INTERGENERATIONAL KNOWLEDGE TRANSMISSION FROM ABORIGINAL FEMALE ELDERS TO YOUTH REGARDING PREVENTATIVE AND SELF-CARE KNOWLEDGE OF URINARY TRACT INFECTIONS IN PRINCE GEORGE, BC

by

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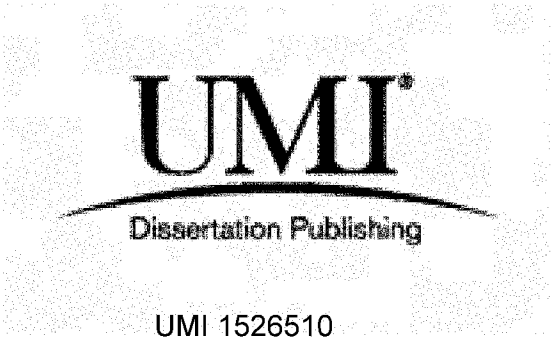

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Abstract

This study examines the factors influencing intergenerational knowledge transmission of Aboriginal women in Prince George, BC regarding preventative and self-care practices for urinary tract infections. The research questions were: What is the level of intergenerational knowledge exchange between female Aboriginal elders and youth, and what are the factors influencing this transmission? Interviews were conducted with seven Aboriginal youth and three elders living in Prince George and analyzed using the combined methods of narrative inquiry and interpretive phenomenological analysis. The results indicate that there are both historical and contemporary factors influencing the level of intergenerational knowledge transmission. Some participants discussed the complexities of finding their footing in a new territory, and the cultural tensions they felt as Aboriginal outsiders within a new Aboriginal community. Participants offered recommendations for improving the level of Aboriginal knowledge transmission and implications for future research were discussed.

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Acknowledgment

"A good thesis is a finished thesis". I posted these words on my wall and used it as my mantra to get through the countless hours of writing and revisions in order to create a worthwhile product. There were several moments during my long stint as a graduate student that I didn't think I would make it through to the end, and without the help and support of several people in my life, I truly believe that I would not have been able to complete this piece of writing that you are currently reading.

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Chapter One: Introduction

In Canada, the health care system is viewed as an integral part of our society and has contributed to our country having some of the best health outcomes in the world (Health Canada, 2005). Unfortunately, marginalized populations in Canada are still living in subpar conditions comparable to poorer countries around the world (National Collaborating Centre for Aboriginal Health, 2012b; Stephens, Parkes, & Chang, 2007). For various reasons, both historical and contemporary, Aboriginal peoples in Canada continue to be disproportionately represented among those who suffer from poorer health outcomes.

Aboriginal peoples have often reported lower satisfaction with their experiences within the health care system compared to the majority of Canadians (Canadian Institute for Health Information, 2009). The long history of colonization has embedded systemic and overt racism within some parts of the current mainstream health care system and contributed to the current health status of Aboriginal peoples (Browne & Fiske, 2001; Little Bear, 2000; National Collaborating Centre for Aboriginal Health, 2009; Waldram, Herring, & Young, 2007). Western discourses on health are increasingly found to be ineffective when working with many Aboriginal patients because their concept of health is incongruent with much of the care they are receiving (Lee & Sum, 2011). Gaining a better understanding of Aboriginal peoples' perspectives on health and healing, as well as providing culturally appropriate health care, are seen as steps that can improve the health outcomes of Aboriginal peoples (Johnson, 2012). More and more health care professionals are realizing the importance that Indigenous knowledge and medicine can hold for their Aboriginal patients (Young, Reading, Elias, & O'Neil, 2000).

Indigenous knowledge, also known as traditional knowledge or Aboriginal knowledge, has been transmitted largely through intergenerational teaching and learning that has been developed over centuries. This body of knowledge is unique and varies by people group, cultural practice, and regions throughout the world (Assembly of First Nations, 2009b). Indigenous knowledge transmission has historically been conducted through oral communication, observation, and hands-on learning, which require a strong communal learning environment in order to be successful. For many, the difference between Indigenous knowledge, Indigenous cultural practice and Indigenous spirituality is non-existent. Thus the transmission of this body of knowledge through generations is congruent with maintaining the longevity of Aboriginal culture to its peoples (National Collaborating Centre for Aboriginal Health, 2012a). Not all knowledge is passed on to everyone, as there is certain knowledge specific to women, or men, or even certain families within nations. Knowledge holders, as well as elders, are crucial in this transmission process (Royal Commission on Aboriginal Peoples, 1996). Unfortunately, through colonization, Aboriginal peoples' way of life has been disrupted and Indigenous knowledge around the world has become endangered, or kept hidden for decades, only to begin resurfacing in recent years with resurgence in cultural revitalization (Hunter, Logan, Barton, & Goulet, 2004; Martin-Hill, 2003).

The objective of this study is to explore the transmission of intergenerational knowledge among Aboriginal women in Prince George, British Columbia. Prince George is a relatively large urban city and the northern hub of British Columbia. Many residents of Prince George came from other towns within the region, as there are growing opportunities for education and work. Urbanization of Aboriginal peoples is an increasing phenomenon and cities are becoming a place where rich and diverse Aboriginal cultures can interact (Norris, Clatworthy, & Peters, 2013). This is due in part to the increased opportunities for

Aboriginal peoples in urban areas compared to their home communities (Hunter, Logan, Goulet, & Barton, 2006; Place, 2012). Migration from traditional territories to cities, whether temporarily or for longer periods of time, as well as an increase in Aboriginal self-identification are in large part responsible for the urbanization of Aboriginal peoples (Place, 2012). The large Aboriginal population in Prince George creates a unique opportunity to explore the Indigenous knowledge present in this area.

I became interested in this research topic through personal experience. As a first generation Canadian born woman with Chinese and Vietnamese ancestry, I found myself constantly stepping between two worlds: the dominant society of English-speaking Canada, and my home life where English was not allowed to be spoken in order to preserve our Asian culture. I found myself being questioned on my cultural authenticity and trying to legitimize my place in both of these worlds. When I moved to Prince George, BC to start my master's degree, I found my personal struggles being mirrored by the Aboriginal youth that I encountered. This interested me greatly and motivated me to research more about the experiences of Aboriginal women in this community.

I chose to focus conversations on urinary tract infections (UTI), as they are an extremely common condition that can be treated using both biomedical modalities as well as home remedies (Foxman, 2002). By using UTIs as a starting point, I asked the participants to discuss how they acquired health knowledge and to discuss their level of Indigenous knowledge surrounding UTIs. The study endeavored to answer the following questions:

1. What kind of information do Aboriginal women in Prince George have about self-care and preventative measures for UTIs?

2. From whom did these women receive this knowledge about UTIs, and what kind of information is it: Indigenous knowledge or western knowledge?
3. What factors do they perceive as having an influence on Indigenous knowledge transmission?

Pertinent information regarding Indigenous knowledge and its transmission is covered with a review in the current literature and presented in the next chapter. This review also examined Aboriginal health and how it relates to Indigenous knowledge and culture among Aboriginal peoples in Canada. Finally, as the discussion with participants surrounded preventative and self-care practices regarding UTIs, relevant literature concerning UTIs is also covered.

The conceptual framework for this study is an anti-oppressive and feminist lens that grounded the analysis of my results in relation to questioning mainstream social discourses of women and marginalized populations. Using this framework helped me to better root myself within the method of interpretive phenomenological analysis (IPA) by analyzing the participants' experiences as unique and valid events that are reflective of their position within society. IPA enables the researcher to bring light to the possible incongruence between the experiences of the participants within the larger social discourse that has been created for them. This methodological lens along with the existing literature is conflated in the discussion to critically examine the factors influencing knowledge transmission facing Aboriginal women in Prince George, BC.

Chapter Two: Literature Review

The purpose of this chapter is to provide the reader with an overview of the literature pertinent to the ideas and concepts discussed within this thesis. As this study's aim is to focus on improving the health of Aboriginal peoples, this literature review begins by looking at the current health status of Aboriginal peoples in Canada. I looked at the experiences of Aboriginal peoples within the health care system as well as how Aboriginal peoples find knowledge about health care. Next, I present a review of the literature focusing on the topic of Indigenous knowledge, how it is transmitted, factors influencing its transmission, and recommendations for increasing Indigenous knowledge transmission in communities. Finally, because this thesis focused on knowledge transmission through the use of participants' knowledge on urinary tract infection (UTI) self-care and preventative measures, a review of relevant UTI information is provided.

Aboriginal Health in Canada

On a global scale, Canada is seen as a developed and affluent country, which is known for its universal health care supported by its citizens (Health Canada, 2005). However, despite this reputation, many Canadians are living in subpar conditions comparable to poorer countries around the world (National Collaborating Centre for Aboriginal Health, 2012b). For historical and other reasons, Aboriginal Canadians are disproportionally represented among those living in social exclusion. Shah (2003) describes a few key determinants, such as race, age, physical, psychosocial, socioeconomic, and environmental factors, as effective measures of a person's overall health. When the social determinants of health are considered, it creates a more complex picture of why Aboriginal peoples' health has suffered in Canada (Adelson, 2005; Reading & Wien, 2009).

Along with these determinants, many Aboriginal Canadians view health differently than the dominant health care system, as a "balance, harmony, holism, and spirituality rather than in terms of western concepts of physical dysfunction and disease within the individual" (Shah, 2003, p. 163). Some Aboriginal peoples use the concept of the medicine wheel to share their understanding of health (Assembly of First Nations, 2009b). This wheel encompasses four quadrants, physical, mental, emotional, and spiritual, that must be in harmony in order to truly be a healthy individual. When taking into account the social determinants of health, how the four quadrants of the medicine wheel have not been balanced for Aboriginal peoples in Canada is better understood. Furthermore, Thompson and Gifford (2000) found that for Aboriginal peoples, health was closely linked with the land and their culture, and that "illness itself, cannot be separated from people's experiences of unstable, unpredictable and disempowered realities of everyday life, as it is lived through recollections of past, experiences of present and concerns about the future" (p. 1458). It is important to understand the concept of health from an Aboriginal perspective, as it has been found that western discourses on health were ineffective and inappropriate for many Aboriginal patients (Foster, 2006; Lee & Sum, 2011). Health care initiatives designed using western views of health were unsuccessful because they were not culturally relevant to their target populations (Browne, Varcoe, & Fridkin, 2011; Shah, 2003; Thompson & Gifford, 2000).

Aboriginal peoples often rate their health status as poor compared to other Canadians (Assembly of First Nations, 2009a; Garner, Carriere, & Sanmartin, 2010). This information is also consistent with other literature on Aboriginal health in Canada in terms of incidence of chronic disease, morbidity, and mortality rates (de Leeuw & Greenwood, 2011; Shah, 2003; Waldram et al., 2007).

Historically, there have been many factors contributing to the imbalance of the health of Aboriginal peoples in Canada. Centuries of colonization have devastated Aboriginal communities and disconnected people from their language, culture, land, and autonomy (de Leeuw & Greenwood, 2011; Shah, 2003). Residential schools separated children from families in attempts to assimilate Aboriginal peoples to European ideals. Many students experienced severe emotional, physical, and/or sexual abuse (Waldram et al., 2007). The experiences at residential schools, particularly in British Columbia, have been found to be far ranging, from positive to torturous, thus its effect on the outcomes of health of Aboriginal peoples can be quite different, making this topic complex (de Leeuw & Greenwood, 2011). As a result, the social determinants of health that we see today are a reflection of the deleterious effects that colonization has had on Aboriginal peoples (Archibald, 2006; Shah, 2003).

Experiences with the health care system. The health status of Aboriginal peoples in Canada is affected, in part, by their experiences with the health care system. While the majority of Canadians reported having a satisfactory relationship with their health care provider and would recommend their doctor to a friend or relative (Canadian Institute for Health Information, 2009), Aboriginal peoples have had difficulties navigating the health care system due to systemic racism and prejudice (Browne & Fiske, 2001; National Collaborating Centre for Aboriginal Health, 2009; Waldram et al., 2007). Browne and Fiske (2001) found that First Nations women experienced a mixture of both positive and negative encounters within the health care system. The negative experiences included feelings of marginalization by the health care system, as well as feeling dismissed and negatively stereotyped by health care providers (Browne & Fiske, 2001). Positive experiences included being able to be an active participant in their health care, as well as having good relationships

with the health care providers when their personal and cultural identity was affirmed (Browne & Fiske, 2001). These experiences can influence how Aboriginal peoples access health care services that are available to them. It is interesting to note that despite the experiences with the health care system, Aboriginal peoples also continue to access traditional modalities for health care needs as well (Archibald, 2006; Embree, Clark, Mello, & Sheppard, 1994; Place, 2012).

Aboriginal peoples in Prince George. Over half of all Aboriginal peoples in Canada live in urban areas (Norris et al., 2013). Urbanization of Aboriginal peoples is increasing rapidly, especially among Aboriginal women (Andersen, 2013). In 1994, a report was done by the Aboriginal Health Policy Branch of the BC Ministry of Health and Ministry Responsible for Seniors to review the health services for Aboriginal peoples living in the Prince George area. This report found that in 1994, almost 7000 Aboriginal peoples were living in the city of Prince George (Embree et al., 1994). In 2006, an Aboriginal population profile was done in Prince George and found that 8855 Aboriginal peoples were living in this city and over half of this population had relocated either to Prince George from an outside community, or moved within the city, between 2001 and 2006 (Milligan, 2010). Within this group, the highest number of Aboriginal peoples living in Prince George identified as First Nations, at fifty-five percent, with the second largest identifying as Métis, at forty-five percent (Milligan, 2010).

The experiences with the health care system have been less than ideal for Aboriginal peoples in Canada. These experiences can affect the way Aboriginal peoples look for care and advice about their health.

Health Knowledge Acquisition and Indigenous Knowledge Transmission

To better understand how knowledge is transmitted, one must also look at how a person seeks information to obtain their knowledge. There have been numerous studies investigating health information seeking behavior; however, the literature found on Aboriginal women's information seeking behavior is slight. Savolainen (2005) believes that "even though individuals select and use various sources to solve problems or make sense of their everyday world, the source preferences and use patterns are ultimately socially conditioned" (p. 143). These social conditions are made up of how a person conceptualizes their problem that they would like to solve, what values they attach to the problem, and the current phase of life that the person is in (Savolainen, 2005).

Using Savolainen's theory that a person's preferred source of information is influenced by their surroundings can be applied to study how different generations seek health information. Several studies have found that an increasing number of adolescents are using the Internet to find information for their health needs over older generations (Borzekowski & Rickert, 2001; Gray, Klein, Noyce, Sesselberg, & Cantrill, 2006; Hansen, Derry, Resnick, & Richardson, 2003; Skinner, Biscope, Poland, & Goldberg, 2003; Ybarra & Suman, 2008). Gray et al. (2006) found that many adolescents used the Internet as their primary source for seeking health information, while Ackard and Neumark-Sztainer (2001) found that adolescents sought information from their parents first before using the Internet. Both studies found that as adolescents grew older, they were more likely to seek health information from peers or the Internet rather than parents or health care professionals. Many benefits were found when using the Internet as a source to seek health information, including fast and easy access to updated information and being able to discuss potentially

embarrassing and personal topics without judgment while keeping anonymity (Borzekowski & Rickert, 2001; Gray et al., 2006; Jiménez-Pernett, de Labry-Lima, Garcia-Gutiérrez, del Carmen Salcedo-Sánchez, & Bermúdez-Tamayo, 2010; Skinner et al., 2003). In addition, Ybarra and Suman (2008) found that those who used the Internet to learn more about their health inquiries had improved patient-provider relationships because of their increased knowledge and comfort level discussing their health issues. Despite these benefits, the Internet comprises challenges such as the vast amounts of information available, being able to decipher which sources are credible, and being able to navigate websites in order to find the answer to the user's proposed questions (Hansen et al., 2003; Skinner et al., 2003). Although other sources of media are used to seek health information such as pamphlets, and popular magazines, the Internet remains the most widely used by youth, while older adults prefer more traditional sources such as their health care professional or books (Skinner et al., 2003; Ybarra & Suman, 2008).

