)	0.02	PC<C
Reinforcement management	2.1 (1.1)	2.4 (0.9)	2.6 (1.2)	3.7 (1.4)	2.7 (1.5)	2.4 (1.4)	0.20	---
Self-liberation	2.6 (0.9)	3.4 (0.9)	3.1 (0.9)	4.0 (1.0)	1.5 (0.9)	2.9 (1.0)	0.002	C>M
Total Experiential	2.4 (0.8)	2.8 (0.5)	3.2 (0.5)	2.2 (0.3)	2.1 (1.1)	2.6 (0.7)	0.03	PC<A
Total Behavioural	2.2 (0.7)	2.7 (0.4)	2.7 (0.4)	2.6 (0.9)	2.2 (0.8)	2.4 (0.6)	0.13	---
Situational-temptation, mean (SD)								
Positive social situations	2.8 (1.0)	2.7 (0.9)	2.9 (1.1)	1.4 (0.8)	1.6 (1.0)	2.6 (1.0)	0.02	PC>A
Negative affect	3.5 (1.2)	3.2 (1.2)	3.0 (0.7)	1.9 (1.2)	1.4 (0.5)	3.2 (1.2)	0.01	PC>M
Craving	2.9 (1.0)	2.5 (1.0)	2.2 (0.7)	1.3 (0.5)	1.1 (0.2)	2.5 (1.0)	0.002	PC>A,M
Perceived Stress Scale, mean (SD)	6.6 (3.4)	7.5 (3.0)	8.0 (1.1)	5.7 (2.1)	10.0 (2.8)	7.1 (3.1)	0.38	---
HADS, mean (SD)								
Anxiety	7.5 (4.0)	7.2 (2.9)	8.4 (3.5)	7.3 (2.9)	8.0 (7.1)	7.5 (3.6)	0.96	---
Depression	6.5 (3.4)	7.4 (3.1)	6.1 (2.5)	7.7 (1.5)	7.0 (2.8)	6.7 (3.1)	0.82	---
Overall	14.0 (5.5)	14.6 (4.1)	14.5 (4.3)	15.0 (3.0)	15.0 (4.2)	14.3(4.7)	0.99	---
Social Support , mean (SD)	3.8 (0.8)	3.9 (0.7)	3.4 (0.9)	3.8 (0.9)	3.6 (0.5)	3.8 (0.8)	0.78	---

Table 4: Summary of feasibility results for study of pregnant smokers in Nunavut

Feasibility outcome	Operational definition	Success criteria	Actual percent
Assessed for eligibility	Number of pregnant women agreeing to be screened for study/number of pregnant women staying at the boarding home or seen in pre-natal clinic at hospital during a three-week period	≥ 90%	56/56 (100%)
Recruitment rate	Number of eligible women consenting to participate/total number of eligible women identified during a three-week period	≥ 80%	49/49 (100%)
Completeness of data collection	Number of survey items with valid responses/total number of survey items	≥ 80%	8298/8416 (98.6%)
Internal consistency of scales used for data collection	Cronbach's alpha for selected scales	≥ 70% but < 95%	
	• Decisional balance		0.77
	General pros		0.78
	Pregnancy-related pros		0.69
	○ Disapproval from others		0.77
	○ Health-related cons		0.83
	• Processes of change		0.86
	○ Experiential		0.78
	○ Behavioural		0.69
	• Situational-temptation		0.88
	○ Positive affect		0.61
	○ Negative affect		0.83
	○ Cravings		0.70
	• Heaviness of smoking index		0.71
	• Maternal antenatal attachment scale		0.30
	• Hospital anxiety depression scale		0.67
	○ Anxiety		0.67
	○ Depression		0.47
	• Perceived stress scale		0.67
	• Social support		0.84

Table 5: Missing values

Question	Missing responses
Due date	3/66
Is this your first pregnancy?	2/66
How many previous pregnancies have you had?	17/66
How many children do you have?	1/66
Adoption intentions	4/66
Marital status	1/66
Employment status	1/66
Primary prenatal health care provider	16/66
Age started daily smoking	1/66
Number of cigarettes smoke(d) per day	3/66
Number of people who smoke in house	1/66
Exposed to second hand smoke	16/66
Time to first cigarette in the morning	7/66
Considering quitting in 6 months	2/66
Considering quitting in 30 days	4/66
Motivation to quit	3/66
Confidence to quit	2/66
Past quit attempts	7/66
Cigarette dependence (self-reported)	3/66
Perception of quitting smoking	2/66
Frequency of alcoholic beverages	2/66
Number of alcoholic beverages	3/66
Smoked marijuana in the last 30 days/1 year	5/66
Used cocaine in the last 30 days/1 year	5/66

Used sedatives in the last 30 days/1 year	5/66
Used opiates in the last 30 days/1 year	5/66
Used stimulants in the last 30 days/1 year	5/66
Used other drugs in the last 30 days/1 year	5/66
Ever had, or currently have an alcohol or drug problem	2/66
Decisional balance: smoking helps me concentrate	1/66
Decisional balance: I am relaxed, and more pleasant when smoking	1/66
Decisional balance: people think I am foolish for smoking	1/66
Situational-temptation: tempted to smoke over coffee	1/66
Process of change: frequency of smoking when thinking of something else	1/66
Process of change: frequency of noticing non-smokers asserting rights	1/66
Process of change: frequency of recalling benefits of quitting smoking	1/66
Process of change: frequency of thinking about pollution to environment	1/66
Process of change: frequency of emotional reactions to health	1/66
Process of change: frequency of getting upset when thinking of smoking	1/66
Process of change: frequency of having someone who listens	1/66
Process of change: frequency of telling self if I try hard enough, I won't smoke	1/66
Process of change: frequency of noticing changes in society in regards to smoking	1/66
Process of change: frequency of having someone I can count on	2/66
Process of change: frequency of doing something else instead of smoking	2/66
Process of change: frequency of reacting emotionally to warnings of cigarettes	1/66
Process of change: frequency of keeping things around house that remind no smoking	2/66
Process of change: frequency of being rewarded by others for not smoking	2/66
Perceived stress scale: how often were you able to control things in life	2/66
Social support scale: how often do you have someone to take you to doctor	1/66
Social support scale: how often do you have someone who shows you love and affection	1/66
Maternal attachment scale: emotional feelings towards baby	1/66

Maternal attachment scale: desire to read or get information on developing baby	1/66
Maternal attachment scale: thoughts towards baby	1/66
Maternal attachment scale: picturing what baby might look like	1/66
Maternal attachment scale: feelings towards baby and pregnancy	1/66
Maternal attachment scale: aggression or happiness towards baby	1/66
Maternal attachment scale: feelings if miscarriage or death occurs	2/66

Figure 1: Decisional balance scores among pregnant women in different stages of change

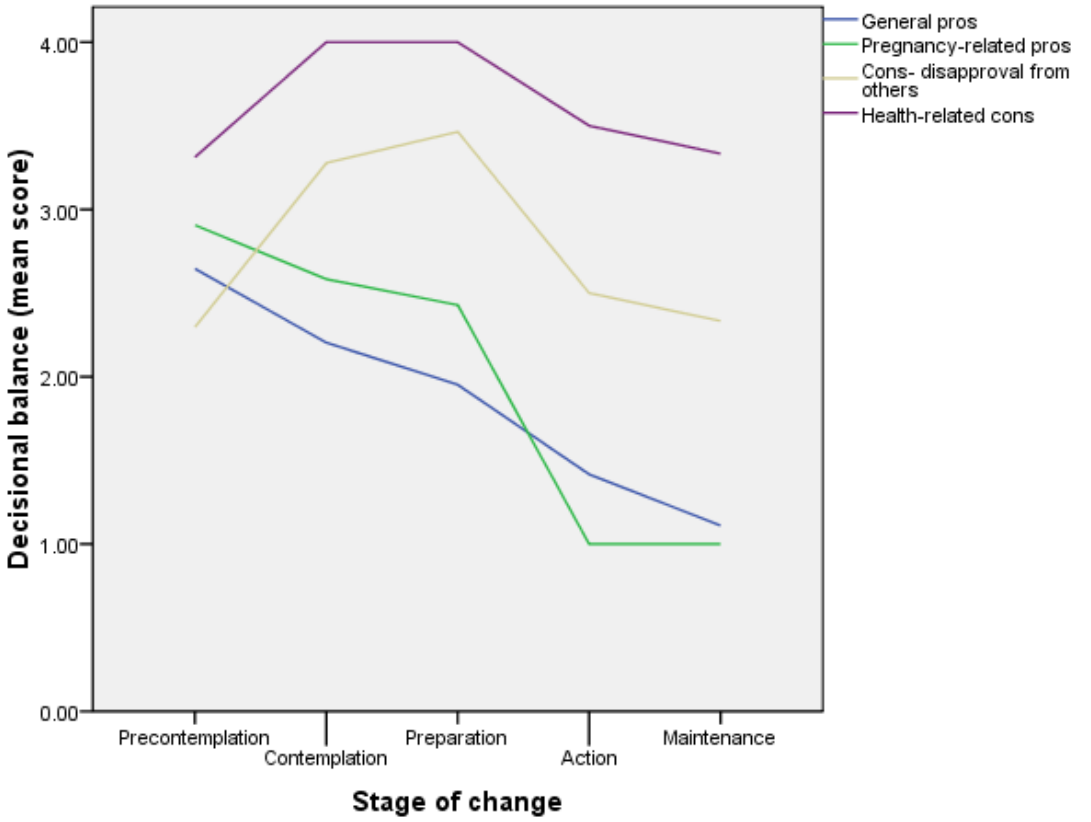


Figure 2: Situational-temptation mean scores among pregnant women by stage of change

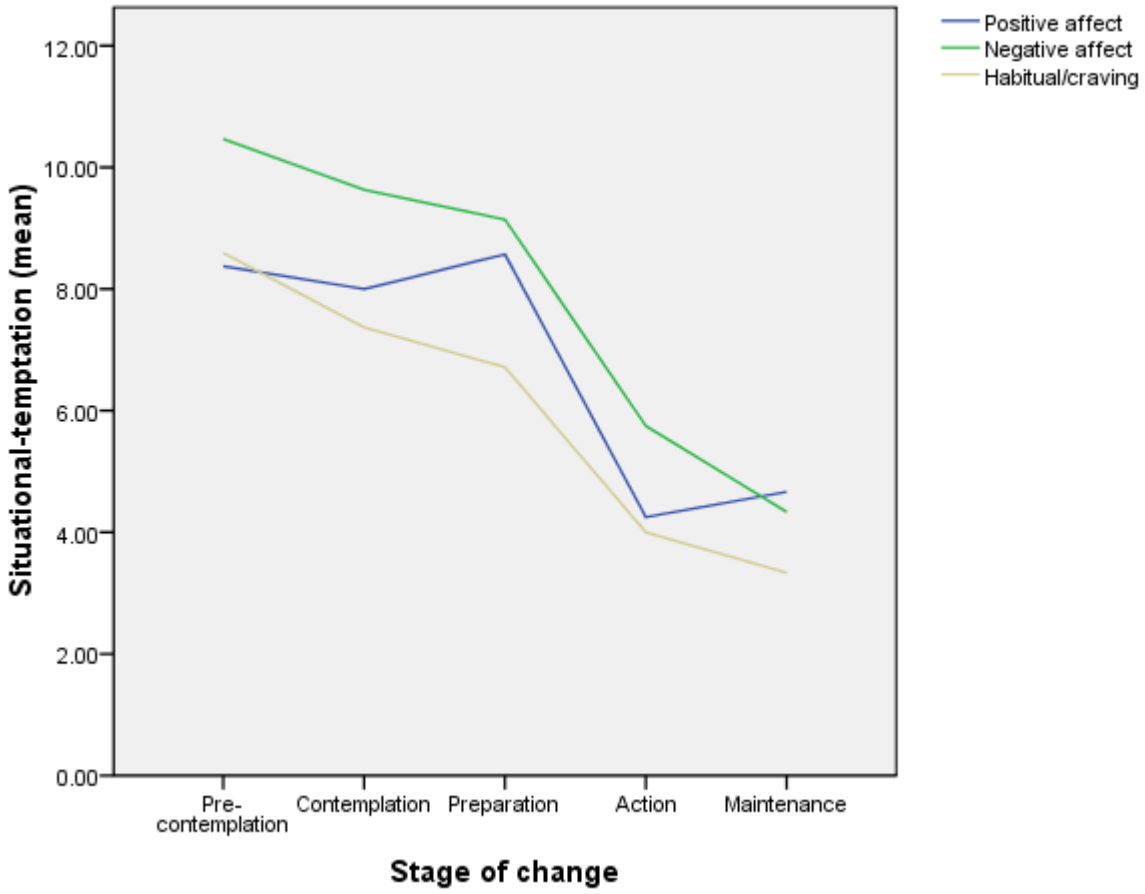


FIgure 3: Process of change among pregnant women by stage of change

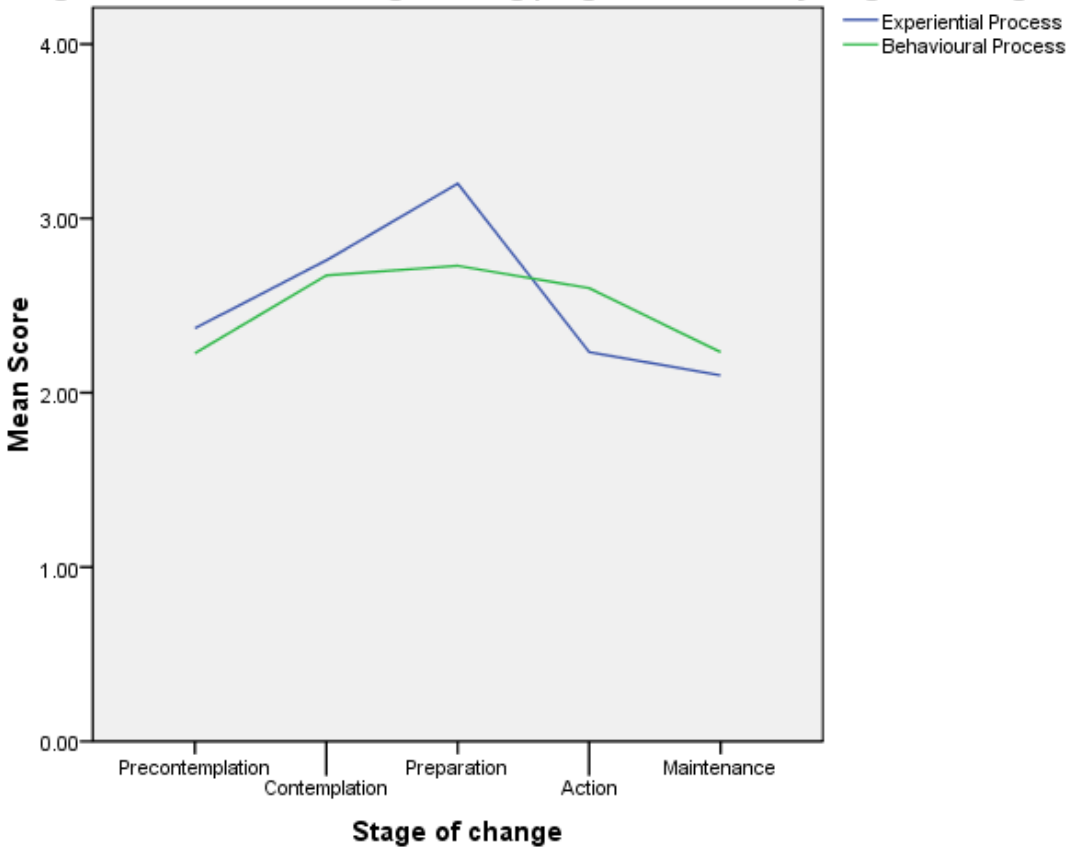


Figure 3a: Experiential process of change scores among pregnant women by stage of change

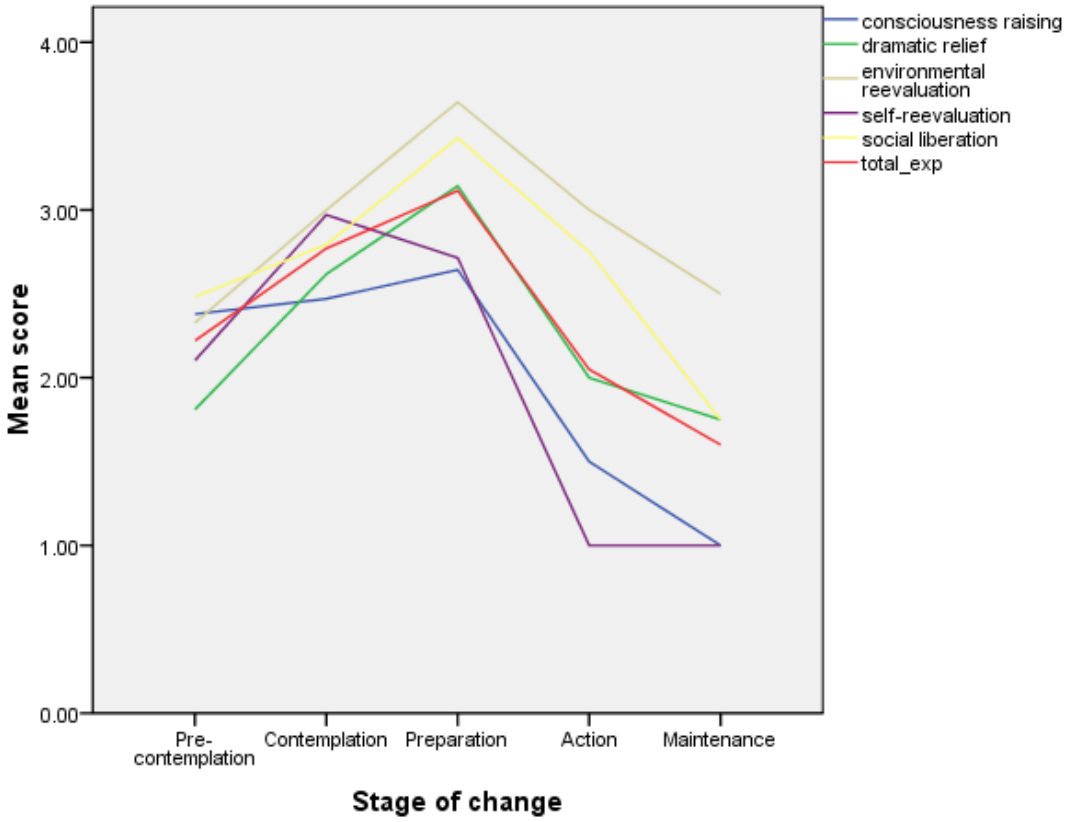


Figure 3b: Behavioural process of change scores among pregnant women by stage of change

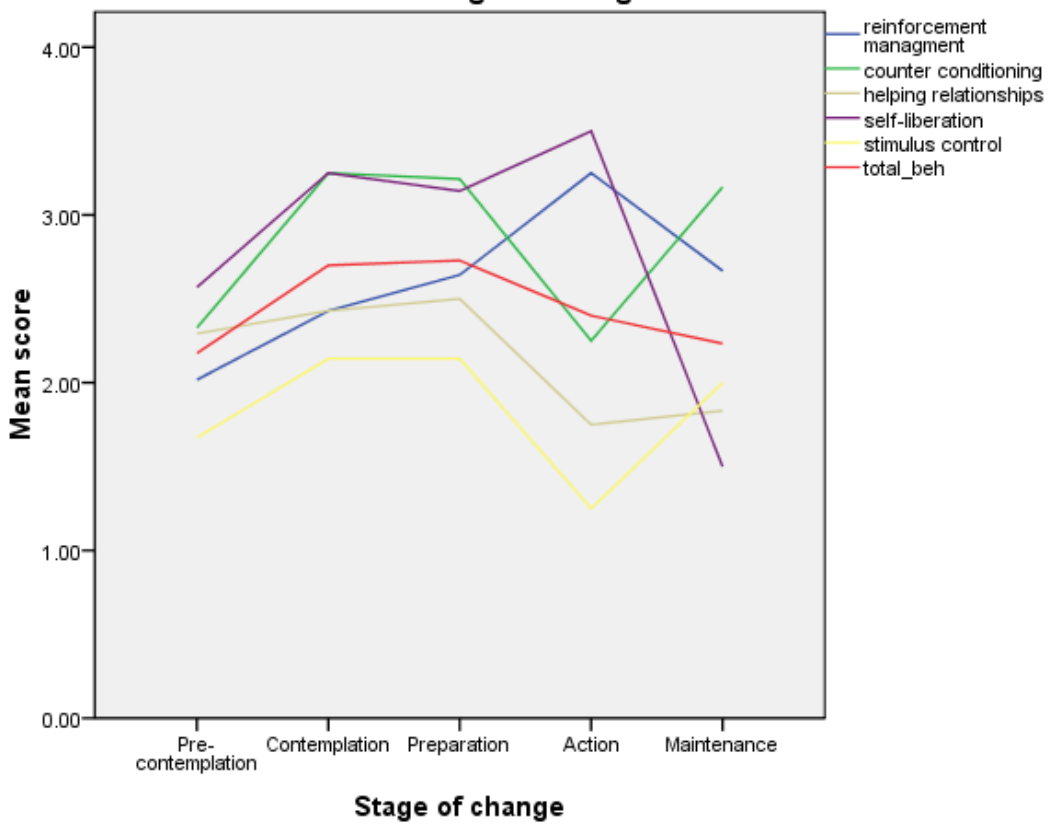
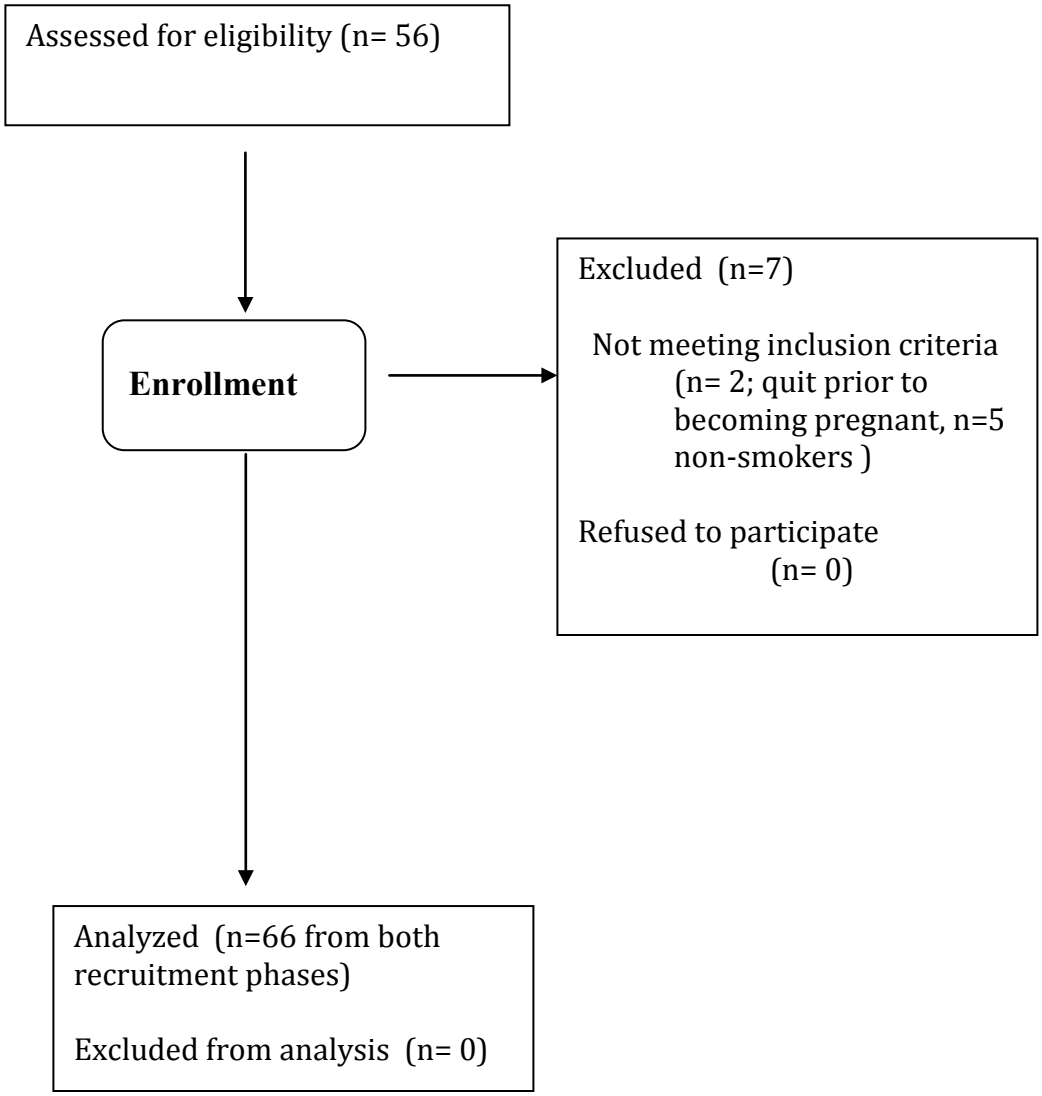


Figure 4: Recruitment flow chart



Manuscript 2:

Exploring the context of smoking behaviours of pregnant women in Nunavut: What are the perceived barriers and facilitators to smoking cessation?

Abstract

Objectives: To identify and characterize the perceived barriers and facilitators to smoking cessation among pregnant women living in the Baffin region of Nunavut.

Methods: A qualitative study, using semi-structured interviews with 17 pregnant Inuit women all of whom were current smokers or had smoked at least 1 cigarette since they learned they were pregnant.

Results: When asked about the potential risks of smoking to the baby, most women identified that they understood there were health risks to their foetus, but this was not sufficient motivation for them to quit. Indeed, approximately half of the women interviewed (n=8) stated they started smoking *more* when they found out they were pregnant than in pre-pregnancy and this was largely due to contextual influences. All women reported stress as the main reason for their continued smoking throughout their pregnancy. Critical stressors included financial situation, housing instability, troubled partner relationships and single parenthood. All women identified that smoking was used as a coping mechanism as it helped them relax, and temporarily relieved their anxiety. When asked if they knew where they could go for help or support to quit smoking, the majority indicated that they did not know of any programs or where to go for help.

Conclusion: Smoking cessation among pregnant Inuit women poses a major challenge for public health professionals in light of this information.

Introduction

In 2006, Statistics Canada estimated that 18.5% of pregnant Canadian women smoked during their pregnancy (1). Experts estimate that approximately 80% of pregnant women in Nunavut smoke (2) which is much higher than the national average. Smoking in pregnancy is strongly associated with poverty, low levels of education, poor social support, depression and psychological illness (3-7). Not attending prenatal classes and experiencing stressful events before/during pregnancy have been shown to increase the mothers' odds of continued smoking during pregnancy (8). Women in the general population who were smokers during pregnancy had a higher rate of smoking partners, and they reported higher levels of daily stress compared to non-smokers (9).

The socioecological theoretical framework (12, 13) emphasizes that the social environment has an important role in the health behaviours of an individual. This particular perspective is important to consider as smoking is influenced by the larger social–environmental context such as the influence of friends, family, and environmental tobacco exposure (14). The reasons underlying women's smoking are complex, which reflect multiple and interacting social, cultural, economic, and biological influences (10). Differences in the smoking behaviours of women are argued to be a result of a different socio-cultural environment, life trajectories and social circumstances (11).

In studies done in First Nation communities in British Columbia, Canada it was found that extended family networks are an important part of everyday life (15, 16). Despite the effects of unemployment, poverty, and collective experiences related to the consequences of residential schools, strong connections within and among families were evident in daily life (16), and these connections were important in shared activities that

supported health (e.g., sharing traditional foods). However, these connections also increased pressures to smoke, particularly in households where smoking was part of everyday interactions, celebrations and other family events (16). The evidence for the impact of the broader social network influences on smoking cessation among pregnant women also shows that friends' smoking status was predictive of smoking among pregnant women (14). Similarly, factors related to smoking cessation during pregnancy found that the influence of friends and family on smoking during pregnancy was related to changes in smoking status (14).

In a recent study, results suggest that childhood trauma may be a risk factor underlying nicotine dependence in pregnant smokers (17). This is particularly important from a Northern perspective, as there has been a substantial amount of literature done on the traumas experienced by Aboriginal people in regards to colonization and residential schools (18-20). Furthermore, research shows that living in socioeconomically disadvantaged communities can potentially expose women to greater risks of physical and sexual violence, which has been associated with greater likelihood of smoking during pregnancy (21, 22).

Psychosocial factors have been shown to be important in predicting both prenatal and postpartum smoking (22), and women who are socioeconomically disadvantaged may be resistant to smoking cessation and have fewer resources to draw from compared to women in the general population (22). Social support, both interpersonal and paternal, was associated with maternal smoking behaviour during pregnancy, with positive support reducing and negative support increasing the probability of smoking (22).

There is little literature to explain the smoking behaviours of women in Nunavut,

therefore it is unknown if the findings within the literature conducted in the general population is similar to what is happening in the North. This study identifies barriers and facilitators to smoking among Inuit women in the Baffin Region of Nunavut using in-depth interviews focusing on perceptions of smoking, and perceived barriers and facilitators of smoking behaviours.

Methods

Study design

A qualitative approach that examined pregnant Inuit women's perceptions towards smoking cessation using semi-structured interviews was undertaken. Qualitative research helps to provide a broad understanding of context surrounding complex issues, in part because it does not depend on a closed, pre-determined set of questions. Qualitative studies have been used to gain a greater understanding of the process of quitting smoking as researchers have investigated the social and psychological factors around women's attempting to quit smoking during pregnancy (23). A qualitative interview method was thus considered appropriate to build a knowledge base for understanding the context of smoking behaviours among pregnant women in Nunavut.

Participants

Participants were eligible for the study if they were: pregnant; ≥ 16 years of age (women who were 16 or 17 years of age were eligible to participate with signed parental/guardian consent as required by the University of Ottawa Heart Institute Research Ethics Board); smoked at least 1 cigarette since learning they were pregnant;

agreed to participate in an interview; able to articulate their experience in English or Inuktitut, and; capable of providing informed consent.

Recruitment

Recruitment for the study took place at the Qikiqtani General Hospital, a 35-bed facility that serves patients from 13 communities in Nunavut's Qikiqtaaluk region and the Tammaativvik Medical Boarding Home in Iqaluit, Nunavut between May and June, 2010. Women from smaller communities outside of Iqaluit are brought to stay at the boarding home several weeks before their expected due date so they have ready access to prenatal care and can deliver at the Qikiqtani General Hospital. Women with higher-risk pregnancies are usually sent outside of Nunavut to Ottawa or Winnipeg therefore were not included in this study.

Pregnant women attending prenatal care clinics at Qikiqtani General Hospital in Iqaluit were asked about their smoking status and those who were identified as smokers had the study explained to them by one of the prenatal care nurses during their regularly scheduled appointment. Women interested in participating in the study were referred to the study researcher (primary author of this paper), situated in a private area within the hospital. The primary author of this paper was situated in the clinic area during clinic hours for a three-week recruitment period to conduct the interviews. At this point, broader information about the study was explained, and an opportunity to ask questions was provided. All women provided informed consent, and were asked to sit down to participate in a face-to-face interview. Women were given an opportunity to have the interview conducted in their own language in two ways: a project coordinator spoke

Inuktitut would come to do the interview, or the study researcher would ask the questions in English and they could respond in their own language and the interviews would be translated during the transcription process. This second option could have presented a problem during the data collection and analysis as the primary author did not speak the language and therefore could not ask pertinent follow up questions, however, this was the best solution with the limited options available. Only people listed on the approved research protocol by the Ottawa Heart Institute Human Research Ethics Board and those listed on the Nunavut Research License were able to collect data, therefore despite the number of people within the community who could have helped with translating, this would mean a deviation from the protocol. In the end, all participants agreed to participate in English.

Pregnant women who were staying at the medical boarding home were also approached directly by the study researcher and asked if they were willing to participate in an interview to discuss smoking during pregnancy. Those who expressed an interest were explained the details of the study and informed consent was obtained. Whenever possible, the interview was done at the boarding home. Due to high noise levels, some women completed the interview the following day in the private area located in the hospital. All women were given a gift basket with baby supplies (approximate value of $25) once the interview was completed.

Data collection and analysis

The primary method of data collection was individual interviews with pregnant women who smoked or had recently quit smoking; all interviews were conducted using a

semi-structured interview guide (see Appendix G). The interview questions addressed a range of topics organized around the beliefs and attitudes towards smoking during their pregnancy. The interview questions dealt initially with general themes and progressed to more in-depth questions, structured like a conversation would typically flow; these more in-depth questions were based on issues that had been salient in the literature (i.e. past quit attempts, stress, personal meaning of smoking). The content of the interviews was informed by the socioecological framework to ask about possible social and cultural influences on smoking, and this interview was guided by Spradley's ethnographic approach using "grand tour" and "mini tour" type questions (13).

At the beginning of the interview, the women were asked to complete a brief demographic questionnaire to provide some information about their background—information gathered in the research was confidential and pseudonyms were used to protect the privacy of both the individual and the community. This study was part of a larger three-part study, and the demographic questionnaire given to those participating in the interviews were the same as the questions used in study 1: Does maternal antenatal emotional attachment influence readiness to quit smoking? The demographic questions asked were based on a review of literature which suggested information such as parity, marital status, education, age, income, ethnicity and having prenatal care are all factors related to smoking behaviours. Further, this type of information helped describe the study sample, and provided critical markers from a population health perspective, as it provides an indication of socioeconomic status.

The analyses of the interviews were guided conceptually by Spradley's suggestions regarding exploration in ethnographic interviews (13). Ethnographic

interviewing involves two distinct, but complementary processes: developing rapport and eliciting information (24). Rapport refers to a harmonious relationship between ethnographer and informant (24). It means that a basic sense of trust has developed that allows for the free flow of information (24). The rapport process, when successful, usually proceeds through the following stages: apprehension, exploration, cooperation, participation (24). Rapport encourages participants to talk about their culture; eliciting information fosters the development of rapport (24). Three important principles facilitated the rapport-building process, and this was used to guide the interviewing process in this study. First, repeated explanations were requested. Spradley suggests that repetition before each interview, during interviews, and at the end of each will be beneficial in the rapport process, by simply restating ideas such as "I'd like to understand your point of view on this topic" or "I'd like to learn from you" (24). Second, the information stated by participants was restated throughout the interviews. According to Spradley, restating demonstrates an interest in learning the participant's language and culture. Restating embodies the nonjudgmental attitude which contributes directly to rapport, and when the interviewer restates what an informant says, a powerful, unstated message is communicated—"I understand what you're saying; I am learning; it is valuable to me" (24). And third, asking for use, rather than meaning was stressed throughout the interviews as Spradley suggests that being concerned by meanings and motives tends to push questions like, "What do you mean by that?" and "Why would you do that?": these types of questions may contain a hidden judgmental component (24).

All interviews were digitally recorded and transcribed verbatim by an independent contractor. All transcripts were entered in NVivo version 8.0 for analysis and coding.

A subset of interviews was coded (n=5) by the primary author, and a review of the five interviews was done by a second researcher, LM. There were minimal discrepancies between both researchers. The review of the coding was not done in NVivo, but rather LM reviewed the transcripts and the coding scheme and made suggestions to include some of the quoted text in more than one theme (i.e. "role of family" quote to also be included in the "barriers to quit" theme). Once the coding scheme was agreed upon, all transcripts were coded by the primary author and subsequently analysed for content.

Researcher's standpoint

As a non-Inuit outsider to the community and as a researcher, it was important to document impressions, observations and thoughts throughout the interview process to assess any potential bias that may have been brought into the interviews, as well as help provide additional context to the stories that the women shared. I have never smoked a cigarette and I have never been pregnant, therefore I could not personally relate to the experiences of the women in this study sample on this level. I kept this in mind during the interviews, and this may have affected the direction of the conversations with the participants and ultimately the final transcripts of the interviews as I could have missed pertinent questions that could have provided additional context to the interviews that would have been obvious to a smoker and/or a pregnant woman.

The first few interviews were short, and non-informative, as the women typically gave one-or two-word answers, and would not expand on thoughts or ideas, despite the prompts for further information. This could be due to a multitude of reasons such as: my inexperience in interviewing; I was a stranger to them, so open communication had not

been established; they were being recorded; language barriers; personality of the woman being interviewed; and non-verbal communication to name a few. I then revised the interview guide from a general-to-specific semi-structured interview to a more organized semi-structured format, which helped solicit more information and was a better fit in the end as I learned that the women in this sample were not "talkers". The same information was used that was found within the interview guide, but organized in a list of questions, and if any additional information came up I could still ask the women to expand on their thoughts and include these observations for future interviews. I added a few questions based on the initial interviews, which were related to the cost of cigarettes, and worded ideas based on the descriptions I used to convey this information when language barriers were evident. For example, "grand tour" questions such as "explain the role that smoking plays in your life" was not easily conveyed, and had to be broken down in to simpler concepts. I found that asking "if you could describe a cigarette like it was a person, how would you describe it" was met with looks of confusion and was not well received. But by asking "how would you feel if you had to quit smoking right now" generated responses that were likely similar to the original question, but in a way that was easier to understand by the participants.

The additional information that follows should be kept in mind when reading the results of this study. As the interviews unfolded, the information revealed by the women at times was hard to process as they mentioned current and past emotional and verbal abuse, rape and domestic violence:

" ..learned of domestic violence with one of the participants… I advised her to talk to boarding home staff before leaving to set up a safe return…Should I have done something else?"- Chantal, journal

"Lack of child support and domestic violence is becoming a recurring theme. This is being revealed after the recording is stopped." –Chantal, journal

The levels of poverty were higher than I had thought possible, and I was unprepared to hear this type of information.

"One of the participants broke my heart despite trying to stay neutral. Finances are tight, she is supporting 4 kids on her own and one is adopted out! I will give her extra diapers when I see her at the clinic"- Chantal, journal

"(I) can't help but notice the racial discrepancies in income/lifestyle. Why is this the case?"- Chantal, journal

Often this information was revealed once the tape recorder was turned off, and notes were taken to record this additional context as soon as possible. I quickly learned that for some of these women, this is their life, and I felt the need to detach emotionally from some of the information they were giving me but at the same time this was most helpful in contextualizing their responses. This information provided an insight into their everyday lives that needed to be considered when interpreting the results, and providing

intervention strategy recommendations. Smoking appears to be a by-product of much broader social issues, and after listening to the women's stories, I knew this information could not be ignored and needed to be incorporated into the analysis. One woman asked to not "be a statistic"…I had to make sure to contextualize the information with as much accuracy as possible, without involuntarily reinforcing or creating stereotypes.

Also, it was becoming evident throughout the interviews that my own perspectives on these issues were affecting how I interpreted the information the women were giving me. Despite my efforts to remain objective, it was not possible, as ideas that were firm in my mind (such as what constitutes a healthy relationship) were very different from the participants being interviewed and my perspective could not be ignored.

> *"…this woman is having her 7th pregnancy, and it was kind of sad because I learned she has no one to talk to, and her partner is non-existent except for sex"— Chantal journal*

While conducting these interviews that I realized how my interpretations and views on the information being provided were going to affect the analysis of the transcripts. I realized that my subjectivity to the interviews could not be ignored, but rather I had to be aware of this information when presenting the results.

Results

Participant profile

A total of 17 pregnant women who met the inclusion criteria were interviewed. No one who was approached to participate refused to do the interviews. Table 1 outlines the demographic characteristics of the participants. The average age of the participants was just less than 27 years of age, with a range of 20 to 37 years. All of the women (n=17) had been pregnant previously, and 10 had more than one child living in their household. Most (n=14) were planning to keep their baby. The marital status of the women was as follows: five were single, 10 were married or in a common-law relationship and one was divorced or separated. The majority of the women (n=10) had not completed high school, three received their high school diploma and four had at least some post secondary education. The average income per household was as follows: seven reported having less than $29,999 per year; two reported receiving between $30,000 - $59,999 and four reported having an income greater than $60,000 per year. Five women reported working full time, two part-time, three were unemployed and three were receiving social support. Lastly, the majority of the sample (n=15) reported receiving prenatal care. Table 2 presents the data for each participant along with their pseudonym to better contextualize the quotes that will follow.

The interviews progressed from general pregnancy questions and gradually led into smoking during pregnancy. The order of the results presented below does not necessarily reflect the order with which these issues were discussed in the interviews themselves.

Risks to baby and experiences with previous pregnancy

One of the potential motivators to quit smoking could be the knowledge of the risks it poses to their baby, which may be informed by health issues related to smoking among their other children. When asked about the potential risks for the baby, most women identified that they understood there were health risks to their foetuses. All were aware that the baby is "smoking" every time they do, but this was not sufficient motivation for them to quit. When asked to list potential health risks to the baby, most women could identify the common health risks of smoking including, respiratory illness, low birth weight, decreased immune response and cancer.

> *"I know it's hurting the baby but maybe due to my addiction, I'm not quitting"— Olivia*

For those who have had previous pregnancies, when asked about their previous smoking behaviours, all of them stated they smoked with their previous pregnancies. Seven women stated that their other children had respiratory illnesses. As Beth reported,

> *"Um, well like all my boys, I have smoked throughout the whole time. They usually have colds, runny nose, earaches and stuff like that" Beth*

One woman reported that her baby developed a hernia from constant coughing. Even those women who have had children who manifested symptoms related to tobacco exposure still smoked during their current pregnancy, and most of the women who had

previous children experiencing health complications stated that they understood that their smoking could have contributed to these health issues. When asked if the women thought that smoking may have contributed to the health issues their children have today, the majority of the women responded "yes" or "probably". Further to this question was whether or not their other children's health influenced their smoking behaviours with their current pregnancy, and the majority of the participants said "no".

Stress and addiction to nicotine were the most commonly reported reasons why smoking continued during pregnancy.

> *"No, with my other two I, I smoked less, like even before I found out I was pregnant with them, I wasn't smoking as much but then all the, all the stress at home and all the acting up got me smoking more and more every day.- Naomi*

Some of the women expressed feelings of guilt as they felt they could not stop smoking due to their self-reported addiction to nicotine, while other women reported that although their children had health complications this did not change their current cigarette consumption.

> *"Even though I know it's hurting my baby and I don't like that part, but I think I'm just so addicted to it that its not making me want to quit as much…I feel sorry for the baby inside me because the baby can't go nowhere."—Eva*

The word "addiction" was only mentioned by two participants; however the concept was characterized differently by each of the women interviewed, usually in an example of the stresses of quitting. In particular, the word "craving" was used often to describe the addiction component of smoking.

Key barriers to smoking cessation during pregnancy

As noted above all women reported stress as the main reason for their continued smoking throughout their pregnancy. The following three women described stressful life circumstances impeding their ability to quit smoking including financial situations, housing instability, troubled partner relationships and single parenthood.

> *"Well being a single parent and taking care of all three boys, um, I don't like to make excuses though but, ah, sometimes it's just really hard to try and balance, um, to be a mother and, ah, a person….you know, I don't know what else, just ah, the father and I have some real issues to deal with."—Beth*

> *" Sometimes I start realizing that when I'm in the stressful situation, I'm smoking more often…like trying to buy the Pampers for the babies, it's so expensive at home and the formula, the, the youngest little boy that I have but my mom adopted, I end up buying him formula when they can't"—Mary*

> *"…it's mostly stress at home too 'cause we're having problems with housing. We can't get our own place and like peoples being, a lot of people have been applying*

for houses and some of them up, have been trying for so many years and every family has different situations and that's not how the housing, ah, association is looking at it…like anyways just so stressed, stressed out about not having our own space and our own place, like our own rules right so I think it's more stress…ah, there's 5 of us, two bedrooms and another one coming, one on the way."- Susan

All the women identified that smoking was used as a coping mechanism as it helped them temporarily relieve their anxiety. When asked if they could see themselves doing something else to help alleviate their stress, the mere thought of not smoking was enough to provoke an anxious response. Increased marijuana use was often cited as an alternative to reduced tobacco use to help control their anxiety.

"…like I usually go for a smoke every half hour and hour but and I also those green stuff…yeah that (marijuana) helps me stop smoke, less too."-Fay

Boredom was another theme that emerged throughout the interviews, with many women claiming there is nothing to do in their communities. Cigarettes often presented the only "break" women had in their day, and gave them something to do when they experienced boredom.

"There is nothing to do in my home town."—Lynn

"Like get bored, when I get bored, I get smoke."—Rosa

The social aspect of smoking was the most prominent overarching theme as a barrier to smoking cessation. Most women have smoking partners, friends or family members of which they are exposed to everyday. Many women identified that it would be difficult to resist smoking if they saw their friends or family go out for a cigarette, and most would be surrounded by others smoking on a daily basis.

> *"I think it would be harder to quit because I got a lot of friends who smoke cigarettes and my parent smoke cigarettes and my boyfriend and my brother."—Jackie*

> *"I find it difficult to quit and everybody else that I'm usually around smoke too, so seeing them puff on a cigarette makes me want to puff on a cigarette"—Naomi*

Throughout the rest of the interviews, all women identified that they had strong social circles of smoking friends/family, however only a few identified that this might be problematic in attempting to quit smoking.

Because women in Nunavut experience these stressors, high levels of boredom and a higher smoking rate in general among family and friends in comparison to other Canadian women, this may help to explain a large part of the differences in prenatal smoking behaviour.

Increased cigarette use during pregnancy

Nearly half of the women interviewed (n=8) stated they started smoking more when they found out they were pregnant (that is, in their current pregnancy) as compared to before their pregnancy, six of the women did not change their daily cigarette consumption from pre-pregnancy and three identified smoking less once they learned they were pregnant. When asked if the pregnancy was a positive experience or a stressful event, the answers varied from excitement to stress of having another child. Having an unplanned pregnancy was the most commonly reported reason for experiencing stress. The perception of the pregnancy, however, did not seem to influence the amount of cigarette smoking. Some women, who reported they were happy about the new baby, also reported increasing cigarette consumption, mainly due to other stressors (such as personal relationships and finances). Alternatively, those who reported that having another baby was stressful, some of the women decreased their daily number of cigarettes, mainly attributed to their daily distractions (i.e. cleaning, busy with kids) or having someone to chat with.

All women interviewed who were not originally from Iqaluit and staying at the boarding home stated that they increased cigarette smoking since arriving in Iqaluit to await the delivery of their babies, some as much as 2-3 times their regular daily cigarette consumption.

> *"...when I was back home, I normally was smoking six sticks a day but then when I came here (Iqaluit), [I am now smoking] half a pack a day."—Genevieve*

Reasons for this increase in cigarette consumption at the boarding home included partner instability/troubled relationships and the stress of leaving their children behind in their communities as the women are typically sent to Iqaluit alone to give birth, and usually cannot bring their children with them.

> *"…but lately I've, I smoke a lot since I got here (Iqaluit), just thinking about my girls back home."- Fay*

Seeing other women smoking often increased their desire to smoke.

> "(*Being at the boarding home) make me want to smoke more. Um, like when they said I'm going for a smoke, I feel like I want to smoke too and yeah". –Eva*

In addition, some women mentioned that smoking helped them socialize with the other women staying at the boarding home, which seems to indicate a situational cue to smoke.

Knowledge of local resources/support

Currently, the main smoking cessation strategy in place for Nunavut is the territory-wide, government led initiative called the Quit Line which is a free, telephone based service that provides assistance for those wishing to quit smoking, or helping them remain smoke free. When asked if the women knew where they could go for help or

support to quit smoking, most of the women (n=12) stated that *they did not know of any existing programs* or *did not know where to go*. None of the women gave a definitive answer, but five suggested going to the local nursing station to seek help. None of the women identified the Quit Line as a resource.

"[I'd go to the] health centre, but I don't think its really much help"—Fay

When asked if women felt it would be easier to quit in their respective communities (rather than in Iqaluit or another community) most women felt that if they wanted to quit smoking in their home community, they would be left on their own to do it, without any formal support. But as Genevieve noted, this would make it much harder:

"Yes it does (make it harder to quit at home) ah 'cause you, you would have to try and quit by yourself without anybody helping you."

In addition, some of the women stated that they thought they were the only pregnant women who smoke, and often resorted to smoking in private so they would not be seen. This is important to note, as this may suggest that social acceptability may be influencing their smoking behaviours. Given the high prevalence of smoking among pregnant women, the women may feel less stigmatized as they are merely following status quo. In fact, it may also contribute to social isolation if a woman chooses to quit smoking while all her other pregnant friends continue to do so.

When asked if they had a friend or partner who could help them quit, some of the women stated that it would likely increase their smoking as they did not know of anyone else wanting to quit, but they would have someone to smoke with.

Identified facilitators to smoking cessation

All the women interviewed had attempted to quit at least one time in the past. When the women were asked what they feel could help them quit smoking this time, three main ideas emerged: nicotine replacement therapy, someone to talk to and community groups/activities.

First, most women identified that their addiction to nicotine would pose a problem, but a "pill" or patch to help curb the cravings would help them quit smoking. Some women mentioned that they have tried the patch (commonly referred to as "a pad"), but this did not help curb the cravings, suggesting that perhaps they were not given a proper dosage or may not have been used properly. As mentioned earlier, there are other social cues that may be preventing smoking cessation, as these influences can be stronger than the physical addiction to nicotine, and negate any medicinal attempts to curb the cravings. However, it raises the question of availability of resources as most communities are staffed only by a nurse or community health representatives, which do not typically have permission to prescribe NRT.

> *"I would need nicotine patch or nicotine gum…that's the most important thing I would need"—Carolyn*

The women also stated having someone to chat with or go for a walk will help distract them from smoking.

Lastly most wanted more programs like "moms and tots" or group activities to get them out of the house. There was a lot of emphasis on fresh air and outdoors (walking) to help them remain smoke free. As mentioned earlier in the results section, most women who are staying at the boarding home increased cigarette consumption due to the stresses of having to leave their communities. Having a group of women with similar stresses/situations, the boarding home also provides an ideal opportunity for support groups and common activities for pregnant women, which could be beneficial to promoting cessation.

"There should be more and more Butt Out[*] for pregnant women"—Debbie

"Um, there should be something else like go out somewhere and have something to do…sewing, maybe moms and tots. Something like that"—Eva

Throughout the interviews, most women stated that they felt it would be easier to quit smoking in their home town as their kids and daily routines could distract them from smoking. In addition, most women did not allow smoking in their home.

[*] Butt Out in this context is a quit smoking component offered through the prenatal program.

Discussion

As noted at the outset, the majority of pregnant women smoke in Nunavut, which is much higher than the national average of fewer than 20%; the smoking prevalence in the general population in Nunavut is also much higher than the average. Although pregnant women from Nunavut behave differently than their Canadian counterparts, they differ little from their local family and friends.

The health implications for the foetus/babies of smokers are well documented, and the women interviewed were aware of these risks. However, it was not enough to motivate them to quit smoking. Even those who have children currently experiencing health complications that could be due to exposure to smoking felt they could not quit smoking during their pregnancy, therefore other motivators/facilitators should be emphasized.

Personal coping mechanisms and social environments influence the smoking behaviours of the Inuit women in this study. Daily smoking is exacerbated by many aspects of the pregnancy experience in Nunavut, particularly for those women coming from smaller communities to Iqaluit to give birth. Housing instability, financial issues, single parenting and partner issues were all factors that contributed to increased daily cigarette consumption. These factors are consistent reasons why women smoke during pregnancy within the literature among the general pregnant population (8, 25, 26); however, most women decrease their cigarette consumption once learning of their pregnancy (4, 26, 27), as opposed to increase it. So there are clearly unique facilitators of smoking in Nunavut that are linked to the context of their prenatal care situation (i.e. housing women at the boarding home).

A recent publication by the Public Health Agency of Canada reported that 25.6% of Canadian women have to travel outside their home communities to give birth compared to 64.5% of women in Nunavut (28). The same report also showed that 100% of women surveyed in Canada received prenatal care (28), and within this sample 87.5% received prenatal care. Women in Nunavut reported that 17.7% of them received their first prenatal care visit after 14 weeks gestation, compared to the national average of 94.9% of women who received their first visit prior to 14 weeks gestation (28). There also appears be a lower level of prenatal care uptake among women in Nunavut.

Most Canadian women received their prenatal information from their prenatal care providers (28); however 32.4% of women in Nunavut reported that they received prenatal care information from family and friends compared to 10.0% of women nationally (28). This is interesting as it may highlight the roles of family and friends among women in Nunavut, and may also in part help explain the regional differences in the uptake of prenatal care. Culturally, there may be more emphasis on traditional prenatal care methods than using medical services.

The social environment of the pregnant women seems to reinforce her smoking as friends, family and other pregnant women are smoking within her immediate environment. Most women reported having smoking partners, and according to recent research, this is a huge factor in continued smoking and a strong predictor for relapse. Studies conducted in First Nations communities showed that smoking reflected and strengthened social bonds, and enabled family life by helping individuals manage the stresses of disadvantage as well as shared losses (16). Participants revealed that they were given their first cigarettes by well-meaning parents or relatives at a young age (16).

Smoking, and exposure to second hand smoke, was a part of life for most Aboriginal women (16).

An argument can be made that smoking cessation strategies must target the specific needs of pregnant women in Nunavut. Women in the sample reported high dependence of nicotine, high levels of daily stress and extended social networks of smokers. These factors, in addition to the stress of the pregnancy, must be considered when examining relevant intervention strategies. Most women stated that they did not know where to go to get help if they wanted to quit smoking, and most felt they would be left on their own to deal with their addiction. Some did identify the nursing station as a possible resource, which can be integrated into future smoking cessation intervention strategies. Interestingly, some women stated that they felt they were one of the only pregnant women who smoke, often resorting to smoking in private whereas it would appear that the opposite is true. The smoking prevalence is so high in Nunavut among pregnant women; it raises questions about the social isolation of some of these women if they feel they are alone in their smoking behaviours.

A systematic review of the literature showed that community interventions rarely led to higher quit rates (29). However, community interventions increased community knowledge of health risks, changed attitudes to smoking, increased quit attempts, and led to better environmental and social support for quitting (29). A community type intervention may help encourage a more supportive environment for cessation. Most women in this study identified boredom as a barrier to quitting smoking, as they were alone most of the time with little activity. They did however reveal that having someone to chat with or go for a walk with would distract them from smoking. A meta-analysis

revealed that group programmes were more effective for helping people to stop smoking than being given self-help materials and the chances of quitting were approximately doubled (30). Providing women in the North with a group cessation programme can help them come together for a common goal, provide social support for their cessation efforts while at the same time providing them an opportunity to be engaged in a social activity. By combining this with a community intervention, this may be an ideal setting to encourage those in a woman's social environment to support her cessation efforts.

Strengths and limitations

The main strength of this paper is that it is one of the first studies detailing the women's perceptions on their smoking behaviours during their pregnancy in Nunavut.

The limitations of the data are linked in part to the exclusion criteria. Higher risk pregnancies are typically sent to Ottawa, ON for medical care and therefore these women were not included in the study as recruitment took place in the prenatal care clinics, just prior to the women giving birth. An opportunity to discuss smoking with women experiencing high-risk pregnancies may have provided additional content to the interviews and may have highlighted other emerging themes or perceptions on smoking. Another limitation was the language barrier. The interviews could have been more informative or in-depth if they were done in the participant's first language; however all were done in English, which was the author's first language.

Conclusions and recommendations

This paper presents a qualitative exploration of the smoking behaviours of Inuit women in Iqaluit, Nunavut and is one of the first studies detailing the women's perceptions on their smoking behaviours during their pregnancy. Women revealed that their daily smoking increased during pregnancy, particularly in the late stages of pregnancy when many had to leave their communities to give birth. Reasons for this increase in cigarette consumptions included the stress of leaving their children behind in their communities. Stress emerged as a key barrier to smoking cessation, and the women's personal and social circumstances contribute greatly to their daily stress levels. Women in this study had very little social interaction, and many felt alone and isolated and cigarettes often presented an opportunity to be distracted from their boredom. Lastly, the social influences of friends and family were a major reason why women continued to smoke during their pregnancy. A tailored intervention for smoking cessation is needed which includes a unified, multi-level approach to promote cessation within the communities as well as meet the needs of pregnant women. Further research is required to address smoking among higher-risk pregnancies, and to identify smoking cessation interventions that can be implemented in a larger, Nunavut-wide study.

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Table 1: Participant characteristics

Study sample (n=17)	%
Participants age (years) (mean, SD)	26.9 (5.6)
First pregnancy	
Yes	11.1
No	88.9
Number of children in household	
1	37.5
2	37.5
3	6.3
4	12.5
5	6.3
Keeping baby or adopting out	
Keeping	81.3
Adopting out	13.3
Marital Status	
Single	31.3
Married	6.3
Common-law	50.0
Divorced/separated	6.3
Ethnicity	
Inuk	100
Employment status	
Full time	25.0
Part time	12.5
Unemployed	18.8
Contract	6.3
Social support	18.8
Other	18.8
Household income	
<$10 000	31.3
$10 000- 19 999	6.3
$20 000-39 999	6.3
$40 000- 59 999	6.3
$60 000-79 999	12.5
>$80 000	12.5
Refused to answer	25.0
Prenatal health care provider	
Physician	25
Public health nurse	50.0
Nurse practitioner	6.3
No prenatal care	12.5
Other	6.3

Table 2: Individual participant profiles

Pseudonym	Profile
Beth	37 years old, divorced/separated. This is not her first pregnancy, and she has three children living at home. She plans to keep this baby. She completed some university courses, has full time employment, and has an annual household income of > $80 000 per year. She had prenatal care with a public health nurse.
Carolyn	34 years old, marital status unknown (refused) This is not her first pregnancy, and she has two children living at home. She is keeping this baby. The highest level of education completed is some high school. She is not working, and collecting social support. Her prenatal care was with a public health nurse.
Debbie	33 years old, married. This is not her first pregnancy, and she has five children living at home. She is going to adopt her baby out. Her highest level of education is grade 9-10, and she is employed full time with an average income of >$80 000 per year. Her prenatal care was with a nurse practitioner.
Eva	20 years old, common-law relationship This is her second pregnancy, she has one child living at home, and she plans to keep this baby. The highest level of education completed is grade 11-13, with no secondary school diploma, and she is employed part time with an average income in the $40, 000-59, 000 range per year. She did not receive prenatal care for this pregnancy.
Fay	24 years old, single This is not her first pregnancy, and she has two children living at home. She plans to keep this baby. The highest level of education completed is grades 9-10, she is unemployed and earns an average income of less than $10 000 per year. She received prenatal care with a public health nurse.
Genevieve	33 years old, single This is her second pregnancy, and she has two other children living at home. She is going to keep her baby. The highest level of education is grades 9-10, and she is receiving social support. She received prenatal care with a physician.

Heather	35 years old, in a common-law relationship This is not her first pregnancy, and she has four other children living at home. She is keeping this baby. She is unemployed, receives an annual income of <$10 000 per year, and the highest level of education completed was grades 9-10. She did not have any prenatal care.
Isabelle	28 years old, in a common-law relationship This is not her first pregnancy, and she has one other child living at home. Her baby will be adopted out. She is employed full time, receives an annual income of $60, 000-70, 00 per year, and has received a secondary school diploma. She received prenatal care with a public health nurse.
Jackie	26 years old, single This is not her first pregnancy, and she has one child living at home. She is keeping her baby. She has received her high school diploma, works full time and earns an annual income of $30, 000- 39, 000. She received prenatal care with a physician.
Kate	23 years old, in a common-law relationship This is her second pregnancy, and she has two children living at her home. The highest level of education completed is grade 9-10. She refused to reveal her employment status or the average income for her household. She received prenatal care from a family member (not a health care professional).
Lynn	34 years old, single This is her sixth pregnancy, and she is keeping this baby. She has four children living at home. She has completed some college courses, and is earning less than $10, 000 per year. She received prenatal care from a public health nurse.
Mary	23, single This is her third pregnancy, and she plans to keep this baby. She has one child living at home. Her highest level of education is grade 9-10, and she receives social support. She received prenatal care from a public health nurse.
Naomi	23 years old, in a common-law relationship This is her sixth pregnancy, and she is keeping this baby. She has two children living at home. She has completed college, currently working on contract and earns an average income of $10, 000-19, 000 per year. She received prenatal care from a physician.

Olivia	23 years old, in a common-law relationship This is second pregnancy, and she is keeping this baby. She has one child living with her at home. She received her high school diploma, and receives an annual income of $60, 000-79, 999 per year. She received prenatal care with a public health nurse.
Penelope	20 years old, in a common-law relationship This is her second pregnancy, and she has one child living at home. She plans to keep this baby. She completed grade 9-10 and is working part time. She refused to reveal her annual income. She received prenatal care with a public health nurse.
Rosa	25 years old, in a common-law relationship This is her second pregnancy, and she plans to have her baby adopted out. She has two children living with her at home. She completed grade 9-10, is unemployed and receives an average income of less than $10, 000. She received prenatal care from a physician.
Sandra	24 years old, in a common-law relationship This is her second pregnancy, and she plans to keep this baby. She has one child living with her at home. She completed college, is employed full time and earns an average income of $10, 000-19, 999 per year. She received prenatal care from a public health nurse.

Manuscript 3:

Health care providers' perspectives of smoking cessation among pregnant women in Nunavut: a qualitative study

Abstract

Objectives: Healthcare personnel are well placed to share health promotion messages with a large proportion of the population, and can treat inquiries about tobacco use and smoking cessation at every visit. This study investigated the perspectives of health care providers regarding their knowledge of smoking cessation resources available to them and of the barriers and facilitators of smoking cessation for pregnant women in Nunavut.

Methods: This qualitative study investigated the perspectives of health care providers on smoking cessation for pregnant women in Nunavut using a structured interview. The study took place in two 3-week recruitment periods, between October 2008 and October 2010 in 13 communities in the Qikiqtaaluk region of Nunavut.

Results: A total of 12 health care providers were interviewed. Most reported asking pregnant women about their smoking status, and assessing readiness to quit smoking, and many advised their pregnant patients to quit smoking. Posters regarding the effects of smoking on baby (available in Inuktitut and English), pamphlets (English and Inuktitut), medications (patch, gum), Nunavut Quit Line, and radio programming were identified as smoking cessation resources that currently exist in the community; none were specific to pregnant women. The health care providers' approach to smoking cessation ranged from no approach, to guilt tactics to supportive dialogue.

Conclusion: Most of the health care providers felt that addressing smoking among pregnant women in the North was necessary however they lack formal training in smoking cessation. Future cessation strategies should actively engage community members, particularly elders, to assist in delivering interventions.

Introduction

Recent statistics show that the prevalence of smoking among pregnant women in Nunavut is high at approximately 80% (1). The most well-known risk factor for small-for-gestational-age is maternal smoking during pregnancy (2). Smoking causes foetal oxygen deprivation, which can retard foetal growth and result in low birth weight (3, 4). It is not surprising then that Nunavut has the highest percentage per capita of small-for-gestational-age and preterm deliveries in Canada (5). Babies born prematurely and small-for-gestational-age have increased risks of health complications such as intellectual disabilities, cerebral palsy, respiratory problems, vision and hearing loss and feeding and digestive issues (6).

The Department of Health and Social Services in Nunavut announced the introduction of a Tobacco Reduction Campaign in December of 2001. This campaign includes: television and radio public service announcements, posters, and training of local people to be involved in cessation programs (in partnership with Pauktuutit, an advocacy group for Inuit women in Canada). In addition to the tobacco reduction campaign, under the Non-Insured Health Benefits, tobacco cessation aids are available to Inuit beneficiaries (7). A smoker's help-line, *Nunavut Quit Line*, is also available to Nunavut residents. No specific approaches to smoking cessation for pregnant women have been identified, however current smoking cessations strategies available to health care providers include: advice to quit, counselling, behaviour modification, self-help materials and pharmacotherapy (8).

Health Canada created the *Best Practice Guidelines* to address smoking cessation among pregnant women in the general population (9). These best practices include providing brief advice to quit smoking, recommending a harm reduction approach, and providing intervention support such as counselling and relapse prevention. Brief physician advice has

been shown to be effective for smoking cessation (10). There is strong evidence that health care providers can make a significant difference in helping their clients quit, and this can be achieved in less than three minutes by using the 5**A's** approach (11, 12). This intervention consists of: **a**sk about tobacco use at every opportunity; **a**dvise all tobacco users to quit; **a**ssess all tobacco users' readiness to quit**; a**ssist all tobacco users in quitting; and **a**rrange follow-up or referral (12). This approach has been endorsed by the United States Public Health Service and by the American College of Obstetricians and Gynaecologists as there is evidence to suggest it is effective for most pregnant smokers, including women of low-income, the group most likely to smoke during pregnancy (13).

A study which examined smoking cessation advice from physicians showed that even after the development and dissemination of smoking cessation guidelines in clinical practice, more than one quarter of adult smokers reported never having received smoking cessation advice from their health care providers (15). A recent study showed that physicians who smoke are less likely to initiate cessation interventions and have less formal training in cessation strategies (13). Physician interventions can be simple and effective; however they are not consistently implemented in practice, particularly if a physician is a smoker.

In addition to physicians, nurses constitute 65 percent of the healthcare workforce and are well placed to share the health promotion message with a large proportion of the population (14). Healthcare personnel should treat inquiries about tobacco use and smoking cessation as a standard assessment question at every visit, recording current use, history and amount (15).

Looking specifically at smoking cessation interventions targeting pregnant women, a meta-analysis found that programs in which the mothers received systematic interventions

resulted in a 50% increase in cessation rates and improvements in infant birth weight (16, 17). Successful programs included individualized counselling, pregnancy-specific counselling delivered by a health designate, and self-help manuals (16, 18). Minimal interventions may encourage a committed person who smokes to think about their smoking and to start to look at the disadvantages of continued smoking as well as the benefits of quitting (19). It has also been stated that for patients not ready to quit at a particular time, providing self-help material will increase their awareness and motivation to quit (14).

It is unknown what strategies are currently in place in Nunavut to help pregnant smokers quit. Therefore, this study investigated the perspectives of health care providers regarding their knowledge of smoking cessation resources available for health care providers in the Baffin Region and of the barriers and facilitators of smoking cessation for pregnant women in Nunavut.

Methods

Study design

A qualitative study employing structured interviews with health care providers (HCP) was undertaken in the Baffin Region of Nunavut. The interviews were designed to gain insight into health care providers' perspective on interventions for smoking cessation among pregnant women in the Baffin Region; their personal smoking history; and to assess their awareness and availability of community smoking cessation aids.

Previous research done in a clinical setting interviewing physicians found that qualitative methods were appropriate for practical situations in which a fuller understanding of behaviour and the contexts of events might be useful for physicians (20). Interviewing

techniques can be used to gather information necessary to plan and implement administrative changes in a clinical setting (20). This study examines use of resources available to HCPs in the North and the use of structured questions provided more in-depth contextual information, which can be used to provide recommendations for clinical interventions.

Participants

Participants were eligible for this study if they were HCP who interacted in some way with pregnant women who smoke; this included physicians, midwives, nurses, nurse practitioners or community health representatives. They must also have worked in the Baffin region of Nunavut during the study period, provided informed consent and were able to articulate their experiences in English. Participants were excluded from the study if they were unable to speak English.

Recruitment

The recruitment took place in two three-week recruitment periods between October 2008 and October 2010 from 13 community health centres in the Qikiqtaaluk region of Nunavut. Two of the participants were recruited in the first wave (October 2008), and the remaining (n=11) participants were recruited in the second wave (May to June 2010).

Data collection was performed by two interviewers, one of whom was a nurse that practiced in the Baffin Region for several years, and the other was the primary author. The community-based research coordinator conducted the first interview recruitment wave and the primary author conducted the second recruitment wave by contacting health care providers working in community health centres in the Baffin region. HCPs working outside of Iqaluit

were contacted by telephone while those working in Iqaluit were contacted in person. Type of contact differed mainly due to logistics, as most communities outside of Iqaluit are only accessible by plane therefore doing in-person interviews was not considered feasible in light of financial implications (see Appendix I). A Participant Information Sheet was sent via email to each HCP, the study was explained, and informed consent was obtained (signed or verbal when conducted by phone) prior to data collection.

Prior to the implementation of the study, the Minister of Health and Social Services for the Government of Nunavut was provided with a synopsis of the study to inform him of the recruitment period and the sampling methods (see Appendix J). The regional medical staffing manager was also informed of the study prior to recruitment. Copies of the Nunavut Research License and University of Ottawa Research Ethics Board approval letter were also sent to medical staff for their review, to ensure that all relevant parties understood that the research met the Tri-Council regulations involving Aboriginal peoples.

A list of community health centres and hospitals was obtained from the Government of Nunavut's website for the Baffin Region, and all head nurses/doctors were contacted to advise them that they or one of their staff would be contacted to ask if they wanted to be included in the study and participate in an interview. No one refused participation during recruitment for the primary author, and recruitment statistics are unknown during the first wave conducted by the community-based study coordinator.

Data collection and analysis

The purpose of the structured interview was to systematically gather information. The primary method of data collection was through individual interviews using a structured

interview guide (see Appendix H). The interview questions included demographic questions such as age, professional designation, smoking status and standard smoking indicators, and a few open ended questions regarding availability of smoking cessation resources and personal attitudes and perceptions of smoking among pregnant women in Nunavut**.**

HCPs were asked about their own smoking status, smoking history, and motivational readiness to quit smoking using standardized questions drawn from Health Canada's core smoking indicators (9). Open-ended questions were asked to explore what type of advice or assistance the HCP typically provided to pregnant women who smoke, what resources were available within their communities, and the preferred approach (e.g. counselling, providing self-help) used by HCPs when discussing smoking cessation with pregnant women. All participants had the opportunity to provide additional information they felt may be useful for future intervention strategies for pregnant women in Nunavut who smoke.

The reported benefits of the structured interview include the premise that it can be conducted efficiently by interviewers, and structured interviews do not require the development of rapport between interviewer and interviewee (21). As such, they can produce consistent data that can be compared across a number of respondents (21). The first interviewer conducted the in-person interviews, and this professional relationship may have solicited more information or withheld certain information from the participants because they were known to each other. The primary author conducted the remaining interviews over the phone with no knowledge of the participants. During the analysis of both sets of transcripts, there were no obvious differences between both interviewers.

Characteristics of the structured interview include: the respondents are asked the same series of questions; the questions are created prior to the interview and often have a limited set

of response categories; there is usually little room for variation in responses; questioning is standardized and the ordering and phrasing of the questions are kept consistent from interview to interview; and the interviewer plays a neutral role and acts casual and friendly, but does not insert his or her opinion in the interview (21).

As stated by Cohen and Crabtree, the development of a structured interview guide or questionnaire requires a clear topical focus and well-developed understanding of the topic at hand (21). A well-developed understanding of the topic allows researchers to create a highly structured interview guide that provided respondents with relevant, meaningful and appropriate response categories to choose from for each question. Structured interviews are ideal when the literature in an area is highly developed as it provides the researcher with adequate understanding of a topic to construct meaningful and relevant close-ended questions (21).

All interviews were recorded by hand by the interviewer and then transcribed into NVivo 8.0 and coded for common themes. A total of four interviews were done in person and nine were done by telephone from Ottawa, ON. All demographic data was entered in Microsoft Excel and descriptive statistics were presented (e.g. mean, SD). No identifying information is presented due to the small size of the communities being studied. Information such as years worked within the Baffin Region, age, and professional designation were collected but have been suppressed to assure confidentiality. Differences in years worked as a health care provider in the Baffin region or other demographic information was used to aid in the analysis of the data, for example to compare and contrast the responses from the participants.

The structured interview guide was reviewed by another qualitative researcher (LM) for appropriateness of content and broad theme categories. No further discussions were needed in regards to the coding schema, as the responses were coded according the question type. A review of the coded transcripts was done by an external reviewer, (KB), to assess congruence between the primary author and (KB). There was little discrepancy between both researchers as the structured question guide helped group the common themes and, as such, a second coding was not needed.

Results

Participants' profile

The study sample consisted of 13 HCPs. The sample included licensed practicing nurses, registered nurses, midwives, nurse practitioners and community health representatives (CHR). One participant withdrew their consent after their data had been collected; they were not included in the data analysis (12 included for analysis).

Table 1 outlines the characteristics of the participants in this study. The average age was 47.1 (±10.8) years. The mean years working as a health professional was 20.6 (±10.9), and the average number of years working in the Baffin Region was 12.3 (±11.5).

A quarter of the health care providers were current smokers, and they smoked an average of 13.7 (±7.1) cigarettes a day. None of the current smokers were planning to quit within the next 6 months and none had made any attempt to quit within the past year. Half of the HCPs have smoked at some point in their lifetime, and none received any formal help to quit, i.e. they quit "cold turkey". Only one HCP allowed smoking in their home, but two were

exposed to second hand smoke in their place of employment daily or almost every day, usually near the entrances of the community health centres.

Current approaches to address smoking during pregnancy

The majority of HCPs asked pregnant women about their smoking status, while most assessed readiness to quit smoking and many advised their pregnant patients to quit smoking. For those who did provide smoking cessation assistance to pregnant women, the following strategies were mentioned: individual counselling; offers of nicotine replacement therapy such as the patch, gum and/or inhaler; a harm reduction approach; the women were provided self-help guides/kits which included pamphlets; and one HCP suggested that women could contact the Nunavut Quit Line. Less than half of the HCPs arranged for a follow-up with the women by recommending they call the quit line, and fewer followed up by re-assessing them at their next visit.

HCPs who did not advise women to quit smoking were asked why they did not and three main reasons emerged. The first was that HCPs felt women knew and understood the harms of smoking to the foetus—so there was no need to advise them to quit.

> *"I feel that most pregnant women know that smoking harms the foetus. They do not need to be lectured."*

Providing education on the effects of smoking on both the mother and the foetus was the second reason that HCPs did not advise women to quit smoking. They felt that advising may be perceived as negative by the women, therefore education was a better approach.

"I provide information (and) facts on harm reduction…which means less pressure on prenatal women."

"{My approach is} providing encouragement and education on the effects of smoking on the foetus."

Third, HCPs described that the context of the patient encounter did not permit this sort of discussion (i.e. limited time to triage patient, short staffed). The three reasons provided were passive in nature, as they did not directly address smoking among pregnant women.

Smoking cessation resources within the community

When asked about the cessation resources that currently exist in the community, the following resources were identified: posters regarding the effects of smoking on baby which were available in Inuktitut and English; pamphlets, which were available in English, French and Inuktitut; medications such as nicotine replacement therapy (patch, gum); the Nunavut Quit Line; local radio programming; and lastly, access to public health nurses. No one mentioned that any resources existed specifically for pregnant women who smoke.

"[We have] *pamphlets, otherwise nothing*."

"*None specific to prenatal women. CHR's have visual resources as well as handouts in English and French {and} Health Canada's: Your Children and Smoking--mostly handouts in English and French"*

With the exception of the posters, no other resources were identified for pregnant women, and those who mentioned the posters felt that the information was tailored to the general population more so than to pregnant women, let alone Inuit women.

When asked about the HCPs' approach to smoking cessation, the responses ranged from no approach, to guilt tactics and supportive dialogue. Some mentioned they used an education approach and discussed/reinforced the damages of smoking on the baby and mother's health.

Some HCPs stated they used supportive dialogue regarding the challenges of quitting smoking, and used "gentle" language without being judgmental.

"Discussion of harmful effects of cigarette smoke on baby… {like} supportive dialogue regarding the challenges of quitting smoking..{and} the visualization of placenta post-delivery to show effects of smoking."

Some HCPs provided information and facts on harm reduction, while some referred women to a medical doctor (MD) for a prescription for nicotine replacement therapy (NRT) (usually the patch). Guilt tactics were used by some of the HCPs in regards to prenatal smoking and some reinforced that the baby was not making the choice to smoke.

"I make them {women} feel bad for smoking."

"I tell women that their baby is not making the choice to smoke."

Lastly, some HCPs referred women for behavioural therapy and others discussed the financial benefits of quitting smoking (i.e. money saved if quit smoking).

Some stated they did not have an approach or did not engage in any discussions as they felt that it is an individual choice to continue smoking.

"Their personal will determines quitting."

Although not every HCP stated they had a consistent approach to smoking cessation, all of them stated that they discussed health impacts of smoking both to the mother and foetus, particularly emphasizing "wheezy babies" or the likelihood of the baby developing chronic obstructive pulmonary disorder (COPD) due to the mother's smoking. Two of HCP stated using assessment checklists at every prenatal care visit, which include assessing the smoking status of pregnant women. This checklist serves as an opportunity to discuss smoking, though the discussion is usually brief due to time constraints of the appointment.

Factors to consider in smoking cessation

HCPs were asked what factors they felt needed to be considered when addressing smoking cessation with pregnant women. Community of residence, social environment, housing situation, number of smokers in the house, financial situations, social impacts of

smoking and quitting, marijuana use, boredom, lifestyle, number of years smoking and personal circumstances were all identified as factors to consider when addressing smoking with pregnant women. Family, friends and partners of pregnant women were mentioned by all HCPs interviewed as considerations when discussing smoking cessation. The HCPs understood that unless they try to encourage partner cessation, or prepare the women for the social pressures of smoking (in addition to the other factors listed above), cessation would be difficult for pregnant women.

Perceived benefits of smoking cessation

Overall, most HCPs felt that if women quit smoking, it would result in a better health status for the mothers and their unborn children. The majority of HCPs felt there were no disadvantages to quitting, at least from a health perspective. However, most stated that they felt that women would experience increased daily stress, experience social isolation as most (if not all) of their friends and family were likely smokers, that women would experience an increase in weight gain, an increase in marital conflict, and an increase in mood swings. This information was not presented as reasons not to provide smoking cessation interventions, but rather as a reflection of the difficulties women will likely face if she quits smoking. However on a positive note, HCPs felt that quitting smoking could provide the women with a sense of accomplishment and empowerment, in addition to saving money.

Facilitating smoking cessation

HCPs were asked what they thought would facilitate smoking cessation among pregnant smokers in their communities. The main themes that emerged were: access to

training and more resources to help women in their communities. Many suggested that support groups for women were needed where they could talk among a group of peers and share personal experiences, or that prenatal type classes should include a dedicated smoking cessation component.

"Support groups so they [pregnant women] can share personal experiences."

"Incorporate smoking cessation into schools, prenatal classes, lunch & learns…turn it into a conversation."

Regular follow-ups with women trying to quit were also needed, as after-birth care is not common, and many women will relapse post-partum. One HCP stated however, that there was little use in discussing post-partum relapse as they felt it was perceived as a negative message.

"[I] don't discuss the potential for relapse as [I] find it's negative and [I] generally try to avoid this discussion. [I] do not find it useful".

Having a ready supply and access to smoking cessation aids (such as videos) is important, but as noted, only pamphlets are available. According to many HCPs, literacy levels are low therefore pamphlets were not helpful for the women and usually accumulated over the years. HCPs had little material on relapse prevention and felt that more information

about this topic, and training for the health care staff would be helpful. Smoking cessation training and/or specialists are needed for the North.

> *"[We need] smoking cessation nurses/specialists… [as most] smoking cessation nurses are in the South."*

The need to initiate and maintain a constant dialogue about smoking during prenatal visits was emphasized by HCPs. There should be education and information about smoking cessation included in lunch and learn programs and in the curriculum at school. There was emphasis on removing the unequal partnership (i.e. doctor-patient relationship) and creating a supportive environment to quit smoking, while having Inuit-lead support groups whenever possible (i.e. no southern nursing staff).

> *"Interventions [and smoking cessation] messaging should be by Inuit people…not White people."*

One HCP felt that women were lacking the "will to quit", and nothing would be helpful to facilitate smoking cessation until the women decided on their own that it's time to quit. This suggests that personal attitudes towards smoking may influence how the HCP approaches smoking cessation among pregnant women.

Lastly, many of the HCPs stated that Elders play an influential role in the community, especially female Elders, and should be engaged in smoking cessation strategies. Elders can influence the promotion of prenatal care and smoking cessation. It was suggested that Elders

could act as local "champions" for smoking cessation, or be formally trained in smoking cessation counselling for the community. This reinforces the notion that intervention lead by Inuit people would be more readily accepted as opposed to interventions lead by Southern medical staff.

Barriers to smoking cessation

The most significant barriers to quitting smoking among pregnant women, as reported by HCPs, ranged considerably but primarily included addiction barriers and social barriers. Some HCPs stated that the severity of addiction to nicotine and the co-addiction to marijuana or increased use of marijuana would be a significant barrier to smoking cessation. For those needing help with their addiction and needing NRT, there are delays in providing NRT as the prescription must be signed off by a physician who is typically situated outside the community in Iqaluit, which results in a missed opportunity for intervention. Further to this, many of the smaller community health centers do not have a ready supply of NRT.

> *"If women need NRT, a three to four week delay is usual while waiting for a script [this means] a lost opportunity [for intervention]."*

According to the HCPs, women did not necessarily grasp the harms of smoking and the increased use of cigarettes during pregnancy was considered a positive aspect for delivery, as this increased the chances of having a smaller baby. The severity of the risks of smoking to their own health was reported to also be lacking.

"The severity of health [impacts] hasn't 'hit' yet."

Smoking is a common social activity in Nunavut and there is a lot of social pressure to continue smoking as there is a strong social value attached to smoking.

"There's lots of social pressure to smoke…the woman is missing out if she's not smoking."

Boredom, social issues such as unemployment, domestic abuse, isolation, and stress were also identified as significant barriers to smoking cessation.

There is a lack of coping mechanisms among women to deal with everyday stress, a lack of support persons or groups in which they can seek help, and a lack of follow up for persons wanting to quit as many women do not realize it may take more than one quit attempt before becoming successful. In addition to the above items, some HCPs did not know where they could send women who wanted help to quit smoking, as the resources are limited.

The use of marijuana emerged as a recurring theme when discussing considerations for future intervention strategies. The use of marijuana presents a "catch 22" with regards to smoking cessation. As reported by the health care providers, as women smoke less tobacco, they increase their use of marijuana.

"In my experience, it's not unusual for a mom to smoke five to six (marijuana cigarettes) a day" [in addition to her regular cigarette consumption].

Another HCP noted that

"In this community, 100% of women who are smoking (cigarettes) are also smoking marijuana."

A dual addiction strategy may be needed to combat both nicotine and marijuana simultaneously.

Biggest influence on smoking cessation

HCPs described who, or what, they felt had the biggest influence on a pregnant woman's decision to quit smoking. The most common response was family, with particular emphasis on women, such as a grandmother or mother.

"Her family…especially [her] mother and elders."

"[A woman's] parent or, an elder has biggest influence [on smoking cessation]."

"Family, especially older women."

The majority of HCPs stated that a woman's partner had a big influence on her smoking behaviour, followed by her friends.

"[A (positive) influence] …a woman who quit smoking to share her experiences…. [however] I don't know of any."

Women who have successfully quit smoking could be important role models for other women contemplating quitting. Unfortunately, there are few women who have successfully quit during pregnancy in Nunavut.

Discussion

Smoking cessation strategies and resources are needed to effectively curb smoking rates in pregnant women in Nunavut. Given the high prevalence of smoking among the population in Nunavut and among pregnant women in particular, it is difficult to reduce smoking if resources are lacking for those expected to provide smoking cessation interventions.

HCPs were aware of some existing resources for smoking cessation in their communities; only posters and pamphlets were specific to pregnant women. Overall, most HCPs felt that addressing smoking cessation among pregnant women was necessary. The information provided in their interviews allowed us to gain insight on the scarcity of resources. Some HCPs noted they recommended behavioural therapy, but aside from the Quit Line most HCPs did not know where to send women for help.

Previous research has shown that HCPs perceptions of barriers that prevent their patients from making quit attempts were a lack of willpower, addiction/dependency issues, and the influence of social environments and/or peers (13), which is consistent with the findings of this study.

When asked about the current approach used to address smoking cessation with their patients, the responses ranged considerably, from no approach, to guilt tactics and supportive dialogue. A more unified strategy may be needed to ensure a consistent approach within the Baffin Region. Furthermore, it appears that for some, the HCP's personal attitudes towards smoking influenced their approach to smoking cessation in this population.

Some of the HCPs stated there was a lack of a systematic approach to address smoking among pregnant women, whereas some stated they were using a screening checklist which included smoking questions during prenatal visits. Despite using the checklist by some of the HCPs, there were no indications that a specific strategy was in place to address cessation strategies with the pregnant smoker. Current literature suggests that having a systematic approach in place, such as assessing smoking status at every visit to a family doctor, is effective for increasing cessation rates (22). A meta-analysis of smoking cessation programs for pregnant women found that programs in which the mothers received systematic interventions resulted in a 50% increase in cessation rates and improvements in infant birth weight (16, 17). A secondary component may be needed to address the use of marijuana in conjunction with smoking cessation, tailored for pregnant women, as postpartum relapse rates are very high (23) with cigarettes, and many may turn marijuana as an alternative.

The results show that most HCPs need training on smoking cessation, or need cessation specialists in the area to refer women for assistance with quitting smoking. As demonstrated, the majority of HCPs advised women to quit smoking; however there was not much assistance available due to the lack of training in smoking cessation, a lack of a systematic approach to address smoking, and the lack of resources for both the health care staff and their community. A study examining the perceived barriers and facilitators to

smoking cessation in Nunavut found that most pregnant women did not know of any existing resources to help them quit smoking, but most cited that they would turn to HCPs for assistance (25). This provides an ideal intervention strategy initiative as training existing staff would strengthen community capacity to address smoking among pregnant women (and others within the community), however if there is only one HCP for that area, alternate staffing approaches may need to be considered.

Health care providers felt that it was important to actively engage community members, particularly female elders, to deliver the smoking cessation intervention when designing strategies, as they are influential in the Inuit community. While nursing staff and CHRs play an integral role in community health, the delivery of the cessation strategies should be lead whenever possible by Inuit people. Support groups, mom and baby programs, and someone to talk to who understands the challenges of smoking cessation were identified as key facilitators for cessation by both the HCPs and pregnant women within the Baffin Region (24).

The social experience of smoking, and the extended networks of smokers provide ample opportunity for pregnant women to continue smoking, be exposed to smoke or relapse into smoking if successful in quitting. This raises a few levels of complexity that will need to be addressed. First, the social networks of family and friends, particularly partners, have been consistently documented to influence a woman's quit attempt(s) (25-29). Research suggests that a family-centered approach that involves fathers may improve the likelihood of long-term abstinence (16). The more supportive her immediate social environment, the more likely she is to remain smoke free. Second, when considering the prevalence of smoking within the population of Nunavut, succeeding in cessation for pregnant women will be difficult unless a

coordinated strategy is developed to also target the general population. Third, the paradigm of smoking cessation can be shifted from a medical-health model, to a more holistic, social model to simultaneously address smoking among pregnant women and their communities. HCPs and pregnant women (24) have identified the health risks of smoking, so the health message is heard, but the saliency of this information is lacking. And lastly, with often limited resources (nursing staff), strategies will need to be relatively simple to implement and flexible.

Strengths and limitations

This is one of the first studies to examine the perspectives of HCPs in the North with regards to smoking cessation and to gauge their awareness of resources to address smoking cessation among pregnant women in the Baffin Region.

The biggest limitation is that only a select group of health care providers in the Baffin Region were recruited, and this may not reflect the challenges and perceptions of those in other regions of Nunavut. In hindsight, although the interview questions were based on the Best Practice Guidelines, the exploration of whether or not the HCPs heard of, or adhered to these guidelines was never asked. Semi-structured interviews likely may have solicited more in-depth conversations with HCPs which could have enriched the results with additional information, as the conversation would flow more naturally than with a set of pre-determined questions. Lastly, all interviews were recorded in writing by the interviewer; however, audio recordings would have been more useful as all conversations could have been transcribed verbatim.

Conclusion and recommendations

Most of the HCPs in this sample felt that addressing smoking cessation among pregnant women in the North was necessary as the social experience of smoking, and the extended networks of smokers, provide ample opportunity for pregnant women to continue smoking, be exposed to smoke or relapse into smoking if she succeeds in quitting. Some HCPs personal attitudes towards smoking influenced whether or not they advised pregnant women to quit smoking. Health care providers interviewed stated they needed training on smoking cessation, or need cessation specialists in the area to refer women who need help with quitting smoking, as the existing resources were limited. Support groups, mom and baby programs, and someone to talk to who understands the challenges of smoking were identified as key facilitators for cessation. Cessation strategies should actively engage community members, particularly elders, to assist in delivering intervention.

Future research is needed to assess different cessation strategies to provide recommendations for long-term, sustainable interventions that are specific to Nunavut. More research is needed to determine the role of HCPs and other community members in delivering and supporting future smoking cessation interventions. Health care providers in other communities outside the Baffin Region need to be interviewed to learn from their perspectives on smoking in Nunavut, and compare their data with the results of this study.

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Table 1: Participant demographics

Table 1: Participant demographics (n=12)	**%, Mean (SD)**
Age (years)	47.1 (10.8)
Years working as a health professional	20.6 (10.9)
Years working in the Baffin Region	12.3 (11.5)
Currently smoking	25.0%
Ever smoked	50.0%

5.0 General discussion and conclusion

5.1 Summary of key findings

This thesis examined three integrated research questions using mixed methods to help build a knowledge base for future intervention strategies that better understand the reasons behind smoking amongst pregnant women in the Baffin Region of Nunavut, and by examining smoking cessation from the perspectives of HCPs. As stated by Creswell, mixed method research provides more comprehensive evidence for studying a research problem than either quantitative or qualitative alone (1).

The first manuscript focused at the individual level, the first level in the socioecological framework which was the overarching perspective of the thesis, and investigated the socio-demographic and clinical factors associated with processes and stages of change for smoking cessation among pregnant women in Nunavut. The data revealed that smoking is very prevalent among pregnant women in the Baffin region, higher than in previously reported estimates. Overall most women were not considering quitting smoking, as they tended to be mostly in the earlier stages of change, state the stages (pre-contemplation and contemplation). Decisional balance scores indicated that these women were rather ambivalent about continuing to smoke during their pregnancy. Situational-temptation values were high in social situations in women who had quit smoking indicating that they may be at high risk for relapse in the future. And lastly, the results show that it is feasible to conduct a larger survey of smoking behaviour in this population, however some of the proposed measures were not sufficiently reliable to be used in a larger study.

The second manuscript moved beyond the individual behavioural level to the broader social level and identified a wider range of factors influencing smoking and barriers and

facilitators to smoking cessation among Inuit women. Using in-depth qualitative methods including semi-structured interviews, the data revealed that daily smoking was not attenuated but rather exacerbated by the pregnancy experience, particularly for those women who were required to leave their smaller communities go to Iqaluit to give birth. Housing instability, financial issues, single parenting and issues with spouses/partners were factors that contributed to increased daily cigarette consumption. The women interviewed were aware of the health implications of smoking for the foetus; however, it was not enough to motivate them to quit smoking in the face of social barriers. Even those who had older children currently experiencing health complications that could be linked to exposure to smoking both in utero and through second hand smoke felt they could not quit smoking during their pregnancy; these past experiences did not influence their current smoking behaviours. The social environment was the most significant influence on the smoking behaviours of Inuit women. All of the women had smoking friends and family and most women reported having smoking partners.

The third manuscript examined one of the aspects of the structural level by exploring the influence of the health care system on the smoking behaviour of pregnant women as perceived by their HCPs. HCPs were questioned regarding the barriers and facilitators of smoking cessation for pregnant women in Nunavut and what smoking cessation resources were available for HCPs in the Baffin Region. This study revealed that HCPs were aware of existing resources for smoking cessation in their communities; however, none were specific to pregnant women. Although some of the HCPs stated that they recommended behavioural therapy to help women quit smoking, most of them did not know where women could go for help or therapy aside from the Quit Line. Those who recommended NRT as part of their smoking cessation intervention strategy were met with delays of days to weeks in obtaining a

prescription from a medical doctor, which resulted in a missed opportunity for intervention. The majority of the HCPs felt that addressing smoking cessation among pregnant women was necessary; however most stated they needed formal smoking cessation training.

5.2 Overall contribution to the population health literature

There is very little literature specifically focused on smoking behaviours during pregnancy in Nunavut, and therefore there is little knowledge about how to intervene to reduce the high prevalence of smoking among pregnant Inuit women. This thesis examined three different research questions by using mixed methodologies to help build a knowledge base for future intervention strategies by better understanding the reasons behind smoking among pregnant women.

The population health perspective recognizes that the umbrella of cultural norms, environmental cues, and infrastructural constraints are essential considerations for smoking cessation interventions (5). Individual smoking cessation strategies make up an important component of a comprehensive societal approach to tobacco control.

By adopting a broader population health perspective, this thesis identified different layers of influence on the behaviour of pregnant women, the interactions between these influences, and how these interactions contribute to the high smoking rates among pregnant women in Nunavut. This perspective allows for a critical examination of how the women in Nunavut may be particularly vulnerable to smoking behaviours in comparison to the general population of pregnant women in Canada. This overarching perspective highlighted the social conditions, current policies and other individual factors in a Nunavut context that contribute to the regional variations in smoking behaviours. All three studies revealed new information that can be used to help address the gap in research within the Inuit population in

regards to smoking cessation. While the first study provided a description of smoking behaviour, the second study revealed reasons why women were not intending to quit smoking, and explained likely reasons why the data of the TTM constructs were demonstrating certain patterns. The second study also revealed that some women who were thinking of quitting in the future would seek assistance from health care providers. The third study revealed that the HCPs were not trained to provide smoking cessation assistance.