Defining Indigenous knowledge. The complexity of Indigenous knowledge stems from the fact that many cultures have different working definitions of what their traditional knowledge means to their people. Many synonymous terms are used, such as traditional knowledge, and Aboriginal knowledge, although there are many researchers dissatisfied with the term 'traditional' as it implies a primitive nature to this knowledge. In addition, Indigenous knowledge is not a static entity; rather, it has been constantly adapting throughout history (Barnhardt & Kawagley, 2005). The Assembly of First Nations (2009b) generally defines this knowledge as:

> The customary ways in which Aboriginal peoples have done or continue to do certain things or activities, as well as the new ideas or ways of doing things that have been developed by Aboriginal peoples which respect their traditions, cultures and practices. Many of these customary ways have been passed on from generation to

> generation and are considered sacred. This unique body of knowledge is culturally based, context specific, holistic and differs from nation to nation. (p. 4)

This definition can be applied to many aspects of traditional ways of life, from hunting and fishing, to Indigenous medicine and ceremony. Indigenous knowledge has been passed down from generation to generation through methods of storytelling, observation, and apprenticeship (Ohmagari & Berkes, 1997). Some researchers, such as Barnhardt and Kawagley (2005), argue that this method of education and transmission is based on carefully constructed observation that has been tested over time, and been adapted to maintain survival with changing environments. Furthermore, the authors suggest that in this way, Indigenous knowledge shares many traits of western science, and thus they do not need to be viewed strictly as opposing forces. Contrary to many western scientists that have historically believed that Indigenous knowledge was inferior or did not exist altogether (Agrawal, 1995), Battiste (2002) argues that:

> As a concept, Indigenous knowledge benchmarks the limitations of Eurocentric theory—its methodology, evidence, and conclusions—reconceptualizes the resilience and self-reliance of Indigenous peoples, and underscores the importance of their own philosophies, heritages, and educational processes. Indigenous knowledge fills the ethical and knowledge gaps in Eurocentric education, research, and scholarship. (p. 5)

It was not until recent history that Indigenous knowledge began to resurface as a long existing form of knowledge, and to some, it is being viewed as "the best strategy in the old fight against hunger, poverty and underdevelopment" (Agrawal, 1995, p. 413).

In terms of health care, studies show the increasing benefits to health outcomes when Indigenous knowledge and medicine are incorporated into care for many Aboriginal patients (Alvord & Van Pelt, 1999; Durie, 2004; Foster, 2006; Place, 2012). Additionally, researchers are working with communities to provide administrators and policy makers'

recommendations regarding how to incorporate these ways of knowing into the dominant health care system so that care provided to Aboriginal peoples can be culturally appropriate and relevant (Johnson, 2012). The National Aboriginal Health Organization (2008) found that of the 276 Aboriginal women they interviewed in Ontario, seventy-two percent were still utilizing Indigenous healers and medicine for their health care. Within an urban setting, thirty-four percent of Aboriginal peoples were still able to access traditional medicines in cities (National Aboriginal Health Organization, 2008)

How is Indigenous knowledge transmitted? There are many legends about how Indigenous knowledge first came into existence. Spirituality comprises a large component of how Aboriginal peoples first acquired their knowledge and medicines. It is viewed as a gift from the Creator, and thus must be respected. Cultural and spiritual practices coincide with the use of Indigenous knowledge, and the belief in the power of these practices is known to directly affect the efficacy of Indigenous medicine (Hill, 2009). Because of this, it is important to understand that for Aboriginal peoples, the transmission of Indigenous knowledge is not solely acquiring a body of information; rather, it is in itself the transmission of Aboriginal culture, providing strength, resiliency, and transformation (National Collaborating Centre for Aboriginal Health, 2012a).

Indigenous knowledge has been transmitted through generations using symbolic communication and apprenticeship, rather than formal education seen in western societies (Ohmagari & Berkes, 1997). Ohmagari and Berkes (1997) researched the transmission of Indigenous knowledge of the James Bay Cree regarding bush skills, and found that the children learned not through verbal instruction from elders, but from observation and imitation. Meanwhile, these children acquired the "values of self-reliance, independence, and competence, and also of sharing and cooperation" (Ohmagari & Berkes, 1997, p. 206).

Furthermore, the teaching of this information was not limited to just one person; rather, knowledge was transmitted from parents, grandparents, older siblings, extended family, and community members as well (National Collaborating Centre for Aboriginal Health, 2012a; Ohmagari & Berkes, 1997). However, it is important to note that the transfer of information was fundamentally intergenerational, and it was widely understood that elders were a crucial part of this transmission process (Hunter et al., 2006; Reading & Wien, 2009). The Royal Commission of Aboriginal peoples (1996) define elders as:

> keepers of tradition, guardians of culture, the wise people, the teachers. In Aboriginal societies, elders are known to safeguard knowledge that constitutes the unique inheritance of the nation. They are revered and respected. While most of those who are wise in traditional ways are old, not all old people are elders, and not all elders are old. (p. 488)

Other studies have found that oral narratives made up a large portion of the transmission of knowledge. Sterling (1997) describes oral tradition as "[being] able to sustain important cultural information for many Aboriginal peoples, when other parts of culture have been lost. They transmit cultural knowledge through pedagogies, philosophies, histories, and healing" (p. 6-7). There has been much debate over the validity of Indigenous knowledge due to the nature of its transmission. One literature review conducted by von Gernet (1996) for the Department of Indian Affairs and Northern Development found that:

> "accurate" oral traditions... depend not only on the ability of an individual to combat memory decay and refraction, but also on the unerring transmission from one individual to another...experimental work has shown that significant changes take place during the transmission of oral information between humans. (p. 16)

The devaluation of oral traditions and Indigenous knowledge stems from the authoritative stance of the Eurocentric scientific empirical methods. Written record has been considered more reliable and thus, a more valid source of information, which has created continued

resistance for oral traditions and oral histories to be included within academia and society (Hulan & Eigenbrod, 2008). However, von Gernet (1996) found that "evidence has been mounting that many oral traditions contain information on historical realities that are centuries old. These traditions have usually been validated by using [external tests]" (p. 19). von Gernet (1996) found that by comparing the stories in oral histories with historical texts, much of the information was the same, thus showing the consistency that oral histories were able to obtain. Furthermore, numerous scholars believe that in the process of attempting to write down oral traditions, the story and meaning of such knowledge was contorted and lost (Hulan & Eigenbrod, 2008; Nicholas, 2008). Moreover, in the 1997 case, Delgamuukw v. British Columbia, historical decisions were made to accept oral history, traditional stories, and songs as evidence (BC Treaty Commission, 1999). More recently, it is becoming increasingly apparent that Indigenous knowledge and oral traditions are extremely valuable in many disciplines including health, economics, agriculture, and land development (Young-Ing, 2008).

Factors influencing transmission. Oral transmission is a social and cultural act, which relies on a strong communal environment in order to survive. With colonization came drastic disruption to Aboriginal peoples' way of life, and thus also to the transmission of Indigenous knowledge (National Collaborating Centre for Aboriginal Health, 2012a).

Through colonization, Aboriginal culture and practices were "denounced, devalued, and in some cases, outlawed specifically through legislation such as the Indian Act" (National Aboriginal Health Organization, 2008, p. 7). The impact of cultural genocide from forces such as missionaries, residential schools, and assimilation policies, have taken a toll on generations of Aboriginal peoples and have affected all aspects of their health (Alvord & Van Pelt, 1999; Archibald, 2006; Hunter et al., 2006; Little Bear, 2000; Martin-Hill, 2003;

Waldram et al., 2007). As a result of these colonial forces, Indigenous knowledge became fragmented, and fear of retribution or imprisonment from churches, government, and educational institutions drove much of Aboriginal culture underground (Martin-Hill, 2003). This includes "the collection and use of natural remedies as well as some fundamental concepts of public or population health which flow naturally from Aboriginal concepts of land, languages and relationships within communities" (National Aboriginal Health Organization, 2008, p. 7). Often healers (also known as medicine men/women) and elders were the only people in each community that had knowledge of these natural remedies and Indigenous medicines of their people. Martin-Hill (2003) defines a medicine man/woman as:

> [A person who's] work usually engages in ritual, ceremonial activity and prayer. In some societies they are identified as "medicine men/women" because they possess sacred bundles, sacred pipes, sacred masks, and the rights to rituals, songs and medicines that have been inherited from their parents, grandparents, or that they earned through apprenticeship with a respected medicine man or woman. Depending on their nation, they are also conductors of community ceremonies...It is normative for these individuals to sacrifice their daily lives to ritual, prayer and healing. (p. 8)

Through historical events of colonization, many of these knowledge keepers were unable to pass their knowledge down to younger generations and much of it has been lost with the death of these elders.

The residential school system has been found to be responsible for major losses of Aboriginal culture (Barnhardt & Kawagley, 2005; Blackstock, Trocmé, & Bennett, 2004; de Leeuw & Greenwood, 2011; Martin-Hill, 2003; National Collaborating Centre for Aboriginal Health, 2012a; Ohmagari & Berkes, 1997; Waldram et al., 2007). Removal of children from their families and communities deprived multiple generations of Aboriginal children from their culture and language. Many were met with physical, psychological, and sexual abuse (National Collaborating Centre for Aboriginal Health, 2012a). Students were no longer

allowed to display any aspect of their Aboriginal identity, whether that be through language, spiritual belief, or talk to their family. The goals of many residential schools were to teach students that their Aboriginal culture embodied uncleanliness and disease, and to feel shame over their peoples' way of life (Kelm, 1998).

The experience of the residential school system left many survivors without the tools necessary to "[form] healthy relationships with their partners and children, which frequently resulted in experiences of poverty, mental health issues, addictions, and domestic violence" (National Collaborating Centre for Aboriginal Health, 2012a, p. 4). The loss of language was especially detrimental to the transmission of Indigenous knowledge, as language creates a "connection to the past and its role as repository and transmitter of Indigenous knowledge is enhanced in the act of speaking" (National Collaborating Centre for Aboriginal Health, 2012a, p. 4). As the National Aboriginal Health Organization (2008) points out:

> Language is integrally linked to Indigenous knowledge and practices. Without the continuance of language, a people's relationship with the land with which they live, their health and well-being, and cultural and traditional practices are compromised, as the means of transferring the complexities of Indigenous knowledge is lost. (p. 5)

Many Aboriginal peoples believe that this direct loss of culture from residential schools and colonization are contributing to the poor health that Aboriginal peoples face today, and only recently has a resurgence in Indigenous knowledge become evident (National Aboriginal Health Organization, 2008). Before the late 1900s, many traditional ceremonies and practices were still illegal, thus there are many knowledge keepers that are still leery of openly practicing and embracing their traditional ways (Martin-Hill, 2003). There has been much loss of knowledge over the years and many elders feel that younger generations are not interested in learning their traditional cultures (Martin-Hill, 2003). Today, the lives of

Aboriginal peoples are much different and the role of colonization has taken a toll on the traditional family structure (Das Gupta, 1995).

These effects on family structure not only come from the impacts of residential schools but also the historical mass removal of Aboriginal children from their families into non-Aboriginal homes, known as the Sixties Scoop (Blackstock et al., 2004; Carriere, 2005). This movement came from the misinformation and misinterpretation of social workers about the historical trauma of Aboriginal peoples that led to the loss of parenting skills and placed many Aboriginal peoples in a place of poverty without empowerment (Blackstock et al., 2004). As many as eighty percent of Aboriginal children were placed in non-Aboriginal homes and many Aboriginal children were not heard from again by their original families or not until adulthood (Carriere, 2005). Carriere (2005) found that Aboriginal adoptees felt a sense of loss towards their culture and that this disconnection was a factor influencing their health, creating a barrier for many in building community across generations.

The transmission of Indigenous knowledge has been effected not only by historical factors, but by contemporary factors as well. One of the key struggles of many Aboriginal peoples is the concept of cultural authenticity. James (2001) discusses the problematic essentialization of Aboriginal culture:

> Suppressing different ideological or religious views amounts to suppressing the peoples who hold them... [E]ssentialist depictions of Aboriginal culture refer to the most well known traditional ideologies and symbols. The Aboriginal and non-Aboriginal are paired off in sets of opposites... These contrasting pairs emphasize the differences between Aboriginal and non-Aboriginal worldviews; they also emphasize the definition of culture as difference. Throughout the twentieth century, such essentialist notions of culture have been used to stereotype and denigrate as well as to legitimate. This has led to critiques of the essentialist concepts of culture. (p. 319)

By essentializing Aboriginal culture, not only is there a glaring dichotomy of what is Aboriginal and non-Aboriginal, but also what is the 'right' type when comparing Aboriginal people groups. Because Aboriginal peoples are so diverse, many protocols and spiritual beliefs differ by nation. Thus, essentialism of culture can create tension between Aboriginal groups when customs differ, especially when educating non-Aboriginal people about Aboriginal culture.

Recommendations. Some research has been conducted looking into how the transmission of Indigenous knowledge can be improved for Aboriginal peoples. Battiste (2002) concluded that in order for any improvement to be made, Canada needed to "affirm that Indigenous knowledge is an integral and essential part of the national heritage of Canada that must be preserved and enhanced for the benefit of current and future Canadians" (p. 33). Actions to support this recommendation included supporting lifestyles that allowed intergenerational Indigenous knowledge to be transmitted, and changing the educational institutions to affirm Indigenous knowledge for the next generations (Barnhardt & Kawagley, 2005; Battiste, 2002). Furthermore, Norris et al. (2013) found that culturally sensitive services and initiatives that foster strong cultural identities were an important element to increasing and maintaining the overall wellbeing of the Aboriginal population. The rapid urbanization of Aboriginal peoples also comes with the need for Indigenous cultural renewal in cities rather than its erosion (Norris et al., 2013). Policies are needed to support these recommendations and should include affirming traditional ownership over Indigenous knowledge and the protection of Indigenous language (Battiste, 2002; Canadian Heritage, 2012).

Urinary Tract Infections

This study used urinary tract infections (UTI) as a research focus in order to study knowledge transmission between Aboriginal women. UTIs were used because of their common occurrence in women in North America, as well as the ability for women to treat UTIs relatively easily and outside of a hospital setting with biomedical and/or traditional treatment modalities. The study of Indigenous women's experiences of care in the context of UTIs thus provides a unique opportunity to explore issues related to Indigenous intergenerational knowledge transmission. The next section briefly explores relevant literature on UTIs to help provide context for the lens of this study.

What is a urinary tract infection? A UTI is a bacterial infection that colonizes and proliferates within the urinary tract, usually found in the bladder, but in more serious cases, can reach the kidneys as well. UTIs can be divided into two categories: complicated UTIs and uncomplicated UTIs.

A complicated UTI is defined as "a urinary infection occurring in a patient with a structural or functional abnormality of the genitourinary tract" (Nicolle & AMMI Canada Guidelines Committee, 2005, p. 349). Genitourinary abnormalities can introduce infection through various ways, such as obstruction of the urinary tract via stones resulting in incomplete voiding of urine, bacteria being introduced into the urinary tract via instruments such as catheters, and bacterial colonization in the biofilm of stones and indwelling devices (Nicolle & AMMI Canada Guidelines Committee, 2005). Complicated UTIs are usually asymptomatic and can range from mild infections contained within the lower urinary tract, such as the bladder, to more complex manifestations such as septic shock or even death (Nicolle & AMMI Canada Guidelines Committee, 2005). These severe systemic

complications are usually rare in healthy women and are more common with patients suffering from comorbid conditions such as diabetes (Foxman, 2002; Harding, Zhanel, Nicolle, & Cheang, 2002; Nicolle & AMMI Canada Guidelines Committee, 2005; Patterson & Andriole, 1997).

An uncomplicated UTI is said to be a "benign illness with no long-term medical consequences [found within a] nonobstructed adult" (Foxman, 2002, p. 9S). Uncomplicated UTIs have very distinct symptoms that can often be self-diagnosed by women who have had a previous UTI in their lifetime (Nicolle et al., 2006). According to Hooton et al. (1996), these symptoms include dysuria, frequency, and/or urgency. When the infection has reached the kidneys, symptoms of fever, flank pain, nausea and/or vomiting can also be found (Stamm, McKevitt, Roberts, & White, 1991). Within a clinical setting, a culture-confirmed uncomplicated UTI has "greater or equal to 10^2 colony-forming units of a uropathogen per milliliter of midstream urine" (Stamm et al., 1991, p. 469), but many times a urine culture does not have to be confirmed for many health care practitioners to diagnose a UTI as it was found that a urine dipstick test was sufficient as well as the unique symptoms associated with UTIs (Foster, 2008).

Hooton (2001) defines a recurrent UTI as a "symptomatic UTI that follows clinical resolution of an earlier UTI generally, but not necessarily, after treatment" (p. 259). As it is difficult to ascertain whether or not the recurrent UTI is a new infection by a different strain of uropathogen or relapse of the original infection, other definitions simply state a person has a recurrent UTI if they have had at least two to three episodes per year (Jepson & Craig, 2008). Stamm et al. (1991) found that recurrent UTIs occur on an average of 2.6 times per year but the range varied greatly from 0.3-7.6 episodes per year. Furthermore, UTIs were found to recur in clusters followed by periods of latency (Stamm et al., 1991).

Epidemiological data. In North America, UTIs are extremely common in women and are considered one of the most common bacterial infections (Foxman, 2002). Gupta, Hooton, Roberts, and Stamm (2001) have found that approximately fifty to seventy percent of women will experience a UTI in their lifetime, with many of these women having recurrent infections. UTIs are approximately fifty times more common in women than in men (Jepson & Craig, 2008), and are responsible for a significant morbidity and health care costs (Foxman, 2002; Hooton et al., 1996; Schaeffer & Stuppy, 1999). Foxman (2002) reports that these costs include visits to physician clinics, prescriptions for antibiotic therapy, hospitalization expenses, as well as costs associated with travel, sick days from work, and morbidity. It was found that the average woman experiencing a UTI could be found to have "symptoms for an average of 6.1 days, have restricted activities for 2.4 days, miss 1.2 days of work or school, and spend 0.4 days in bed" (Foster, 2008, p. 235). Annually in the United States, these costs total approximately $1.6 billion (Foxman, 2002, p. 10S). Nicolle et al. (2006) suggest that statistics for UTIs in Canada are likely comparable to that of the United States. Although specific epidemiological data does not exist on Aboriginal women, risk factors for UTIs such as diabetes are more common in this population (Stapleton, 2002).

Risk factors for urinary tract infections. UTIs have been the focus of many studies due to the high prevalence in North American women. There are populations that are more susceptible to UTIs than others, such as patients with diabetes, the elderly, pregnant persons, young children, patients with spinal cord injuries and catheters, persons living with HIV/AIDS, and persons with abnormal urinary tracts (Foxman, 2002). However, healthy young women with normal urinary tracts make up many cases of UTIs as well, with the majority of UTIs being uncomplicated (Foxman, 2002). Numerous studies have researched risk factors for acquiring UTIs in these young women. Sexual activity was one of the most

important risk factors for infection and recurrence in healthy women (Foster, 2008; Kontiokari, Nuutinen, & Uhari, 2004; Scholes et al., 2000). Nicolle, Harding, Preiksaitis, and Ronald (1982) found that seventy-five percent of the episodes of UTIs in women would occur within 24 hours of sexual intercourse and that the more intercourse episodes within a given interval, the greater the likelihood that infection would result. In a study researching sexually active young women attending a university health centre and a health maintenance organization (HMO), Hooton et al. (1996) found that if a woman had sexual intercourse three of the past seven days, she would have a risk of contracting a UTI that was 2.6 times greater than a student that did not have sexual intercourse that week. Furthermore, the risk would increase to 9 times greater if she had sexual intercourse daily for the past week. Other risk factors include the type of contraception used and a previous history of UTIs (Foster, 2008; Hooton et al., 1996; Kontiokari et al., 2004; Nicolle et al., 1982). Scholes et al. (2000) found that a maternal history of UTIs and the early age of a woman's first UTI contributed to a two to four times greater chance of acquiring a recurrent UTI. Voiding before and after intercourse, frequency of urination, wiping patterns, and frequent use of tight clothing was not found to be risk factors for UTIs (Foxman & Chi, 1990; Hooton, 2001).

Persons with diabetes. Persons with Diabetes Mellitus (DM) are common sufferers of UTIs. Studies suggest that women with diabetes contract UTIs at higher frequencies than women without diabetes, as well as having more severe cases of UTIs (Geerlings et al., 2000; Harding et al., 2002; Stapleton, 2002). It is interesting to note that while women with diabetes can experience two to three times greater risk of contracting a UTI than women without diabetes, studies have shown that there is no significant increase of infection between UTIs in men with diabetes compared with men without diabetes (Patterson & Andriole, 1997). Risk factors for this subpopulation were the same as other non-diabetic women for

contracting UTIs with sexual activity being the most prominent (Geerlings et al., 2000). In some Canadian studies, it was found that Aboriginal ethnicity was found to have higher prevalence of DM and bacteriuria, and showed association to increased risk of contracting UTIs (Stapleton, 2002).

In Canada, diabetes is one of the most common chronic illnesses that Aboriginal peoples are suffering from today (Barton, Anderson, & Thommasen, 2005; Daniel et al., 1999; Reading, 2009). Diabetes has become a major public health concern as the prevalence of diabetes in the Aboriginal population is 3.6 times higher in men, and 5.3 times higher in women, than among the general Canadian population (Barton et al., 2005; Young et al., 2000). Two-thirds of the diabetic Aboriginal population are women, and the incidence of type 2 diabetes in Aboriginal children is increasingly rapidly (Shah, 2003). Although statistics range within different Aboriginal groups, a common trend of increasing prevalence exists (de Leeuw & Greenwood, 2011; Health Canada, 2009; Yu & Zinman, 2007). The highest incidences of diabetes are found in southern urban areas and as one moves northward, and closer toward rural and remote areas, the incidence of diabetes decreases (Daniel et al., 1999; Waldram et al., 2007; Young et al., 2000). In 2001, forty-nine percent of Aboriginal peoples lived in urban areas, thirty-one percent on reserve, and the remaining twenty percent lived in rural, non-reserve areas (Shah, 2003). Diabetes is a recent disease for the Aboriginal population that was relatively rare before the latter half of the 20th century (Shah, 2003; Young et al., 2000). Many researchers have found that the boom in diabetes can be attributed to colonization and its impact on the traditional lifestyle of Aboriginal peoples, as well as environmental factors and genetic susceptibility (Daniel et al., 1999; Reading, 2009; Waldram et al., 2007).

The issue of diabetes is a prominent one in Canada, as it has become an epidemic in Aboriginal populations. This chronic, debilitating, and costly disease also enhances risks for other comorbid conditions in patients, including vascular diseases, renal complications, nerve damage, as well as urinary tract infections (Geerlings et al., 2000; Harding et al., 2002; Stapleton, 2002; Young et al., 2000).

UTI treatments. Currently, the empirical method of treatment of UTIs is using antimicrobial therapy. This knowledge stems from the susceptibility of uropathogens to certain antibiotics used to treat infections within the urinary tract. However, consistent use of the same antibiotic has resulted in an increased resistance in North America. Risk factors for resistance to antibiotics were found to be associated with diabetes, recent hospitalization, and recent antibiotic use (Hooton, 2001). For women who do not wish to take antibiotics for prolonged periods, some physicians recommended self-treatment of a single-dose or three-day drug therapy (Gupta et al., 2001; Hooton, 2001; Schaeffer & Stuppy, 1999). Because women have been found to be successful with self-diagnosis of UTIs, they were also able to self-treat. However, Hooton (2001) warns that this method should be restricted to highly compliant patients who have been well documented with having recurrent UTIs and have a good relationship with their health care providers. Persons with diabetes should have antimicrobial therapy that should be extended for at least seven days due to resistant uropathogens involved in UTIs found in patients with DM (Stapleton, 2002).

Preventative measures. Antibiotics have not only been used as treatment for UTIs, but also as a prophylaxis as well (Gupta et al., 2001; Hooton, 2001; Schaeffer & Stuppy, 1999). This method of prevention ranges from taking a single dose of an antibiotic post sexual intercourse, to taking a continuous dose of antibiotics for an extended period of time, ranging from six months to two years (Hooton, 2001). Antibiotics as a preventative measure

have been recommended for women who have a higher degree of discomfort experienced with the onset of their infection and experience recurrent UTIs in a short period of time, due to the clustering nature of UTIs (Hooton, 2001). However, since the frequency of antibiotic use was found to be directly related to the prevalence of bacterial resistance, more and more health care professionals are considering other options for preventative measures as well (Schaeffer & Stuppy, 1999).

Alternative methods of prevention have been extensively studied as bacterial resistance has been increasing. Kontiokari et al. (2004) researched dietary factors affecting susceptibility to UTIs, specifically berries and fruit, probiotics, and other dietary interventions. They found that "frequent consumption of fresh berry or fruit juices and fermented milk products containing probiotic bacteria decreases the risk for UTI recurrence in women" (Kontiokari et al., 2004, p. 378). Cranberries have been frequently researched as an alternative to antimicrobial prophylaxis, and are one of the most common herbal remedies (Stothers, 2002). Studies suggest that the effectiveness of cranberries as a preventative measure for UTIs is due to the cranberries preventing bacteria adhering to the uroepithelial cells along the bladder wall (Jepson & Craig, 2008). This method would be most effective against *E. coli,* as this organism relies on its fimbriae to adhere to cell walls and allow proliferation of the bacteria (Jepson & Craig, 2008; Raz, Chazan, & Dan, 2004). The compounds responsible for cranberries' anti-adherent properties were found to be fructose and high-molecular-weight compounds that inhibit both mannose-sensitive and mannose-resistant adhesins in *E. coli* (Raz et al., 2004). Many studies researched the efficacy of cranberry products to prevent UTIs in the form of tablets, fresh cranberries, and cranberry juice cocktails (Stothers, 2002). Although cranberries were found to be effective in many studies (Lowe & Fagelman, 2001; Raz et al., 2004; Stothers, 2002), some studies found little

to no significant difference in a reduction of UTIs (Barbosa-Cesnik et al., 2011). Furthermore, adherence was found to be difficult for participants within the study, and the drop-out rate was relatively high, due to the need for long term daily ingestion of cranberries (Jepson & Craig, 2008; Raz et al., 2004). Cranberries must be ingested continuously in order to have any effect on the prevalence of UTIs and the costs associated with purchasing these nonprescription medications are relatively high for the patient (Stothers, 2002). Although there has been extensive research assessing cranberries as an effective prophylaxis against UTIs compared to a placebo, little evidence suggests that cranberries are a successful treatment for established UTIs (Raz et al., 2004). Furthermore, according to the 2008 Cochrane Review, there have been no published studies comparing antimicrobials and cranberries as prophylaxis, but Jepson and Craig (2008) suggests that in theory, the use of herbal remedies such as cranberries would reduce the likelihood of bacterial resistance.

The cranberry, *Vaccinium macrocarpon,* is one of three berries that are indigenous to North America (Raz et al., 2004). First Nations people were the first to use these berries for medicinal purposes, including blood disorders, stomach ailments, liver problems, bladder and kidney diseases, and fever, yet this medicine was relatively new within a European context (Raz et al., 2004; Stothers, 2002). Cranberries as a western household remedy for prevention of UTIs were not made popular until much later on. Today, it is widely accepted that, as a home remedy, cranberries aid in preventing as well as treating UTIs (Jepson & Craig, 2008). However, studies have found varying results of the significant effectiveness of cranberries as a UTI treatment compared to antimicrobial therapy (Raz et al., 2004).

Indigenous knowledge of UTI treatments. Traditionally, Aboriginal peoples' way of life was tied closely to the land in various ways including hunting, fishing, and gathering plants as medicine and sustenance (Little Bear, 2000; Panelli & Tipa, 2007; Ritch-Krc,

Thomas, Turner, & Towers, 1996). Today, aspects of the traditional lifestyle of many Aboriginal peoples have changed, yet the importance of the land still persists in their culture (Ritch-Krc et al., 1996). However, through land development and forestation, many areas where Aboriginal peoples could go to harvest medicinal plants have been wiped out or contaminated and thus threatening an integral part of their culture (Ritch-Krc et al., 1996; Young & Hawley, 2004).

Although there exists some literature on the use of traditional medicine, there is little on treatments for UTI specifically. Ritch-Krc et al. (1996) write that the Carrier peoples of British Columbia used the Common Juniper to relieve kidney infections and Labrador tea for cleansing on a regular basis. Young and Hawley (2004) noted the Yinka Dene people of Northern British Columbia had the same uses as the Carrier peoples for Juniper and Labrador tea, with the addition of Tamarack branches used as diuretics, Western Chokecherry used specifically for bladder conditions, and Kinnikinnik described specifically as "women's medicine" and Horsetail as "men's medicine", both causing diuresis. Smith (1928) noted that the Gitxsan of Northern British Columbia used Juniper plants as well for kidney troubles, as well as many other plants, such as the Scrub Pine, Jack Pine, and False Solomon's Seal as a diuretic. Western Nettle was used by the Gitxsan specifically for bladder troubles while Sweet Gale was used by the Bella Coola peoples as a diuretic (Smith, 1928).

Currently, there are many campaigns raising awareness for consultation and consent from Aboriginal communities regarding land development. Many industries such as mining, forestry, and pipeline development are hoping to utilize and pass through traditional territories of many nations in northern British Columbia. There have been numerous nations opposing this development in fear of contamination of the environment and destroying sacred wildlife crucial to their culture (Gathering of Nations). However, if corporations and

governments continue to strive for development of the land, fewer and fewer opportunities for medicine harvesting will be available, and Indigenous knowledge transmission may suffer.