Looking at the different influences on smoking from each level provides a glimpse into the complexities of providing smoking cessation interventions among pregnant women in Nunavut. Women revealed potentially stronger addiction to nicotine (as indicated by the Heaviness of Smoking Index) and high levels of stress. Coupled with this are the social pressures to smoke, and for those wanting to quit, few resources exist which can provide them with support during the process. This can decrease their motivation to quit smoking, and provide negative reinforcement to continue smoking throughout their pregnancy.

Typically, interventions can be done at a structural level (taxes, policies), social level (community interventions) and/or at an individual level. This thesis revealed that the TTM is a promising theoretical basis to develop intervention strategies among the general population and pregnant women at an individual level.

Usually, pregnant women who are considering quitting smoking display a pattern of increased use of the processes of change with increasingly advanced stage of change (2). As stated earlier, experiential processes may be more important in earlier or pre-action stages whereas behavioural processes are used in the latter stages of smoking cessation (2,3). Women in this study were less likely to express feelings about their smoking, which is a process used in the early stages of change. Women were less likely to use processes commonly used in the latter stages such as make use of the support of caring others during

attempts to smoking; less inclined to substitute alternatives for smoking; and less likely to control situations and other causes which trigger smoking behaviours. These can be important areas on which to base future interventions.

As indicated by the social ecological framework, the social environment is important to consider in the context of smoking cessation since the women in this sample are surrounded by friends, family and people in their community who smoke. Trying to control situations and causes which trigger smoking may be challenging with the overwhelming presence of smokers within her immediate environment. Smoking cessation interventions must account for the social environment in which these women live, and provide support for relapse prevention.

Women in this study were less likely to express feelings about their experiences with smoking cessation than women in previous smoking cessation research studies (4, 5). HCPs in this study were not formally trained in smoking cessation, and knew of few resources at their disposal to address smoking in the community and among pregnant women. In addition, the majority of the women in this sample did not know where to go for help and many had not heard of the Nunavut-wide Quit Line, which is the main cessation intervention for the territory. Furthermore some women, particularly in the smaller communities, do not have access to a telephone, which is problematic as the Quit Line is a telephone-based counselling service.

Looking at the whole picture, the TTM has been documented to work well as a basis for a smoking cessation intervention, however, other layers of influence such as the social and physical environments, including the lack of resources and the geographic location of the smaller communities, need to be considered and built into the intervention strategy. Therefore, broadly focused population health interventions are needed for women who

smoke during pregnancy.

Interventions aimed at the general pregnant population may not address the unique stressors faced by Inuit women. Smoking cessation interventions need to be tailored to not just smoking behaviours alone, but to the determinants of smoking behaviours of women (6), such as their limited access to resources, lower levels of education and single parenthood. Even when targeting women, additional effort may be required to address women of different ethnicities (6), such as Inuit women.

Other studies among pregnant Aboriginal women suggest that interventions should focus on the social environment, and the influences of social networks and partners on the behaviour of individuals (7). The findings in this study support these recommendations, as the social environment clearly influences the smoking behaviours of women in this sample. Individually-based interventions have to consider the unique circumstances described in this thesis which include: a high percentage of socioeconomically disadvantaged women, social influences of family and friends on smoking behaviours, and limited capacity to provide smoking cessation services (such as individual counseling) due to a lack of access to health care and a lack of formal HCP training.

Comprehensive population health models are needed for effective changes as there are strong associations between socioeconomic factors and smoking among pregnant women, and greater efforts and resources should be channelled into strategies to reduce social inequalities (2, 3). Social and environmental factors need to be emphasized to understand the relationship among disparities, social context, diversity, inequalities, and inequities in the utilization of tobacco (4), particularly in Nunavut.

5.3 Potential policy and program implications

Smoking cessation interventions and programs should recognize that the co-occurrences of single motherhood, parenting responsibilities, and low-income may increase the risk of smoking (8). A strategy should include the circumstances unique to these women, and understand that cigarette smoking may often provide a sense of stress relief for women.

Tobacco control policies need to be tailored to not just smoking behaviours alone, but to the determinants of smoking behaviours of women (6). Policies should include a broad perspective that can incorporate other components such as offering free pharmacotherapy to those who may have financial constraints, and who are not eligible to receive subsidized medication. Support services such as groups or access to resources in the community should be provided for women who may not have personal social support. For example, research done on the health of Aboriginal communities found that people voiced concerns in their community including substance abuse, suicide, unemployment and family violence (9, 10). These determinants can increase stress and increase smoking to cope with the stress.

This study provided some insight into the unique circumstances of pregnant Inuit women, and therefore highlights some of the considerations needed for culturally sensitive approaches to smoking cessation, such as their limited access to care. Data in this thesis suggest that the current practice of removing pregnant women from their communities and sending them to Iqaluit to the medical boarding home until they give birth has unintended consequences which are associated with an increase in daily smoking among pregnant women. This is not to say that the boarding home is facilitating this increase in cigarette consumption as they do not allow smoking within the building, but rather, that removing women from their communities is often stressful, and cigarettes are used as a coping mechanism to deal with this stress. Some of the women revealed that while staying at the

boarding home, they felt alone and did not have anyone to talk to, even if there were other pregnant women also present. When they saw other women smoking, it provided an opportunity to go out with them to have a cigarette and helped them socialise with the other pregnant women also staying at the boarding home. The boarding home is an ideal location to implement smoking cessation interventions, as it reaches the target population and provides an opportunity for women to support each other in engaging in smoking cessation.

Many of the women in this study revealed that they have never heard of the Quit Line offered in Nunavut. Although this service is intended to provide support to those who want to quit smoking at no cost, the current marketing strategy for the Quit Line is not reaching this target audience and other promotional avenues may be needed to raise awareness and create effective promotion campaigns. Reinforcing a non-judgmental and positive attitude towards smoking cessation can help improve the visibility of the program and open the lines of communication for women who are smoking throughout their pregnancy.

5.4 Future intervention strategy considerations

There are several layers of influential factors to smoking behaviour among pregnant women that need to be considered for more effective future intervention strategies. First, Inuit women in the first study revealed that most women were not considering quitting smoking in the foreseeable future; they smoked on average more cigarettes daily than other pregnant women (11); they experienced high personal levels of stress; and revealed they had moderate to high dependence on cigarettes. TTM scores indicated that women were ambivalent about continued smoking during their pregnancy, and situational-temptation values were high in social situations among women who had quit smoking indicating that they may be at high risk for relapse in the future. Women in the second study revealed that

despite knowing the risks associated with smoking, the majority of women increased their cigarette consumption during pregnancy. HCPs revealed they use pregnancy as a teaching opportunity, or a way to address smoking with pregnant women; however, if the results in the first two studies are any indication of the norm, then this approach may not be particularly effective as the pregnancy experience appears to add more stress to these women. In light of these findings, a different approach is necessary which focuses on the individual correlates of smoking behaviours with perhaps less emphasis on the pregnancy experience.

Second, pregnant women in Nunavut are surrounded by family, friends and partners who smoke, perhaps more so than other Canadian women. The social influence of smoking has been well documented to be a strong predictor of relapse (11). Unless a community-wide strategy is created, individual intervention strategies targeting pregnant women are not likely to succeed. Group counselling using behavioural modification as an intervention have promise and could include programs tailored to pregnant women, family based counselling, or community group sessions. An added benefit to creating a group approach is the social aspect that it provides, which encourages women to get together for a common goal and creates a support system. Many women revealed they felt alone, and they were not likely to engage in discussing their smoking experiences or reach out for support to help them quit and this may provide an ideal setting for building support and providing smoking cessation education. The medical boarding home provides one potential venue, as women often stay there for long periods of time while waiting to give birth, and they can have the support of the women around them trying to achieve a similar goal.

Third, the women in this study sample revealed stressful life circumstances such as housing instability, social isolation, abusive relationships, single parenting, low-income and

unemployment. Smoking helped relieve their anxiety and was often used as a coping mechanism. These circumstances must be considered in future interventions.

Lastly, all future intervention strategies must consider the geographic locations of the smaller communities and be able to adapt to the needs of the communities, as well as the minimal available resources. Access to medical care, social services and other services are often only attainable outside of the community, therefore interventions should be flexible, adapt to the needs of the community, and consistent among neighbouring communities to ensure a unified approach. Local "champions" and Elders can play an integral role in promoting smoking cessation by becoming trained in cessation counselling, and utilizing existing resources, without relying exclusively on HCPs. This would strengthen community capacity with respect to smoking cessation.

5.5 Strengths and limitations

The main strength of this thesis is that it is one of the first studies examining smoking behaviours among pregnant women in Nunavut. This thesis helps provide some evidence to help address the smoking behaviours of pregnant women in Northern Canada.

The first manuscript provides unique data, as there have not been any studies done on maternal attachment among women in Nunavut. The second manuscript is one of the first studies detailing the women's perceptions of their smoking behaviours during their pregnancy in Nunavut. Lastly, the third manuscript is one of the first studies that gauged the awareness of resources to address smoking cessation among HCPs in the Baffin Region of Nunavut, and identified perceived barriers and facilitators for effective interventions.

The overall limitations include: the small sample size, the fact that some measures used had not been validated in an Inuit population, and the fact that women not receiving any

prenatal care may have been higher risk smokers, but were not captured in recruitment. There is very little research done on pregnant smokers within an Inuit population, therefore there were no previous studies to compare these results to except for research from First Nations populations; however, these are very different cultures.

Conducting research in an Aboriginal community has several challenges that could not have been predicted, which resulted in delays with data collection and slowed the progress of this study. Although these challenges were handled accordingly, the realities of doing research in the Canadian North need to be mentioned to highlight some of the unique circumstances of this study.

Research ethics approval from the University of Ottawa Heart Institute (UOHI) took approximately eight months for this project. A typical turnaround time for clinical research protocols is between four and six weeks. Data collection was expected to start in January of 2009, however due to delays in obtaining approval from the research ethics board and obtaining a research license from the Nunavut Research Institute (NRI), data collection could not start before August 2009.

There were delays in obtaining ethics approval for many reasons; however, the main barriers were the requirements needed to meet the University of Ottawa Heart Institute Research Ethics Board (UOHI REB) and the requirements needed to meet the needs of the NRI. For example, the UOHI REB required that the patient information sheet and consent forms contain a verbatim script that did not comply with the required script by the NRI. The information in both scripts was the same, though they were presented in a different way, and communicating these discrepancies resulted in long delays.

This project adhered to the Canadian Institute for Health Research (CIHR) among Aboriginal populations' guidelines, which in some cases caused more delays with the ethics

procedure, as data ownership and control is different from the current UOHI REB regulations. These issues were resolved, and ethics approval was granted.

The medical boarding home in Nunavut was intended to be the primary recruitment site for this study; however the centre is run somewhat informally. There is no formal procedure to track how many residents frequent the boarding home for what purpose, at any given time. Room availability is monitored, though who or why the person is staying at the boarding home is not captured. Accurate recruitment statistics could not be kept for this recruitment venue. It was decided to include the prenatal clinic at the Iqaluit hospital, as an alternate recruitment venue, to best capture the pregnant population.

The cost of this study was high. Gifts were purchased for all women who participated in the study. The gifts were shipped to the boarding home, where they could be accessed by the project staff and distributed as appropriate. The cost of shipping exceeded the original budget allocated for the gifts. After a few weeks of data collection, we were informed that all the supplies had gone missing, and needed to be replaced. The recruitment was put on hold until more gifts could be sent for the women.

There was a budget allocated for hiring a project coordinator, but there were delays in finding staff, and once staff was hired, staffing instability ensued. For various reasons that cannot be disclosed, staffing was challenging as three different coordinators were hired but could not continue their role in the project. Part of adhering to the CIHR guidelines for Aboriginal research is to build community capacity; therefore it was originally thought that someone in the community should do the data collection. It was then decided that the primary author of this thesis would do all the data collection. This was unfortunate, as the primary author did not speak Inuktitut (which is the main dialect in Nunavut) and it started to become apparent that language barriers posed some challenges, as there was much non-

verbal communication that the author was unaware of initially. Also, a translator could not be hired due to the potential breach of confidentiality, and the inevitable delays of adding project staff with the UOHI REB.

The primary author is a Southern researcher who has never lived in Nunavut. During the course of the project, the primary author travelled to Iqaluit three times and observed the radical differences in geography, climate and culture that had never been experienced before. These experiences included very cold temperatures and rapid changes in weather conditions. The primary author also observed children smoking cigarettes with ease (i.e. not likely their first time smoking), which at first challenged their perspective of culture and parenting. It was hard to understand why parents would allow their child to smoke, but after listening to people in the community and observing interactions between children and adults, it became clear that there were cultural differences in parenting. There seemed to be more of an equal relationship, than a parent-child relationship. This collection of observations is important, as it helps provide a side to this story that would have otherwise been missed, if the data had not been collected first hand.

Under Ownership, Control, Access, and Possession (OCAP) principles, and Canadian Institute of Health Research (CIHR) guidelines involving Aboriginal communities, building community capacity is encouraged, and therefore three different local project coordinators were hired to conduct the interviews. This was done to build research capacity in the community, and the women could speak Inuktitut, which prevented language barriers during the interviews. Three different women were asked to be a part of the study as project coordinators, but for various reasons they could not continue with data collection. Therefore, the primary author collected the vast majority of the data, which posed some challenges in

terms of data collection mostly in regards to language barriers. These changes in project staff resulted in delays of about a year in data collection.

The data collected from HCPs had to be limited to general quotes, and absolutely no identifying information could be used. If a HCP described circumstances unique to their community, but while communicating this information the community or the HCP could be identified, only the essence or parts of the information could be used. This limited the depth of the information provided in this thesis.

Lastly, the information presented in the three studies cannot be published until the community has a chance to respond to the data presented in each manuscript. Key findings of this research were sent to the communities in the Baffin Region in July 2012. If there is general consensus that the papers should not be published, by adhering to the OCAP principles, the thesis findings will not be disseminated publicly through peer-reviewed journals.

5.6 Future research

More research is needed to understand smoking behaviours among pregnant women in Nunavut. In addition, more qualitative studies are required to gain an in-depth understanding of beliefs and attitudes related to smoking during pregnancy in this population. More research is needed to develop a valid measure to assess maternal attachment styles for the Inuit population. Further research is required to address smoking among higher-risk pregnancies, and can be implemented in a larger, Nunavut-wide study.

Second, interventions should consider a broader perspective which includes women's economic, social and environmental circumstances. As part of an objective to promote smoking cessation, pregnant women should have access to a range of social and supportive

resources. There is no available literature to suggest which smoking cessation strategy might be best used in an Inuit population. The current literature suggests that interventions using the TTM may be useful, and this needs to be explored further as there is promise that these types of interventions work with pregnant women in Southern Canada.

Multiple levels of influence are important for understanding tobacco initiation and interventions to prevent uptake and the development of dependency should be explored.

5.7 Conclusion

The finding of this thesis provides a description of the interdependence of multiple levels of influence on the prevalence of smoking among pregnant women in Nunavut. Specifically, this study revealed that the majority of pregnant women in the Baffin region were not considering quitting smoking in the foreseeable future. The data from several TTM constructs indicate that women who have quit, or who may quit in the future, may be at high risk for relapse. In addition to the clinical indicators, the social environment was the most significant influence in the smoking behaviours of Inuit women, as all of the women had smoking friends and family and most women reported having smoking partners. Lastly, although HCPs feel that addressing smoking cessation among pregnant women is needed, they lack formal smoking cessation training. This information may help shape the future of smoking cessation intervention strategies.

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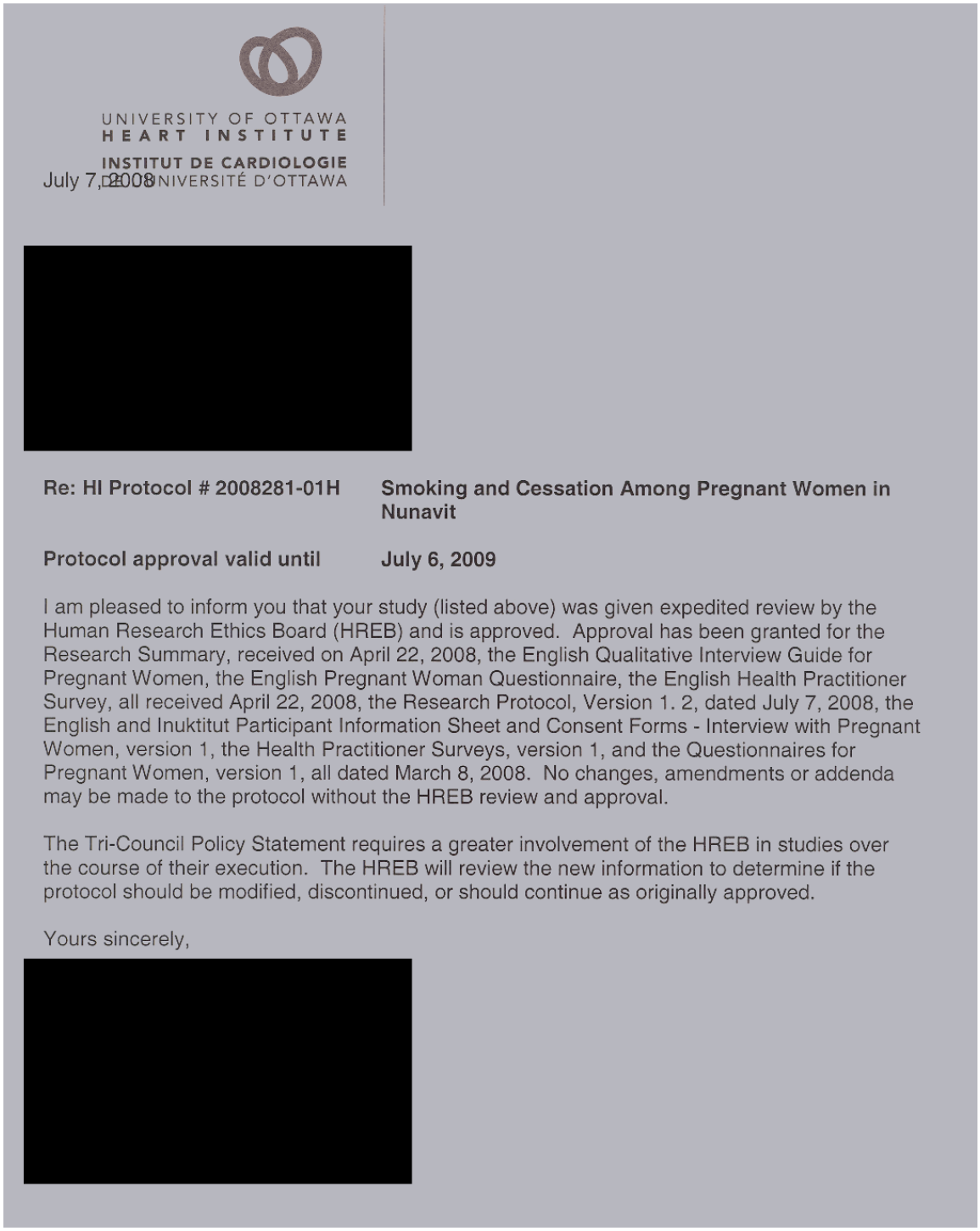
Appendix A: Social Ecology Model

Dahlgren and Whitehead's layered influences on health, 1992

Source: G. Dahlgren and M. Whitehead. (1992). *Policies and strategies to promote social equity and health.* Copenhagen: World Health Organization.

Appendix B: University of Ottawa Heart Institute Ethics Approval



UNIVERSITY OF OTTAWA
HEART INSTITUTE
INSTITUT DE CARDIOLOGIE
UNIVERSITÉ D'OTTAWA

July 7, 2008

[redacted]

Re: HI Protocol # 2008281-01H **Smoking and Cessation Among Pregnant Women in Nunavit**

Protocol approval valid until **July 6, 2009**

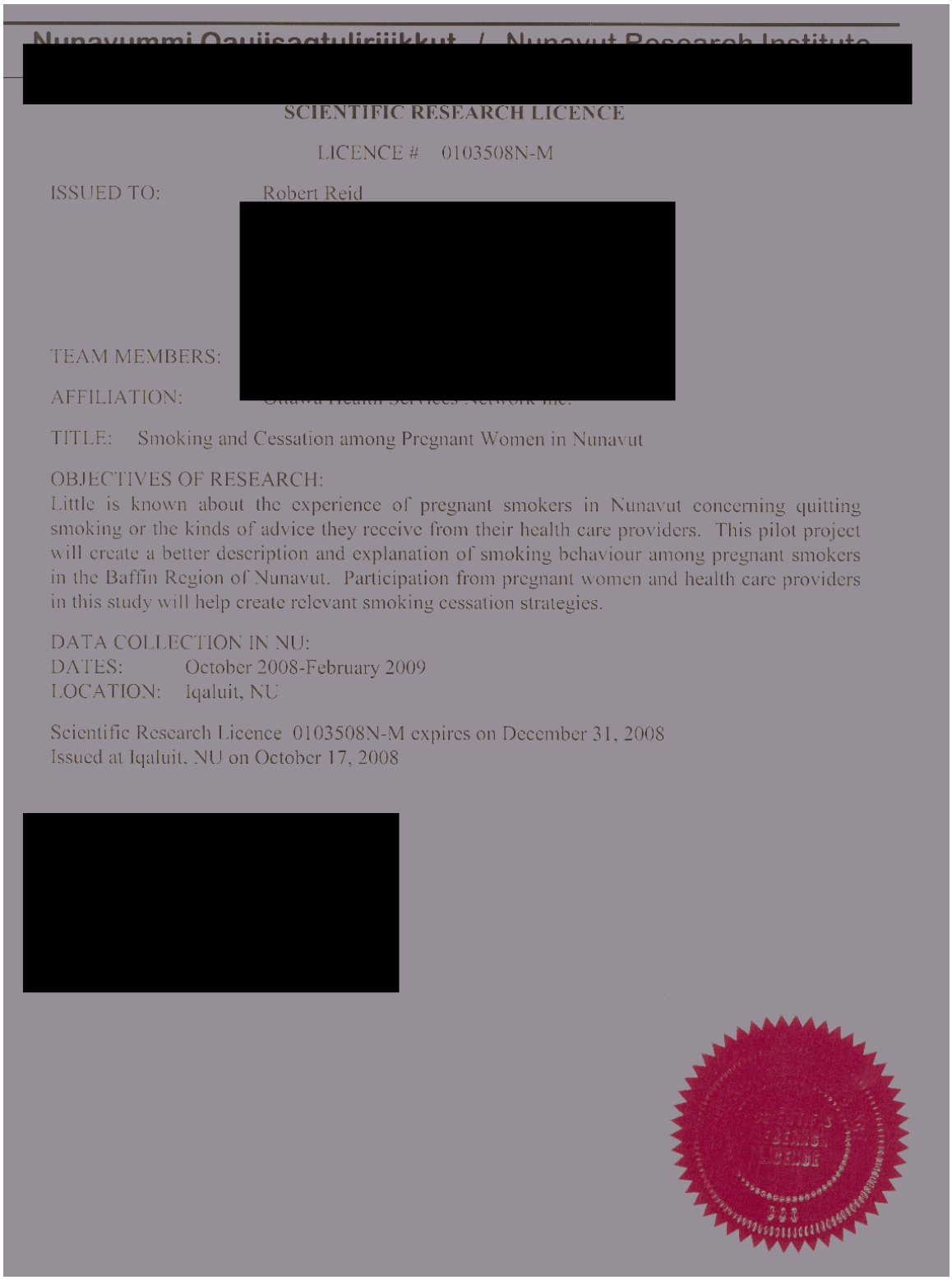
I am pleased to inform you that your study (listed above) was given expedited review by the Human Research Ethics Board (HREB) and is approved. Approval has been granted for the Research Summary, received on April 22, 2008, the English Qualitative Interview Guide for Pregnant Women, the English Pregnant Woman Questionnaire, the English Health Practitioner Survey, all received April 22, 2008, the Research Protocol, Version 1. 2, dated July 7, 2008, the English and Inuktitut Participant Information Sheet and Consent Forms - Interview with Pregnant Women, version 1, the Health Practitioner Surveys, version 1, and the Questionnaires for Pregnant Women, version 1, all dated March 8, 2008. No changes, amendments or addenda may be made to the protocol without the HREB review and approval.

The Tri-Council Policy Statement requires a greater involvement of the HREB in studies over the course of their execution. The HREB will review the new information to determine if the protocol should be modified, discontinued, or should continue as originally approved.

Yours sincerely,

[redacted]

Appendix B: Nunavut Research Institute Licenses



[redacted]

SCIENTIFIC RESEARCH LICENCE

LICENCE # 0103508N-M

ISSUED TO: Robert Reid

[redacted]

TEAM MEMBERS:

AFFILIATION:

TITLE: Smoking and Cessation among Pregnant Women in Nunavut

OBJECTIVES OF RESEARCH:
Little is known about the experience of pregnant smokers in Nunavut concerning quitting smoking or the kinds of advice they receive from their health care providers. This pilot project will create a better description and explanation of smoking behaviour among pregnant smokers in the Baffin Region of Nunavut. Participation from pregnant women and health care providers in this study will help create relevant smoking cessation strategies.

DATA COLLECTION IN NU:
DATES: October 2008-February 2009
LOCATION: Iqaluit, NU

Scientific Research Licence 0103508N-M expires on December 31, 2008
Issued at Iqaluit, NU on October 17, 2008

[redacted]

[redacted]

SCIENTIFIC RESEARCH LICENCE

LICENCE # 0100909R-M

ISSUED TO: [redacted]

TEAM MEMBERS:

AFFILIATION: Ottawa Health Services Network Inc.

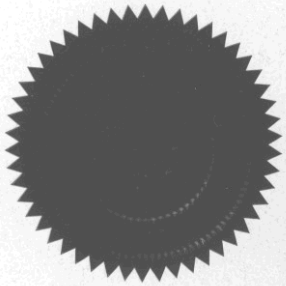
TITLE: Smoking and Cessation among Pregnant Women in Nunavut

OBJECTIVES OF RESEARCH:
Little is known about the experience of pregnant smokers in Nunavut concerning quitting smoking or the kinds of advice they receive from their health care providers. This pilot project will create a better description and explanation of smoking behaviour among pregnant smokers in the Baffin Region of Nunavut. Participation from pregnant women and health care providers in this study will help create relevant smoking cessation strategies.

DATA COLLECTION IN NU:
DATES: February, 2009 - December 31, 2009
LOCATION: Iqaluit

Scientific Research Licence expires on December 31, 2009.
Issued at Iqaluit, NU on February 05, 2008.

[redacted]



UNIVERSITY OF OTTAWA
HEART INSTITUTE
INSTITUT DE CARDIOLOGIE
DE L'UNIVERSITÉ D'OTTAWA

SMOKING AND CESSATION AMONG PREGNANT WOMEN IN THE BAFFIN REGION OF NUNAVUT STUDY

Purpose: The purpose of this project is gain a better understanding of smoking behaviors and the process of cessation among pregnant women.

Participation: Your participation in the study will last approximately 30 minutes, during which time you will be asked to answer questions in a survey or take part in a brief interview. There will be a total of 70 participants recruited into the study from Iqaluit.

Eligibility: If you meet the following criteria, you may be eligible to participate in the study.

- You are pregnant;
- You have smoked at least 1 cigarette since learning you were pregnant; and
- You are 18 years old or older (for 16- and 17-year olds, you will need to have your parent/guardian sign a consent form to be allowed to participate).

The information you provide during your interviews will be anonymous so you cannot be identified, and we will protect the privacy of you and your community.

If you are interested in participating in this study, or would like more information, please contact:

[redacted]

This study has been approved by the University of Ottawa Heart Institute Human Research Ethics Board.

Appendix E: Questionnaire for pregnant women- English

Smoking and Cessation among Pregnant Women in Nunavut

Pregnant Woman Questionnaire

All information obtained during the study will be held in strict confidence. No names or identifying information will be used in any publication or presentations. Your survey results will have only an identifying number on them. Your personal information and other study results will be stored in a locked filing cabinet, and no one except the principal investigator, co-investigators and study-coordinator will see your answers and/or study results.

There are no right or wrong answers; we ask only that you answer each question as honestly and accurately as you ca.

If you have any questions or concerns about any of the questions, please do not hesitate to contact [redacted]

UOHI Protocol #: 2008281-01H

Participant ID:_____

Date:_____

Demographic Information

Date:_____

Subject ID:_____

Completed by:_____

1. Age:_____

2. What is your expected due date?:_____

3. Is this your first pregnancy?_____

4. How many children do you have (living with you or adopted)?_____

5. Do you intend to keep your baby or arrange for adoption?

_____

6. What is your marital status? Please check ☑ the best answer.

☐ Single ☐ Married	☐ Common Law ☐ Divorced/Separated	☐ Widowed ☐ Refused

7. What is your race/ethnicity? Please check ☑ the best answer.

☐ White	☐ Black	☐ Chinese
☐ South Asian	☐ Korean	☐ Latin American
☐ Filipino	☐ Arab	☐ Japanese
☐ Aboriginal People of North America	☐ Other: *Please specify:* _____	☐ Prefer not to answer

8. What is your employment status? Please check ☑ the best answer.

☐ Full Time ☐ Part Time ☐ Other:_____	☐ Unemployed ☐ Contract ☐ Refused	☐ Disability ☐ Social Support

9. Please indicate which category best describes the highest level of education that you've completed

❑ Never attended school or attended kindergarten only	❑Grades 11-13	❑ Completed some university courses
❑ Grades 1-4	❑ Received High School Diploma or equivalent	❑ Completed university degree
❑ Grades 5-8	❑ Completed some college courses	❑ Professional or graduate degree
❑ Grades 9-10	❑ Completed college	

10. What is total approximate household gross income from all sources for the past year? Please check ☑ the best answer.

☐ Less than $10 000	☐ $30 000-$39 999	☐ More than $80 000
☐ $10 000- $19 999	☐ $40 000- $59 999	☐ No Income
☐ $20 000- $29 999	☐ $60 000- $79 999	☐ Refused

11. Please indicate your primary pre-natal care provider.

☐ Physician	☐ Nurse Practitioner	☐ Traditional Healer
☐ Public Health Nurse	☐ Midwife	☐ Do not have prenatal care
		☐ Other: please specify

Health Canada Core Indicators

1. At the present time, do you smoke cigarettes? ☐ Yes ☐ No

1a**.** If no:Have you ever smoked cigarettes daily? ☐ Yes ☐ No

1b. (If yes to 1a): When did you stop smoking (month and year)?_____

1c. (If yes to 1a): Did you stop smoking upon learning you were pregnant? ☐ Yes ☐ No

1d. (If yes to 1a): Did you stop smoking before getting pregnant? ☐ Yes ☐ No

2. Did you receive any assistance to help you quit smoking? ☐ Yes ☐ No

2a. If yes, what kind of assistance did you receive?

_____

_____

3. In the past 30 days, did you smoke every day? ☐ Yes ☐ No

4. On those days that you've smoked, how many cigarettes did you usually smoke? ____

5. At what age did you first try smoking?_____

6. At what age did you begin to smoke cigarettes daily?_____

7. Is smoking allowed in your home?_____

8. How many people smoke cigarettes inside your home everyday or almost everyday? _____ (include all family members and visitors)

9. (If employed) Are you exposed to smoking in your place of work every day or almost every day?_____

10. How soon after waking up do you smoke your first cigarette?_____(minutes)

11. Are you seriously considering quitting within the next 6 months?

☐ Yes	☐ No

12. Are you seriously considering quitting within the next 30 days?

☐ Yes	☐ No

13. On a scale of 1-10, how motivated are you to quit smoking at the present time? (If 1 is not motivated at all to quit and 10 is completely motivated). Please circle the best answer.

1	2	3	4	5	6	7	8	9	10
Not motivated at all			Somewhat motivated				Completely motivated		

14. On a scale of 1 to 10 how confident are you that you could quit smoking completely if you wanted to? (If 1 is not confident at all and 10 is completely confident). Please circle the best answer.

1	2	3	4	5	6	7	8	9	10
Not confident at all			Somewhat confident				Completely confident		

15. In the past year, how many times did you stop smoking for at least 24 hours because you were trying to quit? _____

16. Please rate your dependence on cigarettes on a scale of 1-10. Please circle the best answer.

1	2	3	4	5	6	7	8	9	10
Not dependent			Somewhat dependent				Completely dependent		

17. For you, quitting smoking would be: Please circle the best answer. **(Selby, 2004)**

Very Easy	Fairly Easy	Fairly Difficult	Very Difficult	Impossible
1	2	3	4	5

Possible Co-Addictions (Selby, 2004)

1. How often, if ever, did you drink alcoholic beverages since learning you were pregnant? Please check ☑ the best answer.

☐ More than once a day	☐ about every day	☐ 4-5 times a week
☐ 2-3 times a week	☐ once a week	☐ 2-3 times a month
☐ once a month	☐ less than once a month	☐ never

2. Since learning you were pregnant, how may drinks containing alcohol did you have on a typical day when you were drinking? Please check ☑ the best answer.

1 standard drink= 12 oz. beer, 5 oz. wine, 1.5 oz alcohol

☐ 1-2	☐ 3-5	☐ 6-10	☐ more than 10

3. Have you ever used any of these substances since learning you were pregnant? Please check ☑ the best answer.

	No	Past (>1 yr)	Currently (last 30 days)
Marijuana	☐	☐	☐
Cocaine	☐	☐	☐
Sedatives	☐	☐	☐
Opiates	☐	☐	☐
Stimulants	☐	☐	☐
Other_____	☐	☐	☐

4. Do you have or have you ever had a problem with excessive drugs use and/or alcohol consumption? If yes, please specify:

☐ Yes	☐ No

_____

5. Do you currently have any of the following problems or stressors in your life? Please check ☑ the best answer.

☐ Financial	☐ Family	☐ Housing
☐ Work	☐ Psychiatric Illness	☐ Other:_____
☐ Unemployment	☐ Medical Illness	☐ No stressors

Decision Balance (Bane et al., 1999)

The following statements represent different opinions about smoking. Please rate HOW IMPORTANT each statement is to your decision to smoke according to the following scale and check ☑ the one that is most applicable:

1. Smoking cigarettes relieves tension

☐ Not important	☐ Slightly important	☐ Moderately important	☐ Very important	☐ Extremely important

2. Smoking helps me to concentrate and do better work

☐ Not important	☐ Slightly important	☐ Moderately important	☐ Very important	☐ Extremely important

3. I am relaxed and therefore more pleasant when smoking.

☐ Not important	☐ Slightly important	☐ Moderately important	☐ Very important	☐ Extremely important

4. Cigarettes help me relax and I couldn't give that up while pregnant

☐ Not important	☐ Slightly important	☐ Moderately important	☐ Very important	☐ Extremely important

5. It's too hard for me to quit while pregnant.

☐ Not important	☐ Slightly important	☐ Moderately important	☐ Very important	☐ Extremely important

6. I'm embarrassed to have to smoke

☐ Not important	☐ Slightly important	☐ Moderately important	☐ Very important	☐ Extremely important

7. My cigarette smoking bothers other people

☐ Not important	☐ Slightly important	☐ Moderately important	☐ Very important	☐ Extremely important

8. People think I'm foolish for ignoring the warnings about cigarette smoking

☐ Not important	☐ Slightly important	☐ Moderately important	☐ Very important	☐ Extremely important

9. My family told me to quit or cut down

☐ Not important	☐ Slightly important	☐ Moderately important	☐ Very important	☐ Extremely important

10. Smoking cigarettes is hazardous to my health

☐ Not important	☐ Slightly important	☐ Moderately important	☐ Very important	☐ Extremely important

11. I know of the increased risk of medical problems such as cancer

☐ Not important	☐ Slightly important	☐ Moderately important	☐ Very important	☐ Extremely important

Self-Efficacy (DiClemente, 1981)

Listed below are situations that lead to some people to smoke. We would like to know **how tempted** you may be to smoke in each situation. Please check ☑ the answer that best describes how tempted you may be in each situation.

1. With friends at a party

☐ Not at all tempted	☐ Not very tempted	☐ Moderately tempted	☐ Very tempted	☐ Extremely tempted

2. When I first get up in the morning

☐ Not at all tempted	☐ Not very tempted	☐ Moderately tempted	☐ Very tempted	☐ Extremely tempted

3. When I am very anxious and stressed

☐ Not at all tempted	☐ Not very tempted	☐ Moderately tempted	☐ Very tempted	☐ Extremely tempted

4. Over coffee while talking and relaxing

☐ Not at all tempted	☐ Not very tempted	☐ Moderately tempted	☐ Very tempted	☐ Extremely tempted

5. When I feel I need a lift

☐ Not at all tempted	☐ Not very tempted	☐ Moderately tempted	☐ Very tempted	☐ Extremely tempted

6. When I am very angry about something or someone

☐ Not at all tempted	☐ Not very tempted	☐ Moderately tempted	☐ Very tempted	☐ Extremely tempted

7. With my spouse or close friend who is smoking

☐ Not at all tempted	☐ Not very tempted	☐ Moderately tempted	☐ Very tempted	☐ Extremely tempted

8. When I realize I haven't smoked for a while

☐ Not at all tempted	☐ Not very tempted	☐ Moderately tempted	☐ Very tempted	☐ Extremely tempted

9. When things are not going my way and I am frustrated

☐ Not at all tempted	☐ Not very tempted	☐ Moderately tempted	☐ Very tempted	☐ Extremely tempted

Process of Change (Prochaska, Velicer, DiClemente and Fava 1988)

The following experiences can affect the smoking habits of some people. Think of any similar experiences you may be currently having or have had in the last month. Then rate the **frequency** of this event by checking off ☑ the best answer.

1. When I am tempted to smoke I think about something else

☐ Never	☐ Seldom	☐ Occasionally	☐ Often	☐ Repeatedly

2. I tell myself I can quit if I want to

☐ Never	☐ Seldom	☐ Occasionally	☐ Often	☐ Repeatedly

3. I notice that nonsmokers are asserting their rights

☐ Never	☐ Seldom	☐ Occasionally	☐ Often	☐ Repeatedly

4. I recall information people have given me on the benefits of smoking.

☐ Never	☐ Seldom	☐ Occasionally	☐ Often	☐ Repeatedly

5. I can expect to be rewarded by others if I don't smoke

☐ Never	☐ Seldom	☐ Occasionally	☐ Often	☐ Repeatedly

6. I stop to think that smoking is polluting the environment

☐ Never	☐ Seldom	☐ Occasionally	☐ Often	☐ Repeatedly

7. Warnings about the health hazards of smoking move me emotionally

☐ Never	☐ Seldom	☐ Occasionally	☐ Often	☐ Repeatedly

8. I get upset when I think about my smoking

☐ Never	☐ Seldom	☐ Occasionally	☐ Often	☐ Repeatedly

9. I remove things from my home or place of work that remind me of smoking

☐ Never	☐ Seldom	☐ Occasionally	☐ Often	☐ Repeatedly

10. I have someone who listens when I need to talk about my smoking

☐ Never	☐ Seldom	☐ Occasionally	☐ Often	☐ Repeatedly

11. I think about information from articles and ads about how to stop smoking

☐ Never	☐ Seldom	☐ Occasionally	☐ Often	☐ Repeatedly

12. I consider the view that smoking can be harmful to the environment

☐ Never	☐ Seldom	☐ Occasionally	☐ Often	☐ Repeatedly

13. I tell myself that if I try hard enough I can keep from smoking

☐ Never	☐ Seldom	☐ Occasionally	☐ Often	☐ Repeatedly

14. I find society changing in ways that makes it easier for nonsmokers

☐ Never	☐ Seldom	☐ Occasionally	☐ Often	☐ Repeatedly

15. My need for cigarettes makes me feel disappointed in myself.

☐ Never	☐ Seldom	☐ Occasionally	☐ Often	☐ Repeatedly

16. I have someone I can count on when I'm having problems with smoking

☐ Never	☐ Seldom	☐ Occasionally	☐ Often	☐ Repeatedly

17. I do something else instead of smoking when I need to relax.

☐ Never	☐ Seldom	☐ Occasionally	☐ Often	☐ Repeatedly

18. I react emotionally to warnings about smoking cigarettes

☐ Never	☐ Seldom	☐ Occasionally	☐ Often	☐ Repeatedly

19. I keep things around my home or place of work that remind me not to smoke

☐ Never	☐ Seldom	☐ Occasionally	☐ Often	☐ Repeatedly

20. I am rewarded by others if I don't smoke

☐ Never	☐ Seldom	☐ Occasionally	☐ Often	☐ Repeatedly

Perceived Stress Scale (Cohen & Williamson, 1988)

The questions in this scale ask you about your feelings and thoughts during the last month. In each case, please indicate with a check ☑ how often you felt or thought a certain way.

1. In the last month, how often have you felt that you were unable to control the important things in your life?

☐ Never	☐ Almost never	☐ Sometimes	☐ Fairly Often	☐ Very often

2. In the last month, how often have you felt confident about your ability to handle your personal problems?

☐ Never	☐ Almost never	☐ Sometimes	☐ Fairly Often	☐ Very often

3. In the last month, how often have you felt that things were going your way?

☐ Never	☐ Almost never	☐ Sometimes	☐ Fairly Often	☐ Very often

4. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

☐ Never	☐ Almost never	☐ Sometimes	☐ Fairly Often	☐ Very often

Hospital Anxiety and Depression Scale- HADS (Snaith & Zigmond, 1994)

Read each item below and check ☑ which comes closest to how you have been feeling in the past week. Don't take too long over your replies; your immediate reaction to each item will probably be more accurate than a long, thought out response.

1. I feel tense or wound up

☐ Most of the time	☐ A lot of the time	☐ From time to time, occasionally	☐ Not at all

2. I still enjoy the things I used to enjoy

☐ Definitely as much	☐ Not quite so much	☐ Only a little	☐ Hardly at all

3. I get a sort of frightened feeling as if something awful is about to happen

☐ Very definitely and very badly	☐ A lot of the time	☐ From time to time, occasionally	☐ Not at all

4. I can laugh and see funny side of things

☐ As much as I always could	☐ Not quite so much now	☐ Definitely not so much now	☐ Not at all

5. Worrying thoughts go through my mind

☐ A great deal of time	☐ A lot of the time	☐ Sometimes, but not too often	☐ Only occasionally

6. I feel cheerful

☐ Most of the time	☐ Sometimes	☐ Not often	☐ Not at all

7. I can sit at ease and feel relaxed

☐ Definitely	☐ Usually	☐ Not often	☐ Not at all

8. I feel as if I am slowed down

☐ Nearly all the time	☐ Very often	☐ Sometimes	☐ Not at all

9. I get a sort of frightened feeling like 'butterflies' in my stomach

☐ Very often	☐ Quite often	☐ Occasionally	☐ Not at all

10. I have lost interest in my appearance

☐ Definitely	☐ I don't take so much care as I should	☐ I may not take quite as much care	☐ I take just as much care as ever

11. I feel restless as I have to be on the move

☐ Very much indeed	☐ Quite a lot	☐ Not very much	☐ Not at all

12. I look forward with enjoyment to things

☐ As much as I ever did	☐ Rather less than I used to	☐ Definitely less than I used to	☐ Hardly at all

13. I get sudden feelings of panic

☐ Very often	☐ Quite often	☐ Not very often	☐ Not at all

14. I can enjoy a good book or radio or television program

☐ Often	☐ Sometimes	☐ Not often	☐ Seldom

Social Support (Richmond, C., Ross, N., Egeland, M. 2007)

These questions are concerned with how many people you see or talk to on a regular basis. Read each item below and check ☑ the answer that best describes your situation.

1. How often do you have someone to have a good time with?

☐ Never	☐ Almost never	☐ Sometimes	☐ Fairly Often	☐ Very often

2. How often do you have someone to do something enjoyable with?

☐ Never	☐ Almost never	☐ Sometimes	☐ Fairly Often	☐ Very often

3. How often do you have someone to get together for relaxation?

☐ Never	☐ Almost never	☐ Sometimes	☐ Fairly Often	☐ Very often

4. How often do you have someone to confide in or talk about yourself or your problems?

☐ Never	☐ Almost never	☐ Sometimes	☐ Fairly Often	☐ Very often

5. How often do you have someone you can count of when you need advice?

☐ Never	☐ Almost never	☐ Sometimes	☐ Fairly Often	☐ Very often

6. How often do you have someone you can count on to listen to you when you need to talk?

☐ Never	☐ Almost never	☐ Sometimes	☐ Fairly Often	☐ Very often

7. How often do you have someone to take you to the doctor if you need it?

☐ Never	☐ Almost never	☐ Sometimes	☐ Fairly Often	☐ Very often

8. How often do you have someone who shows you love and affection?

☐ Never	☐ Almost never	☐ Sometimes	☐ Fairly Often	☐ Very often

Maternal Antenatal Attachment Scale (Condon, 1993)

These questions are about your thoughts and feelings about the developing baby. Please check ☑ one box only in answer to each question.