Summary and Research Questions

This chapter provided a review of the relevant literature pertaining to this study. Background information was given on Indigenous knowledge transmission, Aboriginal health status in Canada, and UTIs. After reviewing the relevant literature, three research questions were developed to address the gaps within the literature. The research questions for this study were:

1. What kind of information do Aboriginal women in Prince George have about self-care and preventative measures for UTIs?
2. From whom did these women receive this knowledge about UTIs, and what kind of information is it: Indigenous knowledge or western knowledge?
3. What factors do they perceive as having an influence on Indigenous knowledge transmission?

In order to help answer these research questions, the motivations and background of the researcher are explored in the next chapter as well as an examination of the methods for this study.

Chapter Three: Methods

The way in which research is conducted can reveal a lot about what answers the researcher will find. In this chapter, I begin by locating myself within my research, followed by a discussion of the methods that were used for this study, the research process, and the limitations found within the study.

Locating Myself

> One of the most fundamental principles of Aboriginal research methodology is the necessity for the researcher to locate himself or herself. Identifying, at the outset, the location from which the voice of the researcher emanates is an Aboriginal way of ensuring that those who study, write, and participate in knowledge creation are accountable for their own positionality. (Absolon & Willett, 2005, p. 97)

I hail from Dartmouth, Nova Scotia, which is traditional Mi'kmaq territory. I am a first generation Canadian. My mother is ethnically Chinese and grew up in Cambodia, and my father is Vietnamese. Both my parents fled from war torn countries independently and made their way to Canada where they met, married, and had three children. My mother worked quite diligently to ensure that my siblings and I knew our languages, both Chinese and Vietnamese. As refugees, my parents were very fond of Canada and the opportunities it brought for them and their family. They instilled in me the importance of hard work and education, and how wonderful this country was going to be for my life. Growing up, I always thought of myself as Canadian. But later in life, my experiences at school began to make me question what exactly it meant to be 'Canadian'. I believed in the mainstream rhetoric of a multicultural and friendly nation and it was not until I started my university career that I began to see the complexities of this rhetoric, and what it means for many of its citizens.

As a non-white woman, I found myself becoming more and more aware of this fact in my adult life. My ethnic background was asked on almost all of my job and university applications, student loans, and scholarship applications. I began to understand what the term tokenism meant, as well as the expectation that I had pan-Asian experiences, while at the same time being termed a 'CBC: Canadian Born Chinese' by others, and thus being 'white-washed', which was meant to mean that I lost Chinese culture from growing up in Canada, and was essentially a white person. I felt the need to justify to others just now 'non-white' I was, and once again I needed to analyze what it meant to be Canadian.

In 2009, I came to the University of Northern British Columbia with little research experience. My interest in this research stems from my interests in health, feminist, and social justice research. The research questions for my thesis developed with these interests in mind. Moving into my master's degree from an undergraduate degree in biology, my understanding of research was not rooted within the social sciences, and thus it was a steep learning curve for me at the beginning of the research process to identify and acknowledge my biases before moving forward with my thesis. In order to help acknowledge these biases, I embraced an anti-oppressive and feminist lens as the conceptual framework for my research. Specifically, the concept of 'standpoint research' was used because I believe it should be recognized as a reality of the human experience. Olesen (2011) describes standpoint research as:

> The concept of essentialized [and] universalized women [being replaced] with the idea of a situated woman with experiences and knowledge specific to her place in the material division of labor and the racial stratification system. (p. 130)

Along with standpoint research, the concept of intersectionality is also present, which Olesen (2011) views as:

> Social divisions [that] are constructed and intermeshed with one another in specific historical conditions to contribute to the oppression of women not in mainstream white, heterosexual, middle-class, able bodied [North] America. (p. 134)

These concepts were important to my research process to ensure I did not essentialize my participants' experiences and understand that their perspectives were reflective of their position in society.

It is important to note that qualitative researchers "stress the socially constructed nature of reality, the intimate relationship between the researcher and what is studied, and the situational constraints that shape inquiry" (Denzin & Lincoln, 2011, p. 8). Thus, one must acknowledge the realities of authoritative knowledge within institutional research, and to "recognize that we all always run the risk of privileging particular perspectives and marginalizing, essentializing, or even erasing others, even as we attempt to join together reciprocally across differences" (Cannella & Manuelito, 2008, p. 46). Furthermore, the constant reflection and assessment of power dynamics during the research process between researcher, participants, and our place within society, must be addressed (Cannella & Manuelito, 2008; Ermine, 1995).

Throughout the research process, I reflected upon my personal experiences as a non-Aboriginal researcher and how it compared to the participants' experiences, striving to ensure my potential biases did not affect the outcome of the research. I acknowledge that as a qualitative researcher, there is subjectivity in interpreting and analyzing the data, and one must be aware of personal values that may affect what I find to be significant (Absolon & Willett, 2005).

Qualitative Methods

My research questions for this study are:

1. What kind of information do Aboriginal women in Prince George have about self-care and preventative measures for UTIs?
2. From whom did these women receive this knowledge about UTIs, and what kind of information is it: Indigenous knowledge or western knowledge?
3. What factors do they perceive as having an influence on Indigenous knowledge transmission?

In order to best answer these research questions, qualitative research was chosen as the most suitable type of method, as it "consists of a set of interpretive, material practices that make the world visible... qualitative researchers study things in their natural settings, attempting to make sense of or interpret phenomena in terms of the meanings people bring to them" (Denzin & Lincoln, 2011, p. 3). As my research questions focused on the perspectives of women, it was only fitting that qualitative methods be used as qualitative researchers believe that human experience is inherently value-laden and subjective (Denzin & Lincoln, 2011).

Qualitative approaches to research are ones in which "the inquirer often makes knowledge claims based primarily on constructivist perspectives...or advocacy/participatory perspectives...or both" (Creswell, 2003, p. 18). Constructivist perspectives focus on establishing the meaning of a phenomenon from the participant's perspective and using observation, such as fieldwork, as a key element in data gathering. Participatory perspectives focus on collecting stories of participants and by interviewing participants for data gathering. The narrative approach, which is a common research design in participatory perspectives, enables the researcher to create a story through both the researcher's voice and the participants' voices. It is an approach that compiles the stories given by the participants in the interviews to be united and told through the words of the researcher.

Initially, I had planned to use a narrative design to frame and share the research, feeling that narrative research would best answer my research question. I believed that the narrative approach was congruent with Aboriginal traditions, such as storytelling (Barton, 2004). However, as I finished data collection and began my analysis, I quickly realized that transferring the narrative field texts to research text would not be possible. The experiences of the participants were too different to create a composite narrative, and would not do justice to the individual women's experiences. After much reflection, I decided to change my analysis and interpretation method to interpretive phenomenological analysis (IPA). I felt the blend of narrative inquiry and IPA created a well-rounded method that was better suited to explore the richness of participants' stories. The narrative portion of my methods enables the stories of the participants to come through in a manner that is comfortable for them, while IPA enabled me to explore the meanings of these stories without having to create a composite narrative, and essentializing these women's experiences.

IPA has been described as an "inductive approach...[that] does not test hypotheses, and prior assumptions are avoided. IPA aims to capture and explore the meanings that participants assign to their experiences" (Reid, Flowers, & Larkin, 2005, p. 20). Within IPA, it is assumed that the participants are the experts in their own lived experiences and are able to help the researcher understand these experiences through the telling of their stories (Reid et al., 2005). Participant numbers in IPA are smaller, as the analysis of the data is extensive. The analysis is interpretive, looking to make sense of the world and the experiences within it for the participants, through systemic analysis and reflection (Reid et al., 2005).

IPA allows the researcher to discover possible dissonance between participants' experiences within the larger social discourse that has been created for them. I believe that this method is in line with my conceptual framework of an anti-oppressive feminist lens by

being able to question the social narrative around Aboriginal women's experiences with their bodies.

Participants

The populations selected as the focus of this study included young Aboriginal women between the ages of 19 and 35, and Aboriginal elders/knowledge keepers, residing in Prince George, British Columbia. Selection of the age range for the young women for the 'youth' category for this study stems from the definition of a young woman. A study done by McDermott, Campbell, Li, and McColloch (2009) defines young women as women of childbearing age, which they determined to be between the ages of 15 and 34 years old. However, the minimum age of participants that were recruited started at age 19 due to consent issues, and the maximum age was changed to age 35 due to interested volunteers that passed the original maximum age of 34 before being able to be interviewed. This maximum age was chosen in order to have a sufficient generation gap from the second target population described below. The term 'youth' in this study is applied loosely and may not be representative of all peoples' understanding of the term. It is meant to describe the younger generation of women interviewed within this study. The term 'Aboriginal' includes Status and non-Status First Nations, Métis, and Inuit (Indian and Northern Affairs Canada, 2002; Shah, 2003) and any woman that self-identified as Aboriginal was eligible to participate in the study. Recruitment was conducted through various avenues for the target population. Posters were put up around the University of Northern British Columbia, and emails were distributed through the First Nations Centre at the university. This mailing list included both university students as well as community members. The only other criterion for the study was

that the participants have knowledge and/or experience with a UTI. Seven young women representing First Nations and Métis were selected and interviewed for this study (Table 1).

As Indigenous knowledge transmission is fundamentally an intergenerational process, a second target population was identified to explore the knowledge set of a different generation other than the young Aboriginal women. Three female elders were recruited to participate in this study through the First Nations Centre mailing list and the Prince George All Nations Elders meetings (Table 1). The women that volunteered for the study either identified themselves as elders or were identified as elders through community members.

The participants were recruited from Prince George, British Columbia, which is considered a northern urban area with a population upwards of 80,000 people (Statistcs Canada, 2012). However, as many of the younger participants were students at the university, their stories and experiences were from other regions outside of Prince George and thus the information collected and analyzed is not necessarily reflective of their current urban area.

Demographic Information

All participants were currently living in Prince George at the time of their interviews, with the exception of one participant who was commuting into Prince George for education. Although these women had experience with Prince George's urban setting, only two of the participants were raised in Prince George, with the remaining eight participants growing up outside of Prince George in a rural setting, both on- and off-reserve. Seven of the participants grew up with connections to their own Aboriginal communities, while three participants were either adopted or had a parent that had been apprehended in the Sixties Scoop. Six of the ten participants were students at the University of Northern British Columbia at the time of the interviews. A variety of nations, bands, and cultural groups spanning different areas of

British Columbia were self-identified when the participants described their Aboriginal identity. These women self-identified as being from Tahltan, Tsimshian, Stellako, Carrier, Nisga'a, Wet'suwet'en, Secwepemc, Cree-Metis, and Gitxsan origin.

Table 1

Characteristics of Study Participants

Participant Category	Number of Participants	Average Age of Participants	Age Range of Participants
Youth	7	29	19 - 35
Elder	3	63	60 - 66

Data Collection

The research method used for collecting data was interviewing participants. Open-ended interviews were used, rather than survey questionnaires, because with interviews, "the researcher can reach areas of reality that would otherwise remain inaccessible such as people's subjective experiences and attitudes" (Perakyla & Ruusuvuori, 2011, p. 529). Exploratory interviewing was best suited for answering the research question since I did not know what level of Indigenous knowledge the participants possessed regarding self-care and preventative measures of UTIs. Because I had no prior assumptions about what to expect, exploratory research allowed the participants to speak more freely about their experiences and allow the themes to develop from the data. Furthermore, Meadows, Lagendyk, Thurston, and Eisener (2003) found in their study that Aboriginal women that were more familiar with oral histories much preferred qualitative research methods such as open-ended questioning as it was familiar to them.

A proposal of the research study was submitted to the University of Northern British Columbia Research Ethics Board (REB) to ensure ethical research protocols would be followed. A letter of support from Paul Michel, Director of the First Nations Centre was provided in order for recruitment to occur through the First Nations Centre.

Following recruitment, one-on-one interviews were set up with each participant. The only request by the researcher was to be in a relatively quiet area if possible because of the voice-recording device. Upon meeting, participants were given a consent form and given time to read the form over before proceeding with the interview. An honorarium of twenty dollars was also given to the participants to thank them for their time and participation in the study. The interview questions differed slightly between the interviews with the youth and with the elders. The interviews consisted of five open-ended questions surrounding knowledge and experiences of UTIs, Indigenous knowledge, and knowledge transmission (Appendix 1; Appendix 2). Probe questions were also used to facilitate discussion where necessary. All interviews were digitally recorded and hand written notes were taken if necessary. The interview lengths varied, ranging from twenty-five minutes to one hundred minutes.

The University of Northern British Columbia Survey Research Centre transcribed the interviews. The researcher reviewed all transcriptions to ensure accuracy, and corrections were made where necessary. All participants were contacted and given either a paper or electronic copy of the transcript of their interview for approval.

Data Analysis

A multi-step coding process was used in order to analyze the data. Coding was chosen because there are "essence-capturing and essential elements of the research story that, when

clustered together according to similarity and regularity...actively facilitate the development of categories and thus analysis of their connections" (Saldana, 2013, p. 8). Value Coding was used as the lens of analysis and interpretation of the transcripts because it is beneficial for "[exploring] cultural values, identity, intrapersonal and interpersonal participant experiences... oral history, and critical ethnography" (Saldana, 2013, p. 111). The transcripts were read and coded by hand, one by one. Initial codes were assigned to relevant passages within the transcripts and a codebook was created using Microsoft Excel. As new codes emerged, all transcripts were reviewed and codes were reassigned if necessary. After several reviews of the transcripts, the codes were reorganized within the codebook and analyzed for themes. Five key themes emerged: knowledge of UTIs, knowledge acquisition, experiences with the health care system, Indigenous knowledge, and factors influencing the transmission of knowledge. These themes are explored in detail in the next chapter.

Chapter Four: Results

Few studies have explored the intergenerational knowledge transmission of Aboriginal women's health knowledge. Using UTIs as a lens for focusing on this topic, the study was designed to delve into a deeper conversation about the perceptions of knowledge transmission among a group of Aboriginal women living in Prince George. Participants were asked about their experiences with UTIs, their knowledge of self-care and preventative measures, and where they obtained this knowledge. Participants described their experiences with UTIs as well as their experiences and perceptions of knowledge transmission within their lives and their communities.

The results section is organized by the qualitative themes that emerged from the analysis of the participants' interviews. The key themes identified were knowledge acquisition, neutral and negative experiences with the health care system, perceptions of Indigenous knowledge, and factors influencing knowledge transmission. These factors were found to be experiences of colonization, residential schools, lifestyle changes, land development, and loss of familial ties. Participants also offered recommendations for improving the level of knowledge transmission in their communities.

Knowledge of UTIs

All participants were familiar with UTIs. All but one woman discussed experiencing at least one UTI in their lifetime, with six of the women reported having recurrent UTIs. Reported symptoms were consistent among participants and included describing pain while urinating, frequent and urgent need to urinate, and small amounts of urine being voided. In terms of steps to prevent UTIs, several participants discussed the need to maintain good hygiene, as well as changes to diet. Drinking cranberry juice was mentioned as both a

treatment and a preventative measure by six of the ten participants. The remaining four participants discussed antibiotics or general medication from their health care professional as the method of treatment for their UTI. When asked what they thought caused a UTI, a variety of hypotheses from the participants surfaced, including poor hygiene, sexual intercourse, diet, moving to an urban area, type of birth control, and having an already existing bacterial infection.

Knowledge Acquisition

Participants used a variety of sources to acquire knowledge about UTIs and their health in general. Five of the participants stated that they sought and/or received information from their mothers; four participants stated they received information from another family member either instead of or in addition to their mother, and two women utilized their friends and peers for information. Five of the participants used the Internet to find information about UTIs, such as medical symptom checker websites and search engines, and one participant mentioned reading information in a popular women's magazine. Two participants were given information about UTIs at a health food store. Surprisingly, only three participants reported receiving information from a health care professional.

When reviewing these results, questions arose about the reasons behind the sources the participants chose to seek information. Why did some of the participants feel comfortable speaking with their mothers, or family members, while others opted to seek information from outside of their family, such as friends? I believe it is important to think about the relationships that these women may have had with their family, as well as how they viewed the UTI.

> I can tell you culturally that um, I probably wouldn't feel very comfortable like phoning my mom up and describing ailments. If I did have quite a lot of urinary tract infections I'd probably go to the doctor first. I wouldn't call my mom. I probably wouldn't call my grandma or my aunties either...[I would call them for] ailments that wouldn't be viewed as like, sexually based 'cause that would just be kind of embarrassing for me, I guess, so. (Youth 2)

This participant viewed her UTI as something that was related to sexuality and thus she did not feel comfortable discussing this information with her family. Perhaps this was in concern with or fear of judgment or punishment, which would suggest that the topic of sexuality in young adults is an uncomfortable one to discuss with role models such as mothers or older family members. This idea is consistent with other youth participants' knowledge seeking behavior within the study as many of the women decided to seek advice of a source outside of the family, such as the friends, the Internet, magazines, or health food store employees. An elder participant also discussed the cultural appropriateness of discussing sexually based information with the community.

> It's going to take a while for us to be free to talk about urinary tract infections without feeling shame. It's a sexual organ and the perception of being an evil attention to a sexual organ because of Christianity. Many of our elders have this shame about not talking about something because they would be told that they're going to hell because they did something wrong which is a terrible message. So it's going to take a while to get over that negative attitude towards our own being and that's going to take a while. (Elder 3)

Until recently, access to information about women's bodies may have been more limited. Women either had to seek information from their families, or in the example given by the elder, keep silent. It is interesting to see the difference in how elders and youth seek information. The youth participants discuss the benefits of technology that allowed them to access a wide variety of information on their own, or with the help of their peers, while

maintaining anonymity, while the elders discussed the taboo nature of discussing their condition.

Participants that sought advice from their mothers and family members did not see a sexual connection with their UTI. One youth that consulted with her mother suggested that the reason for contracting a UTI was lack of hygiene, while others suggested diet or medications were contributing causes. It is possible that because these participants did not associate sexual behavior with the UTI, they felt more comfortable discussing this information with their mothers, like one would talk about a cold, or a stomachache.

Another point of interest was the choice to seek information from a family member other than the participants' mothers. Some youth sought out information about general women's health from their grandmother, stating that their grandmothers had a lot of traditional knowledge about how to stay healthy, but did not speak directly about UTIs. An elder participant discussed how this was very common in her culture to have another family member discuss women's health with the young women.

> [When my oldest daughter started her period,]...right away my sister got on the phone with [her] which is what we do. She then, is the mother. She then talks her up because I'm, I'm too scared of it. I'm worried about sexuality and her sexual activity and all of that...Family is very different now compared to the way it was then. I knew all my aunts and uncles...I needed to because they were my secondary moms and dads and down the line, when things got too emotionally charged between my biological parents and myself or my siblings and them, we always knew we had alternate parents to go to so that, 'cause they don't have that emotionality and they could help us solve that problem and [they] then go back to our biological parents and discuss what happened and we're there as well. (Elder 2)

These relationship dynamics may be very important in helping understand knowledge-seeking behavior of youth; however, I am unable to comment as to whether this generalizes to all Aboriginal youth represented in my study.

Experiences with the health care system. Throughout the interviews, several participants brought up experiences with the health care system. Seven participants described their experiences, and although attitudes toward the health care system were varied, all experiences discussed were either neutral or negative. Not all experiences were regarding UTIs but some participants stated that it did shape the way they saw their value within the health care system and influenced their decisions on treatment or self-care of their UTI.

Neutral experiences. Participants felt that their encounters with health care professionals did not benefit them as they were looking for reasons why they were having UTIs. Some participants stated that the physicians that they visited merely prescribed medication for them but did not discuss preventative measures or factors that may have contributed to the UTI.

> It took me quite a few years to get a doctor in Prince George so it was a lot of walk-in clinics for me. And it just seemed like you would go to the doctor, it was very impersonal and they give you drugs and get you out of there, as fast as they could. (Youth 2)

> They didn't give me any alternative treatments like cranberry juice and no like, they didn't tell me until I guess my last one I think, to drink lots of water. All they did was prescribe something. That was it. (Youth 7)

Negative experiences. Other participants had clear negative experiences with health care professionals.

> I don't seek the advice of a medical, like a physician, often, if ever, about subjects because they have absolutely zero grasp, absolutely no grasp on holistic, a Band-Aid solution like antibiotics is not going to help if you have recurring [infections]... So when you're taking antibiotics or something like that, sometimes you need them, but that's the only time I'll go to seek [them], if I actually need an antibiotic, then I'll go. But I need to find the actual underlying issues... I saw an internal specialist because I've been having problems with my stomach and he had just, he had absolutely no bedside manner. He didn't listen to what I was telling him... Predominantly any physician I've ever seen puts that Band-Aid solution [on], and I don't agree with it,

> and I just don't seek their advice because I don't trust them. I don't trust physicians. I have zero trust in them. (Youth 5)

One participant offered suggestions as to why they thought they were acquiring recurrent UTIs but stated that the doctors were quick to dismiss their proposed connections.

> [The doctors] never said a thing to me, never got excited about me discovering this connection about the cold [contributing to a UTI] or even going into discussion about it, "did you know that also?" or, "have you also noticed that it's also connected?" Nobody said a word. "Okay, we'll just give you a prescription." (Elder 2)
> They told me I was, it was completely wrong, there is no way there could be any correlations. I was kinda was, I didn't even, I was kinda just put back. Like, they didn't even say, you know, "oh it could be, or it couldn't be," they just, "no way, no way did [a cold] have [anything to do with it]." (Youth 6)

One participant stated that she knew she was sick but due to bad experiences in the past with health care professionals, she was deterred from seeking medical advice from the health care system.

> I was really bad for that. I knew sometimes I was sick, you know, and I would refuse to go and see the doctor. I don't know why. I guess it's because I've had some bad experiences. (Elder 1)

One participant even reported an incidence of sexual abuse that occurred when consulting a health care professional. Because of respect for confidentiality, the participant's quote cannot be shared.

All the participants' experiences of accessing health services, both on- and off-reserve, were far from satisfactory for a number of reasons. Within these experiences, the participants stated that they were being dismissed quickly without further discussion about their concerns. Deep mistrust was noted, as well as abuse, and for these reasons, participants chose alternative methods of treatments for their health. I was surprised to find that not one participant discussed a positive experience with the health care system. The question must be

asked, if this is the standard for most Aboriginal women, or even the general population, what measures must be taken in order to improve patient experiences in the health care system? If the current philosophy of care is not working for these patients, what changes can be made to enable patients to feel comfortable with their health care provider in order for them to utilize the services that are available to them? Without positive interactions, it was difficult for the participants to feel safe discussing their health with their health care providers.

Indigenous Knowledge

Many participants discussed using Indigenous knowledge as a way to help prevent and treat their UTIs. When asked what participants thought of Indigenous knowledge, there were many definitions that each woman felt best described their perceptions of this kind of knowledge, and how it influenced their lives. Many women incorporated the mode of transmission into their definition of Indigenous knowledge, stating that, "[Indigenous knowledge] differs [from western knowledge] in that it's based a lot on inheritance of information and trust rather than research and disproving" (Youth 1).

Many definitions of Indigenous knowledge involved comparisons with western knowledge:

> I prefer the traditional medicines because um, traditional medicine, they heal you. They want to heal you, whereas I think the western medicine, they just want to mask your problems. Like, you know, if you have pain, if you have back pain, the doctor gives me pain pills. Whereas, traditionally they would work on your back and really work with you. (Elder 1)

Other participants discussed the importance of Indigenous knowledge, and how it is incorporated into cultural practice.

> It guides us, it confirms us, affirms us, it all clicks. It's just like when you know you're on the right path with the creator. You said your prayer and it's so easily answered. You can see it so clearly. And that's the way it is with traditional knowledge. If you really truly have traditional knowledge, there will not be bumps and burps and all of that stuff in your life. When you know there's a gap, the way you know it is, is like a hiccup and you gotta go ask another question. What happened? Why this? (Elder 2)

> I think it would be knowing about our cultural practices, our healing ceremonies, um and just how we do things. Like in when I, when I'm with my uncle, there's a very certain way of doing things like collecting Devil's Club and cleaning fish and smoking the fish you know? There's a very specific way of doing things. I think that's what I would say is our cultural knowledge and should be passed down and all those stories about how we got to where we are, and why we do the things we do, 'cause those things aren't in books. So um, I think that's my idea of cultural knowledge. (Youth 7).

> It's an innate belief in our whole surroundings, including our ecosystem. An innate belief that our whole physical being is a holistic being and we need to take care of it. We weren't told it was medicine; it was our lifestyle. (Elder 3)

The participants' definitions of Indigenous knowledge differed slightly but there were many key values that were consistent throughout the study. Indigenous medicine and knowledge were sometimes used synonymously. Furthermore, Indigenous knowledge was not separated out from cultural practice, ceremony, or transmission of knowledge via participating in culture. These data show the participants view Indigenous knowledge as not only a body of knowledge, but also a way of life. However, the way in which the participants expressed this lifestyle differed slightly. Some participants spoke about eating healthy and focusing on diet as a focal point of Indigenous knowledge and medicine, while others discussed participating in cultural practices and ceremonies.

Within the definitions of Indigenous knowledge, participants also included that the mode of transmission differed from western knowledge. One youth quoted above stated in

her definition the idea that transmission of knowledge was built on 'trust' rather than 'research and disproving' (Youth 1). This choice of wording may give an indication of the possible value that the participant allotted to Indigenous knowledge compared to western knowledge. Another youth discussed utilizing Indigenous medicine in contemporary society:

> I just want to say like. Okay um, if there was something wrong with me that was simple and a simple remedy could be used, then I would take that over antibiotics or something very harsh. So I don't necess-- like I know I sounded quite harsh when I say it's all [nonsense]. So like, like I said I'll drink some juice or tea to cure something simple but if it's like, if it's a serious health issue then I would take the best technology that's available to me. So I guess just to backtrack how bad I sounded there, I guess, so. Um, just that I know the elders like to drink this certain type of tea for headaches or whatnot, so. Like I know that that works for me like, yeah. For something that's a bit more severe, health-wise, I would take the best. (Youth 2)

These data raise questions about how Aboriginal youth view Indigenous knowledge in the context of their life experiences. A value term like 'best' to represent western medicine suggests that the participant views Indigenous and western medicine in a hierarchy. This idea contrasts with the previous findings of the participants' experiences with the health care system. Although western medicine was viewed as 'best' by one participant, none of the participants were satisfied with their experiences with the health care system.

Furthermore, it is interesting to compare the perceptions of Indigenous knowledge from the elders to the youth. The elders' definitions discussed spirituality and the creator working in synergy with Indigenous knowledge whereas the youth's definition discussed more physical aspects of traditional life, such as drinking herbal teas, or harvesting medicines. These differences may be significant in order to research whether or not colonization has affected Aboriginal youth's perception of Indigenous knowledge.

Transmission of Knowledge

Discussions about the factors surrounding transmission of knowledge emerged from the participant interviews. Participants discussed how they felt about their level of Indigenous knowledge, and what experiences in their lives may have influenced this. Out of the seven young women that were interviewed, all stated that they would like to know more about Indigenous knowledge and felt their level of knowledge could be better.

> I think that [my level of knowledge] is good but I think that it could be a lot stronger. Because, I'm not saying that it's weak, but I do see places where it could be improved. Like for example we are learning so much more through books nowadays rather than the traditional way of learning, which is just going and observing. (Youth 1)

> I'm still a learner because, well, one thing is that I didn't know my language fluently so I didn't learn as much because of that... my grandmother taught my mother, she would talk to her in our language and talk to her for a long time, right? But when I was working with her we hardly talked that much because um, she didn't speak English, she didn't like talking English that much and so she would tell me things and that but it was nothing compared to how she would talk to my mother when they were doing things. (Youth 3)

> I'm just, what I've learned so far, that I've learned here in school, not from anything passed down at all, because of the fact that we haven't had very many ties with that side of the family. (Youth 6)

> It's just 'cause I'm losing connections with my family mostly, I think. I think I would, I mean I never really, really practiced it. I'm sure my family would like me to. I probably, and I always say, I probably would be a lot better off if I did 'cause my blood pressure is extremely high and I have headaches all the time and I have lots of aches. I always think about it. I just haven't gotten around to doing it. (Youth 7)

Many of the participants noted that their level of knowledge was influenced by the amount of contact they had with their family and/or their communities growing up, as well as language fluency, geographic location, and how contemporary society shapes the way young Aboriginal peoples are learning about their culture, such as formal education classes and

learning through research and books rather than traditional modes of knowledge transmission such as observation and apprenticeship.

When discussing Indigenous knowledge with the elders, one participant felt that she could improve her knowledge level.

> What I'm trying to do now is relearn stuff there, like um, how to bead and we're going to learn how to sing...hymns and nursery rhymes in [our traditional language], and of course relearning our language which I'm getting better at... it's always in the back of your head, hey? Because after going to residential school, for a couple of years and after a while you know, you just kind of forget how to talk [your language] or you get mixed up anyways. We used to go home in the summertime and we used to end up speaking like, [our language] with English words all mixed up together, you know? So my grandparents used to get mad you know, when we did that, and tried to tell us to just speak [our language]. We couldn't because we forgot, hey? 'Cause you're eight months in the residential school and two months at home, hey? So that's kind, it was hard. (Elder 1)

Other elders felt that their knowledge base was sufficient but spoke about the troubles and hardships with transmitting Indigenous knowledge.

> Our southern neighbours have lost a lot of it through Indian residential schools and stuff and also with the imposition of the Indian Act and the Indian bands and elected system. (Elder 3)

> I shared [traditional knowledge] but I don't now, because my children are intermarried again, so my grandchildren are a quarter. So however they take that, it's up to them, because it's a mixed culture again. (Elder 2)

The elders brought up residential schools and colonization as a large theme for influencing the way Indigenous knowledge is being transmitted in today's society.

Experiences and perceptions of colonization. Through discussions of UTIs and knowledge transmission, the theme of colonization became very prominent in the interviews. All of the participants mentioned aspects of colonization impairing the level of transmission of Indigenous knowledge in a contemporary context.

Residential schools. Some participants discussed their experience within the residential school system, while other participants discussed its effect on their family members and friends. The experiences discussed were all negative and seen as a large contributor to the loss of cultural knowledge in contemporary society.

> I'm not very culturally oriented because, um, from the residential schools there. We couldn't practice our culture and we couldn't speak our language. So we lost a lot of that there, hey? Being in the residential schools there... it's like that for everybody. (Elder 1)

Although not all participants went to residential schools, their experiences paint a picture of how it fragmented relationships with the rest of the community, as well as influenced the upbringing of younger generations.