1. Over the past two weeks I have thought about, or been preoccupied with the baby inside me:

☐ Almost all the time

☐ Very frequently

☐ Frequently

☐ Occasionally

☐ Not at all

2. Over the past two weeks when I have spoken about, or thought about the baby inside me I got emotional feelings which were:

- ☐ Very weak or non-existent
- ☐ Fairly weak
- ☐ In between strong and weak
- ☐ Fairly strong
- ☐ Very strong

3. Over the past two weeks my feelings about the baby inside me have been:

- ☐ Very positive
- ☐ Mainly positive
- ☐ Mixed positive and negative
- ☐ Mainly negative
- ☐ Very negative

4. Over the past two weeks I have had the desire to read about or get information about the developing baby. This desire is:

- ☐ Very weak or non-existent
- ☐ Fairly weak
- ☐ Neither strong nor weak
- ☐ Moderately strong
- ☐ Very strong

5. Over the past two weeks I have been trying to picture in my mind what the developing baby actually looks like in my womb:

- ☐ Almost all the time
- ☐ Very frequently
- ☐ Frequently
- ☐ Occasionally
- ☐ Not at all

6. Over the past two weeks I think of the developing baby mostly as:

- ☐ A real little person with special characteristics
- ☐ A baby like any other baby
- ☐ A human being
- ☐ A living thing
- ☐ A thing not yet really alive

7. Over the past two weeks I have felt that the baby inside me is dependent on me for its well-being:

- ☐ Totally
- ☐ A great deal
- ☐ Moderately
- ☐ Slightly
- ☐ Not at all

8) Over the past two weeks I have found myself talking to my baby when I am alone

- ☐ Not at all
- ☐ Occasionally
- ☐ Frequently
- ☐ Very frequently
- ☐ Almost all the time I am alone

9. Over the past two weeks when I think about (or talk to) my baby inside me, my thoughts:

- ☐ Are always tender and loving
- ☐ Are mostly tender and loving
- ☐ Are a mixture of both tenderness and irritation
- ☐ Contain a fair bit of irritation
- ☐ Contain a lot of irritation

10. The picture in my mind of what the baby at this stage actually looks like inside the womb is:

- ☐ Very clear
- ☐ Fairly clear
- ☐ Fairly vague
- ☐ Very vague
- ☐ I have no idea at all

11. Over the past two weeks when I think about the baby inside me I get feelings which are:

- ☐ Very sad
- ☐ Moderately sad
- ☐ A mixture of happiness and sadness
- ☐ Moderately happy
- ☐ Very happy

12. Some pregnant women sometimes get so irritated by the baby inside them that they feel like they want to hurt it or punish it:

- ☐ I couldn't imagine I would ever feel like this
- ☐ I could imagine I might sometimes feel like this, but I never actually
- ☐ I have felt like this once or twice myself
- ☐ I have occasionally felt like this myself
- ☐ I have often felt like this myself

13. Over the past two weeks I have felt:

- ☐ Very emotionally distant from my baby
- ☐ Moderately emotionally distant from my baby
- ☐ Not particularly emotionally close to my baby
- ☐ Moderately close emotionally to my baby
- ☐ Very close emotionally to my baby

14. If the pregnancy was lost at this time (due to miscarriage or other accidental event) without any pain or injury to myself, I expect I would feel:

- ☐ Very pleased
- ☐ Moderately pleased
- ☐ Neutral (ie neither sad nor pleased; or mixed feelings)
- ☐ Moderately sad
- ☐ Very sad

15. Over the past two weeks I have taken care with what I eat to make sure the baby gets a good diet:

- ☐ Not at all
- ☐ Once or twice when I ate
- ☐ Occasionally when I ate
- ☐ Quite often when I ate
- ☐ Every time I ate

16. When I first see my baby after the birth I expect I will feel:

- ☐ Intense affection
- ☐ Mostly affection
- ☐ Dislike about one or two aspects of the baby
- ☐ Dislike about quite a few aspects of the baby
- ☐ Mostly dislike

17. When my baby is born I would like to hold the baby:

- ☐ Immediately
- ☐ After it has been wrapped in a blanket
- ☐ After it has been washed
- ☐ After a few hours for things to settle down
- ☐ The next day

18. Over the past two weeks I have had dreams about the pregnancy or baby:

- ☐ Not at all
- ☐ Occasionally
- ☐ Frequently
- ☐ Very frequently
- ☐ Almost every night

19. Over the past two weeks I have found myself feeling, or rubbing with my hand, the outside of my stomach where the baby is:

- ☐ A lot of times each day
- ☐ At least once per day
- ☐ Occasionally
- ☐ Once only
- ☐ Not at all

Thank You!

Appendix F: Questionnaire for pregnant women- Inuktitut

ᓄᓇᕗᒻᒥᐅᑦ ᐊᕐᓇᐃᑦ ᓯᖕᒐᐃᔪᑦ ᓯᒡᒐᓕᐊᖅᑐᖃᑦᑕᕐᓂᖏᑦ ᓄᖅᑲᖅᐸᓪᓕᐊᓂᖏᓪᓗ

ᐊᕐᓇᓄᑦ ᓯᖕᒐᐃᔪᓄᑦ ᐊᐱᖅᑯᑏᑦ

ᖃᐅᔨᓴᐃᓂᑦᑎᓐᓂ ᑐᓴᖅᑕᓕᒪᕗᑦ ᑲᓐᒍᓇᖅᑐᑎᑕᐅᔪᐃᓐᓇᐅᓂᐊᖅᑐᑦ. ᐅᓂᒃᑲᒃᓴᓂᒃ ᓴᖅᑭᑦᑎᒍᑦᑕ ᑲᑎᒪᔾᔪᑕᐅᓂᐊᖅᐸᑕᓘᓐᓃᑦ ᑐᓴᐅᒪᔭᕗᑦ ᐊᑎᖅᑲᖅᑎᑕᐅᔾᔭᓐᖏᑦᑐᑦ ᓇᓗᓇᐃᖅᓯᔾᔪᑎᖅᑳᔾᔮᓐᖏᓗᑎᒃᓗ. ᖃᐅᔨᔭᕗᑦ ᓅᓴᐅᓯᖅᑕᐅᓯᒪᑐᐃᓐᓇᕐᓂᐊᖅᑐᑦ. ᐃᓕᙵᖕᒐᔪᑦ ᑐᓴᐅᒪᔾᔪᑏᑦ ᐊᒻᒪᓗ ᐊᓯᖏᑦ ᑐᓴᖅᑕᕗᑦ ᑮᒃᑕᐅᓯᒪᓗᑎᒃ ᑐᖅᑯᖅᑕᐅᓯᒪᓂᐊᖅᑐᑦ, ᖃᐅᔨᒪᔪᑐᐊᕐᒍᓂᐊᖅᓗᓂᓗ ᑕᐃᓐᓇ ᖃᐅᔨᓴᖅᑎᑦᓗᐊᑕᐅᓚᐅᖅᑐᖅ, ᖃᐅᔨᓴᐃᖃᑎᒋᔭᖏᑦ ᐊᒻᒪᓗ ᖃᐅᔨᓴᖅᑕᑦᑎᓐᓄᑦ ᑐᑭᒧᐊᒃᑎᑦᑎᔨ. ᑖᒃᑯᐊᑐᐊᖅ ᑭᐅᔾᔪᑎᒋᓚᐅᖅᑕᕐᓂᒃ ᐊᒻᒪᓗ/ᐅᕝᕙᓘᓐᓃᑦ ᖃᐅᔨᒪᑦᑎᓐᓂᒃ ᖃᐅᒪᔨᔪᑐᐊᕐᒍᓂᐊᖅᑐᑦ.
ᑭᐅᔾᔪᑎᓂᒃ ᑕᒪᓐᖏᑦᑐᖅᑕᖃᔾᔮᓐᖏᑦᑐᖅ ᑕᒪᖅᑐᖃᔾᔮᕋᓂᓗ; ᐊᐱᖅᑯᑏᑦ ᓇᓕᖅᑯᓐᓇᓱᒃᓗᒋᑦ ᑭᐅᓂᐊᖅᐸᑎᑦ.

ᐊᐱᖅᑯᑎᒋᔭᑦᑕ ᒥᒃᓵᓄᑦ ᐊᐱᖅᑯᑎᖃᕈᕕᑦ ᐃᓱᒫᓗᑎᖃᕈᕕᑦᓗᓐᓃᑦ, ᐊᐱᕆᔪᓐᓇᖅᑕᐃᑦ ᓘᒃᑖᖅ [redacted]

ᖃᐅᔨᓴᖅᑕᐅᔪᑉ ᓈᓴᐅᑕ #: 2008281-01H

ᐊᐱᖅᓱᖅᑕᐅᔫᑉ ᓈᓴᐅᑖ:___________________

ᐅᓪᓗᖓ:___________________________

ᐃᓕᓐᓄᑦ ᑐᕌᖓᔪᑦ ᑐᓴᐅᒪᔾᔪᑎᑦ

ᐅᓪᓗᖓ:____________________

ᐊᐱᖅᓱᖅᑕᐅᔫᑉ ᓈᓴᐅᑖ:____________________

ᐱᔭᕇᖅᑕᐅᔪᑦ ᐆᒪ:____________________

1. ᐊᕐᕌᒍᑎᑦ:__________
2. ᖃᖓ ᐃᓂᕖᒃᓴᖅᐱᑦ?:__________________
3. ᓯᖓᐃᒋᐅᖅᐲᑦ?______________________
4. ᖃᔅᓯᓂᒃ ᕿᑐᕐᖓᖃᖅᐱᑦ (ᐸᐸᑕᑎᑦ ᐅᕝᕙᓘᓐᓃᑦ ᑎᒍᐊᑦ?__________________
5. ᓄᑕᕋᓛᑦ ᐱᓯᒪᓂᐊᖅᐱᐅᒃ ᐅᕝᕙᓘᓐᓃᑦ ᑎᒍᐊᖑᓂᐊᖅᐸ?

____

6. ᐊᐃᑉᐸᖃᖅᐲᑦ? ᓇᓗᓇᐃᕐᓗᒍ☑ ᓇᓕᖅᑯᑦᑎᔪᖅ.
   - ☐ ᐊᐃᑉᐸᖃᓐᖏᑦᑐᖅ
   - ☐ ᐃᒡᓗᓕᐅᑕᕐᑲᑎᓕᒃ
   - ☐ ᐅᐃᖏᖅᓯᒪᔪᖅ
   - ☐ ᑲᑎᑎᑕᐅᓯᒪᔪᖅ
   - ☐ ᐊᕕᓯᒪᔪᖅ
   - ☐ ᑭᐅᔪᒪᓐᖏᑦᑐᖅ

7. ᖃᓄᐃᑦᑐᓂᒃ ᐅᕕᓂᕐᑲᑎᕐᑲᖅᐱᑦ ? ᓇᓗᓇᐃᕐᓗᒍ ☑ ᓇᓕᖅᑯᑦᑎᔪᖅ.
   - ☐ ᕐᑲᓪᓗᓈᖅ
   - ☐ ᐳᐊᑎᑭ
   - ☐ ᓴᐃᓃᓯ
   - ☐ ᐊᐃᓯᐊᒥᐅᑦ ᓂᒋᖓᓂᕐᒥᐅᑦ
   - ☐ ᑯᓇᐊᒥᐅᑦ
   - ☐ ᒥᐊᓕᒐᕐᒥᐅᑦ
   - ☐ ᕕᓕᐲᓄ
   - ☐ ᐊᓅᐱᐊᒥᐅᑦ
   - ☐ ᔫᐸᓃᓯ
   - ☐ ᓄᓇᕐᑲᖅᑳᖅᓯᒪᔪᖅ
   - ☐ ᐊᓯᐊ: ᓇᓗᓇᐃᕐᓗᒍ: ________________
   - ☐ ᑭᐅᔪᒪᓐᖏᑦᑕᕋ

8. ᐃᖅᑲᓇᐃᔫᕐᑲᖅᐲᑦ? ᓇᓗᓇᐃᕐᓗᒍ ☑ ᓇᓕᖅᑯᑦᑎᔪᖅ.
   - ☐ ᐃᖅᑲᓇᐃᔭᐃᓐᓇᖅᑐᖅ
   - ☐ ᐃᖅᑲᓇᐃᔭᓐᖏᑦᑐᖅ
   - ☐ ᐊᔪᕿᑎᓕᒃ
   - ☐ ᐃᖅᑲᓇᐃᔭᑲᐃᓐᓇᕐᑲᑦᑕᖅᑐᖅ
   - ☐ ᑳᓐᑐᕌᕐᑲᑦᑕᖅᑐᖅ
   - ☐ ᓂᕐᑲᐃᓱᖅᑎ
   - ☐ ᐊᓯᐊ:______________
   - ☐ ᑭᐅᔪᒪᓐᖏᑦᑐᖅ

9. ᓇᓗᓇᐃᕐᓗᒍ ᕐᑯᕝᕙᓯᖕᓂᖅᐹᖅ ᐃᓕᓐᓂᐊᕌᓂᒃᓯᒪᓂᑯᐃᑦ
   - ❑ ᐃᓕᓐᓂᐊᓚᐅᖅᓯᒪᓐᖏᑦᑐᖅ ᐃᓕᓐᓂᐊᓯᔪᖅᑐᓄᑦ ᐃᓚᐅᓂᑯᑐᐃᓐᓇᕐᔫᓐᓃᑦ
   - ❑ ᕐᑯᕝᕙᓯᖕᓂᓛᑦ 11-13
   - ❑ ᓯᓚᑦᑐᖅᓴᕐᕕᖕᒥ ᐃᓕᓐᓂᐊᖅᓯᒪᓂᑯ ᐃᓚᖏᓐᓂᒃ
   - ❑ ᕐᑯᕝᕙᓯᖕᓂᓛᑦ 1-4
   - ❑ ᐃᓕᓐᓂᐊᕐᕕᐊᓗᖕᒥ ᓇᓗᓇᐃᒃᑯᑕᖅᑖᖅᓯᒪᔪᖅ ᐊᔾᔨᐸᓗᖏᓐᓂᒡᔫᓐᓃᑦ
   - ❑ ᓯᓚᑦᑐᖅᓴᕐᕕᒡᔪᐊᕐᒥ ᐃᓕᓐᓂᐊᕌᓂᒃᓯᒪᔪᖅ
   - ❑ ᕐᑯᕝᕙᓯᖕᓂᓛᑦ 5-8
   - ❑ ᓯᓚᑦᑐᖅᓴᕐᕕᖕᒥ ᐃᓚᖏᓐᓂᒃ ᐱᔭᕇᖅᓯᓯᒪᔪᖅ
   - ❑ ᐃᖅᑲᓇᐃᔫᑉᓚᑦᑖᕐᔫᖕᖓᔪᓂᒃ ᐱᔭᕇᖅᓯᓯᒪᔪᖅ
   - ❑ ᕐᑯᕝᕙᓯᖕᓂᓛᑦ 9-10
   - ❑ ᓯᓚᑦᑐᖅᓴᕐᕕᖕᒥ ᐱᔭᕇᖅᓯᓯᒪᔪᖅ

10. ᑲᑎᓪᓗᒋᑦ ᐃᒡᓗᔅᓯᓐᓂ ᖃᔅᓯᓂᒃ ᑮᓇᐅᔭᓕᐅᖅᑕᓚᐅᖅᐱᓯ ᑕᒪᑐᒪᓂ ᐊᕐᕌᒍᒥ? ᓇᓗᓇᐃᕐᓗᒍ ☑ ᓇᓕᖅᑯᑦᑎᔪᖅ.
    - ☐ $10 000 ᑐᖕᒑᓂ
    - ☐ $30 000-$39 999
    - ☐ $80 000 ᐅᖓᑖᓂ
    - ☐ $10 000- $19 999
    - ☐ $40 000- $59 999
    - ☐ ᑮᓇᐅᔭᓕᐅᓐᖏᑦᑐᖅ
    - ☐ $20 000- $29 999
    - ☐ $60 000- $79 999
    - ☐ ᑭᐅᔪᒪᓐᖏᑦᑕᕋ

11. ᐊᐃᑉᐸᖃᖅᐲᑦ? ᓇᓗᓇᐃᕐᓗᒍ☑ ᓇᓕᖅᑯᑦᑎᔪᖅ.
    - ☐ ᐊᐃᑉᐸᖃᓐᖏᑦᑐᖅ
    - ☐ ᐃᒡᓗᓕᐅᑕᕐᑲᑎᓕᒃ
    - ☐ ᐅᐃᖏᖅᓯᒪᔪᖅ
    - ☐ ᑲᑎᑎᑕᐅᓯᒪᔪᖅ
    - ☐ ᐊᕕᓯᒪᔪᖅ
    - ☐ ᑭᐅᔪᒪᓐᖏᑦᑐᖅ
    - ᐊᓯᐊ: ᓇᓗᓇᐃᕐᓗᒍ: ☐

ᑲᓇᑕᒥ ᐋᓐᓂᐊᖅᑲᕐᓇᖏᑦᑐᓕᕆᔾᑯᑦ ᑐᑭᓯᕙᒪᓂᕆᔭᖏᑦ

1. ᒫᓇ ᓯᒡᒐᓕᐊᖅᑐᖅᑲᑦᑕᖅᐲᑦ? ☐ ᐄ ☐ ᐋᒃᑲ

1a. ᓯᒡᒐᓕᐊᖅᑐᖅᑲᑦᑕᓐᖏᒃᑯᕕᑦ, ᖅᑲᐅᑕᒫᖅ ᓯᒡᒐᓕᐊᖅᑐᖅᑲᑦᑕᓚᐅᖅᓯᒪᕖᑦ? ☐ ᐄ ☐ ᐋᒃᑲ

1b. (ᐊᖏᕈᕕᑦ 1a): ᖅᑲᖓ ᓯᒡᒐᓕᐊᖅᑐᖅᑲᑦᑕᕈᓐᓃᖅᓂᖅᐱᑦ (ᑕᖅᑭᖓ ᐊᖅᕿᒍᖓᓗ)?____________

1c. (ᐊᖏᕈᕕᑦ 1a): ᓯᒡᒐᓕᐊᖅᑐᖅᑲᑦᑕᕈᓐᓃᓚᐅᖅᐱᑦ ᓇᔾᔨᓃᑦ ᖅᑲᐅᔨᒐᖓᓂ? ☐ ᐄ ☐ ᐋᒃᑲ

1d. (ᐊᖏᕈᕕᑦ 1a): ᓯᒡᒐᓕᐊᖅᑐᖅᑲᑦᑕᕈᓐᓃᓚᐅᖅᐲᑦ ᓇᔾᔨᓕᓚᐅᓐᖏᓐᓂᖅᓂ? ☐ ᐄ ☐ ᐋᒃᑲ

2. ᓯᒡᒐᓕᐊᒥ ᓄᖅᑲᖅᑯᓯᓕᖅᑎᓪᓗᑎᑦ ᐃᑲᔪᖅᑕᐅᓚᐅᖅᐲᑦ? ☐ ᐄ ☐ ᐋᒃᑲ

2a. ᐊᖏᕈᕕᑦ, ᓇᐅᒃᑯᑦ ᐃᑲᔪᖅᑕᐅᓚᐅᖅᐱᑦ?

____

____

3. ᐅᓪᓗᑦ 30 ᐊᓂᒍᖅᓯᒪᔪᓂ, ᖅᑲᐅᑕᒫᖅ ᓯᒡᒐᓕᐊᖅᑐᖅᑲᑦᑕᓚᐅᖅᐲᑦ? ☐ ᐄ ☐ ᐋᒃᑲ

4. ᓯᒡᒐᓕᐊᖅᑐᖅᑲᑦᑕᓱᖓᖅᑎᓪᓗᑎᑦ, ᖅᑲᔅᓯᓂᒃ ᓯᒡᒐᓕᐊᖅᑐᒡᒍᓚᐅᖅᓯᒪᕕᑦ? ____

5. ᖅᑲᔅᓯᓂᒃ ᐊᖅᕿᒍᖅᑲᓕᖅᑯᑎᑦ ᓯᒡᒐᓕᐊᖅᑐᓇᐅᓚᐅᖅᓯᒪᕕᑦ?__________

6. ᖅᑲᔅᓯᓂᒃ ᐊᖅᕿᒍᖅᑲᓕᖅᑎᓪᓗᑎᑦ ᖅᑲᐅᑕᒫᖅ ᓯᒡᒐᓕᐊᖅᑐᖅᑲᑦᑕᓕᓚᐅᖅᓯᒪᕕᑦ?______________

7. ᐊᖏᖅᖃᔅᓯᓐᓂ ᐃᒡᓘᐸ ᐃᓗᐊᓂ ᓯᒡᒐᓕᐊᖅᑐᖅᓇᖅᐹ?______________________________

8. ᖅᑲᔅᓯᑦ ᐃᓕᔅᓯᓐᓂ ᐃᒡᓗᓖᑦ ᐃᒡᓘᐸ ᐃᓗᐊᓂ ᓯᒡᒐᓕᐊᖅᑐᖅᑲᑦᑕᖅᐸᑦ ᖅᑲᐅᑕᒫᖅ ᐅᕝᕙᓘᓐᓃᑦ ᖅᑲᐅᑕᒫᐸᓗᒃ? _____________ (ᐃᓚᓕᐅᓪᓗᒋᑦ ᐃᓚᔫᓕᒫᑎᑦ ᐸᓖᓇᐊᖅᑲᑦᑕᖅᑐᓪᓗ)

9. (ᐃᖅᑲᓇᐃᔭᕈᕕᑦ) ᐃᖅᑲᓇᐃᔭᖅᕕᔅᓯᓐᓂ ᖅᑲᐅᑕᒫᖅ ᐅᕝᕙᓘᓐᓃᑦ ᖅᑲᐅᑕᒫᐸᓗᒃ ᓯᒡᒐᓕᐊᖅᑐᖅᑐᖅᑐᖅᑲᖅᑲᑦᑕᖅᐹ?_________________________

10. ᐃᖅᑯᒪᓕᖁᖅᑯᑎᑦ ᖅᑲᖓᐅᓕᖅᑲᖓᑦ ᓯᒡᒐᓕᐊᖅᑐᓯᕆᐊᖅᑲᑦᑕᖅᐱᑦ?__________(ᒥᓂᑦᓯᖏᑦᑎᒍᑦ)

11. ᑕᖅᑭᑦ 6 ᐊᓂᒍᖅᓯᒪᔪᓂ ᐃᓱᒪᕆᔭᖅᑲᓚᐅᖅᓯᒪᕖᑦ ᓄᖅᑲᕈᒪᓪᓚᑦᑖᖅᑐᑎᑦ? ☐ ᐄ ☐ ᐋᒃᑲ

12. 30 ᐅᓪᓗᑦ ᐊᒃᑭᖅᑐᓂ ᓯᒡᒐᓕᐊᒥᒃ ᓄᖅᑲᕈᒪᓪᓚᑦᑖᖅᓂᖅᒥᒃ ᐃᓱᒪᖅᑲᖅᐲᑦ? ☐ ᐄ ☐ ᐋᒃᑲ

13. ᓈᓴᐅᑏᑦ 1-ᒥᑦ ᖁᓕᒧᑦ ᑎᑭᓪᓗᒍ, ᒫᓇᐅᔪᖅ ᓯᒡᒐᓕᐊᒥᒃ ᓄᖅᑲᐅᔾᔭᔪᒪᒍᕕᑦ ᖅᑲᓄᑎᒋ ᐱᔪᒥᒃᓱᖅᓂᖅᑲᖅᑎᒋᕕᑦ? (ᐱᔪᒥᒃᓱᓐᖏᑦᑎᐊᕈᕕᑦ 1 ᓇᓗᓇᐃᖅᓗᒍ, ᐱᔪᒥᒃᓱᑦᑎᐊᕈᕕᑦ 10 ᓇᓗᓇᐃᖅᓗᒍ. ᐊᕙᓗᓗᒍ ᓇᓕᖅᑯᑦᑎᔪᖅ.

1	2	3	4	5	6	7	8	9	10
ᐱᔪᒥᒃᓱᓚᐅᓐᖏᑦᑎᐊᖅᑐᖓ			ᐱᔪᒥᒃᓱᒐᓚᓚᐅᖅᑐᖓ				ᐱᔪᒥᒃᓱᑦᑎᐊᓚᐅᖅᑐᖓ		

14. ᓈᓴᐅᑏᑦ 1-ᒥᑦ ᖁᓕᒧᑦ ᑎᑭᓪᓗᒍ, ᖅᑲᓄᑎᒋ ᓇᓗᖅᑯᑎᒋᓐᖏᓕᑎᑦ ᓯᒡᒐᓕᐊᒥᒃ ᓄᖅᑲᐅᔾᔭᔪᓐᓇᖅᓂᕆᔭᖅᓂᒃ (ᓇᓗᖅᑯᑎᒍᕕᑦ 1 ᓇᓗᓇᐃᖅᓗᒍ, ᓇᓗᖅᑯᑎᓐᖏᑦᑎᐊᕈᕕᑦ 10 ᓇᓗᓇᐃᖅᓗᒍ). ᐊᕙᓗᓗᒍ ᓇᓕᖅᑯᑦᑎᔪᖅ.

1	2	3	4	5	6	7	8	9	10
ᓇᓗᖅᑯᑎᔪᖓ				ᓇᓗᖅᑯᑎᓐᖏᓚᒃᑐᖓ			ᓇᓗᖅᑯᑎᓐᖏᑦᑎᐊᖅᑐᖓ		

15. ᐊᕐᖀᒎᓚᐅᖅᑐᒥ, ᖃᔾᔫᖅᑕᖅᑯᑎᒃ ᓯᒃᑲᓕᐊᒥᒃ ᓄᖅᑲᐅᔾᔨᓯᒪᓂᑰᕙᑦ 24 ᐃᑲᕐᕿᓄᑦ ᐅᖓᑖᓄᑦᑑᓐᓃᑦ ᓄᖅᑲᕐᓯᖕᓃᑦ ᐱᔾᔪᑎᒋᑦᑐᒍ? ______________

16. ᓯᒃᑲᓕᐊᒥᒃ ᐊᑐᐃᓐᓇᕆᐊᖅᑲᕐᓃᑦ ᓇᓗᓇᐃᕐᑐᒍ 1-ᒥᑦ 10-ᒧᑦ . ᐊᕗᓗᒍ ᓇᓕᖅᑯᑦᑎᔪᖅ.

1	2	3	4	5	6	7	8	9	10
ᐊᑐᐃᓐᓇᕆᐊᑐᓐᖏᑦᑕᕋ			ᐊᑐᐃᓐᓇᓚᓕᐊᖅᑲᖅᑕᕋ				ᐊᑐᐃᓐᓇᕆᐊᖅᑲᑦᓚᕆᒃᑕᕋ		

17. ᐃᓚᖕᓄᑦ, ᓯᒃᑲᓕᐊᒥᒃ ᓄᖅᑲᐅᔾᔨᓇᓯᖕᓂᖅ ᐃᒪᐃᑦᑑᓇᔭᖅᑐᖅ: ᐊᕗᓗᒍ ᓇᓕᖅᑯᑦᑎᔪᖅ. **(ᓯᐅᑉᐱ, 2004)**

ᐊᔪᕐᓇᖕᖏᑦᑎᐊᖅᑐᖅ	ᐊᔪᕐᓇᓗᐊᖕᖏᑦᑐᖅ	ᐊᔪᕐᓇᒐᓚᒃᑐᖅ	ᐊᔪᕐᓇᕙᒡᔭᐊᖅᑐᖅ	ᐊᔪᕐᓇᑦᓚᕆᒃᑐᖅ
1	2	3	4	5

ᐊᓯᖏᑦ ᑎᒥᐅᑉ ᐅᐃᕆᓯᒪᐅᑎᒋᑐᐃᓐᓇᕆᐊᖅᑕᖏᑦ (ᓯᐅᑉᐱ, 2004)

1. ᑕᐃᒪᖕᖓᓂᑦ ᓯᖓᐃᓕᓚᐅᕐᓃᑦ ᖃᐅᔨᓚᐅᕐᖓᓂ, ᖃᔾᔫᖅᑕᖅᑯᑎᒃ ᐃᒥᐊᓗᖕᒥᒃ ᓂᐅᖅᓯᖃᑦᑕᖅᓯᒪᓂᑰᕙᑦ? ᓇᓗᓇᐃᕐᑐᒍ ☑ ᓇᓕᖅᑯᑦᑎᔪᖅ.
- ☐ ᐅᑦᑐᖅ ᐊᑕᐅᓯᐊᕐᓇᒧ
- ☐ 2-3 ᐱᓇᓱᐊᕈᓯᐅᑉ ᐃᓗᐊᓂ
- ☐ ᑕᖅᑭᖅ ᐊᑕᐅᓯᐊᖅᑯᒧ
- ☐ ᖃᐅᑕᒫᑦᑎᐊᐸᑐᒃ
- ☐ ᐱᓇᓱᐊᕈᓯᖅ ᐊᑕᐅᓯᐊᖅᑯᒧ
- ☐ ᑕᖅᑭᖅ ᐊᑕᐅᓯᐊᕐᑐᒧ ᑐᖕᒫᓄᑦ
- ☐ 4-5 ᐱᓇᓱᐊᕈᓯᐅᑉ ᐃᓗᐊᓂ
- ☐ 2-3 ᑕᖅᑭᐅᑉ ᐃᓗᐊᓂ
- ☐ ᐱᓚᐅᖅᓯᒪᖕᖏᑦᑐᖓ

2. ᑕᐃᒪᖕᖓᓂᑦ ᓯᖓᐅᓃᑦ ᖃᐅᔨᖓᓂ, ᖃᔾᔨᓂᒃ ᐃᒥᐊᓗᓕᖕᓂᒃ ᐃᒥᖅᑕᖅᐸᑦ ᐅᑦᑐᕐᒥ ᓂᐅᖅᓯᓂᐊᕐᓂᕈᕙᑦ? ᓇᓗᓇᐃᕐᑐᒍ ☑ ᓇᓕᖅᑯᑦᑎᔪᖅ.
1 ᐊᑕᐅᓯᖅ= 12 oz. ᐱᐊ, 5 oz. ᕗᐃᓂ, 1.5 ᐊᐅᓐᓯ ᓴᖕᖏᔪᖅ
☐ 1-2 ☐ 3-5 ☐ 6-10 ☐ 10 ᐅᖓᑖᓄᑦ

3. ᐅᑯᓂᖓ ᓇᓕᐊᑐᐃᓐᓇᕐᓂᒃ ᐱᕐᑲᖅᑕᖅᓯᒪᕚᑦ ᑕᐃᒪᖕᖓᓂᑦ ᓯᖓᐃᓕᕐᓃᑦ ᖃᐅᔨᓚᐅᖅᓯᒪᒐᖕᓂ? ᓇᓗᓇᐃᕐᑐᒍ ☑ ᓇᓕᖅᑯᑦᑎᔪᖅ.

	ᐋᒃᑲ	ᑭᖑᓂᖕᓂ(ᐳᐊᕿᒍ ᐊᑕᐅᓯᖅ)	ᒫᓐᓇ (ᐅᑦᑐᑦ 30 ᐃᓗᐊᓂ)
ᒥᐊᓕᕗᐊᓇ	☐	☐	☐
ᑰᑲᐃᓐ	☐	☐	☐
ᓯᓂᖕᓇᖅᑐᑦ	☐	☐	☐
ᖃᓯᓐᓇᖅᑐᑦ	☐	☐	☐
ᓰᓂᒃᑕᖅᑐᓕᑦᑐ ᐆᒻᒪᕆᒃᓯᓐᓇᖅᑐᑦ	☐	☐	☐
ᐊᓯᖏᑦ___________	☐	☐	☐

4. ᑭᖑᓂᕐᓂ ᐊᑲᐅᖕᖏᓕᐅᕈᑎᖃᓚᐅᖅᓯᒪᕖᑦ ᐊᑐᓗᐊᖅᑕᖅᑯᑎᒃ ᐋᖓᔫᕐᓇᖅᑐᓂᒃ ᐊᒻᒪᓗ/ᐅᕝᕗᓅᓐᓃᑦ ᐃᒥᐊᓗᖕᒥᒃ? ☐ ᐄ ☐ ᐋᒃᑲ
ᐊᖏᕈᕙᑦ, ᓇᓗᓇᐃᕐᑐᒍ:

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5. ᒫᓐᓇᐅᔪᖅ ᐅᑯᓂᖓ ᓇᓕᐊᑐᐃᓐᓇᕐᓂᒃ ᐊᑲᐅᖕᖏᓕᐅᕈᑎᖃᖅᐲᑦ ᐅᕝᕗᓅᓐᓃᑦ ᐅᕐᑯᒪᐃᒃᓴᐅᑎᖃᖅᐱᑦ ᐃᕝᕙᑦ ᐃᓅᓯᖓᓂ?
ᓇᓗᓇᐃᕐᑐᒍ ☑ ᓇᓕᖅᑯᑦᑎᔪᖅ.
- ☐ ᑮᓇᐅᔭᒃᑯᑦ
- ☐ ᐃᖅᑲᓇᐃᔮᒃᑯᑦ
- ☐ ᐃᖅᑲᓇᐃᔭᕐᑲᖕᖏᓐᓂ
- ☐ ᐃᓚᔮᓃᑎᒍᑦ
- ☐ ᐃᓯᒪᒃᑯᑦ
- ☐ ᐋᓐᓂᐊᕐᑲᕐᓂᒃᑯᑦ
- ☐ ᐃᓪᓗᕐᑲᑦᑎᐊᖕᖏᓐᓂᖅ
- ☐ ᐊᓯᖏᑦ:__________
- ☐ ᐱᑕᕐᑲᖕᖏᑦᑐᖓ

ᐃᓱᒪᓕᐅᕈᑕᐅᔪᓐᓇᖅᑐᑦ (Bane et al., 1999)

ᐅᑯᐊ ᐊᑖᓂ ᐅᖃᐅᓯᖅᑕᐃᑦ ᑐᑭᓯᓇᖅᓯᑎᒋᐊᕋᓱᓐᓂᐊᖅᑐᑦ ᖃᓄᖅ ᓱᒃᑲᓕᐊᖅᑐᕐᓂᖅ ᐊᔾᔨᒌᓐᖏᑦᑐᓄᑦ ᖃᓄᖅ ᐃᓱᒪᒋᔭᐅᓂᖓ. ᓇᓗᓇᐃᕐᓂᐊᖅᐸᑦ ᖃᓄᑎᒋ ᐱᒻᒪᕆᐅᑎᒋᖕᒪᖕᒫᖕᒋᑦ ᐅᖃᐅᓯᕆᔭᐅᔪᑦ, ᐊᒻᒪ ᓱᒃᑲᓕᐊᖅᑐᖅᑲᑦᑕᕐᓂᕐᓄᑦ ᖃᓄᖅ ᐃᓱᒪᓕᐅᕈᑎᒋᓇᔭᕐᓂᐊᕐᒪᖕᒫᑎᑦ, ᓇᓗᓇᐃᕐᓗᒍᓗ ☑ ᑕᐃᓐᓇ ᐃᓚᖕᓄᑦ ᐊᑐᕐᓂᖅᐹᖑᔪᖅ:

1. ᓱᒃᑲᓕᐊᖅᑐᖅᑯᖕᒐ ᖃᓱᔾᔫᒥᖅᑲᑦᑕᖅᑐᖕᒐ
☐ ᐱᒻᒪᕆᐅᓐᖏᑦᑐᖅ ☐ ᐱᓗᐊᓐᖏᑦᑐᖅ ☐ ᐱᒻᒪᕆᒐᓚᒃ ☐ ᐱᒻᒪᕆᒃ ☐ ᐱᕐᔪᐊᕌᓗᒃ

2. ᓱᒃᑲᓕᐊᖅᑐᓲᖑᔪᖕᒐ ᐃᓱᒪᑦᑎᐊᕐᓂᖅᓴᐅᓂᐊᕋᒥ ᐃᖅᑲᓇᐃᔭᑦᑎᐊᕐᓂᖅᓴᐅᓗᖕᒐᓗ
☐ ᐱᒻᒪᕆᐅᓐᖏᑦᑐᖅ ᐱᓗᐊᓐᖏᑦᑐᖅ ☐ ᐱᒻᒪᕆᒐᓚᒃ ☐ ᐱᒻᒪᕆᒃ ☐ ᐱᕐᔪᐊᕌᓗᒃ

3. ᖃᓱᖕᒐᓂᖅᓴᐅᖅᑲᑦᑕᕋᒪ ᐃᓄᑦᑎᐊᕙᐅᓂᖅᓴᐅᓲᖑᔪᖕᒐ ᓱᒃᑲᓕᐊᖅᑐᓕᕈᖕᒐᒪ.
☐ ᐱᒻᒪᕆᐅᓐᖏᑦᑐᖅ ᐱᓗᐊᓐᖏᑦᑐᖅ ☐ ᐱᒻᒪᕆᒐᓚᒃ ☐ ᐱᒻᒪᕆᒃ ☐ ᐱᕐᔪᐊᕌᓗᒃ

4. ᓱᒃᑲᓕᐊᖅᑐᖅᑯᖕᒐ ᖃᓱᖕᒐᓂᖅᓴᐅᓲᖑᔪᖕᒐ ᐊᒻᒪᓗ ᓄᖅᑲᖅᐸᓐᓇᔫᓐᖏᖕᒐ ᓇᔾᔨᓂᓐᓂ
☐ ᐱᒻᒪᕆᐅᓐᖏᑦᑐᖅ ᐱᓗᐊᓐᖏᑦᑐᖅ ☐ ᐱᒻᒪᕆᒐᓚᒃ ☐ ᐱᒻᒪᕆᒃ ☐ ᐱᕐᔪᐊᕌᓗᒃ

5. ᓄᖅᑲᕋᓱᖕᓂᖅ ᐊᔪᕐᓇᓗᐊᕐᓂᐊᖅᑐᖅ ᓇᔾᔨᓂᓐᓂ.
☐ ᐱᒻᒪᕆᐅᓐᖏᑦᑐᖅ ᐱᓗᐊᓐᖏᑦᑐᖅ ☐ ᐱᒻᒪᕆᒐᓚᒃ ☐ ᐱᒻᒪᕆᒃ ☐ ᐱᕐᔪᐊᕌᓗᒃ

6. ᑲᓐᖑᓱᓲᖑᔪᖕᒐ ᓱᒃᑲᓕᐊᖅᑐᓇᐊᖅᑲᖅᑲᑦᑕᕋᒪ.
☐ ᐱᒻᒪᕆᐅᓐᖏᑦᑐᖅ ᐱᓗᐊᓐᖏᑦᑐᖅ ☐ ᐱᒻᒪᕆᒐᓚᒃ ☐ ᐱᒻᒪᕆᒃ ☐ ᐱᕐᔪᐊᕌᓗᒃ

7. ᓱᒃᑲᓕᐊᖅᑐᖅᑐᖕᒐ ᐳᔪᖕᒐ ᐸᒡᕕᒋᔭᐅᓲᖅ ᐊᓯᓐᓄᑦ.
☐ ᐱᒻᒪᕆᐅᓐᖏᑦᑐᖅ ᐱᓗᐊᓐᖏᑦᑐᖅ ☐ ᐱᒻᒪᕆᒐᓚᒃ ☐ ᐱᒻᒪᕆᒃ ☐ ᐱᕐᔪᐊᕌᓗᒃ

8. ᓯᓚᐃᑦᑑᓇᓱᒋᔭᐅᓲᖑᔪᖕᒐ ᐃᐸᐱᒋᓐᖏᓐᓇᒃᑭᑦ ᓱᒃᑲᓕᐊᑉ ᐅᓗᓇᐊᓇᕐᓂᖏᓐᓂᒃ ᓇᓗᓇᐃᖅᓯᖅᑕᐅᓯᒪᓲᑦ.
☐ ᐱᒻᒪᕆᐅᓐᖏᑦᑐᖅ ᐱᓗᐊᓐᖏᑦᑐᖅ ☐ ᐱᒻᒪᕆᒐᓚᒃ ☐ ᐱᒻᒪᕆᒃ ☐ ᐱᕐᔪᐊᕌᓗᒃ

9. ᐃᓚᓐᓄᑦ ᐅᖃᐅᔭᐅᖃᑦᑕᖅᑐᖕᒐ ᓄᖅᑲᖁᔭᐅᓪᓗᓂ ᓱᒃᑲᓕᐊᖅᑐᓗᐊᖅᑲᑦᑕᓐᖏᓪᓗᖕᒐᓘᓐᓂᑦ.
☐ ᐱᒻᒪᕆᐅᓐᖏᑦᑐᖅ ᐱᓗᐊᓐᖏᑦᑐᖅ ☐ ᐱᒻᒪᕆᒐᓚᒃ ☐ ᐱᒻᒪᕆᒃ ☐ ᐱᕐᔪᐊᕌᓗᒃ

10. ᓱᒃᑲᓕᐊᖅᑐᖅᑲᑦᑕᕐᓂᖅ ᐃᓅᓯᓐᓄᑦ ᐅᓗᓇᐊᓇᖅᑐᖅ.
☐ ᐱᒻᒪᕆᐅᓐᖏᑦᑐᖅ ᐱᓗᐊᓐᖏᑦᑐᖅ ☐ ᐱᒻᒪᕆᒐᓚᒃ ☐ ᐱᒻᒪᕆᒃ ☐ ᐱᕐᔪᐊᕌᓗᒃ

11. ᖃᐅᔨᒪᔪᖕᒐ ᐋᓂᐊᑖᖅᓴᕋᐃᓐᓂᖅᓴᐅᔪᓐᓇᕐᓂᓐᓂᒃ ᓱᒃᑲᓕᐊᖅᑐᖅᑲᑦᑕᕐᓗᖕᒐ, ᓲᕐᓗ ᑳᓐᓱᑖᕐᓗᖕᒐ.
☐ ᐱᒻᒪᕆᐅᓐᖏᑦᑐᖅ ᐱᒻᒪᕆᒐᓚᒃ ☐ ᐱᒻᒪᕆᒐᓚᒃ ☐ ᐱᒻᒪᕆᒃ ☐ ᐱᕐᔪᐊᕌᓗᒃ

ᐃᓚᖕᓄᑦ ᑐᕌᖕᒐᔪᑦ (DiClemente, 1981)

ᐊᑖᓂ ᓇᓗᓇᐃᖅᓯᔪᒍᑦ ᑭᓱᓂᒃ ᐱᔾᔪᑎᖃᖅᑲᓪᓗᑎᒃ ᐃᓚᖏᑦ ᓱᒃᑲᓕᐊᖅᑐᖅᑲᑦᑕᕐᒪᖕᒫᖕᒋᑦ. ᑐᑭᓯᔪᒪᔪᒍᑦ ᖃᓄᖅ **ᐱᔪᒪᓂᖅᐹᖑᓕᓲᖑᒪᖕᒫᖅᐱᑦ** ᖃᓄᐃᑦᑑᓐᑦ ᒪᓕᒡᓗᑎᑦ. ᓇᓗᓇᐃᕐᓗᒍ ☑ ᑭᐅᔾᔪᑦ ᓇᓕᖅᑯᑦᑎᓂᖅᐹᖅ ᓱᒃᑲᓕᐊᖅᑐᕈᒪᓕᖅᑲᑦᑕᕐᓂᕐᓄᑦ.

1. ᐱᖅᑎᐊᓗᒃᑲ ᐹᑎᖅᑎᕆᓪᓗᕆᑦ
☐ ᐱᔪᒪᖅᑲᑦᑕᓐᖏᑦᑎᐊᖅᑐᖕᒐ ☐ ᐱᔪᒪᓗᐊᖅᑲᑦᑕᓐᖏᑦᑐᖕᒐ ☐ ᐱᔪᒪᒐᓚᖅᑲᑦᑕᖅᑐᖕᒐ ☐ ᐱᔪᒪᖅᑲᑦᑕᖅᑐᖕᒐ ☐ ᐱᔪᒪᕙᒃᔪᐊᖅᑲᑦᑕᖅᑐᖕᒐ

2. ᐅᓪᓛᒃᑯᑦ ᒪᑭᑦᑕᖔᖕᒐᒪ

☐ ᐱᔪᒪᖃᑦᑕᓐᓂᑦᑎᐊᖅᑐᖓ ☐ ᐱᔪᒪᓗᐊᖃᑦᑕᓐᓂᑦᑐᖓ ☐ ᐱᔪᒪᒐᓚᖃᑦᑕᖅᑐᖓ ☐ ᐱᔪᒪᖃᑦᑕᖅᑐᖓ ☐ ᐱᔪᒪᕙᔾᔪᐊᖃᑦᑕᖅᑐᖓ

3. ᓯᕘᕋᔭᕌᖓᒪ ᐅᖁᒪᐃᒃᓴᓗᐊᓕᕌᖓᒪᓗ
☐ ᐱᔪᒪᖃᑦᑕᓐᓂᑦᑎᐊᖅᑐᖓ ☐ ᐱᔪᒪᓗᐊᖃᑦᑕᓐᓂᑦᑐᖓ ☐ ᐱᔪᒪᒐᓚᖃᑦᑕᖅᑐᖓ ☐ ᐱᔪᒪᖃᑦᑕᖅᑐᖓ ☐ ᐱᔪᒪᕙᔾᔪᐊᖃᑦᑕᖅᑐᖓ

4. ᑳᐱᑐᓕᕌᖓᒪ ᐅᖃᓪᓗᓇᒃᓴᖅᔪᑕ ᓴᐃᓕᓕᕌᖓᑦᑕᓗ
☐ ᐱᔪᒪᖃᑦᑕᓐᓂᑦᑎᐊᖅᑐᖓ ☐ ᐱᔪᒪᓗᐊᖃᑦᑕᓐᓂᑦᑐᖓ ☐ ᐱᔪᒪᒐᓚᖃᑦᑕᖅᑐᖓ ☐ ᐱᔪᒪᖃᑦᑕᖅᑐᖓ ☐ ᐱᔪᒪᕙᔾᔪᐊᖃᑦᑕᖅᑐᖓ

5. ᖃᑕᐅᒪᓕᕌᖓᒪ
☐ ᐱᔪᒪᖃᑦᑕᓐᓂᑦᑎᐊᖅᑐᖓ ☐ ᐱᔪᒪᓗᐊᖃᑦᑕᓐᓂᑦᑐᖓ ☐ ᐱᔪᒪᒐᓚᖃᑦᑕᖅᑐᖓ ☐ ᐱᔪᒪᖃᑦᑕᖅᑐᖓ ☐ ᐱᔪᒪᕙᔾᔪᐊᖃᑦᑕᖅᑐᖓ

6. ᓂᓐᖓᐅᒪᔾᔪᑎᖃᓕᕌᖓᒪ ᑭᓯᒧᑦ ᐃᓄᖕᒧᑦᓘᓐᓃᑦ
☐ ᐱᔪᒪᖃᑦᑕᓐᓂᑦᑎᐊᖅᑐᖓ ☐ ᐱᔪᒪᓗᐊᖃᑦᑕᓐᓂᑦᑐᖓ ☐ ᐱᔪᒪᒐᓚᖃᑦᑕᖅᑐᖓ ☐ ᐱᔪᒪᖃᑦᑕᖅᑐᖓ ☐ ᐱᔪᒪᕙᔾᔪᐊᖃᑦᑕᖅᑐᖓ

7. ᐊᐃᑉᐸᕋ ᐱᖃᓐᓂᕆᔭᕋᓘᓐᓃᑦ ᐱᖃᑎᒋᑦᓗᒋᑦ ᓯᒡᒐᓕᐊᖅᑐᓕᕌᖓᑕ
☐ ᐱᔪᒪᖃᑦᑕᓐᓂᑦᑎᐊᖅᑐᖓ ☐ ᐱᔪᒪᓗᐊᖃᑦᑕᓐᓂᑦᑐᖓ ☐ ᐱᔪᒪᒐᓚᖃᑦᑕᖅᑐᖓ ☐ ᐱᔪᒪᖃᑦᑕᖅᑐᖓ ☐ ᐱᔪᒪᕙᔾᔪᐊᖃᑦᑕᖅᑐᖓ

8. ᐅᔾᔨᕆᐅᒻᒥᕌᖓᒪ ᓯᒡᒐᓕᐊᖅᑐᓐᖏᑯᑖᓕᕐᓂᓐᓂᒃ
☐ ᐱᔪᒪᖃᑦᑕᓐᓂᑦᑎᐊᖅᑐᖓ ☐ ᐱᔪᒪᓗᐊᖃᑦᑕᓐᓂᑦᑐᖓ ☐ ᐱᔪᒪᒐᓚᖃᑦᑕᖅᑐᖓ ☐ ᐱᔪᒪᖃᑦᑕᖅᑐᖓ ☐ ᐱᔪᒪᕙᔾᔪᐊᖃᑦᑕᖅᑐᖓ

9. ᖃᓄᐃᓕᐅᕋᓱᒃᑕᒃᑲ ᑕᐃᒫᖑᔪᓐᓃᕌᖓᑕ ᐊᒻᒪᓗ ᓂᓐᖓᐅᒪᒐᓚᓕᕌᖓᒪ
☐ ᐱᔪᒪᖃᑦᑕᓐᓂᑦᑎᐊᖅᑐᖓ ☐ ᐱᔪᒪᓗᐊᖃᑦᑕᓐᓂᑦᑐᖓ ☐ ᐱᔪᒪᒐᓚᖃᑦᑕᖅᑐᖓ ☐ ᐱᔪᒪᖃᑦᑕᖅᑐᖓ ☐ ᐱᔪᒪᕙᔾᔪᐊᖃᑦᑕᖅᑐᖓ

ᐊᓯᔾᔨᖅᐸᒡᓕᐊᓂᐅᑉ ᐱᕗᒡᓕᐊᔾᔪᓯᖓ (Prochaska, Velicer, DiClemente and Fava 1988)

ᐅᑯᐊ ᐊᑖᓂ ᑎᑎᕋᖅᓯᒪᔪᑦ ᓇᓗᓇᐃᖅᓯᓯᒪᕗᑦ ᖃᓄᖅ ᓯᒡᒐᓕᐊᖅᑐᕈᓯᑦ ᐊᒃᑐᐃᓂᖃᖃᑦᑕᕐᒪᖔᖓᑦ ᐃᓚᖕᒋᓐᓂᒃ ᐃᓄᖕᓂᒃ. ᐊᔾᔨᐸᓗᖕᒋᓐᓂᒃ ᐊᑐᖃᑦᑕᖅᓯᒪᓂᑯᑎᑦ ᐃᓯᒪᒋᒃᑭᑦ ᒫᓐᓇᐅᔪᖅ ᑕᖅᑭᐅᓚᐅᖅᑐᒥᓘᓐᓃᑦ. ᓇᓗᓇᐃᖅᓯᓕᕐᒥᓗᑎᑦ ᖃᓄᖅ ᐊᑯᓚᐃᑎᒋᔪᒥᒃ ᐊᑐᖃᑦᑕᕐᒪᖔᖅᐱᑦ ᐊᒻᒪᓗ ᓇᓗᓇᐃᕐᓗᒍ ☑ ᓇᓕᖅᑯᑦᑎᓂᖅᐹᖅ.