> I didn't go to residential school. I realize now I was one of the hidden ones but I never felt hidden. I never felt like I was scared or anything like that to, to be out in the open...but the other thing that happened when the kids all came home from residential school and I was on the reserve, because that's fishing season when they come home, um I was ostracized too because I was no longer the same. They, they had this thing about, "only the smart kids go away to school". Yeah and there was something wrong with me, why I was not selected. So that's the spin they put on it. (Elder 2)

> I remember praying with my grandmother in my own language. When I was really, really [little], before I went to school, and her talking to me. But before I went to school, that kind of just quit and she would always just tell us to watch TV and learn how to talk like that because we were going to school and the teachers would be really rough with us. And just to listen to the teachers otherwise we'd get in trouble and they'd be really rough with us because all of her kids went to residential school... and so she thought that we would get in trouble if we talked our own language. So we never learned. We learned so much and then after [we started school] it was just like nobody kind of wanted to teach us because it was frowned upon by society if we knew our language. And if we talked our own language, people got beaten and stuff like that for speaking their own language. I remember as a child like there being a real fear and then I remember them, sometimes talking and they would laugh because they'd notice one of us listening but it was almost like, it was almost like something that we weren't allowed, we weren't part of. And then after, when I got older, people

> wanted to teach it and stuff and people wanted us to know it. And people couldn't understand why we didn't know it but we wanted to know it as well. So it's really frustrating. (Youth 3)

> In the last couple of months, I've been talking with my grandma and she shared her life and all her experiences with me and it's all very revealing about her and where's she's been and you know, why, you know some of the reasons why my birth family is at, why they are. Because being in school I've learned about the history and about residential school and things like that and my grandma, she was part of history. She was in residential school when it was law, and so were my birth parents as well. (Youth 4)

The effects of residential schools carried on through the lives of the victims and into the future generations of the communities and their families. These effects were found to be the loss of language, unhealthy relationships, and spiritual oppression.

Loss of language. Language was found to be a key element that impacted the loss of culture but also a crucial tool needed to help revitalize their Indigenous knowledge.

> I guess, just the, so much of the culture is already wiped out, especially the language, that people hold onto whatever they can to stay grounded to their roots. (Youth 2)

> I understand a lot, like just because of, I think I learned to understand my grandmother a lot just by certain words and stuff like that. And just by her expression and stuff like that. I really used to be mad, like, I think when I got into, as a teenager, I think I got mad at my family for not teaching me to speak the language and I didn't understand the whole background of it though. Now I do and I feel bad because I think my grandmother and my mother and our parents were frowned upon for not teaching us a language when really they had a good reason for not teaching us. I think a lot of people quit speaking their language altogether from the time they went to residential school. I remember praying when I was younger, but I don't remember how to now. I can remember doing it but I can't remember what we were saying. It's so weird that I would forget that. (Youth 3)

Unhealthy relationships. Another theme that surfaced was the effect that residential schools had on interpersonal relationships.

A lot of things I pretty well have to keep to myself unless it's friends that are into their healing too. It is. The jealousy is getting, nice residential school stuff. We were pitted against each other, "you're so stupid!" My mom was used as an example lots of times in residential school and that's how she got ostracized. "You should be more like mother," because my mom was really fair skinned and she had freckles...She was always used and so growing up she was always ostracized, they would, they would make these joke. Grown women would say, "Go ask [M], we should be more like her." You know? And so that's still going on, we handed that down. (Elder 2)

That's another thing that stands in the way, and that's from residential school, this jealousy, pushing up and pushing down thing. We need, when you go into your healing, you start feeling your own value and then it's ok for other people to have value. You value other people as well. I just, we got a long way to go. My mom went through this a lot, being ostracize, ostracized and she, I got my knowledge from my mom. So she had to have a lot of knowledge and I, when she passed on, I felt so inadequate because she took with her a lot of information I needed. And there's day that I cry, I can feel it right now here, there's days that I cry when I realize now what mom went through. She had so much knowledge, that was so valuable but the jealousy that was taught to our people dissolved it. And I have so much knowledge and there's so much jealousy in that circle and fearfulness that I keep it right here. There's a handful of people that say, "You have so much knowledge." Just a handful. And it's going to be lost and I know that, to me, this salvation of our people is our children. But I can feel myself being blocked from approaching these kids that really want to know. It's almost like without words, the rest of the group is saying, "oh we'll help you, we'll help you, come to us, we'll help you." And by their behaviour, no words are said, by their behaviour they're saying, "but don't go near her cause she's got a whole lot of silly ideas." And so we're being blocked. (Elder 2)

I think that there's a lot of lack of communication. And there's a lot of people who don't get along, like there's a lot of unhealthiness and, and it's just from the struggles that we've had over the years because of residential school and because of alcoholism. Because of abuse happening and um, just everything that has happened to people over the years has been really tough and that in a lot of ways [that] stands in our way from working together. (Youth 3)

A lot of our cultural knowledge is being bastardized because of this one-upmanship kind of attitude towards each other. (Elder 2)

It totally blocks the transmission of information to the youth. 'Cause we're so, it's what my brother calls, we're so 'syndroming' around. Residential school syndrome, that we take it personally. You know? As long as, and to me jealousy is I'm feeling

> like I'm not getting enough. It's always feeling wanton and so that wanton feeling is always there and that wanted feeling gets it because the person doesn't feel complete all by themselves. They don't feel worthy, all of those, those uglies. Then if they don't feel worthy, they're not going to let anyone else feel worthy. So it, the information goes nowhere. (Elder 2)

These data show experiences of knowledge not being shared by elders because due to fear of being ostracized, as well as the competition between elders, which was instilled in residential schools.

In an urban area, where the makeup of Aboriginal peoples is diverse, cultural knowledge can clash because different nations are represented in one area, and not all practices and beliefs are shared. One elder stated that she felt 'silenced' when around other elders because the knowledge that she was sharing was not the 'right' kind of knowledge. This tension between elders may be a major factor influencing the type of knowledge being shared to the younger generations of Aboriginal peoples.

Spiritual oppression. One participant discussed how colonization had affected her family's ability to practice their traditional spiritual beliefs, and in turn made it difficult to approach her family for cultural knowledge and advice.

> Sometimes it wasn't safe to go to mom. See she was caught in the middle of this, this um, mom was caught in the middle of remembering traditional cultural spiritual practices but this almost, ah, a big wet blanket of christianity. This staunch christianity that said, "thou shall not do this." It was a, what we call, a hellfire and brimstone kind of teaching. So she is, it's almost like she froze between the two. And so any questions that I asked of her, I almost had to whisper, we never mentioned it to the rest of the community. Other people that have gone to treatment centres and have learned about most of our people have learned about sweat lodging and smudges through treatment centers. And uh so I know who is safe to discuss and people who are my age and younger. It's easier to discuss that now. There is a way to discuss spirituality, which is really the discussion...When the Europeans discuss spirituality, inadvertently they put out religion, when that's not the discussion at all. You get into a whole [lot] of, of clashes when you do religion. So it's a spirituality that we're interested in. It has hurt a lot of our people. You know and I had to be very careful

> when I first got introduced to sweat lodging and smudging, very careful who I discussed it with because there are our, there are some of our people and their answer is to some of our people, is Christianity. That's where they're headed right now. You know and so we've got to respect that and kind of handle them with kid gloves until they get to where they need to get 'cause I remember that's where I started as well. 'Cause that's all I had. But I could not make sense of the, if it's so beautiful, what's the hellfire and brimstone stuff about? I could not do the two. Being scared of it and wanting to know more about it was it was just too scary. (Elder 2)

The elder discussed how spirituality was a substantial part of her understanding of Indigenous knowledge, and for this reason, spiritual oppression would be a large influence on the connection these elders could have with their cultural knowledge. It is possible to suggest then that the indoctrination of Christianity from residential schools may have contributed to the fragmentation of Indigenous knowledge transmission for some of the participants in this study.

Apart from residential schools, there were other themes of colonization that disrupted the transmission of culture and Indigenous knowledge to younger generations. Participants identified themes such as lifestyle changes, land development, and loss of familial ties.

Lifestyle changes. Participants noted that they felt many of their peers had different priorities when it came to cultural knowledge and living.

> There's that disconnect between elders too now right? So, you know, I think a lot of elders feel like people don't go to them enough. We have [this] elder...and people come and access her knowledge and all that kind of stuff, but she says, you know, she's just like, "you know I wish that more people would kind of come and access what I know, you know?"... I think the thing is not enough Aboriginal young people care. They just don't care. It's a different world, it's a different world and there are different priorities now. And it's not taking care of our bodies. That's for sure. Nobody has that priority anymore. (Youth 5)

> People are so busy and I think a lot of people think they don't need that knowledge or that they have time to learn it because they're so busy with their own lives now. So um, a lot of people have asked me, "What's the point of it?" Right? Because it's not

> going to help them in this day and age to know how to fish or something like that, or to practice different things, right? And a lot of people don't understand not selling it. A lot of people want to know [traditional medicine] because they want to sell it and they're like, "you know, we could make so much money off of this. It'd be so good for our community." That's what people believe now. A lot of them believe that money is the most important thing and that's all they care about. (Youth 3)

One of the participants discussed the changing values of her peers as a reason for disinterest in learning about cultural knowledge. Contemporary western lifestyles that value money as currency has shaped the way some Aboriginal peoples view the value of their own cultural knowledge when met with the need to survive in the dominant society's system. One elder described this shift as a 'handicap':

> But you see, we did become more handicapped if we became what the Europeans call 'more civilized'...There's many things we could do so easily before. Like, right now I can't work on my fish here. I gotta go all the way up to [community] where everything's all set up. Things were easier when we lived outside because of the way that we were. (Elder 2)

The move from traditional lifestyles to living in urban communities was seen as a negative change by these participants, impacting the transmission of Indigenous knowledge and altering the cultural values held by their peers.

Land development. Participants discussed how development of the environment hindered their ability to be able to pick medicines.

> Ideally they would say, "Go for a ways, like where there's nobody around kind of thing somewhere way out to get your medicine." You know? And it was always hard to know where to pick because the main concern is by the road, by the power lines, stuff like that. And sometimes that's the only place we'll find it. Then we'll have to use it. (Youth 3)

> If the environment isn't there, our medicines aren't going to be there either. When the power lines go in, and the highways and the mines and everything like that, there are so many places we can't get medicines from and half the time we don't know whether the area has been sprayed or what the water's like. What a lot of elders tell me is that

> the sewage goes straight into the water and there's nothing worse for our plants and us...that's like the worst contaminant on this world. (Youth 3)

> My biggest concern is the pipeline going through, you know. If there's any leakage, it's really gonna ruin our land and the medicines, the animals, the water. We need water for everything, you know, for all our plants and for drinking and I don't know what's going to happen if they ever ruin that, you know? It would be game over for everyone. (Elder 1)

Given that the participants use the terms Indigenous knowledge and medicine interchangeably, the loss of natural land would change the availability of Indigenous medicines.

Loss of familial ties. Some participants spoke about the trouble with learning traditional knowledge because of the disconnection they felt from their families and their culture. The reasons for this disconnect varied, from chosen relocation, such as for work or school, or through forced relocation, such as adoption or removal of children from their family.

Relocation. Many of the youth discussed needing to move away from their families for work and/or school. They discussed the impact this has had on their ability to stay connected with their culture.

> Growing up in the urban [area]... I notice a lot of families, if one of them like their aunties or uncles brought them here, you know, they still have that whole family connection around them. But you know, when we moved here it was just us. We don't know anybody, you know, really any other Aboriginal families, like big families. (Youth 6)

> That's the hardest part of trying to make it [work]. Like, we always say every year, "this summer we're going to make a point of visiting [my community]." And we don't. Like this year, we stopped in once I think. It's a huge disconnect between our families and it's just not, it's not as feasible as it used to be. Now that I have kids and they have their stuff going on and work and school and everything else. It just doesn't

work at all. (Youth 7)

> I grew up in an urban setting so I thought, "well everything here is normal and whatever they're doing in [Community A] is not normal." You know, it was like going for a visit and it was like, "those people are weird." Yeah and all my cousins are completely different 'cause they all grew up on reserve and I didn't, so it's, I can see the difference between us. It is [a disadvantage], 'cause I think my kids will have uh, definitely a disadvantage to learning... So, but I do think it would be, it would, it is more difficult in an urban setting to get connected with somebody, especially if you're growing up where [your nation is] 10 hours away. And you know, like we're only four hours in [Community B] but there was such a huge thing between the different nations. (Youth 7)

> I feel like I am completely disconnected and without my culture I felt kind of lost. I felt like I was putting it on the back burner and I was not um, able to take care of myself because I was not involved with anything. So I was sort of going day to day and doing, you know, all those urban things you do like being involved in lots of things and, but I was not doing any of those cultural practices. That, it might have made me feel more calm and healthy and I think when I do practice some of my culture I do feel a little bit better. And, and I, I think I've kind of lost touch with it because I'm not connected to it at all with my family so. I do [think it affects my physical health]. And I think it's mostly because if I, I, it made me feel-- like just participating in a feast is not a healing ceremony, but it made me feel connected. Where, you know, being in an urban setting and sort of running around all the time and not just being with people is, it feels unhealthy, like I'm very anxious and I'm not, and taking the time to do that. And people in [Community] get that opportunity all the time. They get to participate in feasts and they get to participate in, you know, um, smudging and all those things that they like, you know, they, they, they see as theirs. But we live here and we don't get to do those things and we don't take the time to, I guess because we live in such a fast-paced society now. (Youth 7)

Here, the participant is framing an urban setting with the loss of opportunity for immersion in cultural practices. By creating a dichotomy between her home community and Prince George, the participant speaks with a sense of idealization for her fellow community members' lives. It was interesting hearing the shift in values from her early age, where she thought her on-reserve counterparts were 'weird' for taking part in traditional ceremonies, to present day where she views those cultural practices as a healthier lifestyle choice. It would

be fascinating to explore what factors led to this participant's change in values, and whether or not other youth have experienced this shift.

> I'd say, definitely the internet is a tool, like it's so funny to say that, that it's so disconnected from the human contact, I mean, you're just hearing from other people, like on the internet, but that's the only thing I can really think of right now, besides, you know introducing her to family members and stuff like that, but they live so far away. It is far away for us. (Youth 6)

Although there are opportunities to get involved in Aboriginal culture in an urban setting, the specific nations that the participants belonged to were not always represented in Prince George. Since British Columbia has many diverse groups of Aboriginal peoples, practices and beliefs may differ depending on the group and may not always be compatible with the all persons trying to participate. Their sense of community may be lost and this can create feelings of isolation, and result in the inability for some Aboriginal peoples to learn, teach, and practice their cultural beliefs.

Dislocation. Some of the participants were adopted, or their parents were adopted through the historical government action of the removal of Aboriginal children from their families (Blackstock et al., 2004; Carriere, 2005). The participants discussed the influences that it had on their ability to be immersed in their culture.