1. ᓯᒡᒐᓕᐊᕈᓕᕌᖓᒪ ᐊᓯᖕᒋᓐᓂᒃ ᐃᓯᒪᓇᓯᖃᑦᑕᖅᑐᖓ
☐ ᑕᐃᒪᐃᓚᐅᖅᓯᒪᓐᖏᑦᑐᖓ ☐ ᖃᑯᑎᒃᑯᑦ ☐ ᐃᓛᓐᓂ ☐ ᐊᑯᓚᐃᑦᑐᒃᑯᑦ ☐ ᑕᐃᒪᓐᖓᓕ

2. ᐅᕙᓐᓂᒃ ᐅᖃᐅᔾᔨᖃᑦᑕᖅᑐᖓ ᓄᖅᑲᕈᒪᓕᕈᒪ ᓄᖅᑲᕈᓐᓇᕐᓂᓐᓂᒃ
☐ ᑕᐃᒪᐃᓚᐅᖅᓯᒪᓐᖏᑦᑐᖓ ☐ ᖃᑯᑎᒃᑯᑦ ☐ ᐃᓛᓐᓂ ☐ ᐊᑯᓚᐃᑦᑐᒃᑯᑦ

3. ᐅᔾᔨᕆᓯᒪᓕᖅᑐᖓ ᓯᒡᒐᓕᐊᖅᑐᖃᑦᑕᓐᓂᑦᑐᑦ ᐱᔪᓐᓇᐅᑎᒥᖕᓂᒃ ᐊᑐᕐᓂᖅᓴᐅᓕᕐᓂᖕᒋᓐᓂᒃ
☐ ᑕᐃᒪᐃᓚᐅᖅᓯᒪᓐᖏᑦᑐᖓ ☐ ᖃᑯᑎᒃᑯᑦ ☐ ᐃᓛᓐᓂ ☐ ᐊᑯᓚᐃᑦᑐᒃᑯᑦ

4. ᐃᖅᑲᐅᒪᔪᖓ ᑐᓴᖅᑎᑕᐅᓯᒪᓂᓐᓂᒃ ᓯᒡᒐᓕᐊᖅᑐᕐᓂᐅᑉ ᐱᐅᓂᖕᒋᓐᓂᒃ ᐅᖃᐅᓯᓕᖕᓂᒃ.
☐ ᑕᐃᒪᐃᓚᐅᖅᓯᒪᓐᖏᑦᑐᖓ ☐ ᖃᑯᑎᒃᑯᑦ ☐ ᐃᓛᓐᓂ ☐ ᐊᑯᓚᐃᑦᑐᒃᑯᑦ ☐ ᑕᐃᒪᓐᖓᓕᓖᖅ

5. ᖁᔭᓐᓇᒦᕈᓯᐊᖅᑕᐅᖃᑦᑕᓇᐊᖅᑲᖅᑐᖓ ᐊᓯᓐᓄᑦ ᓯᒃᑲᓕᐊᖅᑐᓐᖏᑦᑕᕋᖕᒐᒪ.
☐ ᑕᐃᒪᐃᓚᐅᖅᓯᒪᙱᑦᑐᖓ ☐ ᖃᑯᑎᒃᑯᑦ ☐ ᐃᓛᓐᓂ ☐ ᐊᑯᓚᐃᑦᑐᒃᑯᑦ ☐ ᑕᐃᒪᙵᓕᒫᖅd

6. ᐃᓱᒪᓚᐅᓲᖑᔪᖕᒐ ᓯᒃᑲᓕᐊᑉ ᐳᔪᖏᑦ ᓱᕈᖅᓴᐃᓂᖏᓐᓂᒃ ᐊᕙᑎᑦᑎᓐᓂᒃ
☐ ᑕᐃᒪᐃᓚᐅᖅᓯᒪᙱᑦᑐᖓ ☐ ᖃᑯᑎᒃᑯᑦ ☐ ᐃᓛᓐᓂ ☐ ᐊᑯᓚᐃᑦᑐᒃᑯᑦ ☐ ᑕᐃᒪᙵᓕᒫᖅ

7. ᓯᒃᑲᓕᐊᑉ ᐅᓗᕆᐊᓇᕐᓂᖕᒐᓂᒃ ᓇᓗᓇᐃᖅᓯᓯᒪᐅᑏᑦ ᐃᓗᓐᓄᑦ ᐊᒃᑐᐃᓂᖅᑲᑦᑕᖅᑐᑦ
☐ ᑕᐃᒪᐃᓚᐅᖅᓯᒪᙱᑦᑐᖓ ☐ ᖃᑯᑎᒃᑯᑦ ☐ ᐃᓛᓐᓂ ☐ ᐊᑯᓚᐃᑦᑐᒃᑯᑦ ☐ ᑕᐃᒪᙵᓕᒫᖅa

8. ᐊᑲᐅᔪᓐᓃᓲᖑᔪᖕᒐ ᓯᒃᑲᓕᐊᖅᑐᖅᑲᑦᑕᕐᓂᕋ ᐃᓱᕆᓕᕚᖕᒐᒃᑯ
☐ ᑕᐃᒪᐃᓚᐅᖅᓯᒪᙱᑦᑐᖓ ☐ ᖃᑯᑎᒃᑯᑦ ☐ ᐃᓛᓐᓂ ☐ ᐊᑯᓚᐃᑦᑐᒃᑯᑦ ☐ ᑕᐃᒪᙵᓕᒫᖅte

9. ᐊᖏᕐᕋᓐᓂ ᐃᖅᑲᓇᐃᔭᕐᕕᓐᓂᔫᓐᓃᑦ ᐱᖁᑎᓂᒃ ᐄᔭᐃᖅᑕᑦᑕᖅᑐᖓ ᓯᒃᑲᓕᐊᒥᒃ ᐃᖅᑲᐃᔾᔪᑎᕆᔭᕚᖕᒐᒃᑭᑦ
☐ ᑕᐃᒪᐃᓚᐅᖅᓯᒪᙱᑦᑐᖓ ☐ ᖃᑯᑎᒃᑯᑦ ☐ ᐃᓛᓐᓂ ☐ ᐊᑯᓚᐃᑦᑐᒃᑯᑦ ☐ ᑕᐃᒪᙵᓕᒫᖅte

10. ᐅᖅᑳᓚᖅᑎᖅᑲᓲᖑᔪᖕᒐ ᓯᒃᑲᓕᐊᖅᑐᖅᑲᑦᑕᕐᓂᕋ ᐅᖅᑲᐅᓯᕆᔪᒪᓕᕚᖕᒐᒃᑯ
☐ ᑕᐃᒪᐃᓚᐅᖅᓯᒪᙱᑦᑐᖓ ☐ ᖃᑯᑎᒃᑯᑦ ☐ ᐃᓛᓐᓂ ☐ ᐊᑯᓚᐃᑦᑐᒃᑯᑦ ☐ ᑕᐃᒪᙵᓕᒫᖅe

11. ᐃᓱᒪᕆᓲᒃᑲ ᑐᓴᐅᒪᔾᔪᑏᑦ ᑕᑯᖅᑲᑦᑕᖅᓯᒪᔭᒃᑲ ᐱᔾᔪᑎᓖᑦ ᖃᓄᖅ ᓯᒃᑲᓕᐊᒥᒃ ᓄᖅᑲᐅᔾᔨᔪᓐᓇᕐᒪᖔᕐᒪ
☐ ᑕᐃᒪᐃᓚᐅᖅᓯᒪᙱᑦᑐᖓ ☐ ᖃᑯᑎᒃᑯᑦ ☐ ᐃᓛᓐᓂ ☐ ᐊᑯᓚᐃᑦᑐᒃᑯᑦ ☐ ᑕᐃᒪᙵᓕᒫᖅte

12. ᐃᓱᒪᖅᑲᑦᑕᖅᑐᖓ ᖃᓄᖅ ᓯᒃᑲᓕᐊᖅᑐᖅᑲᑦᑕᕐᓂᖅ ᓱᕈᒃᑲᓐᓂᐅᑕᐅᔪᓐᓇᕐᓂᖓ ᐊᕙᑎᑦᑎᓐᓄᑦ
☐ ᑕᐃᒪᐃᓚᐅᖅᓯᒪᙱᑦᑐᖓ ☐ ᖃᑯᑎᒃᑯᑦ ☐ ᐃᓛᓐᓂ ☐ ᐊᑯᓚᐃᑦᑐᒃᑯᑦ ☐ ᑕᐃᒪᙵᓕᒫᖅ

13. ᐅᕙᓐᓂᒃ ᐅᖅᑲᐅᔾᔨᓲᖑᔪᖕᒐ ᐊᒃᓱᕈᒃᑲᓐᓂᕈᒪ ᓯᒃᑲᓕᐊᖅᑐᓐᖏᓐᓂᖅᓴᐅᔪᓐᓇᕐᓂᓐᓂᒃ
☐ ᑕᐃᒪᐃᓚᐅᖅᓯᒪᙱᑦᑐᖓ ☐ ᖃᑯᑎᒃᑯᑦ ☐ ᐃᓛᓐᓂ ☐ ᐊᑯᓚᐃᑦᑐᒃᑯᑦ ☐ ᑕᐃᒪᙵᓕᒫᖅd

14. ᐅᔾᔨᕆᓯᒪᔪᖕᒐ ᐃᓅᖅᑲᑎᒃᑲ ᐊᑲᕆᔫᖅᑎᑦᑎᓂᖅᓴᐅᓕᕐᓂᖏᓐᓂᒃ ᓯᒃᑲᓕᐊᖅᑐᖅᐸᖏᑦᑐᓂᒃ
☐ ᑕᐃᒪᐃᓚᐅᖅᓯᒪᙱᑦᑐᖓ ☐ ᖃᑯᑎᒃᑯᑦ ☐ ᐃᓛᓐᓂ ☐ ᐊᑯᓚᐃᑦᑐᒃᑯᑦ ☐ ᑕᐃᒪᙵᓕᒫᖅy

15. ᓯᒃᑲᓕᐊᒥᒃ ᐊᑐᓗᐊᖅᑲᑦᑕᕐᓂᕋ ᐃᓱᒪᕆᑦᑐᒍ ᐅᕙᓐᓂᒃ ᐱᐅᕆᔪᓐᓃᓲᖑᔪᖕᒐ.
☐ ᑕᐃᒪᐃᓚᐅᖅᓯᒪᙱᑦᑐᖓ ☐ ᖃᑯᑎᒃᑯᑦ ☐ ᐃᓛᓐᓂ ☐ ᐊᑯᓚᐃᑦᑐᒃᑯᑦ ☐ ᑕᐃᒪᙵᓕᒫᖅte

16. ᐊᓯᓐᓂᒃ ᐅᖅᑲᖅᑎᖅᑲᕈᓐᓇᓲᖑᔪᖕᒐ ᓯᒃᑲᓕᐊᖅᑐᕐᓂᕋ ᐊᑲᐅᖕᖏᓕᐅᕈᑎᕆᓕᕚᖕᒐᒃᑯ.
☐ ᑕᐃᒪᐃᓚᐅᖅᓯᒪᙱᑦᑐᖓ ☐ ᖃᑯᑎᒃᑯᑦ ☐ ᐃᓛᓐᓂ ☐ ᐊᑯᓚᐃᑦᑐᒃᑯᑦ ☐ ᑕᐃᒪᙵᓕᒫᖅd

17. ᓯᒃᑲᓕᐊᖅᑐᓐᖏᓛᖅᑯᖕᒐ ᐊᓯᖏᓐᓂᒃ ᐱᓕᕆᐊᖅᑲᓲᖑᔪᖕᒐ ᖃᓱᔾᔫᒥᔭᕆᐊᖅᑲᓕᕚᖕᒐᒪ.
☐ ᑕᐃᒪᐃᓚᐅᖅᓯᒪᙱᑦᑐᖓ ☐ ᖃᑯᑎᒃᑯᑦ ☐ ᐃᓛᓐᓂ ☐ ᐊᑯᓚᐃᑦᑐᒃᑯᑦ ☐ ᑕᐃᒪᙵᓕᒫᖅe

18. ᓯᒃᑲᓕᐊᖅᑐᕐᓂᐅᑉ ᐅᓗᕆᐊᓇᕐᓂᖏᓐᓂᒃ ᐅᖅᑲᓕᒫᓕᕚᖕᒐᒪ ᐃᓗᒃᑯᑦ ᐊᒃᑐᖅᑕᐅᖅᑲᑦᑕᖅᑐᖓ.
☐ ᑕᐃᒪᐃᓚᐅᖅᓯᒪᙱᑦᑐᖓ ☐ ᖃᑯᑎᒃᑯᑦ ☐ ᐃᓛᓐᓂ ☐ ᐊᑯᓚᐃᑦᑐᒃᑯᑦ ☐ ᑕᐃᒪᙵᓕᒫᖅte

19. ᐊᖏᕐᕋᓐᓂ ᐃᖅᑲᓇᐃᔭᕐᕕᓐᓂᔫᓐᓃᑦ ᑕᒫᓂᕐᓇᑎᑦᑎᖅᑲᑦᑕᖅᑐᖓ ᓯᒃᑲᓕᐊᖅᑐᓇᐊᖅᑲᓐᖏᓐᓂᓐᓂᒃ ᐃᖅᑲᐃᑎᑦᑎᔾᔪᑎᓂᒃ
☐ ᑕᐃᒪᐃᓚᐅᖅᓯᒪᙱᑦᑐᖓ ☐ ᖃᑯᑎᒃᑯᑦ ☐ ᐃᓛᓐᓂ ☐ ᐊᑯᓚᐃᑦᑐᒃᑯᑦ ☐ ᑕᐃᒪᙵᓕᒫᖅy

20. ᐊᓯᓐᓂᑦ ᖁᔭᓐᓇᒦᕈᓯᐊᖅᑕᐅᖃᑦᑕᖅᑐᖓ ᓯᒃᑲᓕᐊᖅᑐᓐᖏᑦᑕᕋᖕᒐᒪ.
☐ ᑕᐃᒪᐃᓚᐅᖅᓯᒪᙱᑦᑐᖓ ☐ ᖃᑯᑎᒃᑯᑦ ☐ ᐃᓛᓐᓂ ☐ ᐊᑯᓚᐃᑦᑐᒃᑯᑦ ☐ ᑕᐃᒪᙵᓕᒫᖅd

ᐅᖁᒪᐃᑦᑐᖅᓱᐅᕐᓂᐅᑉ ᖃᓄᐃᓕᖕᒐᔾᔪᓯᖕᒐ (Cohen & Williamson, 1988)

ᐅᑯᑎᒎᓈᖅᑐᑦ ᐊᐱᖅᑯᑏᑦ ᐱᔾᔪᑎᖃᖅᑐᖅ ᖃᓄᖅ ᐃᒃᐱᒋᔭᖅᑲᖅᑕᓚᐅᕐᒪᖔᖅᐱᑦ ᐃᓱᒪᖅᑲᑦᑕᓚᐅᕐᒪᖔᖅᐱᓪᓗ ᑕᖅᑭᐅᓚᐅᖅᑐᒥ. ᐊᑐᓂ ᓇᓗᓇᐃᖅᑲᖅᑕᕐᓗᑎᑦ ☑ ᖃᔅᓰᖅᑕᖅᑰᑎᑦ ᑕᐃᒫᒃ ᐃᒃᐱᒍᓱᒃᑲᖅᑕᓚᐅᕐᒪᖔᖅᐱᑦ ᐃᓱᒪᖅᑲᑦᑕᓚᐅᕐᒪᖔᖅᐱᓪᓗ.

1. ᑕᖅᑭᐅᓚᐅᖅᑐᒥ, ᖃᔅᓰᖅᑕᖅᑰᑎᑦ ᐃᓱᒪᖅᑲᖅᓯᒪᕕᑦ ᑕᒪᒃᑯᐊ ᐃᓅᓯᖅ ᐱᖁᔭᑦ ᐊᐅᓚᑦᑐᓇᐃᓪᓕᖅᑯᔾᔨᓪᓗᑎᑦ?
☐ ᐃᓱᒪᓚᐅᖅᓯᒪᓐ ☐ ᐃᓱᒪᒐᔪᓐᖏᑦᑐᖓ ☐ ᐃᓛᓐᓂᒃᑯᑦ ☐ ᐃᓱᒪᒐᔪᒃᑐᖓ ☐ ᐃᓱᒪᐃᓐᓇᐅᔭᖅᑐ

ᖏᑦᑐᖓ ᖓ

2. ᑕᖅᑭᐅᓚᐅᖅᑐᒥ, ᖃᔅᓲᖅᑕᖅᓱᑎᑦ ᓇᓗᖅᑯᑎᓐᖏᔾᔪᑎᖃᖅᓯᒪᕙᑦ ᑲᒪᔪᓐᓇᕋᓱᒋᓂᖅᑎᓪᓗ ᐃᓕᖕᓄᑦ ᑐᕌᖓᔪᑦ ᐊᑲᐅᓐᖏᓕᐅᕈᑏᑦ?

☐ ᐃᓱᒪᓚᐅᖅᓯᒪᓐᖏᑦᑐᖓ ☐ ᐃᓱᒪᒐᔪᓐᖏᑦᑐᖓ ☐ ᐃᑖᓐᓂᒃᑯᑦ ☐ ᐃᓱᒪᒐᔪᒃᑐᖓ ☐ ᐃᓱᒪᐃᓐᓇᐅᔭᖅᑐᖓ

3. ᑕᖅᑭᐅᓚᐅᖅᑐᒥ, ᖃᔅᓲᖅᑕᖅᓱᑎᑦ ᑭᓱᑐᐃᓐᓇᐃᑦ ᐃᖏᕋᑦᑎᐊᕋᓱᒋᓪᓗᒋᑦ?

☐ ᐃᓱᒪᓚᐅᖅᓯᒪᓐᖏᑦᑐᖓ ☐ ᐃᓱᒪᒐᔪᓐᖏᑦᑐᖓ ☐ ᐃᑖᓐᓂᒃᑯᑦ ☐ ᐃᓱᒪᒐᔪᒃᑐᖓ ☐ ᐃᓱᒪᐃᓐᓇᐅᔭᖅᑐᖓ

4. ᑕᖅᑭᐅᓚᐅᖅᑐᒥ, ᖃᔅᓲᖅᑕᖅᓱᑎᑦ ᐊᑲᐅᑲᓐᖏᓕᐅᕈᑏᑦ ᐊᒥᓱᕈᖅᐸᓪᓕᐊᑐᐃᓐᓇᖅᑰᔨᓕᕐᓂᑰᕙᑦ, ᓲᕐᓗ ᓴᐅᔭᐅᓕᖅᓱᑎᑦ?

☐ ᐃᓱᒪᓚᐅᖅᓯᒪᓐᖏᑦᑐᖓ ☐ ᐃᓱᒪᒐᔪᓐᖏᑦᑐᖓ ☐ ᐃᑖᓐᓂᒃᑯᑦ ☐ ᐃᓱᒪᒐᔪᒃᑐᖓ ☐ ᐃᓱᒪᐃᓐᓇᐅᔭᖅᑐᖓ

ᐃᓱᒪᔫᕐᓂᖅ ᐊᒻᒪᓗ ᓱᕞᕋᓂᖅ - HADS (Snaith & Zigmond, 1994)

ᐊᑖᓂ ᑎᑎᕋᖅᓯᒪᔪᑦ ᐅᖃᓕᒫᓚᐅᕐᓗᒍ ᓇᓗᓇᐃᒃᑭᑦ ☑ ᐃᒃᐱᒋᓚᐅᖅᑕᕐᓂᒃ ᓇᓕᖅᑯᑎᓂᖅᐸᑦ ᐱᓇᓱᐊᕈᓯᐅᓚᐅᖅᑐᒥ. ᐊᑯᓂᓗᐊᖅ ᑭᐅᓇᓱᖅᑲᑦᑕᔾᔭᓐᖏᓚᑎᑦ; ᐃᓱᒪᒋᒃᑲᐅᑎᒋᔭᐃᑦ ᓇᓕᖅᑯᑎᓂᖅᓴᐅᓲᖑᔪᖅ ᐃᓱᒪᒋᑯᑖᒃᑕᓐᓂᐅᓐᖏᓂᖅ.

1. ᓱᒃᑲᓯᒪᔪᖓ
   ☐ ᑕᐃᒪᓐᖓᓕᒫᖅ ☐ ᑕᐃᒪᓐᖓᓕᒫᐸᓗᒃ ☐ ᐃᑖᓐᓂᓚᐅᓱᖓᖅ ☐ ᑕᐃᒪᐃᑉᐸᓐᖏᑦᑐᖓ

2. ᖁᕕᐊᒋᖃᑦᑕᓚᐅᖅᓯᒪᔭᒃᑲ ᓱᓕ ᖁᕕᐊᒋᔭᒃᑲ
   ☐ ᑕᐃᒪᓐᖓᓕᒫᖅ ☐ ᑕᐃᒪᓐᖓᓕᒫᐸᓗᒃ ☐ ᐃᑖᓐᓂᓚᐅᓱᖓᖅ ☐ ᑕᐃᒪᐃᑉᐸᓐᖏᑦᑐᖓ

3. ᑲᐯᐊᓱᓕᓲᖑᔪᖓ ᓲᕐᓗ ᐱᐅᓐᖏᑦᑐᒥᒃ ᖃᓄᐃᑦᑐᖅᑕᕐᓂᐊᖅᑰᔨᓪᓗᓂ
   ☐ ᑕᐃᒪᓐᖓᓕᒫᖅ ☐ Aᑕᐃᒪᓐᖓᓕᒫᐸᓗᒃ ☐ ᐃᑖᓐᓂᓚᐅᓱᖓᖅ ☐ ᑕᐃᒪᐃᑉᐸᓐᖏᑦᑐᖓ

4. ᐃᒡᓚᒪᔪᒍᓐᓇᖅᑐᖓ ᐃᔨᖅᓇᖅᑐᓂᒡᓗ ᑕᑯᔪᓐᓇᖅᐳᖓ
   ☐ ᑕᐃᒪᓐᖓᓕᒫᖅ ☐ ᑕᐃᒪᓐᖓᓕᒫᐸᓗᒃ ☐ ᐃᑖᓐᓂᓚᐅᓱᖓᖅ ☐ ᑕᐃᒪᐃᑉᐸᓐᖏᑦᑐᖓ

5. ᐃᓱᒪᒋᔭᖅᑲᖅᑲᑦᑕᖅᑐᖓ ᐃᓱᒫᓘᑎᒃᓴᕿᓘᔭᕐᓂᒃ
   ☐ ᑕᐃᒪᓐᖓᓕᒫᖅ ☐ ᑕᐃᒪᓐᖓᓕᒫᐸᓗᒃ ☐ ᐃᑖᓐᓂᓚᐅᓱᖓᖅ ☐ ᑕᐃᒪᐃᑉᐸᓐᖏᑦᑐᖓ

6. ᖁᕕᐊᓱᒃᑐᖓ
   ☐ ᑕᐃᒪᓐᖓᓕᒫᖅ ☐ ᑕᐃᒪᓐᖓᓕᒫᐸᓗᒃ ☐ ᐃᑖᓐᓂᓚᐅᓱᖓᖅ ☐ ᑕᐃᒪᐃᑉᐸᓐᖏᑦᑐᖓ

7. ᐃᒃᓯᕚᑦᑎᐊᕈᓐᓇᖅᑐᖓ ᖃᓱᖓᓪᓗᖓᓗ
   ☐ ᑕᐃᒪᓐᖓᓕᒫᖅ ☐ ᑕᐃᒪᓐᖓᓕᒫᐸᓗᒃ ☐ ᐃᑖᓐᓂᓚᐅᓱᖓᖅ ☐ ᑕᐃᒪᐃᑉᐸᓐᖏᑦᑐᖓ

8. ᑲᑦᑑᒥᓯᒪᔫᔭᖅᑐᖓ
   ☐ ᑕᐃᒪᓐᖓᓕᒫᖅ ☐ ᑕᐃᒪᓐᖓᓕᒫᐸᓗᒃ ☐ ᐃᑖᓐᓂᓚᐅᓱᖓᖅ ☐ ᑕᐃᒪᐃᑉᐸᓐᖏᑦᑐᖓ

9. ᑲᐯᐊᓱᖅᑰᔨᖅᑲᑦᑕᖅᑐᖓ ᓲᕐᓗ "ᑕᕐᕋᓕᑭᔮᖅᑕᖅᑲᐅᖅᐸᓂ ᐊᖅᑭᐊᕈᓐᓂ
   ☐ ᑕᐃᒪᓐᖓᓕᒫᖅ ☐ ᑕᐃᒪᓐᖓᓕᒫᐸᓗᒃ ☐ ᐃᑖᓐᓂᓚᐅᓱᖓᖅ ☐ ᑕᐃᒪᐃᑉᐸᓐᖏᑦᑐᖓ

10. ᑕᐅᑦᑐᒐᓘᓐᓃᑦ ᐃᒃᐱᒋᔭᓐᓃᖅᑕᕋ
   ☐ ᑕᐃᒪᓐᖓᓕᒫᖅ ☐ ᑕᐃᒪᓐᖓᓕᒫᐸᓗᒃ ☐ ᐃᑖᓐᓂᓚᐅᓱᖓᖅ ☐ ᑕᐃᒪᐃᑉᐸᓐᖏᑦᑐᖓ

11. ᕿᑲᖅᓯᔭᓇᐃᓪᓕᐅᖅᑲᓯᒪᔪᖓ ᐊᐅᓚᐃᓐᓇᓇᐊᖅᑲᖅᑰᔨᓪᓗᖓ

☐ ᑕᐃᒪᓐᖓᓕᒫᖅ ☐ ᑕᐃᒪᓐᖓᓕᒫᐸᓗᒃ ☐ ᐃᓛᓐᓂᓚᐅᓱᖓᖅ ☐ ᑕᐃᒪᐃᑉᐸᓐᖏᑦᑐᖓ

12. ᖁᕕᐊᓇᖅᑐᓂᒃ ᓂᕆᐅᖃᑦᑕᖅᑐᖓ
☐ ᑕᐃᒪᓐᖓᓕᒫᖅ ☐ ᑕᐃᒪᓐᖓᓕᒫᐸᓗᒃ ☐ ᐃᓛᓐᓂᓚᐅᓱᖓᖅ ☐ ᑕᐃᒪᐃᑉᐸᓐᖏᑦᑐᖓ

13. ᑲᑉᐱᐊᓱᓕᑲᓪᓚᖃᑦᑕᖅᑐᖓ
☐ ᑕᐃᒪᓐᖓᓕᒫᖅ ☐ ᑕᐃᒪᓐᖓᓕᒫᐸᓗᒃ ☐ ᐃᓛᓐᓂᓚᐅᓱᖓᖅ ☐ ᑕᐃᒪᐃᑉᐸᓐᖏᑦᑐᖓ

14. ᖁᕕᐊᒋᓗᒋᑦ ᐅᖃᓕᒫᑲᑕᒍᓐᓇᖅᑐᖓ, ᐅᕝᕙᓘᓐᓃᑦ ᓈᓚᐅᑏᑦ ᑐᓵᓗᒋᑦ ᑕᓚᕖᓴᕐᓗᖓᓘᓐᓃᑦ
☐ ᑕᐃᒪᓐᖓᓕᒫᖅ ☐ ᑕᐃᒪᓐᖓᓕᒫᐸᓗᒃ ☐ ᐃᓛᓐᓂᓚᐅᓱᖓᖅ ☐ ᑕᐃᒪᐃᑉᐸᓐᖏᑦᑐᖓ

ᐃᓅᖅᑎᖕᓄᑦ ᐃᑲᔪᖅᓱᖅᑕᐅᓂᖅ (Richmond, C., Ross, N., Egeland, M. 2007)

ᐅᑯᐊ ᐊᐱᖅᑯᑏᑦ ᐱᔾᔪᑎᖃᖅᑐᑦ ᖃᔅᓯᓂᒃ ᐃᓄᖕᓂᒃ ᑕᑯᖃᑦᑕᕐᒪᖔᖅᐱᑦ ᐅᖃᓪᓚᖃᑎᖃᖃᑦᑕᕐᒪᖔᖅᐱᓪᓗ. ᐊᑐᓂ ᐅᖃᓕᒫᓚᐅᕐᓗᒋᑦ ᓇᓗᓇᐃᕐᓂᐊᖅᐸᐃᑦ ☑ ᓇᓕᖅᑯᑦᑎᓂᖅᐹᖅ.

1. ᖃᔅᓰᖅᑕᖅᖢᑎᑦ ᖁᕕᐊᓱᖃᑎᖃᖃᑦᑕᖅᐱᑦ ᐊᓯᖕᓂᒃ?
☐ ᐱᑕᖃᓐᖏ ☐ ᖃᑯᑎᒃᑯᑦ ☐ ᐃᓛᓐᓂ ☐ ᑕᐃᒪᐃᒐᔪᒃᑐᖅ ☐ ᑕᐃᒪᐃᖏᓐᓇᖅᑐᖅ

2. ᖃᔅᓰᖅᑕᖅᖢᑎᑦ ᖁᕕᐊᒋᔭᕐᓂᒃ ᐱᓕᕆᐊᖃᑎᖃᖃᑦᑕᖅᐱᑦ?
☐ ᐱᑕᖃᓐᖏ ☐ ᖃᑯᑎᒃᑯᑦ ☐ ᐃᓛᓐᓂ ☐ ᑕᐃᒪᐃᒐᔪᒃᑐᖅ ☐ ᑕᐃᒪᐃᖏᓐᓇᖅᑐᖅ

3. ᖃᔅᓰᖅᑕᖅᖢᑎᑦ ᐊᓯᖕᓂᒃ ᑲᑎᖃᑎᖃᖃᑦᑕᖅᐱᑦ ᓴᐃᓕᖃᑎᒋᔭᓐᓇᖅᑕᕐᓂᒃ?
☐ ᐱᑕᖃᓐᖏ ☐ ᖃᑯᑎᒃᑯᑦ ☐ ᐃᓛᓐᓂ ☐ ᑕᐃᒪᐃᒐᔪᒃᑐᖅ ☐ ᑕᐃᒪᐃᖏᓐᓇᖅᑐᖅ

4. ᖃᔅᓰᖅᑕᖅᖢᑎᑦ ᑲᑎᖃᑎᖃᖃᑦᑕᕈᓐᓇᖅᐱᑦ ᐃᓕᖕᖒᖓᔪᓂᒃ ᐅᖃᐅᓯᖃᕈᓐᓇᕐᓂᐊᖁᕕᑦ ᐊᑲᐅᓐᖏᓕᐅᕈᑎᑎᓪᓗᓂᒋᑦ ᐅᖃᐅᓯᕆᓇᓱᕐᓂᐊᖁᕕᒋᑦ?
☐ ᐱᑕᖃᓐᖏ ☐ ᖃᑯᑎᒃᑯᑦ ☐ ᐃᓛᓐᓂ ☐ ᑕᐃᒪᐃᒐᔪᒃᑐᖅ ☐ ᑕᐃᒪᐃᖏᓐᓇᖅᑐᖅ

5. ᖃᔅᓰᖅᑕᖅᖢᑎᑦ ᐃᑲᔪᖅᑕᐅᔭᕆᐊᖃᓕᖄᖓᕕᑦ ᐃᑲᔪᖅᑎᑖᖃᑦᑕᕈᓐᓇᖅᐱᑦ?
☐ ᐱᑕᖃᓐᖏ ☐ ᖃᑯᑎᒃᑯᑦ ☐ ᐃᓛᓐᓂ ☐ ᑕᐃᒪᐃᒐᔪᒃᑐᖅ ☐ ᑕᐃᒪᐃᖏᓐᓇᖅᑐᖅ

6. ᖃᔅᓰᖅᑕᖅᖢᑎᑦ ᓈᓚᒍᓐᓇᖅᑐᒥᑦ ᑲᑎᖃᑎᖃᖃᑦᑕᕈᓐᓇᖅᐱᑦ ᐅᖃᓪᓚᖃᑎᒋᔭᓐᓇᖅᑕᕐᓂᒃ?
☐ ᐱᑕᖃᓐᖏ ☐ ᖃᑯᑎᒃᑯᑦ ☐ ᐃᓛᓐᓂ ☐ ᑕᐃᒪᐃᒐᔪᒃᑐᖅ ☐ ᑕᐃᒪᐃᖏᓐᓇᖅᑐᖅ

7. ᖃᔅᓰᖅᑕᖅᖢᑎᑦ ᓘᒃᑖᓕᐊᓇᐊᖃᓕᖄᖓᕕᑦ ᐱᖃᑎᖃᓇᐊᖃᕈᕕᑦ ᐱᖃᑎᒃᓴᖃᖃᑦᑕᖅᐱᑦ?
☐ ᐱᑕᖃᓐᖏ ☐ ᖃᑯᑎᒃᑯᑦ ☐ ᐃᓛᓐᓂ ☐ ᑕᐃᒪᐃᒐᔪᒃᑐᖅ ☐ ᑕᐃᒪᐃᖏᓐᓇᖅᑐᖅ

8. ᖃᔅᓰᖅᑕᖅᖢᑎᑦ ᓇᒡᓕᒃᑎᒋᔭᕐᓃᖃᑦᑕᖅᐱᑦ ᐃᑉᐱᒍᓱᑦᑎᐊᖅᑐᒥᒡᓗ?
☐ ᐱᑕᖃᓐᖏ ☐ ᖃᑯᑎᒃᑯᑦ ☐ ᐃᓛᓐᓂ ☐ ᑕᐃᒪᐃᒐᔪᒃᑐᖅ ☐ ᑕᐃᒪᐃᖏᓐᓇᖅᑐᖅ

ᖃᓄᑎᒋ ᓇᔾᔮᐊᕐᓂᒃ ᖃᓂᒃᓴᖅᑎᒋᖕᒪᖔᖅᐱᑦ (Condon, 1993)

ᐅᑯᐊ ᐊᐱᖅᑯᑏᑦ ᐱᔾᔪᑎᖃᖅᑐᑦ ᖃᓄᐃᑦᑐᓂᒃ ᐃᓱᒪᒋᔭᖃᖃᑦᑕᕆᒫᖅᐱᑦ ᐃᑉᐱᒍᓱᖃᑦᑕᕆᒫᖅᐱᓪᓗ ᓇᔾᔮᕐᓄᑦ. ᓇᓗᓇᐃᕐᓗᒍ ᐊᑕᐅᓯᖅ ᓯᒃᑭᑦᑕᖅ ☑ ᑭᒡᒍᑎᙵᓄᑦ.

7. ᐱᓇᓱᐊᕈᓰᒃ ᒫᒃᑮᒃ ᐊᓂᒍᖅᓯᒪᔪᓂ, ᐃᓱᒪᖃᑦᑕᖅᓯᒪᔪᖓ, ᐅᙱᓘᓐᓃᑦ ᐃᓱᒪᒋᔭᖃᐃᓐᓇᖅᓯᒪᔪᖓ ᓇᔾᔮᐱᔭᓐᓂᒃ ᐅᕙᓐᓂ ᐱᕈᖅᐸᓪᓕᐊᔪᒥᒃ:

- [ ] ᑕᐃᒪᙵᓕᒫᖅ
- [ ] ᐊᑯᓚᐃᑦᑐᕕᒡᔪᐊᒃᑯᑦ
- [ ] ᐊᑯᓚᐃᑦᑐᒃᑯᑦ
- [ ] ᐃᑖᓂᓚᐅᓱᙵᖅ
- [ ] ᐃᓱᒪᒋᓚᐅᖅᓯᒪᙱᑕᕋ

8. ᐱᓇᓱᐊᕈᓰᒃ ᒫᒃᑮᒃ ᐊᓂᒍᖅᓯᒪᔪᓂ, ᐃᓱᒪᒋᓕᕌᙵᒃᑯᑦ ᓇᔾᔮᕋ ᐅᕙᓐᓂ ᐱᕈᖅᐸᓪᓕᐊᔪᖅ, ᐃᒃᐱᒍᓱᙱᒃᑲ ᐃᒪᐃᑦᑑᖃᑦᑕᖅᓯᒪᔪᑦ:

- [ ] ᓴᙱᑦᑐᑦ ᐱᑕᖃᙱᑦᑐᕐᔫᓐᓃᑦ
- [ ] ᓴᙱᓪᓚᒃᑐᖅ
- [ ] ᓴᙱᔫᑉ ᓴᙱᑦᑑᓪᓗ ᐊᑯᓐᓂᖓᓂ
- [ ] ᓴᙱᔪᓚᒃ
- [ ] ᓴᙱᔪᕐᔪᐊᕌᓗᒃ

9. ᐱᓇᓱᐊᕈᓰᒃ ᒫᒃᑮᒃ ᐊᓂᒍᖅᓯᒪᔪᓂ, ᓇᔾᔮᖓᕋ ᐅᕙᓐᓂ ᐱᕈᖅᐸᓪᓕᐊᔪᖅ ᐃᒪᓇ ᐃᒃᐱᒋᖃᑦᑕᖅᓯᒪᔭᕋ:

- [ ] ᐱᐅᕗᒡᔪᐊᖅᑐᖅ
- [ ] ᐱᐅᔪᐃᓐᓇᐸᓗᒃ
- [ ] ᐱᐅᔫᓯᖅ ᐱᐅᙱᑦᑑᓯᕐᓗ
- [ ] ᐱᐅᙱᑦᑐᐃᓐᓇᐸᓗᒃ
- [ ] ᐱᕐᑯᙱᑦᑐᓪᓚᓇᒃ

10. ᐱᓇᓱᐊᕈᓰᒃ ᒫᒃᑮᒃ ᐊᓂᒍᖅᓯᒪᔪᓂ, ᓇᔾᔮᓇᔭᑦ ᖃᓄᖅ ᐱᕈᖅᐸᓪᓕᐊᖃᑦᑕᕆᒫᙵᑦᑕ ᒥᒃᓵᓄᑦ ᐅᖃᓕᒫᕈᒻᒪᐅᒥᓯᒪᔪᖓ ᑐᑭᓯᒃᑲᓂᕈᒪᓪᓗᙵᓗ. ᑕᒪᓇ ᐱᔪᒪᓂᕋ ᐃᒪᐃᓕᖓᔪᖅ:

- [ ] ᓴᙱᑦᑐᑦ ᐱᑕᖃᙱᑦᑐᕐᔫᓐᓃᑦ
- [ ] ᓴᙱᓪᓚᒃᑐᖅ

☐ ᓴᓐᖏᔫᓐᖏᑦᑐᖅ ᓴᓐᖐᑦᑑᓐᖏᑦᑐᕐᓗ

☐ ᓴᓐᖏᔪᒐᓚᒃ

☐ ᓴᓐᖏᔪᕐᔪᐊᕌᓗᒃ

11. ᐱᓇᓱᐊᕈᓲᒃ ᒪᒃᕉᒃ ᐊᓂᒍᖅᓯᒪᔪᓂ, ᐃᒡᓕᐊᓐᓃᖅᑐᖅ ᓄᑕᕋᓛᖅ ᖃᓄᖅ ᑕᐅᑦᑐᖅᑲᖅᒪᓐᖒᓐᖓᓂᒃ ᑕᑯᓐᓇᓐᖑᐊᕋᓱᒃᓯᒪᔪᓐᖓ:

☐ ᑕᐃᒪᓐᖓᓕᒫᖅ

☐ ᐊᑯᓚᐃᑦᑐᕕᒡᔪᐊᒃᑯᑦ

☐ ᐊᑯᓚᐃᑦᑐᒃᑯᑦ

☐ ᐃᓛᓐᓂᓚᐅᓱᓐᖓᖅ

☐ ᐃᓱᒪᑭᓚᐅᖅᓯᒪᓐᖏᑕᕋ

12. ᐱᓇᓱᐊᕈᓲᒃ ᒪᒃᕉᒃ ᐊᓂᒍᖅᓯᒪᔪᓂ, ᓇᔾᔭᐊᕋ ᐱᕈᖅᐸᑦᑎᐊᔪᖅ ᐃᒪᓐᓇ ᑕᑯᓐᓇᖅᓯᒪᔾᔭᕋ:

☐ ᐃᓄᕋᓛᖅ ᐊᔾᔨᐅᓐᖏᑦᑐᓂᒃ ᖃᓄᐃᓕᖓᓂᖅᑲᐅᖅᑐᖅ

☐ ᓄᑕᕋᓛᖅ ᓄᑕᕋᓛᑎᑐᑐᐃᓐᓇᖅ ᑕᐅᑦᑐᓕᒃ

☐ ᐃᓄᑯᓗᒃ

☐ ᐆᒪᔪᖅ

☐ ᓱᓇᕈᓗᒃ ᐃᓅᑦᓚᓈᓐᖏᑦᑐᖅ

8. ᐱᓇᓱᐊᕈᓲᒃ ᒪᒃᕉᒃ ᐊᓂᒍᖅᓯᒪᔪᓂ, ᓇᔾᔭᐊᕋ ᐃᓱᒪᒋᖅᑲᑦᑕᖅᓯᒪᔭᕋ ᐃᒻᒥᓂᒃ ᐱᕈᖅᐸᑦᑎᐊᑦᑎᐊᕈᓐᓇᕋᓱᒋᑦᓗᒍ ᐅᕙᓐᓄᑦ ᐃᑲᔪᖅᑕᐅᓐᖏᑦᓗᓂ:

☐ ᑕᐃᒪᓐᖓᓕᒫᖅ

☐ ᐊᒃᓱᐊᓗᒃ

☐ ᐃᓚᖓᒍᑦ

☐ ᐃᓛᓐᓂᓚᐅᓱᓐᖓᖅ

☐ ᐃᓱᒪᒋᖅᑲᑦᑕᓐᖏᑦᑕᕋ

9) ᐱᓇᓱᐊᕈᓲᒃ ᒪᒃᕉᒃ ᐊᓂᒍᖅᓯᒪᔪᓂ, ᐃᓄᑑᓕᕌᖓᒪ ᐅᔾᔨᓇᔾᔫᒥᖅᑲᑦᑕᓚᐅᖅᑐᖓ ᓇᔾᔭᐊᓐᓄᑦ ᐅᖅᑲᓪᓚᖅᑲᑦᑕᕐᓂᓐᓄᑦ

☐ ᑕᐃᒪᐃᓕᐅᖅᑲᑦᑕᓐᖏᑦᑐᖓ

☐ ᐃᓛᓐᓂᓚᐅᓱᓐᖓᖅ

☐ ᐊᑯᓚᐃᑦᑐᒃᑯᑦ

☐ ᐊᑯᓚᐃᕕᒡᔪᐊᖅᑐᒃᑯᑦ

☐ ᐃᓄᑑᓂᑕᒫᓐᓂ

14. ᐱᓇᓱᐊᕈᓰᒃ ᒪᒃᑮᒃ ᐊᓂᒍᖅᓯᒪᔪᓂ, ᐃᓱᒪᒋᓕᕚᖓᒃᑯ (ᐅᖃᓪᓚᖃᑎᒋᓕᕚᖓᒃᑯᓘᓐᓃᑦ) ᓇᔾᔭᐊᕋ, ᐃᒪᓐᓇ ᐃᓱᒪᖃᑦᑕᖅᓯᒪᔪᖓ:

☐ ᓇᒡᓕᒋᓲᕋ ᐱᑦᑎᐊᕐᕕᒋᓪᓗᒍᓗ

☐ ᓇᒡᓕᒌᓐᓇᐸᓗᓲᕋ ᐱᑦᑎᐊᖏᓐᓇᐸᓗᒃᕈᒍᓗ

☐ ᑕᒪᒃᑮᒃ ᓇᒡᓕᖕᓂᖅ ᐸᕝᕕᓂᕐᓗ

☐ ᐸᕝᕕᒋᔭᐃᓐᓇᐸᓗᒋᓪᓗᒍ

☐ ᐸᕝᕕᒋᕕᒡᔪᐊᖅᕈᒍ

15. ᓇᔾᔭᐊᕋ ᖃᓄᖅ ᑕᐅᑦᑐᖃᕐᒪᖔᖓ ᐃᓱᒪᒋᓕᕚᖓᒃᑯ ᒫᓐᓇᐅᔪᖅ ᐃᒪᐃᑦᑑᖃᑦᑕᖅᑐᖅ:

☐ ᑕᑯᓐᓇᑦᑎᐊᖅᑕᕋ

☐ ᑕᑯᓐᓇᒐᓚᒃᑕᕋ

☐ ᑕᑯᓐᓇᑦᑎᐊᓐᖏᑕᕋ

☐ ᑕᑯᓐᓇᓐᖏᑦᑎᐊᒐᓚᒃᑕᕋ

☐ ᐃᓱᒪᒋᓐᖏᑦᑎᐊᖅᑕᕋ

16. ᐱᓇᓱᐊᕈᓰᒃ ᒪᒃᑮᒃ ᐊᓂᒍᖅᓯᒪᔪᓂ, ᓇᔾᔭᐊᕋ ᐃᓱᒪᒋᓕᕚᖓᒃᑯᑦ ᐃᒪᓐᓇ ᐃᒃᐱᒍᓱᖃᑦᑕᖅᑐᖓ:

☐ ᓄᒫᓱᕕᒡᔪᐊᓲᖑᔪᖓ

☐ ᓄᒫᓱᒐᓚᓲᖑᔪᖓ

☐ ᑕᒪᒃᑮᒃ ᖁᕕᐊᒋᓪᓗᒍ ᓄᒫᒋᓪᓗᒍᓗ

☐ ᖁᕕᐊᒋᒐᓚᒃᑕᕋ

☐ ᖁᕕᐊᒋᔭᕐᔪᐊᕌᓗᒐ

17. ᐃᓚᖏᑦ ᓇᔾᔭᔪᑦ ᐊᕝᕙᐊᓕᓲᖑᔪᑦ ᓇᔾᔭᐊᕆᔭᕐᒥᓂᒃ, ᑕᐃᒪᐃᓐᓂᕐᒥᓄᓪᓗ ᐋᓐᓂᕈᒪᖃᑦᑕᖅᑕᖓᑦ ᓵᓪᓗᒍᓘᓐᓃᑦ:

☐ ᑕᐃᒪᐃᓐᓂᐅᓴᓐᖏᑦᑐᖓ

☐ ᐃᓛᓐᓂᒃᑯᑦ ᑕᐃᒪᐃᑦᑐᓐᓇᕋᓗᐊᖅᑐᖓ, ᑕᐃᒪᐃᓪᓚᕆᓚᐅᖅᓯᒪᓐᖏᑦᑐᖓ

☐ ᐊᑕᐅᓯᐊᖅᖁᖓ ᒪᕐᑭᐊᖅᑕᖅᖁᖓᒎᓐᓃᑦ ᑕᐃᒪᓐᓇ ᐃᓱᒪᓯᒪᔪᖓ

☐ ᐃᓛᓐᓂᓚᐅᓱᖓᖅ ᑕᐃᒪᐃᕐᑲᑦᑕᖅᓯᒪᔪᖓ

☐ ᐊᒥᓱᐊᖅᑕᖅᖁᖓ ᑕᐃᒪᐃᕐᑲᑦᑕᖅᓯᒪᔪᖓ

18. ᐱᓇᓱᐊᕈᓰᒃ ᒪᒃᕉᒃ ᐊᓂᒍᖅᓯᒪᔪᓂ ᐃᒪᓐᓇ ᐃᒃᐱᒍᓱᕐᑲᑦᑕᖅᓯᒪᔪᖓ:

☐ ᓇᔾᔨᐊᕙ ᐊᒃᓱᐊᓗᒃ ᐃᒃᐱᒋᕐᑲᑦᑕᖅᓯᒪᓐᖏᑕᕙ

☐ ᐊᒃᓱᓗᐊᖑᓐᖏᑦᑐᖅ ᓇᔾᔨᐊᕙ ᐃᒃᐱᒋᓗᐊᕐᑲᑦᑕᖅᓯᒪᓐᖏᑕᕙ

☐ ᓇᔾᔨᐊᕙ ᐃᑉᐱᒋᓗᐊᓐᖏᑕᕙ

☐ ᓇᔾᔨᐊᕙ ᐃᑉᐱᒌᓐᓇᐸᓗᒃᑕᕙ

☐ ᓇᔾᔨᐊᕙ ᐊᒃᓱᐊᓗᒃ ᐃᑉᐱᒋᑦᑎᐊᖅᑕᕙ

14._ᖃᖓᑐᐃᓐᓇᖅ ᓇᔾᔨᐊᓐᓂᒃ ᓱᕙᐃᓐᓂᕈᒪ (ᓱᕙᐃᓂᒃᑯᑦ ᐊᓯᐊᒍᓪᒎᓐᓃᑦ ᐱᕐᓗᐊᕿᓂᒃᑯᑦ) ᐅᕙᖓᓗ ᐋᓐᓂᐊᓐᖏᓪᓗᖓ ᐋᓐᓂᓐᖏᓪᓗᖓᒎᓐᓃᑦ, ᐃᒪᓐᓇ ᐃᒃᐱᒍᓱᖕᓂᐊᕙᓱᒋᔭᖓ:

☐ ᐊᒃᓱᐊᓗᒃ ᖁᕕᐊᓱᒐᔭᖅᑐᖓ

☐ ᖁᕕᐊᓱᓚᒐᔭᖅᑐᖓ

☐ ᖁᕕᐊᓱᓐᖏᑦᒎᓐᖏᓪᓗᖓ ᖁᕕᐊᓱᓕᕐᓗᖓᒎᓐᖏᑦᑐᖅ; ᑕᒪᒃᑮᒃ ᐃᑉᐱᒋᒐᔭᖅᑕᒃᑲ)

☐ ᓄᒫᑦᑕᒐᓚᕙᔭᖅᑐᖓ

☐ ᖁᕕᐊᒋᓐᖏᕕᒡᔪᐊᕙᔭᖅᑕᕙ

15. ᐱᓇᓱᐊᕈᓰᒃ ᒪᒃᕉᒃ ᐊᓂᒍᖅᓯᒪᔪᓂ, ᓂᕆᑦᑎᐊᕙᓱᕐᑲᑦᑕᖅᑐᖓ ᓇᔾᔨᐊᕙ ᓂᕆᑦᑎᐊᕐᓂᐊᕐᒪᑦ:

☐ ᐃᓱᒪᒋᓐᖏᑕᕙ

☐ ᐊᑕᐅᓯᐊᖅᖁᖓ ᒪᕐᑭᐊᖅᑕᖅᖁᖓᒎᓐᓃᑦ ᓂᕆᓕᖀᖓᒪ

☐ ᐃᓛᓐᓂᓚᐅᓱᖓᖅ ᓂᕆᓕᖀᖓᒪ

☐ ᓂᕆᓂᑕᒫᐸᓗᒃ

☐ ᓂᕆᓂᑕᒫᖅ

16. ᐃᕐᓂᕌᕐᓗᖓ ᐊᒻᒪᓗ ᓄᑕᕋᓛᕙ ᑕᑯᒋᐅᕈᒃᑯ ᐃᒪᓐᓇ ᐃᒃᐱᒍᓱᖕᓂᐊᕙᓱᒋᔭᖓ:

☐ ᓇᓪᓕᒋᕕᒡᔪᐊᕙᔭᖅᑕᕙ

☐ ᓇᓪᓕᒋᓇᔭᖅᑕᕙ

☐ ᓄᑕᕋᓛᖅ ᓇᐅᒃᑯᑦ ᐱᐅᒋᓐᖏᑦᑕᕐᑲᕐᕕᒋᓇᔭᖅᑕᕙ

☐ ᐊᒥᓱᓂᒃ ᐱᐅᒋᓐᖏᑦᑕᕐᑲᕐᕕᒋᓇᔭᖅᑕᕙ

☐ ᐱᐅᒋᓐᖏᓐᓇᔭᖅᑕᕋ

17. ᐃᕐᓂᒍᒪ ᓄᑕᕋᓛᕋ ᑎᒍᔪᒪᓇᔭᖅᑕᕋ ᐃᒪᐃᑦᑑᓕᖅᐸᑦ:

☐ ᑎᒍᑲᐅᑎᒋᔪᒪᓇᔭᖅᑕᕋ

☐ ᓂᒥᖅᑕᐅᓯᒪᓕᖅᐸᑦ

☐ ᐅᐊᓴᖅᑕᐅᕖᓂᒃᓯᒪᓕᖅᐸᑦ

☐ ᑭᓯᓕᒫᑦ ᑭᓯᐊᓂ ᐱᔭᕇᖅᑕᐅᒃᐸᑕ ᐃᑲᕐᕋᒐᓴᖕᓄᑦ

☐ ᖃᐅᒃᐸᑦ

18. ᐱᓇᓱᐊᕈᓰᒃ ᒪᒃᑰᒃ ᐊᓂᒍᖅᓯᒪᔪᓂ, ᓇᔾᔨᓂᕐᒪ ᒥᒃᓵᓅᑦ ᐅᖕᖓᓘᓐᓃᑦ ᓄᑕᕋᓛᑉ ᒥᒃᓵᓄᑦ ᓯᓐᓇᒃᑑᒪᖃᑦᑕᖅᓯᒪᔪᖓ:

☐ ᓯᓐᓇᒃᑐᕆᓯᒪᓐᖏᑕᕋ

☐ ᐃᓛᓐᓂᓚᐅᓱᖕᖓᖅ

☐ ᓯᓐᓇᒃᑐᕆᓚᐅᖅᑲᑦᑕᖅᑕᕋ

☐ ᓯᓐᓇᒃᑐᕆᒐᔪᒃᑕᕋ

☐ ᐅᓐᓄᐊᑕᒫᐸᓗᑦᑎᐊᖅ

19. ᐱᓇᓱᐊᕈᓰᒃ ᒪᒃᑰᒃ ᐊᓂᒍᖅᓯᒪᔪᓂ, ᐅᔾᔨᕆᔾᔫᒥᖅᑲᑦᑕᖅᓯᒪᔪᖓ ᐊᒃᑐᐊᓂᓐᓂᒃ, ᐊᒃᓴᓕᒃᓯᓂᕐᓘᓐᓃᑦ ᓈᓐᓂᒃ ᓇᔾᔨᐊᒪ ᐃᓂᒋᔭᖓᓂᒃ:

☐ ᐅᑦᑐᖅ ᐊᒥᓱᐊᖅᑕᖅᑯᒍ

☐ ᐅᑦᑐᖅ ᐊᑕᐅᓯᐊᖅᑯᒍ

☐ ᐃᓛᓐᓂᓚᐅᓱᖕᖓᖅ

☐ ᐊᑕᐅᓯᐊᑐᐃᓐᓇᖅᑯᖕᖓ

☐ ᐊᒃᑐᐊᖅᑲᑦᑕᓐᖏᑕᕋ

ᖁᔭᓐᓇᒦᒃ!

Appendix G: Revised Interview guide- English

Revised Interview Questions

1. Can you tell me how you felt when you found out you were pregnant?
   Prompt: excited, nervous, upset
2. Is this your first baby?
3. Did you smoke in your other pregnancies (if no to #2)?
4. Are you keeping your baby or adopting him/her out?
5. How many kids do you have at home?

   Prompt: Do you have help with your kids?
6. How old were you when you first tried cigarettes?
7. How were you introduced to smoking?
8. How old were you when you started smoking everyday?
9. How does smoking fit in your life? (what role does it play?)
10. Have you ever tried to quit?

    If yes: can you tell me about that?
11. How did you quit? Where did you learn how to quit?
12. If no to question 10: What steps would you take if you wanted to quit smoking?
13. When you found out you were pregnant, did that change your smoking habits?
14. How many cigarettes did you smoke everyday before you were pregnant? After you were pregnant?
15.
16. I'd like to understand the influences that kept you smoking during your pregnancy, can you tell me about them?
17.
18. Can you tell me what you think smoking does to your baby?
19. Can you tell me what you think smoking does to you?

    Prompt: do you know anyone who's had lung cancer or other health issue related to smoking?
20. Did you have prenatal care?
21. Did anyone tell you to quit smoking while you were pregnant?

    Prompt: family, doctors or nurses
22. How do your friends influence you in regards to your smoking?

23. How does your family influence you in regards to your smoking?
24. What about TV, radio, doctors nurses etc. How do they influence you in regards to your smoking?
25. What makes you think about quitting smoking?
26. Imagine I told you that had to quit smoking today. What could I do to help you make it easier?
27. What would be the hardest part about quitting for you? Prompt for barriers
28. Imagine that you went back to your community today and you decided to quit smoking. How would you do it? Do you know where you can go for help?
29. Do you think being at home in your community makes it easier or harder to continue/quit smoking?
30. I've learned that cigarettes are expensive up north. Does that make any differences in your smoking?
    What if the price went up to $25 a pack?
31. Is there anything else you'd like to share with me that might be useful to help other pregnant women quit smoking or to understand why it's so difficult to quit?

Thank you.

Appendix H: Health care practitioner questionnaire- English

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Smoking and Cessation among Pregnant Women in Nunavut

Health Practitioner Survey

All information obtained during the study will be held in strict confidence. No names or identifying information will be used in any publication or presentations. Your survey results will have only an identifying number on them. Your personal information and other study results will be stored in a locked filing cabinet, and no one except the principal investigator, co-investigators and study-coordinator will see your answers and/or study results.

There are no right or wrong answers; we ask only that you answer each question as honestly and accurately as you ca.

If you have any questions or concerns about any of the questions, please do not hesitate to contact [redacted]

UOHI Protocol #:_____

Participant ID:_____

Date:_____

Date:_____

Subject ID:_____

Completed By:_____

Demographic Information

Please check ☑ your current occupation:

☐ M.D.	☐ R.N	☐ Nurse Practitioner	☐ Other:_____

Age:_____

How long have you been practicing as a health care professional?_____

How long have you been working in the Baffin Island region?_____

1. At the present time, do you smoke cigarettes?	☐ Yes	☐ No
1a. If no: Have you ever smoked cigarettes daily?	☐ Yes	☐ No

1b. (If yes to 1a): When did you stop smoking (month and year)?_____

2. Did you receive any assistance to help you quit smoking?

2a. If yes, what kind of assistance did you receive?

_____

_____

Questions 3-8 are for current smokers only

3. In the past 30 days, did you smoke every day?	☐ Yes	☐ No

4. On those days that you've smoked, how many cigarettes did you usually smoke? ____

5. How soon after waking up do you smoke your first cigarette?_____(minutes)

6. Are you seriously considering quitting within the next 6months?	☐ Yes	☐ No
7. Are you seriously considering quitting within the next 30 days?	☐ Yes	☐ No

8. In the past year, how many times did you stop smoking for at least 24 hours because you were trying to quit? _____

9. Is smoking allowed in your home?_____

10. How many people smoke cigarettes inside your home everyday or almost everyday? _____ (include all family members and visitors)

11. Are you exposed to smoking in your place of work every day or almost every day?_____ ☐ Yes ☐ No

Best Practice Questions

To answer these questions, please reflect on the most recent visit you had with a pregnant woman in your office or in a community health centre.

Within the context of your last encounter with a pregnant woman:

1. Did you ask her about her smoking status? ☐ Yes ☐ No

Please answer the following questions based on your most recent encounter with a pregnant woman who has been identified as a smoker.

3. Did you advise this patient to quit smoking? ☐ Yes ☐ No

If no, why not?:_____

4. Did you assess her readiness to quit smoking? ☐ Yes ☐ No

If no, why not?:_____

5. Did you assist her to quit smoking by using the following strategies?:

	Yes	No
Providing counseling (group or individual)	☐	☐
Offering nicotine replacement therapy (patch, gum, inhaler)	☐	☐
Recommending harm reduction (ie. Reducing number of cigarettes)	☐	☐
Prescribed pharmacotherapy: Zyban Buproprin Verenicline (Champix) Other:_____	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐
Provided self-help guides/kits	☐	☐
Other:_____	☐	☐

☐ Yes ☐ No

6. Did you arrange any follow up? (i.e.Referral or community resources)

_____
_____

Please respond to these questions by reflecting on the times you were caring for pregnant women who have identified themselves as smokers.

7. What smoking cessation resources do you currently have, or exist in the community for pregnant women? (please specify what languages these resources are offered).

_____
_____
_____

8. Describe your approach to smoking cessation among pregnant smokers, if any?
(Preference for a smoking cessation method or combination of therapies; follow up; etc.)

_____
_____
_____
_____

9. Do you discuss the health impacts of smoking on the mother, the fetus or both?

_____
_____
_____

10. What personal and/or social circumstances, if any, do you consider when providing assistance to pregnant smokers?
(Influence of partner, family, friends; housing; access to health care etc)

_____
_____
_____

11. In your opinion, what are the most significant barriers to quitting for pregnant smokers in the community?

_____
_____
_____

12. What do you think are the main advantages and disadvantages of women quitting smoking during pregnancy?

_____
_____
_____

13. What do you think would facilitate pregnant smokers to quit?

_____
_____
_____

14. Who do you think has the biggest influence in a pregnant woman's decision to quit smoking?

_____
_____

Thank you!

Appendix I: Recruitment script for health care providers- English

Smoking and Cessation among Pregnant Women in Nunavut: Telephone Script for Health Care Providers

Overview of steps:

1. Contact participants via telephone.
2. Establish if health care professional is interested in the study.
3. Send research summary and participant information sheet by email (or read over telephone).
4. Set up mutually convenient time to go over the study details (if applicable).
5. Do the interview.
6. Thank participant and address any questions/concerns.

1-Introduction

Hello, my name is _____ and I am calling you from the University of Ottawa Heart Institute to discuss a study we're conducting in the Baffin Region in regards to smoking among pregnant women. Would you be interested in discussing this project in further detail?

If no: Would you be interested in discussing this project at another time?
If yes: Arrange for a mutually convenient time to call back.
If no: thank the health care provider for their time.

2-Recruitment
If yes:
Great, we are currently doing a project entitled "smoking and cessation among pregnant women in the Baffin region of Nunavut", which is a joint project between the University of Ottawa Heart Institute & Ottawa Health Services Network Inc. This project has been approved by the University of Ottawa Heart Institute Human Research Ethics Board, as well as the Nunavut Research Institute.

This part of the project is to interview health care professionals to assess their views on smoking cessation and the available resources. I would like to interview 13 health care professionals by telephone (approximate time is 15-20 minutes) to discuss smoking cessation among pregnant women. Would you be interested in participating in this study?

If no: thank them for their time

If yes:
I'd like to arrange a time to go over the patient information sheet and do the survey. Can we proceed now or should I call back another time?

Set up a mutually convenient time:_____ or continue by phone as per the participant's request.

3-Review Participant Information Sheet & questionnaire
[go over participant information sheet]

Reiterate the following:

The information you provide during your interviews will be anonymous so you cannot be identified, and we will protect the privacy of you and your community. We will be recording the information obtained in the interviews by taking written notes.

Do you agree to participate in this research study?

If yes: Obtain informed consent and indicate it on the Patient Information Sheet that verbal consent was given, with the date and your signature. Send a copy to them by mail to their respective address (work or home, as per their preference).

If no: thank them for their time.

4-Interview
Proceed with survey and record responses on the questionnaire.

5-Wrap up and thank you.
Take the time to discuss any questions or concerns the participant may have.
Thank them for their participation.

Appendix J: Letter of support from the Minister of Health & Social Services, Nunavut

[redacted]

June 19th, 2008

[redacted]

The Department of Health & Social Services recognizes that the rates of smoking in pregnant women in Nunavut are among the highest in Canada and that this is associated with poorer pregnancy outcomes. Research on effective interventions to reduce this high rate of smoking has been identified as a priority area for health promotion by the department.
I support the research project "Smoking and cessation among pregnant women in Nunavut" and give the researchers permission to contact Health & Social Services health care providers to request their participation in this important study.

Yours sincerely,

[redacted]

Appendix K: Consent form for questionnaire participation- English

Participant Information Sheet & Consent Form
Smoking and cessation among pregnant women in Nunavut
Questionnaire for Pregnant Women
HI Protocol # 2008281-01H

Investigators:

Principal Investigator [redacted]
University of Ottawa Heart Institute

Study Coordinator/Recruiter: [redacted]
Researcher: [redacted]

Co- Investigators: [redacted]

Please read this Participant Information Sheet and Consent Form carefully and ask questions as you like before deciding whether to participate.

Introduction:

You have been asked to participate in a research project entitled: Smoking and cessation among pregnant women in Nunavut. The purpose of this project is gain a better understanding of smoking behaviors and the process of cessation among pregnant women. Your participation in the study will last approximately 30 minutes, during which time you will be asked to answer questions in a survey. There will be a total of 50 participants recruited into the study from Iqaluit.

Procedure:
A recent review of smoking cessation interventions for pregnant women revealed that there were very few effective methods to help pregnant women quit smoking Your participation in this study will help address this issue.

Participating in the study basically involves answering questions of a questionnaire during a face-to-face interview. You will be asked to complete 17 page survey asking about your demographic information and smoking history. This should take about 30 minutes to complete, but you can take as much time as you need.

The questionnaires will be conducted in a face-to-face interview, and your responses will be recorded. You may participate in these interviews in English, or your own language.

The information you provide during your interviews will be anonymous so you cannot be identified, and we will protect the privacy of you and your community. We will be recording the information obtained by taking written notes and marking your responses directly on the questionnaire.

Risks and Discomforts of Participation:
The time it takes to participate in completing the questionnaire is approximately 1 hour but you may take as long as you need. Some of the questions may be sensitive, and could make you feel uncomfortable. You may choose not to answer these questions, or stop the interview.

Benefits of Participation:
There are no known benefits for participating in this project, although the results of this study could lead to more effective smoking cessation strategies for the Inuit community. You will receive smoking cessation materials and resources if you would like them, whether you participate in the study or not.

Compensation /Remuneration:
In the event of research related side-effects or injury, you will be provided with appropriate medical treatment. By participating in the study and signing the consent form, you are not waiving your legal rights which may be available to you. You will receive a gift basket of baby supplies (e.g. baby clothing, diapers; approximate value = $25) at the end of the interview.

Health Information Privacy and Confidentiality:
As part of this research protocol, the Principal Investigator and their clinical research staff will review your health records. Your relevant records may also be reviewed by

Health Canada, and the Heart Institute Human Research Ethics Board under the supervision of the Investigator.

You and your health records will not be identifiable in publications or presentations. No identifying information will leave the hospital, and your initials will not be used to identify you. Your health information will be kept confidential, unless release is required by law.

All information obtained during the study will be held in strict confidence. You will be revealing personal information about yourself; however this information will remain confidential. All data gathered including responses to questionnaires, and transcripts of interviews will be kept in a locked filing cabinet in our research office. All your personal information will be coded, then it will be stripped of identifiers, and you will be assigned a research ID number. This information will be kept in a secure electronic database that is password protected and only accessible by the Investigators, co-investigators, researcher and study-coordinator. All notes, audio recordings, and transcriptions will be kept in a locked secure location and will not leave the Heart Institute. The data, including the questionnaires, audio recordings, transcriptions and electronic database, will be destroyed fifteen years following their publication.

Ethics:

The Human Research Ethics Board (HREB) of the University of Ottawa Heart Institute has approved this protocol. The HREB considers the ethical aspects of all Heart Institute research projects involving human subjects. If you wish, you may talk to the Chair, Human Research Ethics Board through the Secretariat at [redacted].
This study has also been granted a Research License through the Nunavut Research Institute, who have reviewed and approved the questions we are asking you. We will also be sharing a summary of what we learn in this study with you and your community. You may choose to have this summary in written or audio form.

Participation:

Your participation **in this research study is completely voluntary.** You may withdraw from the study at any time or refuse to answer questions that make you feel uncomfortable.

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DE L'UNIVERSITÉ D'OTTAWA

Smoking and cessation among pregnant women in Nunavut
HI Protocol # 2008281-01H

I understand that I am being asked to participate in a research study about *smoking cessation among pregnant women in Nunavut.* This study has been explained to me by _____. I have been fully informed of the objectives of the project being conducted. I understand these objectives and consent to being interviewed for the project. I understand that steps will be undertaken to ensure that this interview will remain confidential. I also understand that if I wish to withdraw from the study, I may do so without any repercussions.

I have read and understood this 4 page Participant Information Sheet and Consent Form. All my questions at this time have been answered to my satisfaction. If I or any of my family members have any further questions about this study, we may contact the Principal Investigator, [redacted]

I will receive a signed copy of this Participant Information Sheet and Consent Form.
I voluntarily agree to participate in this study.

_____ Participant's Name (Please Print)	
_____ Participant's Signature	_____ Date
_____ Name of Investigator/Delegate (Please Print)	
_____ Signature of Investigator/Delegate	_____ Date
_____ Signature of Parent or Guardian *Only if participant is under 18 years of age*	_____ Date

Appendix L: Consent form for questionnaire participation- Inuktitut

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ᐊᐱᖅᓱᖅᑕᓄᑦ ᑐᓴᐅᒪᔾᔪᑏᑦ ᐊᖏᕐᓂᕐᒧᓪᓗ ᓇᓗᓇᐃᖅᓯᔾᔪᑏᑦ
ᓄᓇᕗᒻᒥ ᐊᕐᓇᐃᑦ ᓱᖓᐃᔪᑦ ᓯᒃᑲᓕᐊᖅᑐᖃᑦᑕᕐᓂᖏᑦ ᓄᖅᑲᖅᐸᓪᓕᐊᓂᖏᓪᓗ
ᐊᕐᓇᓄᑦ ᓱᖓᐃᔭᓄᑦ ᐊᐱᖅᑯᑏᑦ
HI ᒪᓕᒐᖅ ᓈᓴᐅᑎᓕᒃ 2008281-01H

ᖃᐅᔨᓴᐃᔩᑦ:

ᖃᐅᔨᓴᐃᔩᓪᓗᐊᑕᖅ: [redacted]

ᖃᐅᔨᓴᖅᑕᒥᒃ ᑐᑭᒧᐊᒃᑎᑦᑎᔨ/ᕿᓂᖅᑎ: [redacted]

ᖃᐅᔨᓴᐃᖅᑕᐅᔪᑦ: [redacted]

ᐅᑯᐊ ᑐᓴᐅᒪᔾᔪᑏᑦ ᐊᖏᕐᓂᕐᒧᓪᓗ ᓇᓗᓇᐃᖅᓯᔾᔪᑏᑦ ᐅᕝᑲᓖᑦᑎᐊᕐᓂᐊᖅᐸᑎᑦ ᐊᒻᒪᓗ ᐊᐱᖅᑯᑎᒃᓴᖃᕈᕕᑦ ᐊᐱᖅᑯᑎᒋᓂᐊᖅᐸᑎᑦ ᐃᓚᐅᔪᒪᖕᒪᖕᒫᖅᐱᑦ ᐃᓱᒪᓕᐅᓚᐅᓐᖏᓐᓂᕐᓂ.

ᐱᒋᐊᕐᓂᖓ:
ᖃᐅᔨᓴᐃᓂᕈᔪᒪᔭᑦᑎᓐᓄᑦ ᐃᓚᐅᔪᒪᖕᒪᖕᒫᖅᐱᑦ ᐊᐱᕈᔭᐅᓯᒪᔪᑎᑦ, ᑖᓐᓇ ᖃᐅᔨᓴᐃᓂᕈᔪᒪᔭᕗᑦ ᑕᐃᒍᓯᖅᑲᖅᓱᓂ ᐃᒫᒃ: ᓄᓇᕗᒻᒥ ᐊᕐᓇᐃᑦ ᓱᖓᐃᔪᑦ ᓯᒃᑲᓕᐊᖅᑐᖃᑦᑕᕐᓂᖏᑦ ᓄᖅᑲᖅᐸᓪᓕᐊᓂᖏᓪᓗ. ᖃᐅᔨᓴᐃᓂᖃᕈᒪᔪᒍᑦ ᑐᑭᓯᒃᑲᓐᓂᕐᓂᐊᕐᒐᑦᑕ ᓱᖓᐃᔪᑦ ᖃᓄᑎᒋ ᓯᒃᑲᓕᐊᖅᑐᖃᑦᑕᕐᒪᖔᖏᓐᓂᒃ ᖃᓄᑎᒋᓗ ᓄᖅᑲᖅᐸᓪᓕᐊᖕᒪᖔᖏᑦ. ᖃᐅᔨᓴᐃᓂᑦᑎᓐᓄᑦ ᐃᓚᐅᔪᒪᒍᕕᑦ ᐊᐱᖅᓱᖅᑕᐅᓂᕆᓂᐊᖅᑕᐃᑦ ᐃᑲᕋᐅᑉ ᓇᑉᐸᓪᓕᐊᖓᓂᒃ ᑕᑭᓂᖃᕐᓂᐊᖅᑐᖅ, ᑕᒪᓐᓇᓗ ᐊᑐᖅᑎᓪᓗᒍ ᖃᐅᔨᓴᐃᓂᑦᑕ ᒥᒃᓵᓐᖓᔪᓂᒃ ᐊᐱᖅᓱᖅᑕᐅᑲᑕᖕᓂᐊᖅᓱᑎᑦ. ᑲᑎᓕᒫᕐᓗᒋᑦ 50-ᖏᓐᓃᑦᑐᑦ ᖃᐅᔨᓴᖅᑕᐅᖃᑕᐅᓂᐊᖅᑐᑦ ᐃᖃᓗᖕᓂ.

ᐱᕙᓪᓕᐊᔾᔪᓯᖃᓂᐊᖅᑕᖓ:
ᒫᓇᕈᔫᓚᐅᖅᑐᖅ ᖃᐅᔨᓴᐃᓂᖅᑲᖅᑎᓪᓗᑕ ᓱᖓᐃᔪᑦ ᓯᒃᑲᓕᐊᒧᑦ ᓄᖅᑲᖅᐸᓪᓕᐊᓂᖏᓐᓂᒃ ᑐᑭᓯᓚᐅᖅᑐᒧᑦ ᓱᖓᐃᔪᑦ ᓄᖅᑲᕋᔫᑎᒃᓴᓂᒃ ᐊᑐᐃᓐᓇᖅᑲᕐᕕᐅᓐᖏᑐᐊᕐᓂᖏᓐᓂᒃ. ᑕᒪᑐᒪᓂ ᖃᐅᔨᓴᕐᓂᑦᑎᓐᓂ ᐃᓚᐅᔫᕕᑦ ᑕᒪᓐᓇ ᖃᓄᖅᑑᕈᑎᒋᔭᐅᒃᑲᓐᓂᕈᓐᓇᕐᓂᐊᖅᑐᖅ.

ᖃᐅᔨᓴᐃᓂᕐᒥ ᐃᓚᐅᓗᓂ ᐊᐱᖅᓱᖅᑐᖅ ᑕᐅᑐᑦᓚᓇᒡᓗᒍ ᑭᐅᑦᑕᖅᑲᑦᑕᕐᓂᐊᖅᑕᐃᑦ ᐊᐱᕆᔫᖕᒐᑦ. 17-ᓂᒃ ᒪᒃᐱᒐᓕᖕᓂᒃ ᑕᑕᑎᕆᔭᕆᐊᖃᕐᓂᐊᕐᒥᔪᑎᑦ ᐃᓕᖕᓄᑦ ᑐᕌᖓᔪᓂᒃ ᐊᐱᖅᓱᖅᑐᓂᒃ ᐊᒻᒪᓗ ᓯᒃᑲᓕᐊᖅᑐᕈᓯᕆᓚᐅᖅᓯᒪᔭᕐᓂᒃ ᐱᔾᔪᑎᓕᖕᓂᒃ. ᐃᑲᕋᖅ ᓇᑉᐸᖓᓄᑦ ᐊᑯᓂᐅᑎᒋᓂᐊᖅᑐᖅ ᐱᔭᕇᕋᓱᒡᓗᒍ, ᑭᓱᐊᓂᓕ ᑐᐊᕕᖅᓱᖅᑕᐅᔾᔮᖏᑦᑎᐊᖅᑐᑎᑦ ᑕᒪᓐᓇ ᐊᑐᖅᑎᓪᓗᒍ.

ᐊᐱᖅᓱᖅᑕᐅᑎᓪᓗᑎᑦ ᐊᐱᖅᓱᖅᑎ ᑕᐅᑐᓪᓚᓇᖕᓂᐊᖅᑕᐃᑦ, ᐊᒻᒪᓗ ᑭᒡᒍᑎᑎᑦ ᓂᐱᓕᐅᖅᑕᐅᕙᓪᓕᐊᓂᐊᖅᓱᑎᑦ. ᐊᐱᖅᓱᖅᑕᐅᔭᓇᖅᑐᑎᑦ ᖃᓪᓗᓇᐅᔭᖅᑐᒃᑯᑦ ᐅᕝᕙᓘᓐᓃᑦ ᐃᓅᑦ ᐅᖃᐅᓯᕐᖓᐅᑎᖓᒍᑦ.

ᐊᐱᖅᓱᖅᑕᐅᑎᓪᓗᑎᑦ ᑭᐅᕙᓪᓕᐊᔭᑎᑦ ᐊᑎᓕᖅᑕᐅᓯᒪᔾᔮᖏᑦᑐᑦ ᕿᓇᐅᖕᒪᖔᖅᐱᑦ ᖃᐅᔨᒪᔭᐅᔾᔮᖏᓐᓇᕖᑦ ᐊᒻᒪᓗ ᐃᓕᖕᓄᑦ ᓄᓇᓕᖕᓄᓪᓗ ᓴᐳᒻᒥᐅᓯᖅᓯᒪᐅᑕᐅᔪᓇᖅᓱᓂ. ᐊᐱᖅᓱᖅᑎᓪᓗᑕ ᑭᒡᒍᑎᕆᕙᓪᓕᐊᔭᐃᑦ

ᑎᑎᕋᖅᑕᐅᕙᓪᓕᐊᓂᐊᖅᑐᑦ ᐊᒻᒪᓗ ᑭᐅᔾᔪᑎᒋᕙᓪᓕᐊᔭᑎᑦ ᑕᕝᕗᖓ ᑕᑕᑎᖅᑕᐅᕙᓪᓕᐊᔪᒧᑦ ᑎᑎᕋᖅᑕᐅᕙᓪᓕᐊᖃᑦᑕᕐᓂᐊᖅᓱᑎᒃ.

ᐊᐱᖅᓱᖅᑕᐅᓗᓂ ᐅᓗᕆᐊᓇᐅᑕᐅᔪᓐᓇᖅᑐᑦ ᐃᓱᕐᕆᔮᙳᕆᔾᔪᑕᐅᔪᓐᓇᖅᑐᓪᓗ:
ᐊᐱᖅᓱᖅᑕᐅᓂᐊᖅᑐᑎᑦ ᐃᑲᕐᕋᓪᓗᐊᕐᒥᒃ ᐊᑯᓂᐅᑎᒋᔪᒥᒃ ᐃᓱᓕᓐᓂᐊᕐᓂᖅᓴᓄᑦ ᑎᑭᓪᓗᒍ, ᑭᓱᐊᓂᓕ ᑐᐊᕋᖅᓱᖅᑕᐅᔾᔮᙳᕆᑦᑎᐊᕐᓂᕐᓂᒃ ᖃᐅᔨᒪᓂᐊᖅᐳᑎᑦ. ᐃᓚᖏᑦ ᐊᐱᖅᑯᑏᑦ ᐃᓱᕐᕆᔮᙳᕆᔾᔪᑎᒋᑐᐃᓐᓇᕆᐊᖃᖅᑕᑎᑦ, ᐃᓕᖕᓄᓪᓚᕆᒃ ᑐᕌᖓᓂᖏᑦ ᐱᔾᔪᑎᒋᓪᓗᒋᑦ. ᑕᐃᒪᐃᑦᑐᑦ ᐊᐱᖅᑯᑏᑦ ᑭᐅᒋᐊᑐᙳᕆᑕᑎᑦ, ᐅᕝᕙᓘᓐᓃᑦ ᐊᐱᖅᓱᖅᑕᐅᓃᑦ ᓄᖅᑲᖅᑎᑦᑎᐊᒻᒪᕆᒍᓐᓇᖅᓱᒍ.

ᐃᓚᐅᓂᕆᔭᕐᓄᑦ ᐃᑲᔫᑕᐅᔪᓐᓇᖅᑐᑦ:
ᑐᑭᓯᓖᓂᙳᕆᑦᑐᒧᑦ ᖃᓄᖅ ᐊᐱᖅᓱᖅᑕᐅᖃᑕᐅᓗᓂ ᐃᑲᔫᑎᖃᕐᒪᖔᖓ, ᑭᓱᐊᓂᓕ ᑕᐃᒪᐃᒃᑲᓗᐊᖅᑎᓪᓗᒍ, ᖃᐅᔨᓴᐃᓂᑦᑎᓐᓂ ᑐᑭᓯᔭᕗᑦ ᐊᖅᑯᑎᒋᓗᑎᒃᑯᑦ ᓯᒡᒐᓕᐊᒧᑦ ᓄᖅᑲᕋᓱᙵᓂᕐᒧᑦ ᑐᕌᖓᔪᑦ ᐊᑑᑎᖃᑦᑎᐊᕐᓂᖅᓴᐃᑦ ᓴᖅᑭᑕᐅᔪᓐᓇᖅᑐᑦ ᐃᓄᐃᑦ ᓄᓇᓕᕐᑯᑎᙱᓐᓂ. ᓯᒡᒐᓕᐊᒧᑦ ᓄᖅᑲᕋᓱᒍᒪᐅᑎᓄᑦ ᑐᕌᖓᔪᓂᒃ ᑐᓴᐅᒪᔾᔪᑎᓂᒃ ᐱᑎᑕᐅᓂᐊᖅᑐᑎᑦ ᐊᒻᒪᓗ ᐃᑲᔫᑕᐅᒃᑲᓐᓂᕈᓐᓇᖅᑐᓂᒃ ᑕᐃᒪᐃᑦᑐᓂᒃ ᐱᔪᒪᒍᕙᑦ, ᖃᐅᔨᓴᐃᓂᑦᑎᓐᓄᑦ ᐃᓚᐅᓂᐊᕋᓗᐊᕈᕙᑦ ᐃᓚᐅᔾᔮᙳᕆᒃᑲᓗᐊᕐᒪᖔᖅᐱᓪᓗ.

ᐊᑭᓕᖅᑕᐅᓂᐊᕐᓂᖅ/ᑮᓇᐅᔭᖅᑖᕐᓂᐊᕐᓂᖅ:
ᖃᐅᔨᓴᖅᑕᐅᓂᖅᑲᖅᑎᓪᓗᑎᑦ ᓴᓂᐊᒍᑦ ᐃᓗᐊᙳᕆᑦᑐᒥᒃ ᐋᓂᕐᓂᕐᒥᒡᓘᓐᓃᑦ ᓴᖅᑭᑦᑐᖅᑲᖅᐸᑦ, ᐃᓅᓕᓴᐃᔨᓄᑦ ᑕᐃᒪᐃᑦᑐᓕᕆᔪᓐᓇᖅᑐᓄᑦ ᑲᒪᖏᔭᐅᓂᐊᖅᑐᑎᑦ. ᖃᐅᔨᓴᐃᓂᑦᑎᓐᓂ ᐃᓚᐅᒍᕙᑦ ᐊᒻᒪᓗ ᐊᖏᕐᓂᕐᒧᑦ ᑐᕋᖓᔪᓂᒃ ᐊᑎᓕᐅᕆᒍᕙᑦ, ᒪᓕᒐᖅᑎᒍᑦ ᐱᔪᓐᓇᐅᑎᑎᑦ ᓴᒃᑯᙳᕆᑕᑎᑦ ᐃᓕᖕᓄᑦ ᐊᑐᐃᓐᓇᕈᖅᑎᑕᐅᓯᒪᔪᑦ. ᖁᔭᓐᓇᒦᕈᓯᐊᖅᑎᑕᐅᓂᐊᖅᑐᑎᑦ ᓄᑦᑕᓛᖅᓯᐅᑎᓂᒃ (ᐆᒃᑑᑎᒋᓗᒍ, ᓄᑦᑕᓛᖅᓯᐅᑏᑦ ᐊᓐᓄᕌᑦ, ᖁᐃᖅᑭᓕᓴᐃᑦ, ᑲᑎᓪᓗᒋᑦ ᐊᑭᖃᓪᓗᐊᖅᑐᑦ $25.00-ᒥᒃ) ᐊᐱᖅᓱᖅᑕᐅᕚᓂᒃᑯᓇᑦ.

ᐋᓂᐊᖃᕐᓇᖏᑦᑐᓕᕆᓂᕐᒧᑦ ᑐᕌᖓᔪᑦ ᑐᓴᐅᒪᔾᔪᑏᑦ ᑲᙳᓇᖅᑑᑎᑕᐅᓂᐊᕐᓂᖏᑦ ᓴᖅᑭᑕᐅᓂᐊᙱᓐᓂᖏᓪᓗ:
ᖃᐅᔨᓴᐃᓂᐊᕐᓂᕐᒧᑦ ᒪᓕᒐᓄᑦ ᐃᓕᑭᔭᐅᖃᑕᐅᓪᓗᓂ, ᐊᐱᖅᓱᖅᑎᓪᓗᐊᑕᖅ ᐊᒻᒪᓗ ᐃᖅᑲᓇᐃᔭᖅᑎᖏᑦ ᐃᓕᖖᕕᖓᔪᑦ ᐋᓂᐊᕙᖏᒥ ᑎᑎᕋᖅᑕᐅᖃᑦᑕᖅᑐᕙᓃᑦ ᕿᒥᕐᕈᓐᑕᐅᓂᐊᖅᑐᑦ. ᐃᓕᖖᓃᖕᖓᔪᑦ ᑎᑎᖅᑲᕐᑯᑏᑦ ᕿᒥᕐᕈᓐᑕᐅᑐᐃᓐᓇᓄᐊᖅᑲᕐᒥᔪᑦ ᑲᓇᑕᒥ ᐋᓂᐊᖃᕐᓇᖏᑦᑐᓕᕆᓃᒃᑯᓐᓄᑦ, ᐊᒻᒪᓗ ᐆᒪᑎᓕᕆᓂᕐᒧᑦ ᖃᐅᔨᓴᐃᔩᑦ ᑲᑎᒪᔩᙶᓐᓄᑦ, ᑕᐅᑐᒃᑎᕆᔭᐅᓗᓂ ᖃᐅᔨᓴᖅᑎᓪᓗᐊᑕᖅ.

ᐃᓕᖕᓅᖕᖓᔪᑦ ᐊᒻᒪᓗ ᐃᓕᖕᓅᖕᖓᔪᑦ ᐋᓂᐊᖏᕐᒥ ᑎᑎᕋᖅᑕᐅᖃᑦᑕᖅᑐᑦ ᓴᖅᑭᑕᐅᔾᔮᙳᕆᑦᑐᑦ ᐅᖃᓕᒫᖑᙳᖅᑎᑕᐅᔪᓄᑦ ᐃᓄᖕᓄᑦᑑᓐᓃᑦ ᑲᑎᒪᑎᑕᐅᔪᓄᑦ. ᐃᓕᖕᓄᑦ ᓇᓗᓇᐃᖅᓯᔪᓐᓇᖅᑐᑦ ᖃᓄᐃᑦᑐᑐᐃᓐᓇᐃᑦ ᑐᓴᐅᒪᔾᔪᑏᑦ ᐋᓂᐊᖏᕐᒥᑦ ᐊᓂᑕᐅᔾᔮᙳᕆᑦᑐᑦ, ᐊᒻᒪᓗ ᐊᑎᖅᐱᑦ ᓯᕗᓪᓕᕆᑦ ᑎᑎᓚᐅᖅᑕᑎᑦ ᐃᓕᖕᓅᖓᖕᖑᕆᑦ ᓇᓗᓇᐃᖅᑕᐅᔪᓐᓇᔾᔮᙱᓪᓗᑎᒃ. ᐃᓕᖕᓅᖓᔪᑦ ᐋᓂᐊᖏᕐ ᑎᑎᕋᖅᑕᐅᖃᑦᑕᖅᑐᑦ ᑲᙳᓇᖅᑑᑎᕆᔭᐅᓂᐊᖅᑐᑦ, ᓴᖅᑭᑕᐅᓂᐊᖅᐸᑕᓗ ᑭᓱᐊᓂ ᒪᓕᒐᖅᑎᒍᑦ ᓴᖅᑭᑕᐅᔪᓐᓇᖅᓱᑎᒃ.