> [I learned] through my friends. I have a lot of First Nation friends. Because I was raised in a, in a white family, so culture wise, the only things I really learned or picked up were from uh, my friends and their family. You know, just, and that was just from things I saw or I remember like, when I was younger, one of my best friends, she used to go down to the Friendship Centre here, where it used to be and she used to go dance like, dance every week and I, I experienced that with her, I went and did that with her uh a few different times. I thought it was…I thought it was neat. I uh, always love, uh you know, watching you know, things about culture you know, learning you know there, what, what they did because I never got to experience it. It's really stepped up [now] because like I said, I, I watched and learned you know, from my family and her family and now that I'm going to school I've learned a lot and now that I've actually met my birth family, I really, I'm really asking them and reaching

out and trying hard to learn my culture because I know that it's a big part of me and you know, my self-identity. (Youth 4)

The Sixties Scoop means, they literally scooped children up out of their families and placed them in white families, and learning a lot about that and how much it impacts, not only them as a person, but intergenerational it effects, you know, down the line. And I know that it takes however many generations to, not, I wanna say heal from that, but it's just, it's been a learning process definitely. Um, it's been neat to know my family, this side of the family. It's really weird, my mom was working up in a camp, she's first aid, she was first aid, and she's talking to the cook, they were having a conversation. And she's like, "oh, I'm from this place, you know, [Community]," and he was like, "I am too!" And then they started talking and they're like, "oh my gosh we're related!" They had turned out to be cousins so that's our in, our in to the family. It was just happenstance that they were working in the same remote community in the middle of nowhere. (Youth 6)

[Because I'm adopted I didn't feel the need to be affiliated with a First Nations group] not until recently, now I kind of feel like I'm out of the loop. Like you know, that I'm just kinda like a fish out of water. I kinda think I can [start], I want to but, it's just, it's I dunno. It's hard.... and the culture, like I'm almost, not jealous but like, in a way, almost that I'm either missing out or I have missed out or something like that. Yeah it's a weird feeling, like, it's hard to explain. I'm definitely [interested] yeah, yes like traditional, like knowledge, um even oral histories, anything I would love to, to, just be involved in, just gain that knowledge. (Youth 6)

I think more programs would be very beneficial, you know because uh, whether you're given up for adoption or whether you're raised in a First Nations home, it doesn't always mean just because you're First Nations, doesn't mean that your culture's there, doesn't mean you know your traditions. Like, my reserve is not very, you know, not, most of them don't practice our traditions. Most of them, you know, aren't aware of our culture and that. There's very, very few people that, that practice, you know? From what I've learned and what I could see is from the residential school. You know, they were taught you know, two different generations, my birth parents and my grandparents, they were taught to be ashamed, they were beat if they spoke the words, they, they were, they were not allowed to practice any of that. (Youth 4)

These youth discussed the effects that growing up outside of Aboriginal culture has had on them. One participant described how she felt left out of many Aboriginal communities and how the forced removal of her mother during the Sixties Scoop has left many questions about

her Aboriginal ancestry and culture. One of the participants discussed that although she was adopted, other Aboriginal peoples she knew that grew up within an Aboriginal family were not guaranteed more cultural knowledge because of the effects of residential schools on so many Aboriginal peoples.

Two of the participants seemed extremely eager to learn more history and cultural knowledge. Perhaps this was because they were not exposed to it earlier in their lives, and since discovering their birth families, have opened many new channels of information.

Whether or not the relocation of these participants was chosen, these data show that it has affected the ability of the participants to remain connected with their cultural background and may also have influenced the amount of Indigenous knowledge they were able to access.

Recommendations

When asking the participants what they felt was needed in order to improve transmission of knowledge and cultural practices, a variety of themes emerged. These themes were identified as education through supportive communication, ownership, and language and cultural practice.

Education through supportive communication. Many of the participants discussed the need for Aboriginal peoples to learn in a supportive environment and increase contact with elders in the community. This could be done through increased Aboriginal programming between generations as well as educating children in schools at an early age.

> Hmmm, I think they're slowly getting there, I don't really think they're there yet. You know like the, the Aboriginal Choice School is a very positive place. I've been in there and it's, you know, they're doing the best they can, right? And they're, you know, they're going to grow and change as years go on and once they get the grasp of this system I believe, you know, everything always grows and changes in life so I think that's what will happen that way too. Like I said, I think they're doing what they

can. (Youth 4)

> [Educating] orally, expressing my concern for a healthy lifestyle wherever possible, even if it's one to one. That is probably the most crucial part because we are verbal and we come from an oral tradition. It's far easier to share the experience in that matter and unfortunately we live in a technological age and so probably the attention span is not very long. (Elder 3)

> I think it's important that it keeps getting passed on and that's why it's important to me that my kids are more in contact with our community and with our elders. Because, I feel like if we don't, if we don't have any knowledge of it, it's just gonna die with my, with our elders, that it's never going, it's never gonna be passed on and that those cultures will just be gone because we don't write things in books. We, we talk about them and, and those are things you can't read about in a book. You can't learn from a book. You can't learn from going to college. Our kids will never really know. And so I think it's really important that they have more contact with their communities and cultures so that they will learn. (Youth 7)

Some participants also discussed education with elders as well. Because of residential schools, many older generations have also lost Indigenous knowledge and creating a space for all ages of Aboriginal peoples to learn would benefit all generations.

> Be open to all the other cultures. But I didn't say anything there because there's even people amongst us that will grab it and say, "I'm an expert, I know all about it". But they didn't hear the whole thing. We have to make room for everybody's culture and everybody's different ways and why they do it. (Elder 2)

> We have to keep on doing the one on one or short discussions with the elders. I often just relate my own experience to it so they can, they can see a human face on it. And I think that's the only way it's going to be done because there has to be trust and that it's ok to talk about. It's not evil, and it can work the other way. If we convey a message to the youth, the youth can also educate the elders. Can work both ways. And it's people like you that are going to convey the message and provide the material in layman's terms, layperson's terms. (Elder 3)

There has been a lot of focus on the transmission of Indigenous knowledge for youth, but little discussion on the transmission of knowledge for older Aboriginal peoples. Some elders touched on the need for education of all Aboriginal peoples because knowledge has been lost

throughout all generations due to colonization and residential schools. Creating programs that benefit not just youth but elders as well will help restore a healthy community.

Ownership. Some participants discussed the need for Aboriginal peoples to feel ownership within their communities and take action to help aid their cultural learning.

> I think that there just has to be more freedom for communities to start doing it themselves like, um, ownership is a big part of it. Like, when you give people ownership over it, it makes a huge difference, because I mean I could work on something and I can say I did this, but if, if I was working in a community, it's theirs, right? Like if I, if I made a medicine, to me that medicine is from the creator. And that's my traditional medicine from the people and from my grandmother and so that, in that it's, it's not something that somebody can take and own. And so, and sell and stuff like that, and knowledge that's shared, it's not something that can be taken or like in our, in our communities, people need to have ownership over, over their knowledge and people need like, it's so easy for somebody to come in and learn everything and then um, of course they have their own knowledge but it's not, it's kind of like we've, we need our own people learning it and we need our own people teaching it and we need to own it, otherwise it's never gonna be, it's never going to be in our hearts. And it's, it's gonna feel as if it's um, people don't want to be a part of it. You know, people don't want to be a part of something that belongs to somebody else or something that somebody built, like people want to be a part of something that's theirs so I think ownership is a big thing, and, and it's been working on an equal level right? (Youth 3)

> It's just, it's, it's feeling urgent, probably because of my age and a lot of people are passing on. It's feeling urgent and we gotta start asking, okay, when? How? We're always saying the youth need to get together with the elders, the youth are always saying the elders need to get together with them and then when we are placed together, nobody says anything. You know, and they say the youth should get [together], but when? And what specifically do they want to hear? What specifically are they, do they expect to learn? Because, and another thing for me, is that if you want to learn about moccasins or beading, you're going to have to, for me, I'm here to teach the reasons behind it, not just the craft. I can't, it's, it's another bastardizing of our culture, to teach a whole bunch of people about beading, moose hair tufting, all of those things without teaching why. Why that colour? What are you, what does each bead mean? For me, each bead that I pick up is a prayer for somebody else. You know? Nobody talks about that. They just talk about beading... Yeah that's the biggest thing for me is passing on the, the craft is, all it is to them is just crafties. Anybody can do crafties. It's the teaching behind it. The biggest thing is the prayer. I know,

> what I was taught was that every single bead that I pick up is a prayer. Because it has to be because whoever receives this or wears it, they could get hurt if it's all negative stuff in there. (Elder 2)
>
> One of the questions I noticed that we don't ever ask, or maybe I'm not being informed that we ask, especially in the youth side when they say what would you want? They always say, "We need to work with the elders. They got lots of information." Nobody ever says, "when? When would be a good time? Is there um, is there a conference or an undertaking coming up soon that they can be involved in. What's the soonest and how will you involve them?" 'Cause I know that's the question that's being missed on the elder's side: what is needed? We always say we need to get together with the elders or with the youth. And the youth give them information, but we never discuss how or when. There's no commitment...We all know what's necessary. But we don't know when, where and how we do that. (Elder 2)
>
> I think it would be important to, for, for young people to ask about it. Because when I was a youth I don't think I cared at all. And I wish that I had known more back then. Um, and to ask their parents or whoever their important people in their life are, so, like my kids ask questions all the time and so I think just asking the questions will make us all kind of start moving. I don't think [they know to ask questions though]. (Youth 7)

The participants discussed how more ownership needed to be taken if Aboriginal peoples were going to be successful in increasing the level of cultural knowledge being transmitted within their communities. One participant discussed how large amounts of planning were inconsequential if they were not being turned into actions. Better organization and follow through was needed in order for programs to succeed.

The idea of 'who' needed to take ownership over their learning was varied. One participant stated that youth needed to ask more questions of the elders and initiate the communication. Another participant stated that the elders needed to take the initiative because they held the knowledge needed to give it to the youth. Furthermore, the idea that the whole community needed to work in tandem was brought forth in order for success.

Language and cultural practice. Participants discussed how the success of Indigenous knowledge transmission hinged on the ability for Aboriginal peoples to understand their language and cultural practices within their communities.

> You can't learn unless you're actually doing it together and like we'll never learn that much unless we have our language. (Youth 3)

> Well um, I think, really, [knowing your own cultural] language would be uh, the most important thing because uh, I hear that's really dying down eh? And um, like those even like we had uh, language there yesterday afternoon and one guy came in with uh, three of his kids and he must be about 40 or so. And another guy there about the same age, 40, he came in and he was telling us that um, that he was taking [a language course]...and he said he found it really hard. So um, there's uh, I think [his language], I think there's eight different dialects. So some, some of them have a hard time uh hearing them. (Elder 1)

> Yeah and, and also the, the um, the singing and drumming. That, you know, I think um, young people uh, like that. They can relate to that you know, cause they, you know everybody likes to sing you know. And, and um, my sister, she's teaching her family uh, their family's learning how to drum and sing, sing uh...the clan songs. And uh, it does make you feel proud and they are getting, they are getting pretty good at it, you know. And uh, like even the younger, the younger, younger ones, it's uh, it gives them some pride. You know, and especially when somebody tells them, you know, "you guys are really doing good." You know and um, and when, when they're drumming, they uh, they can't drum if they, if they been doing alcohol or drugs, hey? So they have to be um, um abstinent from it for at least two weeks before they can touch a drum. So it's uh, it's kind of like a sacred thing. Yes and it would help, would help the kids there to stay away from drugs and alcohol. (Elder 1)

One elder mentioned the importance of not only knowing the language and cultural practices, but also understanding the meaning behind these practices.

> That's my biggest thing is to, to discuss the spiritual meaning behind all the practices. Because all we're doing is practicing right now. And that's said, it just feels so empty but I have nowhere to go with all this information. Cause even my peers aren't interested in learning about the prayer. (Elder 2)

Participants discussed how loss of culture and loss of language were major portions of Aboriginal identity that were lost because of residential schools. Participants discussed how these two things were crucial to the revitalization of Aboriginal identity, and cultural knowledge. Some participants believed that within their traditional languages were nuances of Indigenous information that could not be successfully translated into English. The language barriers between older generations and youth affected the level of transmission of Indigenous knowledge. Furthermore, cultural practices have teachings embedded within them and thus help Aboriginal peoples learn through doing, while creating a connection with their community.

Throughout this chapter I have analyzed and presented the relevant qualitative findings that emerged from the participants' interviews. Participants were asked about their knowledge of UTIs and how they acquired their self-care and preventative knowledge for this subject. How the participants viewed their UTI influenced the source of information they sought out to help them. The subject of UTIs was used as a lens to discuss their perceptions and uses of Indigenous knowledge in the participants' lives. Themes arose from these interviews about the transmission of Indigenous knowledge between generations as well as the factors that they thought might have influenced this transmission. Colonization and residential schools were major themes, as many participants noted these were key contributors to fragmentation of Aboriginal culture. Contemporary factors that affected knowledge transmission were found to be lifestyle changes, land development, and loss of familial ties. Several participants gave recommendations for increasing the level of Indigenous knowledge transmission. These recommendations were education through supportive communication, ownership, and language and cultural practice.

Chapter Five: Discussion

The discussion section is organized by the qualitative findings that emerged from the results section. These key themes were then compared for similarities and differences to the existing literature. Limitations of the study, as well as recommendations for further research are also discussed in this chapter.

Knowledge of UTIs

The prevalence of participants having experiences with a UTI is higher than the literature due to selection bias of the study. Nine out of the ten participants discussed experiencing a UTI at least once in their lifetime, with six participants having recurrent infections. The existing literature states that fifty to seventy percent of women will report having a UTI in their lifetime (Gupta et al., 2001). In terms of preventative measures, the participants discussed the importance of good hygiene and diet, as well as drinking cranberry juice. In terms of the literature present, cranberry juice was found to be effective in preventing UTIs in most studies (Jepson & Craig, 2008; Lowe & Fagelman, 2001; Raz et al., 2004; Stothers, 2002). Diet was found to have been slightly effective in preventing UTIs (Kontiokari et al., 2004), but hygiene was not found to be a significant preventative measure to protect against UTIs (Foxman & Chi, 1990; Hooton, 2001). The difference between the participants' perceptions and the literature could be due to the small sample size of the research study. In regards to self-care knowledge of UTIs, participants discussed using cranberries and antibiotics as effective treatment methods. While antibiotics have been found within the literature to be an effective treatment method for UTIs, there has been little evidence showing the same effectiveness for cranberries (Raz et al., 2004). Although the effectiveness of cranberries was not shown to match that of antimicrobial therapy in the

literature, it may have been effective enough that the participants perceived their symptoms and infections to be relieved. One must also think about the dissonance between the evidence that is presented within these scientific studies, and the participants' experiences. The participants' experiences are congruent with the widely accepted understanding that cranberries are an effective home remedy in treating UTIs. How is it that many women believe this to be true if studies show conflicting results? Although the results within laboratories may not be significant, cranberries may still be a viable option for many women suffering from a UTI.

Participants discussed several factors contributing to UTIs, including lack of hygiene, sexual intercourse, diet, moving to an urban area, the use of certain types of birth control, and having an already existing bacterial infection. In terms of the existing literature, the most significant risk factors present were frequency of sexual intercourse, type of birth control used, and an existing bacterial infection (Foster, 2008; Kontiokari et al., 2004; Nicolle et al., 1982). As mentioned above, hygiene was not found to be a significant factor to cause UTIs within the literature. However, the significant theme within the study could be due to a non-representative sample. An interesting theme that surfaced from the participants that was not found within the literature was 'moving to an urban area'. The participant that mentioned relocation as a causation of UTIs discussed how living in a rural area was linked to good hygiene for her, and that relocation to an urban area created closer proximity to others' living quarters, which increased her exposure to unsanitary conditions. It may be that disruption of a person's way of life through a new environment could add stressors to their health, disrupting their daily hygiene routine and putting them at risk for illness. More research about this area is needed, as there is little literature on the relationship between these factors and UTIs.