ᖃᐅᔨᓴᐃᓂᑦᑎᓐᓂ ᑐᓴᐅᒪᔾᔪᑎᓕᒫᑦ ᐱᔭᕗᑦ ᑲᙳᓇᖅᑑᑎᑕᐅᓪᓚᕆᖕᓂᐊᖅᑐᑦ. ᐃᓕᖕᓄᑦ ᑐᕌᖓᔪᓂᒃ ᑐᓴᐅᒪᔾᔪᑎᓂᒃ ᓴᖅᑭᑎᓂᐊᖅᑐᑎᑦ; ᑕᐃᒪᐃᒃᑲᓗᐊᖅᑎᓪᓗᒍ, ᑐᓴᐅᒪᔾᔪᑏᑦ ᐃᓕᖕᓂᙴᖅᑐᑦ ᑲᙳᓇᖅᑑᑎᑕᐅᓂᐊᖅᑐᑦ. ᐸᐃᑉᐹᓕᒫᑦ ᑲᑎᖅᓱᖅᑕᕗᑦ, ᐃᓚᓯᐅᓪᓗᒋᑦ ᑕᑕᑎᕆᐊᓕᒃᑎᒍᑦ ᑭᒡᒍᑎᑎᑦ, ᐊᒻᒪᓗ ᐊᐱᖅᓱᖅᑎᓪᓗᑕ ᓂᐱᓕᐅᖅᓯᒪᔪᑦ ᑎᑎᕋᖅᑕᐅᓂᖏᑦ ᕿᒃᑕᐅᓯᒪᔪᓄᑦ ᑐᖅᑯᐃᕙᖕᓄᐊᖅᑕᐅᓂᐊᖅᑐᑦ ᖃᐅᔨᓴᐃᕝᕙᑦᑎᓐᓂ. ᐃᓕᖕᓄᑦ ᑐᕋᖏᔪᓕᒫᑦ ᓇᓗᓇᐃᒃᑯᑦᑎᖅᑕᐅᕋᓂᒃᑯᑎᒃ ᐊᑎᓕᒫᖏᑦ ᐃᓕᖕᓄᓪᓗ ᓇᓗᓇᐃᖅᓯᔾᔪᑕᐅᔪᓐᓇᖅᑐᓕᒫᑦ ᐄᔭᖅᑕᐅᓂᐊᖅᑐᑦ, ᓇᓗᓇᐃᖅᓯᔾᔪᓪᒥᒡᓗ ᓈᓴᐅᒥᒃ ᐃᓯᕙᐅᓗᓂ. ᑕᒪᒃᑯᐊ ᑐᓴᐅᒪᔾᔪᑏᑦ ᖃᕆᓴᐅᔭᒃᑯᑦ ᐃᓱᖅᑕᐅᔪᓐᓇᙳᕆᑦᑐᓄᑦ ᐃᓕᐅᖅᑲᖅᑕᐅᓂᐊᖅᑐᑦ ᐊᒻᒪᓗ ᐃᓯᕈᓐᓇᐅᑎᖅᑲᕐᓗᓂ ᑭᓱᐊᓂ ᒪᑐᐃᖅᑕᐅᔪᓄᐊᖅᑕᐅᓂᐊᖅᑐᑦ, ᑖᒃᑯᐊᓗ ᖃᐅᔨᓴᐃᔩᓄᑦ, ᐃᑲᔪᖅᑎᖏᓐᓄᑦ ᐊᒻᒪᓗ ᖃᐅᔨᓴᐃᓂᕐᒧᑦ ᑐᑭᒧᐊᒃᑎᐅᑉ ᑕᑯᔪᓐᓇᕐᓂᑦ. ᐊᓪᓚᒧᑦ ᑎᑎᕋᖅᑕᐅᔪᕕᓂᓕᒫᑦ, ᓂᐱᓕᐊᕕᓃᑦ ᐊᒻᒪᓗ ᓂᐱᓕᐊᕕᓂᑦ ᑎᑎᕋᖅᑕᐅᓯᒪᔪᑦ ᕿᒃᑕᐅᓯᒪᓂᐊᖅᑐᑦ ᐊᒻᒪᓗ ᐆᒪᑎᓕᕆᓂᕐᒧᑦ ᖃᐅᔨᓴᐃᕝᕕᖕᒥᑦ ᐊᓂᑕᐅᔾᔮᙱᓐᓂᐊᖅᑐᑎᒃ. ᐸᐃᑉᐹᓕᒫᑦ, ᐃᓚᓕᐅᖅᓱᑎᑦ ᐊᐱᖅᑯᑏᑦ, ᓂᐱᓕᐊᕕᓃᑦ, ᐊᐱᖅᓱᖅᑎᓪᓗᑕ ᓂᐱᓕᐅᖅᓯᒪᔪᑦ ᑎᑎᕋᖅᑕᐅᓂᑯᕕᓃᑦ ᐃᒋᑕᐅᓂᐊᖅᑐᑦ 15 ᐊᕐᕌᒍᑦ ᐊᓂᒍᖅᐸᑕ ᑎᑎᖅᑲᓪᓚᓇᖑᖅᑎᑕᐅᓚᐅᖅᑎᓪᓗᒋᑦ.

ᐅᒃᐱᕆᔭᑦ ᑐᓐᖓᕕᒋᔭᐅᔪᑦ:
ᖃᐅᔨᓴᐃᓂᕐᒧᑦ ᐅᒃᐱᕆᔭᓂᒃ ᑐᓐᖓᕕᒋᔭᐅᔪᓄᑦ ᑲᑎᒪᔩᑦ ᐋᑐᕝ ᓯᓚᑦᑐᖅᓴᕐᕕᐟᔪᐊᖓᓐᓂ ᐆᒪᑎᓕᕆᓂᕐᒥᒃ ᖃᐅᔨᓴᐃᕝᕕᖕᒥ ᐅᑯᓂᖓ ᒪᓕᒐᓂᒃ ᐊᖏᖅᓯᓯᒪᔪᑦ. ᑖᒃᑯᐊ ᖃᐅᔨᓴᐃᓂᕐᒧᑦ ᐅᒃᐱᕆᔭᓂᒃ ᑐᓐᖓᕕᒋᔭᐅᔪᓄᑦ ᑲᑎᒪᔩᑦ ᐅᒃᐱᕆᔭᓂᒃ ᑐᓐᖓᕕᒋᔭᐅᔪᓂᒃ ᐊᑐᖅᑎᑦᑎᔪᐃᓇᐅᖃᑦᑕᖅᑐᑦ ᐃᓄᖕᓂᒃ ᖃᓄᒍᐃᓇᖅ ᖃᐅᔨᓴᐃᓕᕐᖓᒥᒃ. ᐱᔪᒪᒍᕙᑦ, ᖃᐅᔨᓴᐃᓂᕐᒧᑦ ᐅᒃᐱᕆᔭᓂᒃ ᑐᓐᖓᕕᒋᔭᐅᔪᓄᑦ ᑲᑎᒪᔩᑦ ᐃᒃᓯᕙᐅᑕᖓᑦ

ᐅᕐᑲᕐᑲᑎᒋᔪᓐᓇᖅᑕᐃᑦ [redacted].

ᑕᒪᓐᓇ ᖃᐅᔨᓴᐃᓂᖅ ᖃᐅᔨᓴᐃᔪᓐᓇᕐᓂᕐᒧᑦ ᓚᐃᓴᒑᖅᑎᑕᐅᓯᒪᔪᑦ ᐊᖅᑯᑕᐅᓪᓗᓂ ᓄᓇᕗᒻᒥ ᖃᐅᔨᓴᐃᓂᓕᕆᔩᑦ, ᐊᐱᖅᑯᑎᒋᔪᒪᔭᕗᓪᓗ ᑖᒃᑯᓄᖓ ᕿᒥᕐᕈᓇᒃᑕᐅᓯᒪᓪᓗᑎᒃ ᐊᒻᒪᓗ ᐊᖏᖅᓯᒪᓪᓗᓂᔾᔪᒃ. ᖃᐅᔨᓴᐃᓂᑦᑎᓐᓂ ᑐᑭᓯᔭᕗᑦ ᓇᐃᓈᖅᓯᒪᔪᓂᒃ ᐱᑎᑕᐅᓂᐊᖅᑐᑎᑦ ᐊᒻᒪᓗ ᓄᓇᓕᕐᑯᑏᑦ. ᑕᐃᒃᑯᐊ ᐅᓂᒃᑳᖅᑐᑦ ᓇᐃᓈᖅᓯᒪᔪᑦ ᑎᑎᕋᖅᓯᒪᔪᒃᑯᑦ ᐱᔪᓐᓇᖅᑕᑎᑦ ᐅᖃᓘᓐᓃᑦ ᓂᐱᓕᐅᖅᓯᒪᔪᒃᑯᑦ, ᓇᓕᐊᑐᐃᓐᓇᖅ ᓂᕈᐊᕐᓗᒍ ᐃᓗᐊᕆᓂᖅᓴᐃᑦ.

<u>ᐃᓚᐅᓂᐊᕐᓃᑦ</u>:

ᑖᒪᑐᒪᓂ ᖃᐅᔨᓴᐃᓂᑦᑎᓐᓂ ᐃᓚᐅᔪᒪᓃᑦ **ᐃᓱᒪᖅᓲᑎᒋᑦᑎᐊᖅᐸᐃᑦ**. ᖃᖓᑐᐃᓐᓇᖅ ᖃᐅᔨᓴᐃᓂᕐᒥ ᐲᖅᑕᐅᔪᒪᔪᓐᓇᖅᑐᑎᑦ ᐅᖃᓘᓐᓃᑦ ᐊᐱᖅᑯᑕᐅᔪᓂᒃ ᑭᐅᔪᒪᙱᒃᑯᕕᑦ ᑭᐅᒋᐊᑐᙱᑦᑐᑎᑦ ᐃᓗᕐᓇᔮᕈᑎᒋᙱᑐᐊᕈᖕᓂ.

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ᓄᓇᕗᒻᒥ ᐊᕐᓇᐃᑦ ᓯᖓᐃᔪᑦ ᓯᒻᒐᓕᐊᖅᑐᕐᑲᑦᑕᕐᓂᖏᑦ ᓄᖅᑳᖅᐸᓪᓕᐊᓂᖏᓪᓗ
HI ᒪᓕᒐᖅ ᓈᓴᐅᑎᓕᒃ 2008281-01H

ᑐᑭᓯᔪᖓ ᖃᐅᔨᓴᖅᑕᐅᓂᐊᕐᓂᕐᒧᑦ ᐃᓚᐅᔪᒪᖕᒪᖕᒫᕐᒪ ᐱᔾᔪᑎᒋᓪᓗᒍ ᓄᓇᕗᒻᒥ ᐊᕐᓇᐃᑦ ᓯᖓᐅᔪᑦ ᓯᒻᒐᓕᐊᖅᑐᕐᑲᑦᑕᕐᓂᖏᓐᓄᑦ ᓄᖅᑳᖅᐸᓪᓕᐊᓂᖏᓐᓄᓪᓗ. ᑕᒪᓐᓇ ᖃᐅᔨᓴᐃᓂᐅᓂᐊᖅᑑᑉ ᖃᓄᐃᑦᑑᓂᐊᕐᓂᖓ ᐅᖃᓐᓄᑦ ᐅᓂᒃᑳᕝᕙᐅᓯᒪᔪᖅ ᐆᒧᖓ ________. ᑐᑭᓯᑎᑕᐅᑦᑎᐊᖅᑐᖓ ᖃᓄᐃᑦᑐᓂᒃ ᑕᒪᓐᓇ ᖃᐅᔨᓴᐃᓂᖅ ᑐᕌᒐᖅᑲᕐᓂᐊᕐᒪᖕᒫᖕ ᐊᒻᒪᓗ ᐊᖏᖅᓱᖓ ᐊᐱᖅᓱᖅᑕᐅᖅᑕᐅᓂᐊᕐᓂᕐᒧᑦ. ᑐᑭᓯᔪᖓ ᑕᒪᒃᑯᐊ ᑎᑎᕋᖅᑕᐅᕙᓪᓕᐊᔪᓕᒫᑦ ᐊᐱᖅᓱᖅᑕᐅᓂᓐᓂ ᑲᖑᓇᖅᑑᑎᑕᐅᓂᐊᕐᓂᖏᓐᓂᒃ. ᑐᑭᓯᖕᒥᔪᖓ ᖃᖓᑐᐃᓐᓇᖅ ᖃᐅᔨᓴᐃᓂᕐᒥ ᐃᓚᐅᔪᒪᔪᓐᓃᕐᓂᕈᒪ, ᖃᖓᑐᐃᓐᓇᖅ ᓄᖅᑲᕈᓐᓇᖅᑐᖓ ᓇᐅᒃᑯᑐᐃᓐᓇᖅ ᐊᑭᓕᐊᖅᑕᐅᓐᖏᓪᓗᖓ.

ᐅᑯᐊ ᑎᓴᒪᑦ ᒪᒃᐱᒐᐃᑦ ᐃᓚᐅᔪᓄᑦ ᑐᓴᐅᒪᔾᔪᑏᑦ ᐊᒻᒪᓗ ᐊᐱᖅᓱᖅᑕᐅᓂᐊᕐᓂᕐᒧᑦ ᐊᖏᕈᑏᑦ ᐅᖃᓕᒫᖅᓯᒪᔾᔭᒃ ᐊᒻᒪᓗ ᑐᑭᓯᓪᓗᒋᑦ. ᐊᐱᖅᑯᑎᓕᒫᒃᑲ ᑕᒪᕐᒥᒃ ᑭᐅᔭᐅᑦᑎᐊᖅᓯᒪᓕᖅᑐᑦ. ᐅᕙᖓ, ᐅᕝᕙᓘᓐᓃᑦ ᐃᓚᒃᑲ ᑕᒪᑐᒪ ᖃᐅᔨᓴᖅᑕᐅᓂᐊᕐᓂᕐᒧᑦ ᑐᕌᖓᔪᓂᒃ ᐊᐱᖅᑯᑎᒃᓴᖃᒃᑲᓐᓂᕈᑦᑕ ᖃᖓᑐᐃᓐᓇᖅ ᖃᐅᔨᓴᐃᔨᓪᓗᐊᑕᖅ, ᓘᒃᑖᖅ ᐸᑉ ᓃᑦ ᐊᐱᕆᔪᓐᓇᖅᑕᕋ, [redacted].

ᐃᓚᐅᓂᐊᖅᑐᓄᑦ ᑐᓴᐅᒪᔾᔪᑏᑦ ᑎᑎᖅᑲᕐᑯᑎᖏᓐᓂᒃ ᐊᑎᓕᐅᖅᓯᒪᔪᓂᒃ ᐊᒻᒪᓗ ᐊᐱᖅᓱᖅᑕᐅᓂᐊᕐᓂᕐᒧᑦ ᐊᖏᕈᑎᖏᑕ ᐊᔾᔨᖏᓐᓂᒃ ᐱᓂᐊᖅᑐᖓ. ᐊᔭᐅᖅᑕᐅᓐᖏᑦᑎᐊᖅᓱᖓ ᐊᖏᖅᐳᖓ ᑕᒪᑐᒧᖓ ᖃᐅᔨᓴᐃᓂᐅᓂᐊᕐᓂᕐᒧᑦ ᐃᓚᐅᔪᒪᓪᓗᖓ.

____
ᐃᓚᐅᔩᑦ ᐊᑎᖓ (ᓴᖑᐃᐱᓗᓐᖏᓪᓗᒍ)

______________________________ ______________________
ᐃᓚᐅᔩᑉ ᐊᑎᓕᐅᕈᓯᐊ ᐅᓪᓗᖓ

____
ᖃᐅᔨᓴᐃᔨᐅᑉ/ᑎᒃᑯᐊᖅᑕᐅᓯᒪᔩᑉ ᐊᑎᖓ
((ᓴᖑᐃᐱᓗᓐᖏᓪᓗᒍ)

______________________________ ______________________
ᖃᐅᔨᓴᐃᔨᐅᑉ/ᑎᒃᑯᐊᖅᑕᐅᓯᒪᔩᑉ ᐊᑎᓕᐅᕈᓯᐊ ᐅᓪᓗᖓ

______________________________ ______________________
ᐊᖓᔪᖅᑳᖓᑕ ᐸᖅᑭᔨᖓᑕᓘᓐᓃᑦ ᐊᑎᓕᐅᕈᓯᐊ ᐅᓪᓗᖓ
ᐃᓚᐅᔪᖅ 18 ᑐᖔᓂ ᑭᓯᐊᓂ ᐊᕐᖄᒍᖅᑲᖅᐸᑦ

Appendix M: Consent form for interview participation- English

UNIVERSITY OF OTTAWA
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Participant Information Sheet & Consent Form
Smoking and cessation among pregnant women in Nunavut
Interview with Pregnant Women
HI Protocol # 2008281-01H

Investigators:

Principal Investigator: [redacted]

[redacted]
University of Ottawa Heart Institute

Study Coordinator/Recruiter: [redacted]

[redacted]

Co- Investigators: [redacted]

[redacted]

Please read this Participant Information Sheet and Consent Form carefully and ask questions as you like before deciding whether to participate.

Introduction:
You have been asked to participate in a research project entitled: Smoking and cessation among pregnant women in Nunavut. The purpose of this project is gain a better understanding of smoking and the process of cessation among pregnant women. Your participation in the study will last approximately 1 hour, during which time you will be asked to participate in two or more interviews either in person or by telephone. There will be a total of 20 participants recruited into the study from Iqaluit.

Procedure:
A recent review of smoking cessation interventions for pregnant women revealed that there were very few effective methods to help pregnant women quit smoking. Your participation in this study will help address this issue.

Participating in the study basically involves participating in two or more interviews. You will be asked several questions about your demographic information and smoking history. Each interview should take about 30 minutes to complete, but you can take as much time as you need. You may participate in these interviews over the telephone or face-to-face with the interviewer. You may participate in these interviews in English, or your own language.

The information you provide during your interviews will be anonymous so you cannot be identified, and we will protect the privacy of you and your community. We will be recording the information obtained in the interviews by taking written notes, and by an audio recorder.

Risks and Discomforts of Participation:
The time it takes to participate in each interview is approximately 30 minutes but you may take as long as you need. Some of the questions may be sensitive, and could make you feel uncomfortable. You may choose not to answer these questions, or stop the interview.

Benefits of Participation:
There are no known benefits for participating in this project, although the results of this study could lead to more effective smoking cessation strategies for the Inuit community. You will receive smoking cessation materials and resources if you would like them, whether you participate in the study or not.

Compensation /Remuneration:
In the event of research related side-effects or injury, you will be provided with appropriate medical treatment. By participating in the study and signing the consent form, you are not waiving your legal rights which may be available to you. You will receive a gift basket of baby supplies (e.g. baby clothing, diapers; approximate value = $25) at the end of the interview.

Health Information Privacy and Confidentiality:
As part of this research protocol, the Principal Investigator and their clinical research staff will review your health records. Your relevant records may also be reviewed by

Health Canada, and the Heart Institute Human Research Ethics Board under the supervision of the Investigator.

You and your health records will not be identifiable in publications or presentations. No identifying information will leave the hospital, and your initials will not be used to identify you. Your health information will be kept confidential, unless release is required by law.

All information obtained during the study will be held in strict confidence. You will be revealing personal information about yourself; however this information will remain confidential. All data gathered including responses to questionnaires, and transcripts of interviews will be kept in a locked filing cabinet in our research office. All your personal information will be coded, then it will be stripped of identifiers, and you will be assigned a research ID number. This information will be kept in a secure electronic database that is password protected and only accessible by the Investigators, co-investigators, researcher and study-coordinator. All notes, audio recordings, and transcriptions will be kept in a locked secure location and will not leave the Heart Institute. The data, including the questionnaires, audio recordings, transcriptions and electronic database, will be destroyed fifteen years following their publication.

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Ethics:

The Human Research Ethics Board (HREB) of the University of Ottawa Heart Institute has approved this protocol. The HREB considers the ethical aspects of all Heart Institute research projects involving human subjects. If you wish, you may talk to the Chair, Human Research Ethics Board through the Secretariat at [redacted]

This study has also been granted a Research License through the Nunavut Research Institute, who have reviewed and approved the questions we are asking you. We will also be sharing a summary of what we learn in this study with you and your community. You may choose to have this summary in written or audio form.

Participation:

Your participation **in this research study is completely voluntary.** You may withdraw from the study at any time or refuse to answer questions that make you feel uncomfortable.

UNIVERSITY OF OTTAWA
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Smoking and cessation among pregnant women in Nunavut
HI Protocol # 2008281-01H

Consent to Participate in Research

I understand that I am being asked to participate in a research study about *smoking cessation among pregnant women in Nunavut.* This study has been explained to me by _____. I have been fully informed of the objectives of the project being conducted. I understand these objectives and consent to being interviewed for the project. I understand that steps will be undertaken to ensure that this interview will remain confidential. I also understand that if I wish to withdraw from the study, I may do so without any repercussions. ***This information is required on participant consent form by the Nunavut Research Institute***

I have read and understood this 4 page Participant Information Sheet and Consent Form. All my questions at this time have been answered to my satisfaction. If I or any of my family members have any further questions about this study, we may contact the Principal Investigator, [redacted].

I will receive a signed copy of this Participant Information Sheet and Consent Form.
I voluntarily agree to participate in this study.

_____ Participant's Name (Please Print)	
_____ Participant's Signature	_____ Date
_____ Name of Investigator/Delegate (Please Print)	
_____ Signature of Investigator/Delegate	_____ Date
_____ Signature of Parent or Guardian *Only if participant is under 18 years of age*	_____ Date

Appendix N: Consent form for interview participation- Inuktitut

UNIVERSITY OF OTTAWA HEART INSTITUTE
INSTITUT DE CARDIOLOGIE DE L'UNIVERSITÉ D'OTTAWA

ᐊᐱᖅᓱᖅᑕᓄᑦ ᑐᓴᐅᒪᔾᔪᑏᑦ ᐊᖏᕐᓂᕐᒧᑦᑐ ᓇᑐᓇᐃᖅᓯᔾᔪᑏᑦ
ᓄᓇᕗᒻᒥ ᐊᕐᓇᐃᑦ ᓱᖑᐃᔪᑦ ᓯᒃᑲᓕᐊᖅᑐᖃᑦᑕᕐᓂᖏᑦ ᓄᖅᑲᖅᐸᓪᓕᐊᓂᖏᓪᓗ
ᐊᕐᓇᐃᑦ ᓱᖑᐃᔪᑦ ᐊᐱᖅᓱᖅᑕᐅᓂᖏᑦ
HI ᒪᓕᒐᖅ ᓈᓴᐅᑎᓕᒃ 2008281-01H

ᖃᐅᔨᓴᐃᓃᑦ:

[redacted]

[redacted]

ᐅᑯᐊ ᑐᓴᐅᒪᔾᔪᑏᑦ ᐊᖏᕐᓂᕐᒧᑦᑐ ᓇᑐᓇᐃᖅᓯᔾᔪᑏᑦ ᐅᖃᓕᒫᑦᑎᐊᕐᓂᐊᖅᐸᑎᑦ ᐊᒻᒪᓗ ᐊᐱᖅᑯᑎᒃᓴᖃᕈᕕᑦ ᐊᐱᖅᑯᑎᒋᓂᐊᖅᐸᑎᑦ ᐃᓚᐅᔪᒪᖕᒪᖔᖅᐱᑦ ᐃᓱᒪᓕᐅᓚᐅᙱᓐᓂᕐᓂ.

ᐱᒋᐊᕐᓂᖓ:
ᖃᐅᔨᓴᐃᓂᕆᔪᒪᔭᑦᑎᓐᓄᑦ ᐃᓚᐅᔪᒪᖕᒪᖔᖅᐱᑦ ᐊᐱᕆᔭᐅᓯᒪᔪᑎᑦ, ᑖᓐᓇ ᖃᐅᔨᓴᐃᓂᕆᔪᒪᔭᕗᑦ ᑕᐃᒨᓯᖃᖅᓗᓂ ᐃᒦᒃ: ᓄᓇᕗᒻᒥ ᐊᕐᓇᐃᑦ ᓱᖑᐃᔪᑦ ᓯᒃᑲᓕᐊᖅᑐᖃᑦᑕᕐᓂᖏᑦ ᓄᖅᑲᖅᐸᓪᓕᐊᓂᖏᓪᓗ. ᖃᐅᔨᓴᐃᓂᖅᑲᕈᒪᔪᒍᑦ ᑐᑭᓯᒃᑲᓐᓂᕐᓂᐊᕐᕿᑕ ᓱᖑᐃᔪᑦ ᖃᓄᑎᒋ ᓯᒃᑲᓕᐊᖅᑐᖃᑦᑕᕐᒪᖔᖏᓐᓂᒃ ᖃᓄᑎᒋᓗ ᓄᖅᑲᖅᐸᓪᓕᐊᖕᒪᖔᖏᑦ. ᖃᐅᔨᓴᐃᓂᑦᑎᓐᓄᑦ ᐃᓚᐅᔪᒪᒍᕕᑦ ᐊᐱᖅᓱᖅᑕᐅᓂᕆᓂᐊᖅᑕᐃᑦ ᐃᑲᕐᕿᓪᓗᐊᖑᓂᐊᖅᑐᖅ, ᑕᒪᓐᓇᓗ ᐊᑐᖅᑎᓪᓗᒍ ᐊᐱᕆᔭᐅᓂᐊᕐᒥᔪᑎᑦ ᐊᐱᖅᓱᖅᑕᐅᔪᓐᓇᕐᒪᖔᖅᐱᑦ ᒪᕿᐊᖅᑕᕐᓗᑎᑦ ᐅᓄᖅᑐᐃᖅᓱᒃᑲᓂᖅᑐᓂᒡᓘᓐᓃᑦ, ᐊᐱᖅᓱᖅᑐᖅ ᑕᐅᑐᒡᓗᒍ ᐅᕙᓘᓐᓃᑦ ᐅᖄᓚᐅᑎᒃᑯᑦ. ᑲᑎᓕᒫᕐᓗᒋᑦ ᐊᕙᑎᐅᓂᐊᖅᑐᑦ ᖃᐅᔨᓴᖅᑕᐅᕐᑲᑕᐅᓂᐊᖅᑐᑦ ᐃᕐᑲᓗᙵ.

ᐱᕙᓪᓕᐊᔾᔪᓯᓇᓂᐊᖅᑕᖓ:
ᒫᓐᓇᕈᓘᓚᐅᖅᑐᖅ ᖃᐅᔨᓴᐃᓂᕐᑲᖅᑎᓪᓗᑕ ᓱᖑᐃᔪᑦ ᓯᒃᑲᓕᐊᒧᑦ ᓄᖅᑲᖅᐸᓪᓕᐊᓂᖏᓐᓂᒃ ᑐᑭᓯᓚᐅᖅᑐᒍᑦ ᓱᖑᐃᔪᑦ ᓄᖅᑲᕋᓱᒋᑦᑎᒃᓴᓂᒃ ᐊᑐᐃᓐᓇᖅᑲᕝᕕᐅᓐᖏᓗᐊᕐᓂᖏᓐᓂᒃ. ᑕᒪᑐᒪᓂ ᖃᐅᔨᓴᕐᓂᑦᑎᓐᓂ ᐃᓚᐅᒍᕕᑦ ᑕᒪᓐᓇ ᖃᓄᖅᑑᕆᑎᒋᔭᐅᒃᑲᓐᓂᕈᓐᓇᕐᓂᐊᖅᑐᖅ.

ᖃᐅᔨᓴᐃᓂᕐᒥ ᐃᓚᐅᓗᓂ ᒪᕿᐊᖅᑕᕐᓗᑎᑦ ᐅᓄᖅᑐᐃᖅᓱᒃᑲᓂᕐᓗᑎᓪᓘᓐᓃᑦ ᐊᐱᖅᓱᖅᑕᐅᓂᐊᖅᑐᑎᑦ. ᐊᑕᐅᓯᐅᓐᖏᑦᑐᓂᒃ ᐊᐱᕆᔭᐅᓂᐊᖅᑐᑎᑦ ᐱᔾᔪᑎᓕᖕᓂᒃ ᐃᓕᖕᓅᖓᔪᓂᒃ ᐊᒻᒪᓗ ᐃᓅᓯᕐᓂ ᖃᓄᖅ ᓯᒃᑲᓕᐊᖅᑐᖃᑦᑕᓚᐅᖅᓯᒪᖕᒪᖔᖅᐱᑦ. ᐊᐱᖅᓱᕐᓃᑦ ᐊᑐᓂ ᐃᑲᕐᕿᐅᑉ ᓇᑉᐸᖓᓂ ᐊᑯᓂᐅᑎᒋᓂᐊᖅᑐᖅ ᐃᓱᓕᓐᓂᐊᕐᓂᖓᓄᑦ ᑎᑭᓪᓗᒍ, ᑭᓯᐊᓂᓕ ᑐᐊᕝᕕᖅᓱᖅᑕᐅᔾᔮᖓᖏᑦᑎᐊᕐᓂᕐᓂᒃ ᖃᐅᔨᒪᓂᐊᖅᐳᑎᑦ. ᐊᐱᖅᓱᖅᑕᐅᔪᓐᓇᖅᑐᑎᑦ ᐅᖃᓚᐅᑎᒃᑯᑦ ᐅᕙᓘᓐᓃᑦ ᐊᐱᖅᓱᖅᑎᐅᑉ ᓵᖓᓂ. ᐊᐱᖅᓱᖅᑕᐅᔪᓐᓇᖅᑐᑎᑦ ᖃᓪᓗᓇᐅᔭᖅᑐᒃᑯᑦ ᐅᕙᓘᓐᓃᑦ ᐃᕙᑦ ᐅᖃᐅᓯᕐᖓᐅᑎᖓᒍᑦ.

ᐊᐱᖅᓱᖅᑕᐅᑎᓪᓗᑎᑦ ᑭᐅᕚᓪᓕᐊᔭᑎᑦ ᐊᑎᓕᖅᑕᐅᓯᒪᔾᔮᓐᖏᑦᑐᑦ ᑭᓇᐅᖕᒪᖕᒫᖅᐱᑦ ᖃᐅᔨᒪᔭᐅᔾᔮᓐᖏᓐᓇᕙᑦ ᐊᒻᒪᓗ ᐃᓕᖕᓄᑦ ᓄᓇᓕᖕᓄᓪᓗ ᓴᐳᒻᒥᐅᓯᖅᓯᒪᐅᑕᐅᔪᓐᓇᖅᑐᓂ. ᐊᐱᖅᓱᖅᑎᓪᓗᑕ ᑭᒡᒍᑎᒋᕚᓪᓕᐊᔭᐃᑦ ᑎᑎᕋᖅᑕᐅᕚᓪᓕᐊᓂᐊᖅᑐᑦ, ᐊᒻᒪᓗ ᓂᐱᓕᐅᖅᑕᐅᓗᑎᒃ.

__ᐊᐱᖅᓱᖅᑕᐅᓗᓂ ᐅᓗᕆᐊᓇᐅᑕᐅᔪᓐᓇᖅᑐᑦ ᐃᓗᕿᓚᔫᓐᖏᔾᔪᑕᐅᔪᓐᓇᖅᑐᓪᓗ:__
ᐊᐱᖅᓱᕐᓃᑦ ᐊᑐᓂ ᐃᑲᕐᖁᐅᑉ ᓇᐸᖕᒐᓂ ᐊᑯᓂᐅᑎᒋᓂᐊᖅᑐᖅ ᐃᓱᓕᓐᓂᐊᕐᓂᖕᒐᓄᑦ ᑎᑭᓪᓗᒍ, ᑭᓯᐊᓂᓕ ᑐᐊᕙᖅᓱᖅᑕᐅᔾᔮᓐᖏᑦᑎᐊᕐᓂᕐᓂᒃ ᖃᐅᔨᒪᓂᐊᖅᐳᑎᑦ. ᐃᓚᖏᑦ ᐊᐱᖅᑯᑏᑦ ᐃᓗᕿᓛᓐᖏᔾᔨᑎᒋᑐᐃᓐᓇᕆᐊᖅᑲᖅᑕᑎᑦ, ᐃᓕᖕᓄᓪᓚᕆᒃ ᑐᕌᖓᓂᖕᒋᑦ ᐱᔾᔨᑎᒋᓪᓗᒋᑦ. ᑕᐃᒪᐃᑦᑐᑦ ᐊᐱᖅᑯᑏᑦ ᑭᐅᒋᐊᑐᓐᖏᑕᑎᑦ, ᐅᕝᕙᓘᓐᓃᑦ ᐊᐱᖅᓱᖅᑕᐅᓃᑦ ᓄᖅᑲᖅᑎᑦᑎᐊᒻᒪᕆᒍᓐᓇᖅᑑᒍᒃ.

__ᐃᓚᐅᓂᕆᔭᕐᓄᑦ ᐃᑲᔫᑕᐅᔪᓐᓇᖅᑐᑦ:__
ᑐᑭᓯᓯᒪᓂᓐᖏᑦᑐᒍᑦ ᖃᓄᖅ ᐊᐱᖅᓱᖅᑕᐅᖃᑕᐅᓗᓂ ᐃᑲᔫᑎᖃᕐᒪᖕᒫᖕᒐ, ᑭᓯᐊᓂᓕ ᑕᐃᒪᐃᒃᑲᓗᐊᖅᑎᓪᓗᒍ, ᖃᐅᔨᓴᐃᓂᑦᑎᓐᓂ ᑐᑭᓯᔭᕗᑦ ᐊᖅᑯᑎᒋᓗᑎᒃᑯᑦ ᓯᒻᒐᓕᐊᒍᑦ ᓄᖅᑲᕋᓱᖕᓂᕐᒍᑦ ᑐᕌᖓᔪᑦ ᐊᑑᑎᖃᑦᑎᐊᕐᓂᖅᓴᐃᑦ ᓴᖅᑭᑕᐅᔪᓐᓇᖅᑐᑦ ᐃᓄᐃᑦ ᓄᓇᓕᕐᑯᑎᖏᓐᓂ. ᓯᒻᒐᓕᐊᒍᑦ ᓄᖅᑲᕋᓱᒍᒪᐅᑎᓄᑦ ᑐᑦᓱᖓᔪᓂᒃ ᑐᓴᐅᒪᔾᔪᑎᓂᒃ ᐱᑎᑕᐅᓂᐊᖅᑐᑎᑦ ᐊᒻᒪᓗ ᐃᑲᔫᑕᐅᒃᑲᓐᓂᕈᓐᓇᖅᑐᓂᒃ ᑕᐃᒪᐃᑦᑐᓂᒃ ᐱᔪᒪᒍᕕᑦ, ᖃᐅᔨᓴᐃᓂᑦᑎᓐᓄᑦ ᐃᓚᐅᓂᐊᕋᓗᐊᕈᕕᑦ ᐃᓚᐅᔾᔮᓐᖏᒃᑲᓗᐊᕐᒪᖕᒫᖅᐱᓪᓗ.

__ᐊᑭᓕᖅᑕᐅᓂᐊᕐᓂᖅ/ᑮᓇᐅᔭᖅᑖᕐᓂᐊᕐᓂᖅ:__
ᖃᐅᔨᓴᖅᑕᐅᓂᖅᑲᖅᑎᓪᓗᑎᑦ ᓴᓂᐊᒍᑦ ᐃᓗᐊᓐᖏᑦᑐᒥᒃ ᐋᓐᓂᕐᓂᕐᒥᒡᔫᓐᓃᑦ ᓴᖅᑭᑦᑐᖅᑲᖅᐸᑦ, ᐃᓅᓕᓴᐃᔨᓄᑦ ᑕᐃᒪᐃᑦᑐᓕᕆᔪᓐᓇᖅᑐᓄᑦ ᑲᒪᒋᔭᐅᓂᐊᖅᑐᑎᑦ. ᖃᐅᔨᓴᐃᓂᑦᑎᓐᓂ ᐃᓚᐅᒍᕙᑦ ᐊᒻᒪᓗ ᐊᖏᕐᓂᕐᒧᑦ ᑐᕌᖓᔪᓂᒃ ᐊᑎᓕᐅᕆᒍᕙᑦ, ᒪᓕᒐᖅᑎᒍᑦ ᐱᔪᓐᓇᐅᑎᑎᑦ ᓴᒃᑯᓐᖏᑦᑕᑎᑦ ᐃᓕᖕᓄᑦ ᐊᑐᐃᓐᓇᕈᖅᑎᑕᐅᓯᒪᔪᑦ. ᖁᔭᓐᓇᒦᕈᓯᐊᖅᑎᑕᐅᓂᐊᖅᑐᑎᑦ ᓄᑦᑕᕐᓛᖅᓯᐅᑎᓂᒃ (ᐆᒃᑑᑎᒋᓗᒍ, ᓄᑦᑕᕐᓛᖅᓯᐅᑏᑦ ᐋᓄᕌᑦ, ᖁᐃᖏᓕᓴᐃᑦ, ᑲᑎᓪᓗᒋᑦ ᐊᑭᖃᓪᓗᐊᖅᑐᑦ $25.00-ᒥᒃ) ᐊᐱᖅᓱᖅᑕᐅᕋᓂᒃᑯᕙᑦ.

__ᐋᓐᓂᐊᖃᕐᓇᖏᑦᑐᓕᕆᓂᕐᒧᑦ ᑐᕌᖓᔪᑦ ᑐᓴᐅᒪᔾᔪᑏᑦ ᑲᓐᖑᓇᖅᑑᑎᑕᐅᓂᐊᕐᓂᖏᑦ ᓴᖅᑭᑕᐅᓂᐊᓐᖏᓐᓂᖏᓪᓗ:__
ᖃᐅᔨᓴᐃᓂᐊᕐᓂᕐᒧᑦ ᒪᓕᒐᓄᑦ ᐃᓚᒋᔭᐅᖃᑕᐅᓪᓗᓂ, ᐊᐱᖅᓱᖅᑎᓪᓗᐊᑕᖅ ᐊᒻᒪᓗ ᐃᖅᑲᓇᐃᔭᖅᑎᖏᑦ ᐃᓕᖅᓅᖓᔪᑦ ᐋᓂᐊᕙᖕᒥ ᑎᑎᕋᖅᑕᐅᖃᑦᑕᖅᑐᕙᓃᑦ ᕿᒥᕐᕈᓇᒃᑕᐅᓂᐊᖅᑐᑦ. ᐃᓕᖅᓅᖓᔪᑦ ᑎᑎᖅᑲᖁᑏᑦ ᕿᒥᕐᕈᓇᒃᑕᐅᑐᐃᓐᓇᓕᐊᖃᕐᒥᔪᑦ ᑲᓇᑕᒥ ᐋᓐᓂᐊᖃᕐᓇᖏᑦᑐᓕᕆᔨᒃᑯᓐᓄᑦ, ᐊᒻᒪᓗ ᐆᒪᑎᓕᕆᓂᕐᒧᑦ ᖃᐅᔨᓴᐃᔩᑦ ᑲᑎᒪᔨᖏᓐᓄᑦ, ᑕᐅᑦᑎᒋᔭᐅᓗᓂ ᖃᐅᔨᓴᖅᑎᓪᓗᐊᑕᖅ.

ᐃᓕᖅᓅᖓᔪᑦ ᐊᒻᒪᓗ ᐃᓕᖅᓅᖓᔪᑦ ᐋᓐᓂᐊᕙᖕᒥ ᑎᑎᕋᖅᑕᐅᖃᑦᑕᖅᑐᑦ ᓴᖅᑭᑕᐅᔾᔮᓐᖏᑦᑐᑦ ᐅᖃᓕᒫᓗᓐᖑᖅᑎᑕᐅᔪᓄᑦ ᐃᓄᖕᓄᓪᓘᓐᓃᑦ ᑲᑎᒪᑎᑕᐅᔪᓄᑦ. ᐃᓕᖕᓄᑦ ᓇᓗᓇᐃᖅᓯᔪᓐᓇᖅᑐᑦ ᖃᓄᐃᑦᑐᑐᐃᓐᓇᐃᑦ ᑐᓴᐅᒪᔾᔪᑏᑦ ᐋᓐᓂᐊᕙᖕᒥᑦ ᐊᓂᑕᐅᔾᔮᓐᖏᑦᑐᑦ, ᐊᒻᒪᓗ ᐊᑎᖅᐱᑦ ᓯᕗᓪᓕᖕᒋᑦ ᑎᑎᓚᐅᖅᑕᑎᑦ ᐃᓕᖅᓅᖕᒪᖕᒫᖕᒋᑦ ᓇᓗᓇᐃᖅᑕᐅᔪᓐᓇᔾᔮᓐᖏᓗᑎᒃ. ᐃᓕᖅᓅᖓᔪᑦ ᐋᓐᓂᐊᕙᖕᒥ ᑎᑎᕋᖅᑕᐅᖃᑦᑕᖅᑐᑦ ᑲᓐᖑᓇᖅᑑᑎᕆᔭᐅᓂᐊᖅᑐᑦ, ᓴᖅᑭᑕᐅᓂᐊᖅᐸᑕᓗ ᑭᓯᐊᓂ ᒪᓕᒐᖅᑎᒍᑦ ᓴᖅᑭᑕᐅᔪᓐᓇᖅᑐᑎᒃ.

ᖃᐅᔨᓴᐃᓂᑦᑎᓐᓂ ᑐᓴᐅᒪᔾᔪᑎᓕᒫᑦ ᐱᔭᕗᑦ ᑲᓐᖑᓇᖅᑑᑎᑕᐅᓪᓚᕐᓂᐊᖅᑐᑦ. ᐃᓕᖕᓄᑦ ᑐᕌᖓᔪᓂᒃ ᑐᓴᐅᒪᔾᔪᑎᓂᒃ ᓴᖅᑭᑎᓂᐊᖅᑐᑎᑦ; ᑕᐃᒪᐃᒃᑲᓗᐊᖅᑎᓪᓗᒍ, ᑐᓴᐅᒪᔾᔪᑏᑦ ᐃᓕᖕᓂᓐᖔᖅᑐᑦ ᑲᓐᖑᓇᖅᑑᑎᑕᐅᓂᐊᖅᑐᑦ. ᐸᐃᑉᐹᓕᒫᑦ ᑲᑎᖅᓱᖅᑕᕗᑦ, ᐃᓚᓕᐅᓪᓗᒋᑦ ᑕᑕᑎᕆᐊᓕᒃᑎᒍᑦ ᑭᒡᒍᑎᑎᑦ, ᐊᒻᒪᓗ ᐊᐱᖅᓱᖅᑎᓪᓗᑕ ᓂᐱᓕᐅᖅᓯᒪᔪᑦ ᑎᑎᕋᖅᑕᐅᓂᖏᑦ ᕿᒃᑕᐅᓯᒪᔪᓄᑦ ᑐᖅᑯᐃᕙᖕᓄᐊᖅᑕᐅᓂᐊᖅᑐᑦ ᖃᐅᔨᓴᐃᕝᕙᑦᑎᓐᓂ. ᐃᓕᖕᓄᑦ ᑐᕌᖓᔪᓕᒫᑦ ᓇᓗᓇᐃᒃᑯᑎᖅᑕᐅᕚᓂᒃᑯᑎᒃ ᐊᑎᓕᒻᒋᑦ ᐃᓕᖕᓄᓪᓗ ᓇᓗᓇᐃᖅᓯᔾᔨᑕᐅᔪᓐᓇᖅᑐᓕᒫᑦ ᐄᔭᖅᑕᐅᓂᐊᖅᑐᑦ, ᓇᓗᓇᐃᖅᓯᔾᔨᓪᒥᒡᓗ ᓈᓴᐅᒥᒃ ᐃᓕᓯᕙᐅᓗᓂ. ᑕᒪᒃᑯᐊ ᑐᓴᐅᒪᔾᔪᑏᑦ ᖃᓇᓴᐅᔭᒃᑯᑦ ᐃᓱᖅᑕᐅᔪᓐᓇᖕᖏᑦᑐᓄᑦ ᐃᓕᐅᖅᑲᖅᑕᐅᓂᐊᖅᑐᑦ ᐊᒻᒪᓗ ᐃᓱᕈᓐᓇᐅᑎᖅᑯᓂ ᑭᓯᐊᓂ ᒪᑐᐃᖅᑕᐅᔪᓄᐊᖅᑕᐅᓂᐊᖅᑐᑦ, ᑖᒃᑯᐊᓗ ᖃᐅᔨᓴᐃᔨᓄᑦ, ᐃᑲᔪᖅᑎᖏᓐᓄᑦ ᐊᒻᒪᓗ ᖃᐅᔨᓴᐃᓂᕐᒧᑦ ᑐᑭᒧᐊᒃᑎᐅᑉ ᑕᑯᔪᓐᓇᕐᓗᓂᒋᑦ. ᐊᒡᒐᒧᑦ ᑎᑎᕋᖅᑕᐅᔭᕝᕕᓕᒫᑦ, ᓂᐱᓕᐊᕙᓃᑦ ᐊᒻᒪᓗ ᓂᐱᓕᐊᕙᓂᑦ ᑎᑎᕋᖅᑕᐅᓯᒪᔪᑦ ᕿᒃᑕᐅᓯᒪᓂᐊᖅᑐᑦ ᐊᒻᒪᓗ ᐆᒪᑎᓕᕆᓂᕐᒧᑦ ᖃᐅᔨᓴᐃᕝᕙᖕᒥᑦ ᐊᓂᑕᐅᔾᔮᓐᖏᓪᓗᑎᒃ. ᐸᐃᑉᐹᓕᒫᑦ, ᐃᓚᓕᐅᑎᓪᓗᑎᑦ ᐊᐱᖅᑯᑏᑦ, ᓂᐱᓕᐊᕙᓃᑦ, ᐊᐱᖅᓱᖅᑎᓪᓗᑕ ᓂᐱᓕᐅᖅᓯᒪᔪᑦ ᑎᑎᕋᖅᑕᐅᓂᑯᕙᓃᑦ ᐃᒋᑕᐅᓂᐊᖅᑐᑦ 15 ᐊᕐᕌᒍᑦ ᐊᓂᒍᖅᐸᑕ ᑎᑎᖅᑲᓪᓚᓇᖑᖅᑎᑕᐅᓚᐅᖅᑎᓪᓗᒋᑦ.
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__ᐅᒃᐱᓇᔭᑦ ᑐᓐᖓᕙᒋᔭᐅᔪᑦ:__
ᖃᐅᔨᓴᐃᓂᕐᒧᑦ ᐅᒃᐱᓇᔭᓂᒃ ᑐᓐᖓᕙᒋᔭᐅᔪᓄᑦ ᑲᑎᒪᔩᑦ ᐋᑐᕗ ᓯᓚᑦᑐᖅᓴᕐᕙᓪᔪᐊᖕᒐᓐᓂ ᐆᒪᑎᓕᕆᓂᕐᒥᒃ ᖃᐅᔨᓴᐃᕝᕙᖕᒥ ᐅᑯᓂᖓ ᒪᓕᒐᓂᒃ ᐊᖏᖅᓯᓯᒪᔪᑦ. ᑖᒃᑯᐊ ᖃᐅᔨᓴᐃᓂᕐᒧᑦ ᐅᒃᐱᓇᔭᓂᒃ ᑐᓐᖓᕙᒋᔭᐅᔪᓄᑦ ᑲᑎᒪᔩᑦ ᐅᒃᐱᓇᔭᓂᒃ ᑐᓐᖓᕙᒋᔭᐅᔪᓂᒃ ᐊᑐᖅᑎᑦᑎᔪᐃᓐᓇᐅᖅᑲᑦᑕᖅᑐᑦ ᐃᓄᖕᓂᒃ ᖃᓄᑐᐃᓐᓇᖅ ᖃᐅᔨᓴᐃᓕᕐᖓᒥᒃ. ᐱᔪᒪᒍᕕᑦ, ᖃᐅᔨᓴᐃᓂᕐᒧᑦ ᐅᒃᐱᓇᔭᓂᒃ ᑐᓐᖓᕙᒋᔭᐅᔪᓄᑦ ᑲᑎᒪᔩᑦ ᐃᒃᓯᕙᐅᑕᖓᑦ ᐅᖃᖃᑎᒋᔪᓐᓇᖅᑕᐃᑦ ᐊᖅᑯᑎᒋᓗᒍ ᑎᑎᕐᕕᖓᑦ, ᐅᖃᓚᐅᑖ [redacted]

ᑕᒪᓐᓇ ᖃᐅᔨᓴᐃᓂᖅ ᖃᐅᔨᓴᐃᔪᓐᓇᕐᓂᕐᒧᑦ ᓚᐃᓴᑖᖅᑎᑕᐅᓯᒪᔪᑦ ᐊᖅᑯᑕᐅᓪᓗᓂ ᓄᓇᕗᒻᒥ ᖃᐅᔨᓴᐃᓂᓕᕆᔩᑦ, ᐊᐱᖅᑯᑎᒋᔪᒪᔭᕗᓪᓗ ᑖᒃᑯᓄᖓ ᕿᒥᕐᕈᓇᒃᑕᐅᓯᒪᓪᓗᑎᒃ ᐊᒻᒪᓗ ᐊᖏᖅᓯᒪᓪᓗᓂᔾᔪᒃ. ᖃᐅᔨᓴᐃᓂᑦᑎᓐᓂ ᑐᑭᓯᔭᕗᑦ ᓇᐃᓈᖅᓯᒪᔪᓂᒃ ᐱᑎᑕᐅᓂᐊᖅᑐᑎᑦ ᐊᒻᒪᓗ ᓄᓇᓕᕐᑯᑏᑦ. ᑕᐃᒃᑯᐊ ᐅᓂᒃᑳᖅᑐᑦ ᓇᐃᓈᖅᓯᒪᔪᑦ ᑎᑎᕋᖅᓯᒪᔫᒃᑯᑦ ᐱᔪᓐᓇᖅᑕᑎᑦ ᐅᕝᕙᓘᓐᓃᑦ ᓂᐱᓕᐅᖅᓯᒪᔫᒃᑯᑦ, ᓇᓕᐊᑐᐃᓐᓇᖅ ᓂᕈᐊᕐᓗᒍ ᐃᓗᐊᕆᓂᖅᓴᐃᑦ.

<u>ᐃᓚᐅᓂᐊᕐᓃᑦ</u>:
ᑖᒪᑐᒪᓂ ᖃᐅᔨᓴᐃᓂᑦᑎᓐᓂ ᐃᓚᐅᔪᒪᓂᑦ **ᐃᓱᒪᖅᓲᑎᒋᑦᑎᐊᖅᐸᐃᑦ**. ᖃᖓᑐᐃᓐᓇᖅ ᖃᐅᔨᓴᐃᓂᕐᒥ ᐲᖅᑕᐅᔪᒪᔪᓐᓇᖅᑐᑎᑦ ᐅᕝᕙᓘᓐᓃᑦ ᐊᐱᖅᑯᑕᐅᔪᓂᒃ ᑭᐅᔪᒪᙱᒃᑯᕕᑦ ᑭᐅᒋᐊᑐᙱᑦᑐᑎᑦ ᐃᓱᕐᓇᔮᕈᑎᒋᙱᑐᐊᕈᓐᓂ

ᓄᓇᕗᒻᒥ ᐊᕐᓇᐃᑦ ᓯᖕᒐᐃᔪᑦ ᓯᒡᒐᓕᐊᖅᑐᖃᑦᑕᕐᓂᖏᑦ
ᓄᖅᑲᖅᐸᓪᓕᐊᓂᖏᓪᓗ
HI ᒪᓕᒐᖅ ᓈᓴᐅᑎᓕᒃ 2008281-01H

ᖃᐅᔨᓴᖅᑕᐅᖃᑕᐅᔪᒪᓂᕐᒧᑦ ᐊᖏᕈᑏᑦ

ᑐᑭᓯᔪᖓ ᖃᐅᔨᓴᖅᑕᐅᓂᐊᕐᓂᕐᒧᑦ ᐃᓚᐅᔪᒪᖕᒪᖕᒑᕐᒪ ᐱᔾᔪᑎᒋᓪᓗᒍ ᓄᓇᕗᒻᒥ ᐊᕐᓇᐃᑦ ᓯᖕᒐᐅᔪᑦ ᓯᒡᒐᓕᐊᖅᑐᖃᑦᑕᕐᓂᖏᓐᓄᑦ ᓄᖅᑲᖅᐸᓪᓕᐊᓂᖏᓐᓅᓪᓗ. ᑕᒪᓐᓇ ᖃᐅᔨᓴᐃᓂᐅᓂᐊᖅᑑᑉ ᖃᓄᐃᑦᑑᓂᐊᕐᓂᖓ ᐅᕙᓐᓄᑦ ᐅᓂᒃᑳᔅᓴᐅᓯᒪᔪᖅ ᐆᒧᖓ ________. ᑐᑭᓯᑎᑕᐅᑦᑎᐊᖅᑐᖓ ᖃᓄᐃᑦᑐᓂᒃ ᑕᒪᓐᓇ ᖃᐅᔨᓴᐃᓂᖅ ᑐᕌᒐᖃᕐᓂᐊᕐᒪᖕᒑᖕᒐ. ᑐᑭᓯᔭᒃᑲ ᑕᒪᒃᑯᐊ ᑐᕌᒐᓕᐊᕆᔭᐅᓯᒪᔪᑦ ᐊᓪᒪᓗ ᐊᖏᖅᓱᖓ ᐊᐱᖅᓱᖅᑕᐅᖃᑕᐅᔪᒪᓂᕐᒧᑦ. ᑐᑭᓯᔪᖓ ᑕᒪᒃᑯᐊ ᑎᑎᕋᖅᑕᐅᕙᓪᓕᐊᔪᓕᒫᑦ ᐊᐱᖅᓱᖅᑕᐅᓂᓐᓂ ᑲᓐᖑᓇᖅᑑᑎᑕᐅᓂᐊᕐᓂᖏᓐᓂᒃ. ᑐᑭᓯᖕᒥᔪᖓ ᖃᖓᑐᐃᓐᓇᖅ ᖃᐅᔨᓴᐃᓂᕐᒥ ᐃᓚᐅᔪᒪᔪᓐᓃᕐᓂᕈᒪ, ᖃᖓᑐᐃᓐᓇᖅ ᓄᖅᑲᕈᓐᓇᖅᑐᖓ ᓇᐅᒃᑯᑐᐃᓐᓇᖅ ᐊᑭᒥᐊᖅᑕᐅᓐᖏᑦᑐᖓ.

ᐅᑯᐊ ᑎᓴᒪᑦ ᒪᒃᐱᒐᐃᑦ ᐃᓚᐅᔪᓄᑦ ᑐᓴᐅᒪᔾᔪᑏᑦ ᐊᓪᒪᓗ ᐊᐱᖅᓱᖅᑕᐅᓂᐊᕐᓂᕐᒧᑦ ᐊᖏᕈᑏᑦ ᐅᕐᑲᓕᒫᖅᓯᒪᔭᒃᑲ ᐊᓪᒪᓗ ᑐᑭᓯᓪᓗᒋᑦ. ᐊᐱᖅᑯᑎᓕᒫᒃᑲ ᑕᒪᕐᒥᒃ ᑭᐅᔭᐅᑦᑎᐊᖅᓯᒪᓕᖅᑐᑦ. ᐅᕙᖓ, ᐅᖁᕚᓐᓃᑦ ᐃᓚᒃᑲ ᑕᒪᑐᒪ ᖃᐅᔨᓴᖅᑕᐅᓂᐊᕐᓂᕐᒧᑦ ᑐᕌᖓᔪᓂᒃ ᐊᐱᖅᑯᑎᒃᓴᖃᒃᑲᓐᓂᖅᐸᑕ ᖃᖓᑐᐃᓐᓇᖅ ᖃᐅᔨᓴᐃᔨᓪᓗᐊᑕᖅ, ᓘᒃᑖᖅ ᐸᑉ ᓈᑦ ᐊᐱᓇᔪᓐᓇᖅᑕᕋ, [redacted]

ᐃᓚᐅᓂᐊᖅᑐᓄᑦ ᑐᓴᐅᒪᔾᔪᑏᑦ ᑎᑎᖅᑲᕐᑯᑎᖏᓐᓂᒃ ᐊᑎᓕᐅᖅᓯᒪᔪᓂᒃ ᐊᓪᒪᓗ ᐊᐱᖅᓱᖅᑕᐅᓂᐊᕐᓂᕐᒧᑦ ᐊᖏᕈᑎᖏᑕ ᐊᔅᓯᖏᓐᓂᒃ ᐱᓂᐊᖅᑐᖓ. ᐊᔭᐅᖅᑕᐅᓐᖏᑦᑎᐊᖅᓱᖓ ᐊᖏᖅᐳᖓ ᑕᒪᑐᒧᖓ ᖃᐅᔨᓴᐃᓂᐅᓂᐊᕐᓂᕐᒧᑦ ᐃᓚᐅᔪᒪᓪᓗᖓ.

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ᐃᓚᐅᔫᑦ ᐊᑎᖓ (ᓴᖑᐃᐱᑐᓐᖏᓪᓗᒍ)

________________________________ ________________________
ᐃᓚᐅᔫᑉ ᐊᑎᓕᐅᕈᓯᐊ ᐅᓪᓗᖓ

____
ᖃᐅᔨᓴᐃᔨᐅᑉ/ᑎᒃᑯᐊᖅᑕᐅᓯᒪᔫᑉ ᐊᑎᖓ
((ᓴᖑᐃᐱᑐᓐᖏᓪᓗᒍ)

________________________________ ________________________
ᖃᐅᔨᓴᐃᔨᐅᑉ/ᑎᒃᑯᐊᖅᑕᐅᓯᒪᔫᑉ ᐊᑎᓕᐅᕈᓯᐊ ᐅᓪᓗᖓ

________________________________ ________________________
ᐊᖓᔪᖅᑳᖓᑕ ᐸᖅᑭᔅᖓᑕᓘᓐᓃᑦ ᐊᑎᓕᐅᕈᓯᐊ ᐅᓪᓗᖓ
ᐃᓚᐅᔪᖅ 18 ᑐᖕᒑᓂ ᑭᓯᐊᓂ ᐊᕐᕿᒍᕐᑲᖅᐸᑦ

Appendix O: Consent form for health care provider participation- English

Participant Information Sheet & Consent Form
Smoking and cessation among pregnant women in Nunavut
Health Practitioner Survey
HI Protocol #2008281-01H

Investigators:

Principal Investigator: [redacted]
[redacted]
University of Ottawa Heart Institute

Study Coordinator/Recruiter: [redacted]
[redacted]

Co- Investigators: [redacted]
[redacted]

Please read this Participant Information Sheet and Consent Form carefully and ask questions as you like before deciding whether to participate.

Introduction:
You have been asked to participate in a research project entitled: Smoking and cessation among pregnant women in Nunavut. The purpose of this project is gain a better understanding of smoking and the process of cessation among pregnant women. Your participation in the study will last approximately 30 minutes in which you will be asked to participate in an interview either in person or by telephone. The questionnaire may be emailed to you ahead of time. There will be a total of 13 health care providers recruited into the study from the Baffin region.

Procedure:

A recent review of smoking cessation interventions for pregnant women found few effective interventions. For sub-populations in particular (e.g. ethnic minority women, Aboriginal women, heavy smokers, and teenaged girls) tailored strategies are all but absent. Your participation in this study will help address this issue.

Participating in the study basically involves participating in a face-to-face or telephone interview. You will be asked several questions about which interventions for smoking cessation are currently being used, and what methods and materials are in place to assist pregnant smokers to quit. Each interview should take about 30 minutes to complete, but you can take as much time as you need. You may participate in these interviews in English, or your own language.

The information you provide during your interviews will be anonymous so you cannot be identified, and we will protect the privacy of you and your community. We will be recording the information obtained in the interviews by taking written notes and by an audio recorder.

Risks and Discomforts of Participation:
There are no anticipated risks or discomforts involved in this study. You may choose not to answer any question that may make you feel uncomfortable.

Benefits of Participation:
There are no known benefits for participating in this project, although the results of this study could lead to more effective smoking cessation strategies for the Inuit community.

Compensation /Remuneration:
In the event of research related side-effects or injury, you will be provided with appropriate medical treatment. By participating in the study and signing the consent form, you are not waiving your legal rights which may be available to you.

Health Information Privacy and Confidentiality:
As part of this research protocol, the Principal Investigator and their clinical research staff will review your health records. Your relevant records may also be reviewed by Health Canada, and the Heart Institute Human Research Ethics Board under the supervision of the Investigator.

You and your health records will not be identifiable in publications or presentations. No identifying information will leave the hospital, and your initials will not be used to identify you. Your health information will be kept confidential, unless release is required by law.

All information obtained during the study will be held in strict confidence. You will be revealing personal information about yourself; however this information will remain confidential. All data gathered including responses to questionnaires, and transcripts of interviews will be kept in a locked filing cabinet in our research office. All your personal

information will be coded, then it will be stripped of identifiers, and you will be assigned a research ID number. This information will be kept in a secure electronic database that is password protected and only accessible by the Investigators, co-investigators, researcher and study-coordinator. All notes, audio recordings, and transcriptions will be kept in a locked secure location and will not leave the Heart Institute. The data, including the questionnaires, audio recordings, transcriptions and electronic database, will be destroyed fifteen years following their publication.

Ethics:

The Human Research Ethics Board (HREB) of the University of Ottawa Heart Institute has approved this protocol. The HREB considers the ethical aspects of all Heart Institute research projects involving human subjects. If you wish, you may talk to the Chair, Human Research Ethics Board through the Secretariat at [redacted].
This study has also been granted a Research License through the Nunavut Research Institute, who have reviewed and approved the questions we are asking you. We will also be sharing a summary of what we learn in this study with you and your community. You may choose to have this summary in written or audio form.

Participation:

Your participation **in this research study is completely voluntary.** You may withdraw from the study at any time or refuse to answer questions that make you feel uncomfortable.

UNIVERSITY OF OTTAWA
HEART INSTITUTE
INSTITUT DE CARDIOLOGIE
DE L'UNIVERSITÉ D'OTTAWA

Smoking and cessation among pregnant women in Nunavut
HI Protocol # 2008281-01H

Consent to Participate in Research

I understand that I am being asked to participate in a research study about *smoking cessation among pregnant women in Nunavut.* This study has been explained to me by _____. I have been fully informed of the objectives of the project being conducted. I understand these objectives and consent to being interviewed for the project. I understand that steps will be undertaken to ensure that this interview will remain confidential. I also understand that if I wish to withdraw from the study, I may do so without any repercussions

I have read and understood this 4 page Participant Information Sheet and Consent Form. All my questions at this time have been answered to my satisfaction. If I have any further questions about this study, we may contact the Principal Investigator, [redacted]

I will receive a signed copy of this Participant Information Sheet and Consent Form.

I voluntarily agree to participate in this study.

_____ Participant's Name (Please Print)	
_____ Participant's Signature	_____ Date
_____ Name of Investigator/Delegate (Please Print)	
_____ Signature of Investigator/Delegate	_____ Date

Appendix P: Consent form for health care provider participation- Inuktitut

UNIVERSITY OF OTTAWA
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DE L'UNIVERSITÉ D'OTTAWA

ᐊᐱᕐᓱᕐᑕᓄᑦ ᑐᓴᐅᒪᔾᔪᑏᑦ ᐋᖏᕐᓂᕐᒨᑦᑐ ᓇᓗᓇᐃᖅᓱᔾᔪᑏᑦ
ᓄᓇᖃᒻᒥ ᐊᕐᓇᐃᑦ ᓱᖓᐃᔪᑦ ᓱᒃᑲᓚᐊᖅᑐᖃᑦᑕᕐᓂᖏᑦ ᓄᖅᑲᖅᐸᓪᓚᐊᓂᖏᓪᓗ
ᐋᓐᓂᐊᓱᐅᖅᑎᓄᑦ ᐊᐱᕐᓱᕐᑕᐅᓂᖅ
HI ᒪᓕᒐᖅ ᓈᓴᐅᑎᓕᒃ 2008281-01H

<u>ᖃᐅᔨᓴᐃᔩᑦ:</u>

ᖃᐅᔨᓴᐃᔩᓪᓗᐊᑕᖅ: [redacted] [redacted]

ᖃᐅᔨᓴᖅᑕᒃᓴᓂᒃ ᕿᓂᖅᑎ: [redacted] [redacted]

ᐅᑯᐊ ᑐᓴᐅᒪᔾᔪᑏᑦ ᐋᖏᕐᓂᕐᒨᑦᑐ ᓇᓗᓇᐃᖅᓱᔾᔪᑏᑦ ᐅᕝᑲᓕᒫᑦᑎᐊᕐᓂᐊᖅᐸᑎᑦ ᐊᒻᒪᓗ
ᐊᐱᖅᑯᑎᒃᓴᖃᕈᕕᑦ ᐊᐱᖅᑯᑎᒋᓂᐊᖅᐸᑎᑦ ᐃᓚᐅᔪᒪᖕᒪᖖᕚᐱᑦ ᐃᓱᒪᓕᐅᕆᓚᐅᓐᖏᓐᓂᕐᓂ.

<u>ᐱᒋᐸᕐᓂᖓ:</u>
ᖃᐅᔨᓴᐃᓂᕆᔪᒪᔭᑦᑎᓐᓄᑦ ᐃᓚᐅᔪᒪᖕᒪᖖᕚᐱᑦ ᐊᐱᕆᔭᐅᓯᒪᔪᑎᑦ, ᑖᓐᓇ ᖃᐅᔨᓴᐃᓂᕆᔪᒪᔫᑦ ᑕᐃᒨᓯᕐᑲᖅᓘᓂ ᐃᒫᒃ: ᓄᓇᖃᒻᒥ ᐊᕐᓇᐃᑦ ᓱᖓᐃᔪᑦ ᓱᒃᑲᓚᐊᖅᑐᖃᑦᑕᕐᓂᖏᑦ ᓄᖅᑲᖅᐸᓪᓚᐊᓂᖏᓪᓗ. ᖃᐅᔨᓴᐃᓂᖃᕈᒪᔪᒍᑦ ᑐᑭᓯᒃᑲᓂᕐᓂᐊᕋᑦᑕ ᓱᖓᐃᔪᑦ ᖃᓄᑎᒋ ᓱᒃᑲᓚᐊᖅᑐᖃᑦᑕᕐᒪᖖᕚᖏᓐᓂᒃ ᖃᓄᑎᒋᓗ ᓄᖅᑲᖅᐸᓪᓚᐊᒪᖖᕚᖏᑦ. ᖃᐅᔨᓴᐃᓂᑦᑎᓐᓄᑦ ᐃᓚᐅᔪᒪᒍᕕᑦ ᐊᐱᕐᓱᕐᑕᐅᓂᕆᓂᐊᖅᑕᐃᑦ ᐃᑲᕐᕋᐅᑉ ᓇᑉᐸᓪᓗᐊᖓᓄᑦ ᐊᑯᓂᐅᑎᒋᓂᐊᖅᑐᖅ, ᐊᐱᕐᓱᕐᑕᐅᔪᓐᓇᖅᓗᑎᓪᓗ ᐊᐱᕐᓱᖅᑐᖅ ᑕᐅᑐᒡᓗᒍ ᐅᕙᓘᓐᓃᑦ ᐅᕝᑲᓚᐅᑎᒃᑯᑦ. ᑕᑕᑎᕆᐊᓖᑦ ᐊᐱᖅᑯᑏᑦ ᖃᕆᓴᐅᔭᒃᑯᑦ ᐃᓕᖕᓄᑦ ᐊᐅᓪᓚᖅᑎᑕᐅᑐᐃᓐᓇᕆᐊᓖᑦ. ᑲᑎᓕᒫᕐᓗᒋᑦ 13-ᖑᓂᐊᖅᑐᑦ ᐋᓐᓂᐊᓱᐅᖅᑏᑦ ᖃᐅᔨᓴᐃᖃᑕᐅᓂᐊᖅᑐᑦ ᕿᑭᖅᑖᓗᖕᒥ.

<u>ᐱᙳᓪᓚᐊᔾᔪᓯᕆᓂᐊᖅᑕᖓ:</u>
ᒫᓐᓇᕈᓘᓚᐅᖅᑐᖅ ᖃᐅᔨᓴᐃᓂᖃᖅᑎᓪᓗᑕ ᓱᖓᐃᔪᑦ ᓱᒃᑲᓚᐊᒨᑦ ᓄᖅᑲᖅᐸᓪᓚᐊᓂᖏᓐᓂᒃ ᑐᑭᓯᓚᐅᖅᑐᒍᑦ ᓱᖓᐃᔪᑦ ᓄᖅᑲᕋᓲᑎᒃᓴᓂᒃ ᐊᑐᐃᓐᓇᖃᖅᕕᐅᓐᖏᓗᐊᕐᓂᖏᓐᓂᒃ. ᐊᕐᓇᐃᑦ, ᓱᒃᑲᓚᐊᖅᑐᕐᔪᐊᖃᑦᑕᖅᑐᑦ ᐊᒻᒪᓗ ᒪᒃᑯᒃᑐᑦ ᐊᕐᓇᐃᑦ) ᖃᓄᖅᑑᕈᑏᑦ ᑕᒪᒃᑯᓄᖕᒐ ᑐᕌᖕᒐᓪᓗᐊᑕᖅᑐᑦ ᐱᑕᖃᖕᖏᑦᑐᑦ. ᑕᒪᑐᒪᓂ ᖃᐅᔨᓴᕐᓂᑦᑎᓐᓂ ᐃᓚᐅᒍᕕᑦ ᑕᒪᓐᓇ ᖃᓄᖅᑑᕈᑎᒋᔭᐅᒃᑲᓐᓂᕈᓐᓇᕐᓂᐊᖅᑐᖅ.

ᖃᐅᔨᓴᐃᓂᕐᒥ ᐃᓚᐅᔪᑦ ᓵᓐᖓᖅᑦᑕᐅᑎᓂᒃᑰᕈᓐᓇᖅᑐᖅ ᐅᕝᕙᓘᓐᓃᑦ ᐅᖄᓚᐅᑎᒃᑯᑦ. ᐊᑕᐅᓯᐅᓐᖏᑦᑐᓂᒃ ᐊᐱᕆᔭᐅᓂᐊᖅᑐᑎᑦ ᖃᓄᐃᑦᑐᓂᒃ ᒫᓐᓇ ᓯᒡᒐᓕᐊᒧᑦ ᓄᖅᑲᕋᓱᒍᑎᓂᒃ ᐱᑕᖃᐅᕐᒪᖔᖓ, ᐊᒻᒪᓗ ᖃᓄᐃᑦᑐᓂᒃ ᓄᖅᑲᕋᓱᒍᑎᓂᒃ ᓱᓇᒃᑯᑖᓂᒡᓗ ᐊᑐᐃᓐᓇᖃᕐᕕᐅᖕᒪᖔᖕᒥᑦ ᓯᖓᐃᔪᑦ ᓯᒡᒐᓕᐊᖅᑐᖅᐸᒃᑐᑦ. ᐊᐱᖅᓱᕐᓃᑦ ᐊᑐᓂ ᐃᑲᕋᐅᑉ ᓇᑉᐸᖓᓂ ᐊᑯᓂᐅᑎᒋᓂᐊᖅᑐᖅ ᐃᓱᓕᓐᓂᐊᕐᓂᖓᓄᑦ ᑎᑭᑦᑐᒍ, ᑭᓱᐊᓂᓕ ᑐᐊᕕᖅᓱᖅᑕᐅᔾᔮᓐᖏᑦᑎᐊᕐᓂᕐᓂᒃ ᖃᐅᔨᒪᓂᐊᖅᐳᑎᑦ. ᐊᐱᖅᓱᖅᑕᐅᔪᓐᓇᖅᑐᑎᑦ ᖃᑦᑐᓇᐅᔭᖅᑐᒃᑯᑦ ᐅᕝᕙᓘᓐᓃᑦ ᐃᕝᕕᑦ ᐅᖃᐅᓯᕐᖓᐅᑎᖓᒍᑦ.

ᐊᐱᖅᓱᖅᑕᐅᑎᓪᓗᑎᑦ ᑭᐅᕙᓪᓕᐊᔭᑎᑦ ᐊᑎᓕᖅᑕᐅᓯᒪᔾᔮᓐᖏᑦᑐᑦ ᑭᓇᐅᕐᒪᖔᖅᐱᑦ ᖃᐅᔨᒪᔭᐅᔾᔮᓐᖏᓐᓇᕕᑦ ᐊᒻᒪᓗ ᐃᓕᓐᓄᑦ ᓄᓇᓕᓐᓄᓪᓗ ᓴᐳᒻᒥᐅᓯᖅᓯᒪᐅᑕᐅᔪᓐᓇᖅᓗᓂ. ᐊᐱᖅᓱᖅᑎᓪᓗᑕ ᑭᒡᒍᑎᒋᕙᓪᓕᐊᔭᐃᑦ ᑎᑎᕋᖅᑕᐅᕙᓪᓕᐊᓂᐊᖅᑐᑦ, ᐊᒻᒪᓗ ᓂᐱᓕᐅᖅᑕᐅᓗᑎᒃ.

ᐊᐱᖅᓱᖅᑕᐅᓗᓂ ᐅᓗᕆᐊᓇᐅᑕᐅᔪᓐᓇᖅᑐᑦ ᐃᓗᕐᕆᓵᓐᖏᔾᔪᑕᐅᔪᓐᓇᖅᑐᓪᓗ:
ᐅᓗᕆᐊᓇᖅᑐᖃᕐᓂᐊᕋᓱᒋᓈᓐᖏᑦᑐᒍᑦ ᐃᓗᕐᕆᓴᓐᖏᔾᔪᑎᒃᓴᖅᑕᖃᕋᓱᒋᓐᖏᓗᒍᓗ ᑕᒪᑐᒪᓂ ᖃᐅᔨᓴᐃᓂᕐᒥ. ᐊᐱᖅᑯᑏᑦ ᑭᐅᒋᐊᑐᓐᖏᑦᑎᑦ ᐃᓗᕐᕆᓴᕈᑎᒋᓐᖏᑐᐊᕈᕕᒋᑦ.

ᐃᓚᐅᓂᕆᔭᕐᓄᑦ ᐃᑲᔫᑕᐅᔪᓐᓇᖅᑐᑦ:
ᑐᑭᓯᓯᒫᓂᓐᖏᑦᑐᒍᑦ ᖃᓄᖅ ᐊᐱᖅᓱᖅᑕᐅᖃᑕᐅᓗᓂ ᐃᑲᔫᑎᖃᕐᒪᖔᖓ, ᑭᓱᐊᓂᓕ ᑕᐃᒪᐃᒃᑲᓗᐊᖅᑎᓪᓗᒍ, ᖃᐅᔨᓴᐃᓂᑦᑎᓐᓂ ᑐᑭᓯᔭᕗᑦ ᐊᖅᑯᑎᒋᓗᑎᒃᑯᑦ ᓯᒡᒐᓕᐊᒧᑦ ᓄᖅᑲᕋᓱᖕᓂᕐᒧᑦ ᑐᕌᖓᔪᑦ ᐊᑑᑎᖃᑦᑎᐊᕐᓂᖅᓴᐃᑦ ᓴᖅᑭᑕᐅᔪᓐᓇᖅᑐᑦ ᐃᓄᐃᑦ ᓄᓇᓕᕐᑯᑎᖏᓐᓂ.

ᐊᑭᓕᖅᑕᐅᓂᐊᕐᓂᖅ/ᑮᓇᐅᔭᖅᑖᕐᓂᐊᕐᓂᖅ:
ᖃᐅᔨᓴᖅᑕᐅᓂᖅᑲᖅᑎᓪᓗᑎᑦ ᓴᓂᐊᒍᑦ ᐃᓗᐊᓐᖏᑦᑐᒥᒃ ᐋᓂᕐᓂᕐᒥᒡᓘᓐᓃᑦ ᓴᖅᑭᑦᑐᖅᑲᖅᐸᑦ, ᐃᓅᓕᓴᐃᔨᓄᑦ ᑕᐃᒪᐃᑦᑐᓕᕆᔪᓐᓇᖅᑐᓄᑦ ᑲᒪᒋᔭᐅᓂᐊᖅᑐᑎᑦ. ᖃᐅᔨᓴᐃᓂᑦᑎᓐᓂ ᐃᓚᐅᒍᕕᑦ ᐊᒻᒪᓗ ᐊᖕᒋᕐᓂᕐᒧᑦ ᑐᕌᖓᔪᓂᒃ ᐊᑎᓕᐅᕆᒍᕕᑦ, ᒪᓕᖅᑎᒍᑦ ᐱᔪᓇᐅᑎᑎᑦ ᓴᒃᑯᓐᖏᑕᑎᑦ ᐃᓕᓐᓄᑦ ᐊᑐᐃᓐᓇᕈᖅᑎᑕᐅᓯᒪᔪᑦ.

ᐋᓂᐊᖅᑲᕐᓇᖅᑐᓕᕆᓂᕐᒧᑦ ᑐᕌᖓᔪᑦ ᑐᓴᐅᒪᔾᔪᑏᑦ ᑲᓐᖑᓇᖅᑑᑎᑕᐅᓂᐊᕐᓂᕐᒥᑦ ᓴᖅᑭᑕᐅᓂᐊᓐᖏᓐᓂᕐᒥᓪᓗ:
ᖃᐅᔨᓴᐃᓂᐊᕐᓂᕐᒧᑦ ᒪᓕᒐᓄᑦ ᐃᓕᕆᔭᐅᖃᑕᐅᓪᓗᓂ, ᐊᐱᖅᓱᖅᑎᓪᓗᐊᑕᖅ ᐊᒻᒪᓗ ᐃᖅᑲᓇᐃᔭᖅᑎᖏᑦ ᐃᓕᖕᓅᖓᔪᑦ ᐋᓂᐊᕕᖕᒥ ᑎᑎᕋᖅᑕᐅᖃᑦᑕᖅᑐᕕᓃᑦ ᕿᒥᕐᕈᓇᒃᑕᐅᓂᐊᖅᑐᑦ. ᐃᓕᖕᓅᖓᔪᑦ ᑎᑎᖅᑲᖁᑏᑦ ᕿᒥᕐᕈᓇᒃᑕᐅᔪᐃᓐᓇᕆᐊᖃᕐᒥᔪᑦ ᑲᓇᑕᒥ ᐋᓂᐊᖃᕐᓇᖅᑐᓕᕆᔨᒃᑯᓐᓄᑦ, ᐊᒻᒪᓗ ᐆᒻᒪᑎᓕᕆᓂᕐᒧᑦ ᖃᐅᔨᓴᐃᔩᑦ ᑲᑎᒪᔨᖏᓐᓄᑦ, ᑕᐅᑦᑎᒋᔭᐅᓗᓂ ᖃᐅᔨᓴᖅᑎᓪᓗᐊᑕᖅ.

ᐃᓕᖕᓅᖓᔪᑦ ᐊᒻᒪᓗ ᐃᓕᖕᓅᖓᔪᑦ ᐋᓂᐊᕕᖕᒥ ᑎᑎᖅᑕᐅᖅᑲᖅᑐᑦ ᓴᖅᑭᑕᐅᔾᔮᓐᖏᑦᑐᑦ ᐅᖃᓕᒫᒐᓐᖑᖅᑎᑕᐅᔪᓄᑦ ᐃᓄᖕᓄᓪᓘᓐᓃᑦ ᑲᑎᒪᑎᑕᐅᔪᓄᑦ. ᐃᓕᖕᓄᑦ ᓇᓗᓇᐃᖅᓯᔪᓐᓇᖅᑐᑦ ᖃᓄᐃᑦᑐᑐᐃᓐᓇᐃᑦ ᑐᓴᐅᒪᔾᔪᑏᑦ ᐋᓂᐊᕕᖕᒥᑦ ᐊᓂᑕᐅᔾᔮᓐᖏᑦᑐᑦ, ᐊᒻᒪᓗ ᐊᑎᖅᐱᑦ ᓯᕗᓪᓕᕐᒥᑦ ᑎᑎᓚᐅᖅᑕᑎᑦ ᐃᓕᖕᓅᖓᔪᒪᖔᖕᒥᑦ ᓇᓗᓇᐃᖅᑕᐅᔪᓐᓇᐃᓐᖏᑦᑐᑎᒃ. ᐃᓕᖕᓅᖓᔪᑦ ᐋᓂᐊᕕᖕᒥ ᑎᑎᖅᑕᐅᖅᑲᖅᑐᑦ ᑲᓐᖑᓇᖅᑑᑎᕆᔭᐅᓂᐊᖅᑐᑦ, ᓴᖅᑭᑕᐅᓂᐊᖅᐸᑕᓗ ᑭᓱᐊᓂ ᒪᓕᒐᖅᑎᒍᑦ ᓴᖅᑭᑕᐅᔪᓐᓇᖅᓗᑎᒃ.

ᖃᐅᔨᓴᐃᓂᑦᑎᓐᓂ ᑐᓴᐅᒪᔾᔪᑎᓕᒫᑦ ᐱᔭᕗᑦ ᑲᓐᖑᓇᖅᑑᑎᑕᐅᓪᓚᕆᖕᓂᐊᖅᑐᑦ. ᐃᓕᖕᓄᑦ ᑐᕌᖓᔪᓂᒃ ᑐᓴᐅᒪᔾᔪᑎᓂᒃ ᓴᖅᑭᑦᑎᓂᐊᖅᑐᑎᑦ; ᑕᐃᒪᐃᒃᑲᓗᐊᖅᑎᓪᓗᒍ, ᑐᓴᐅᒪᔾᔪᑏᑦ ᐃᓕᖕᓂᓐᖔᖅᑐᑦ ᑲᓐᖑᓇᖅᑑᑎᑕᐅᓂᐊᖅᑐᑦ. ᐸᐃᑉᐹᓖᑦ ᑲᑎᖅᓱᖅᑕᕗᑦ, ᐃᓚᓕᐅᕐᓗᒋᑦ ᑕᑕᑎᕆᐊᓪᓚᑎᒍᑦ ᑭᒡᒍᑎᑎᑦ, ᐊᒻᒪᓗ ᐊᐱᖅᓱᖅᑎᓪᓗᑕ ᓂᐱᓕᐅᖅᓯᒪᔪᑦ ᑎᑎᕋᖅᑕᐅᓂᖕᒥᑦ ᕿᒃᑕᐅᓯᒪᔪᓄᑦ ᑐᖅᑯᐃᕕᖕᓄᐊᖅᑕᐅᓂᐊᖅᑐᑦ ᖃᐅᔨᓴᐃᕝᕕᑦᑎᓐᓂ. ᐃᓕᖕᓄᑦ ᑐᕌᖓᔪᓕᒫᑦ ᓇᓗᓇᐃᒃᑯᑎᖅᑕᐅᕚᓂᒃᑯᑎᒃ ᐊᑎᓕᐅᖅᑎᑦ ᐃᓕᖕᓄᓪᓗ ᐸᐃᑉᐹᓖᑦ, ᐃᓚᓕᐅᓪᓗᒋᑦ ᐊᐱᖅᑯᑏᑦ, ᓂᐱᓕᐊᕕᓃᑦ, ᐊᐱᖅᓱᖅᑎᓪᓗᑕ ᓂᐱᓕᐅᖅᓯᒪᔪᑦ ᑎᑎᖅᑕᐅᓂᑯᕕᓃᑦ ᐃᒋᑕᐅᓂᐊᖅᑐᑦ 15 ᐊᕐᕌᒍᑦ ᐊᓂᒍᖅᐸᑕ ᑎᑎᖅᑲᑦᓴᓇᖑᖅᑎᑕᐅᓚᐅᖅᑎᓪᓗᒋᑦ.

ᐅᒃᐱᕆᔭᑦ ᑐᓐᖓᕕᒋᔭᐅᔪᑦ:
ᖃᐅᔨᓴᐃᓂᕐᒧᑦ ᐅᒃᐱᕆᔭᓂᒃ ᑐᓐᖓᕕᒋᔭᐅᔪᓄᑦ ᑲᑎᒪᔩᑦ ᐋᖅᑭᒃᓯᒪᓯᑦᑐᖅᓴᕝᕕᐊᓗᐊᖓᓂ ᐆᒻᒪᑎᓕᕆᓂᕐᒥᒃ ᖃᐅᔨᓴᐃᕝᕕᖕᒥ ᐅᑯᓂᖓ ᒪᓕᒐᓂᒃ ᐊᖏᖅᓯᓯᒪᔪᑦ. ᑖᒃᑯᐊ ᖃᐅᔨᓴᐃᓂᕐᒧᑦ ᐅᒃᐱᕆᔭᓂᒃ ᑐᓐᖓᕕᒋᔭᐅᔪᓄᑦ ᑲᑎᒪᔩᑦ ᐅᒃᐱᕆᔭᓂᒃ ᐊᑐᖅᑎᑦᑎᔨᐅᕙᒃᑐᑦ ᐃᓄᖕᓂᒃ ᖃᐅᔨᓴᖅᑐᐃᓇᓂ

ᖃᐅᔨᓴᐃᓕᕝᕚᒥᒃ. ᐱᔪᒪᒍᕕᑦ, ᖃᐅᔨᓴᐃᓂᕐᒧᑦ ᐅᒃᐱᕆᔭᓂᒃ ᑐᓐᖓᕕᒋᔭᐅᔪᓄᑦ ᑲᑎᒪᔩᑦ ᐃᒃᓯᕙᐅᑕᖓᑦ ᐅᖅᑲᖅᑎᕆᔪᓐᓇᖅᑕᐃᑦ ᐊᖅᑯᑎᒋᓗᒍ ᑎᑎᕋᕐᕕᖓᑦ, ᐅᖄᓚᐅᑖ [redacted]

ᑕᒪᓐᓇ ᖃᐅᔨᓴᐃᓂᖅ ᖃᐅᔨᓴᐃᔪᓐᓇᕐᓂᕐᒧᑦ ᓚᐃᓴᑖᖅᑎᑕᐅᓯᒪᔪᑦ ᐊᖅᑯᑕᐅᑉᓗᓂ ᓄᓇᕗᒻᒥ ᖃᐅᔨᓴᐃᓂᓕᕆᔩᑦ, ᐊᐱᖅᑯᑎᒋᔪᒪᔭᕗᑉᓗ ᑖᒃᑯᓄᙵ ᕿᒥᕐᕈᓇᒃᑕᐅᓯᒪᑉᓗᑎᒃ ᐊᒻᒪᓗ ᐊᖏᖅᓯᒪᑉᓗᓂᔾᔪᒃ. ᖃᐅᔨᓴᐃᓂᑦᑎᓐᓂ ᑐᑭᓯᔭᕗᑦ ᓇᐃᓈᖅᓯᒪᔪᓂᒃ ᐱᑎᑕᐅᓂᐊᖅᑐᑎᑦ ᐊᒻᒪᓗ ᓄᓇᓕᕐᑯᑏᑦ. ᑕᐃᒃᑯᐊ ᐅᓂᒃᑳᖅᑐᑦ ᓇᐃᓈᖅᓯᒪᔪᑦ ᑎᑎᕋᖅᓯᒪᔭᒃᑯᑦ ᐱᔪᓇᖅᑕᑎᑦ ᐅᕙᓘᓐᓃᑦ ᓂᐱᓕᐅᖅᓯᒪᔭᒃᑯᑦ, ᓇᓕᐊᑐᐃᓐᓇᖅ ᓂᕈᐊᕐᓗᒍ ᐃᓱᐊᕆᓂᖅᓴᐃᑦ.

<u>ᐃᓚᐅᓂᐊᕐᓃᑦ:</u>
ᑕᒪᑐᒪᓂ ᖃᐅᔨᓴᐃᓂᑦᑎᓐᓂ ᐃᓚᐅᔪᒪᓃᑦ **ᐃᓱᒪᖅᓱᕐᑎᕆᑦᑎᐊᖅᐸᐃᑦ**. ᖃᖓᑐᐃᓐᓇᖅ ᖃᐅᔨᓴᐃᓂᕐᒥ ᐄᖅᑕᐅᔪᒪᔪᓐᓇᖅᑐᑎᑦ ᐅᕙᓘᓐᓃᑦ ᐊᐱᖅᑯᑕᐅᔪᓂᒃ ᑭᐅᔪᒪᙱᒃᑯᕕᑦ ᑭᐅᒥᐊᑐᙱᑦᑐᑎᑦ ᐃᓗᕐᕆᔮᕈᑎᒋᙱᑐᐊᕈᓐᓂ

UNIVERSITY OF OTTAWA HEART INSTITUTE
INSTITUT DE CARDIOLOGIE DE L'UNIVERSITÉ D'OTTAWA

ᓄᓇᕗᑦᒥ ᐊᕐᓇᐃᑦ ᓯᖓᐃᔪᑦ ᓯᒃᑲᓕᐊᖅᑐᖅᑕᑦᑕᕐᓂᖏᑦ
ᓄᖅᑲᖅᐸᓪᓕᐊᓂᖏᓪᓗ
HI ᒪᓕᒐᖅ ᓈᓴᐅᑎᓕᒃ 2008281-01H

ᖃᐅᔨᓴᖅᑕᐅᖃᑕᐅᔪᒪᓂᕐᒧᑦ ᐊᖏᕈᑏᑦ

ᑐᑭᓯᔪᖓ ᖃᐅᔨᓴᖅᑕᐅᓂᐊᕐᓂᕐᒧᑦ ᐃᓚᐅᔪᒪᖕᒪᖕᖢᕐᒪ ᐱᔾᔪᑎᒋᓪᓗᒍ ᓄᓇᕗᑦᒥ ᐊᕐᓇᐃᑦ ᓯᖓᐅᔪᑦ ᓯᒃᑲᓕᐊᖅᑐᖅᑕᑦᑕᕐᓂᖏᓐᓄᑦ ᓄᖅᑲᖅᐸᓪᓕᐊᓂᖏᓐᓅᓪᓗ. ᑕᒪᓐᓇ ᖃᐅᔨᓴᐃᓂᐅᓂᐊᖅᑑᑉ ᖃᓄᐃᑦᑑᓂᐊᕐᓂᖓ ᐅᕙᓐᓄᑦ ᐅᓂᒃᑲᐅᔅᔭᐅᓯᒪᔪᖅ ᐅᒧᖓ ________________. ᑐᑭᓯᑎᑕᐅᑦᑎᐊᖅᑐᖓ ᖃᓄᐃᑦᑐᓂᒃ ᑕᒪᓐᓇ ᖃᐅᔨᓴᐃᓂᖅ ᑐᕌᒐᖃᕐᓂᐊᕐᒪᖕᖢᖓ ᐊᒻᒪᓗ ᐊᖏᖅᓘᖓ ᐊᐱᖅᓱᖅᑕᐅᖃᑕᐅᓂᐊᕐᓂᕐᒧᑦ. ᑐᑭᓯᔪᖓ ᑕᒪᒃᑯᐊ ᑎᑎᕋᖅᑕᐅᕙᓪᓕᐊᔪᓖᑦ ᐊᐱᖅᓱᖅᑕᐅᓂᓐᓂ ᑲᙳᓇᖅᑑᑎᑕᐅᓂᐊᕐᓂᖏᓐᓂᒃ. ᑐᑭᓯᖕᒥᔪᖓ ᖃᖓᑐᐃᓐᓇᖅ ᖃᐅᔨᓴᐃᓂᕐᒥ ᐃᓚᐅᔪᒪᔪᓐᓃᕐᓂᕈᒪ, ᖃᖓᑐᐃᓐᓇᖅ ᓄᖅᑲᕈᓐᓇᖅᑐᖓ ᓇᐅᒃᑯᑐᐃᓐᓇᖅ ᐊᑭᓕᐊᖅᑕᐅᓐᖏᑦᑐᖓ.

ᐅᑯᐊ ᑎᓴᒪᑦ ᒪᒃᐱᖓᐃᑦ ᐃᓚᐅᔪᓄᑦ ᑐᓴᐅᒪᔾᔪᑏᑦ ᐊᒻᒪᓗ ᐊᐱᖅᓱᖅᑕᐅᓂᐊᕐᓂᕐᒧᑦ ᐊᖏᕈᑏᑦ ᐅᖃᓕᒫᖅᓯᒪᔾᔭᒃᑲ ᐊᒻᒪᓗ ᑐᑭᓯᓪᓗᒋᑦ. ᐊᐱᖅᑯᑎᓕᒫᒃᑲ ᑕᒪᕐᒥᒃ ᑭᐅᔾᔪᑦᑎᐊᖅᓯᒪᓕᖅᑐᑦ. ᑕᒪᑐᒪ ᖃᐅᔨᓴᖅᑕᐅᓂᐊᕐᓂᕐᒧᑦ ᑐᕌᖓᔪᓂᒃ ᐊᐱᖅᑯᑎᒃᓴᖃᒃᑲᓐᓂᕈᒪ ᖃᖓᑐᐃᓐᓇᖅ ᖃᐅᔨᓴᐃᔨᓪᓗᐊᑕᖅ, ᔫᒃᑖᖅ ᐸᐸ ᓅᑦ ᐊᐱᕆᔪᓐᓇᖅᑕᕋ, [redacted].

ᐃᓚᐅᓂᐊᖅᑐᓄᑦ ᑐᓴᐅᒪᔾᔪᑏᑦ ᑎᑎᖅᑲᖁᑎᖏᓐᓂᒃ ᐊᑎᓕᐅᖅᓯᒪᔪᓂᒃ ᐊᒻᒪᓗ ᐊᐱᖅᓱᖅᑕᐅᓂᐊᕐᓂᕐᒧᑦ ᐊᖏᕈᑎᖏᑕ ᐊᔾᔨᖏᓐᓂᒃ ᐱᓂᐊᖅᑐᖓ.

ᐊᔭᐅᖅᑕᐅᓐᖏᑦᑎᐊᖅᖢᖓ ᐊᖏᖅᐳᖓ ᑕᒪᑐᒪᖓ ᖃᐅᔨᓴᐃᓂᐅᓂᐊᕐᓂᕐᒧᑦ ᐃᓚᐅᔪᒪᓪᓗᖓ.

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ᐃᓚᐅᔫᑦ ᐊᑎᖓ (ᓴᖑᐃᐱᓗᓐᖏᓪᓗᒍ)

_______________________________ _____________________
ᐃᓚᐅᔫᑉ ᐊᑎᓕᐅᕈᓯᐊ ᐅᓪᓗᖓ

____
ᖃᐅᔨᓴᐃᔨᐅᑉ/ᑎᒃᑯᐊᖅᑕᐅᓯᒪᔫᑉ ᐊᑎᖓ
((ᓴᖑᐃᐱᓗᓐᖏᓪᓗᒍ)

_______________________________ _____________________
ᖃᐅᔨᓴᐃᔨᐅᑉ/ᑎᒃᑯᐊᖅᑕᐅᓯᒪᔫᑉ ᐊᑎᓕᐅᕈᓯᐊ ᐅᓪᓗᖓ