Knowledge Acquisition

The literature discusses information-seeking behavior to be influenced by a person's phase of life, conception of the problem, and their values (Savolainen, 2005). This concept is consistent with how the participants sought out information about UTIs.

The participants that perceived their UTIs to be sexually based did not seek information or advice from family members. Perhaps this is due to the fact that within society, sexuality is found to be a taboo topic of conversation, especially within Aboriginal cultures (Youth 2). Some participants attributed this to being ashamed of their bodies from their experiences with residential schools (Elder 3). Thus, the societal values that the participants held could influence how they would seek information from a problem they may have perceived as embarrassing. Furthermore, if many of these participants were first experiencing their UTIs as young adults, this phase of life may seem premature to be engaging in sexual activity within society, and may also cause the participant to feel shame or embarrassment.

The participants that perceived their UTIs to not be sexually based sought information or advice from their family members, specifically mothers or grandmothers. The way in which these participants viewed their UTI was much different than those that viewed it as sexual, avoiding feelings of embarrassment or sexual shame. This may have made it easier to approach family members for advice, as there were no moral values attached to the infection.

Some participants discussed speaking with a family member other than their mothers for advice. This is in line with the literature that exists about Indigenous knowledge transmission. Barnhardt and Kawagley (2005) found that the youth learned Indigenous

knowledge through many different teachers, and the sharing of knowledge was not limited to only parents or immediate family members.

The participants' values and perceived etiology of the UTI affected where they found helpful information about UTIs. This is in line with the existing literature, which discusses the factors that affect information-seeking behavior (Savolainen, 2005). This also explains the high number of participants choosing to seek information from their peers or media sources, such as the Internet or popular magazines, rather than approaching their family members or health care professionals for health information (Borzekowski & Rickert, 2001; Gray et al., 2006; Jiménez-Pernett et al., 2010; Skinner et al., 2003). Contrary to Ybarra and Suman's findings (2008) that the Internet enhanced the relationship between patients and health care providers, the participants within this study used the Internet due to the lack of positive experiences with health care providers.

As health information becomes increasingly accessible to the general population, more research is needed to explore the Internet's effects on patient-provider relationships. In addition, there is little literature on the specific population of Aboriginal peoples, and how they seek out health care information. More research is needed to see if there are different trends present within this specific population relative to the general public.

Experiences Influencing Access to Health Care Information

It is interesting to see that many of the participants did not seek, or were reluctant to seek the advice to a health care professional. Within the literature, studies state that UTIs are the cause of a high percentage of health care costs in the United States due to physician's office visits (Foxman, 2002; Hooton et al., 1996; Schaeffer & Stuppy, 1999). One must ask why there is such a dissonance between the participants' responses and the existing literature.

One possible reason for this incongruence is the previous experiences that participants had with the health care system. The participants of this study only described neutral or negative experiences with the health care system. This contrasts with the general Canadian population's experience with the health care system, with the majority of Canadians having satisfactory experiences (Canadian Institute for Health Information, 2009). Rather, Browne and Fiske (2001) found that First Nations women regularly encountered negative experiences when dealing with the Canadian health care system. The systemic racism and prejudice that Aboriginal peoples face, along with the lack of culturally appropriate care has been a major contributor to the poor health status of Aboriginal peoples as well as distrust of the mainstream health care system (de Leeuw & Greenwood, 2011; Foster, 2006; Johnson, 2012). The participants of the study also voiced these concerns as reasons for why they did not seek medical advice for their UTIs. These findings, along with the literature, show extremely concerning trends that Aboriginal peoples are facing within the health care system. Research has shown that culturally appropriate care is needed in order to repair and facilitate rapport with Aboriginal patients (Foster, 2006). One must ask if the health care knowledge is not coming from health care professionals due to the damaged relationships with patients, or from Aboriginal peoples' families due to shame of discussing the sexualization of their bodies (Kelm, 1998), where is this knowledge being acquired? With reform in bedside manner and relationship building with patients, there is potential for improved access to health care advice. Additionally, a shift away from the shame of sexuality needs to occur in order for Aboriginal peoples to feel comfortable discussing health concerns about their bodies with others, whether it is with family or health care professionals.

Perceptions of Indigenous Knowledge Transmission

When reviewing the data within the results of this study, varying perceptions of Indigenous knowledge were found, especially when comparing the Aboriginal youth with the elders. Some youth alluded to a hierarchy between Indigenous medicine and western medicine, with Indigenous medicine being more useful for simple remedies, but western medicine being better suited for more severe illnesses. The elders in the study preferred using Indigenous medicine to western medicine in most situations, as they believed it to be most effective in healing them. These contrasting perceptions raise questions of how a generational gap can create differing values to cultural knowledge, and what factors influence this change.

Historical factors. The participants of this study mentioned various reasons why they believed the level of Indigenous knowledge transmission was not as high as they thought it should be. These reasons focused on historical colonization of Aboriginal peoples, especially the legacy of the residential school system in Canada, mass land development of Aboriginal peoples' traditional territories, and the forced removal of Aboriginal children from their families.

Residential schools. Participants frequently mentioned residential schools as being a major contributing factor to loss of cultural knowledge and practices. This is consistent with the existing literature stating residential schools had a major impact on Aboriginal peoples in Canada (Barnhardt & Kawagley, 2005; Blackstock et al., 2004; de Leeuw & Greenwood, 2011; Martin-Hill, 2003; National Collaborating Centre for Aboriginal Health, 2012b; Ohmagari & Berkes, 1997; Waldram et al., 2007). Three of the major themes found as direct effects of residential schools were loss of language, development of unhealthy relationships,

and spiritual oppression, all of which are supported by the literature (National Collaborating Centre for Aboriginal Health, 2012b).

Loss of language. The existing literature discusses the impact of the loss of language on knowledge transmission (Martin-Hill, 2003; National Collaborating Centre for Aboriginal Health, 2012b; Waldram et al., 2007), but there has been little discussion about the impact of language loss on the relationships with youth and elders. One of the participants told stories about her frustrations as a child because she wanted to learn her traditional language, but was not allowed because elders told her she would be in trouble at school. This perspective shows the multi-generational impact that residential schools have had on Aboriginal communities, with elders not sharing knowledge because of the historical fear of retribution (Martin-Hill, 2003). Furthermore, with language and cultural practice being so closely tied together, without the fluency of Aboriginal languages, it is reasonable to expect that much of the knowledge cannot be properly transmitted due to terminology being lost in translation.

Unhealthy relationships. One of the most significant findings from this research was the tension felt between the elders. Because Prince George is an urban hub where many different Aboriginal peoples live, the participants discussed how diverse cultural knowledge clashes due to different nations being represented in one area. Friendship Centres and programming geared towards all nations are beneficial, but are found to be dominated by the nation whose territory they are on. In the case of this study, Prince George is on the traditional territory of the Lheidli'Tenneh people, thus the programming follows the cultural protocol of this nation. While this is a natural occurrence in order to respect the land and its nation, other elders from differing nations often feel silenced if their cultural protocols conflict, especially when this knowledge is being taught to youth or non-Aboriginal peoples. This is consistent with the literature by James (2001) who discusses the problems with

essentialization of Aboriginal culture creating opportunities for denigrating and legitimizing cultural practices and beliefs.

It is important to note that the urban setting plays only a part of the role in preventing more elders from sharing their knowledge. A large factor stems from the attitudes and tensions of some elders towards others, as if the 'playground bullying' found in childhood carried over into the present day. Some participants felt that their specific cultural knowledge would not be passed on because it was not welcome in these programs, and that there was a sense of competition between elders.

Another lens that should be explored is the place mainstream social constructs had on the historical Aboriginal social systems. Western society is steeped in patriarchy while many Aboriginal cultures historically followed matrilineal social structures. As the All Nations Elder meetings in Prince George are open to everyone, one must wonder if this power struggle is not only influenced by competition from elders of different nations, but perhaps influenced by conflicting gender roles as well that have been instilled in residential schools. Although research has been done on the effect of residential schools and building relationships, there is a gap in the literature discussing this specific experience of elders. More research needs to be conducted in order to better understand this phenomenon and whether or not this can be found in other urban areas or places where differing nations are present.

Spiritual oppression. The legacy of residential schools continues to present itself in different facets of its victim's lives. The spiritual oppression that one of the elders discussed was internalized within her family, which made it extremely difficult for their traditional knowledge to be passed on because of the intimate relationship between cultural knowledge and spirituality. By the oppression of Aboriginal peoples' spirituality, many were not able to

fully connect with all parts of their traditional knowledge and were unable to share this knowledge with others (Archibald, 2006). Furthermore, two elders discussed how Christianity created shame around their bodies and prevented them and their peers from being able to discuss their bodies and seek help for many illnesses relating to a sexual nature. It would be very interesting to explore the cultural taboo of discussing the sexualization of bodies as it related to spiritual oppression of Aboriginal peoples. The existing literature discusses the legacy of residential schools and its impact on Aboriginal peoples' culture, including spirituality, but there is little discussed about how spiritual oppression influences the transmission of cultural knowledge.

Contemporary factors. There have been many historical factors that have contributed to how Indigenous knowledge is transmitted to the youth. However, within a contemporary context, there have also been new and differing factors that have emerged as well. These factors indeed have been influenced by historical colonization, but have taken a different form in contemporary contexts, through the changing way of life of Aboriginal peoples, and the relationship dynamics of Aboriginal peoples in urban environments.

Lifestyle changes. Many of the youth participants discussed why they felt the level of Indigenous knowledge in youth was lacking. Some youth stated they felt that the priorities and values for Aboriginal peoples have changed in recent years. They felt that some Aboriginal youth did not relate to Indigenous knowledge as being helpful to them to be successful in society, which focused on making money as a major driving factor (Youth 3, Youth 7). Barnhardt and Kawagley (2005) also found in their study that the Indigenous knowledge that successfully passed down to the youth were concepts most useful in the eyes of the youth, whereas skills that were not perceived as necessary for survival were less likely to be mastered by the youth.

One youth participant discussed her change in values from childhood to adulthood in regards to her cultural practices, only viewing it in a positive light later on in life (Youth 7). Participants associated living in an urban area as a factor in losing cultural knowledge due to loss of familial ties as well as a loss in cultural interests and values. Interestingly, Norris et al. (2013) found that Aboriginal peoples moving to urban areas had consistent desires to express their Aboriginal identity and teach their children their cultural knowledge, rather than leaving it behind. The contrast within the literature and the results shows how diverse the Aboriginal population is, and these differences could be due to geographic location as well as other demographic factors. It could also be due to difference in upbringing and the instilment of strong cultural identity before youth leave their home communities. The data from Norris et al.'s study (2013) were from analyzing Aboriginal urbanization in larger cities in Canada, where more opportunities and a larger Aboriginal population is present. Thus, the trends and desires of Aboriginal peoples coming to Prince George may not be generalizable.

In terms of health care knowledge, one may believe that remedies for illnesses such as UTIs would be still pertinent to today's youth and this knowledge base would still be passed on. However, the participants discussed how much of the information and cultural teachings that Aboriginal youth receive comes from institutions and formal learning, such as through textbook readings and classrooms. Furthermore, the decades of oppression and attempts at assimilation show the complexities of how and why priorities of Aboriginal peoples may be shifting today.

Land development. Similar to spirituality, Aboriginal peoples view the land as deeply interconnected with their traditional and cultural knowledge (Little Bear, 2000; Panelli & Tipa, 2007; Ritch-Krc et al., 1996; Wa & Uukw, 1992). The land is one of the main sources of Indigenous medicines and with the development of that land, comes fewer and fewer areas

where Aboriginal peoples can collect their medicines. Furthermore, it becomes more difficult to teach others this knowledge when the areas shrink. Through the interviews with the participants, many were not aware of what traditional medicines could be used for prevention and treatment of UTIs or where to begin to look for such medicines. Although the existing literature provides information on some plants that may be used, no treatments were discussed for UTIs specifically. This could be due to the cultural taboo of discussing sexuality and thus played a factor in why ailments were not passed down for these infections. Regardless, these sources about Indigenous plants cannot teach the processes behind how to harvest them to create medicine. Having access to uncontaminated lands must be secured before transmission of knowledge about these medicines can be successful.

Loss of familial ties. Many of the participants discussed the loss of familial ties as being both historical and contemporary factors influencing their knowledge transmission. Regarding the loss of familial ties due to adoption, these participants' experiences were consistent with the literature that show many Aboriginal adoptees feel a disconnect and loss that influences their health (Carriere, 2005). Another reason for participants' loss of familial ties was due to relocation from their home community. Some participants relocated to Prince George for education and/or work and have felt that the distance from their families has influenced their feelings of connectedness to their culture and thus has had an impact on their health. Furthermore, some participants stated that although Prince George has many Aboriginal programs, these programs were specific to the Aboriginal culture on whose territory the city stands. Aboriginal peoples of other nations coming from afar and relocating to Prince George may still feel disconnected from the cultural programs available to them in their new place of living due to the diversity of Aboriginal cultures across the country. Furthermore, internal pressures from their families and upbringing may deter them from

getting involved in programs that are not of their culture. This contrasts what Norris et al. (2013) found, which was an equally strong desire to be involved in and pass on their Aboriginal culture and identity within their community and to future generations as their rural counterparts. Potentially, the larger urban cities that Norris et al. (2013) analyzed could have the capacity to hold programming for several different nations as the Aboriginal population within those cities is larger than in Prince George. Further research would be needed to compare Aboriginal peoples' experiences in terms of the cultural programming available to them within their urban area.

Limitations of the Research

It should be noted that although the population of Aboriginal women participating within this research was diverse, the sample size was small. Furthermore, although the study was open to all Aboriginal women, only First Nations and Métis volunteered to be part of the study and no Inuit women were interviewed. Thus, the experiences of these women were their own and may not be representative of other Aboriginal women's perspectives on the subject matter. The research was done in Prince George, British Columbia, and may not be able to be generalized to other communities. As this study was done with participants who were living off-reserve, it is not known whether or not an on-reserve population would have similar experiences. Lastly, this study found that these participants had many complex challenges and barriers regarding the transmission of their cultural knowledge. As knowledge is always being transmitted in all cultures, it would be interesting to see if a study researching non-Indigneous populations would yield similar challenges in their experiences with knowledge transmission.

Summary

The findings of this study in conjunction with the existing literature highlight several issues that need to be addressed in order to increase the level of Indigenous knowledge transmission within the Aboriginal community of Prince George, BC. The way in which Aboriginal women view how they acquired their UTIs plays a role in how they discuss their condition. The relationships forged with families about sexuality or with health care professionals in general are crucial in influencing how Aboriginal peoples access health knowledge. The horrible legacy of residential schools is still affecting knowledge transmission in today's Aboriginal population while the historical factors are manifesting themselves within contemporary contexts. Inclusivity of cultural programming offered to urban Aboriginal populations is proving to be challenging due to a diverse group of nations represented in Prince George.

Chapter Six: Conclusion

The purpose of this study was to explore intergenerational knowledge transmission about UTIs in Aboriginal women in Prince George, BC and to identify factors that Aboriginal women perceive to be influencing the level of this knowledge in their community. The literature indicated that many historical factors such as colonization and residential schools influence many aspects of Aboriginal culture in today's context and have contributed to a disproportionate number of Aboriginal people being represented in poorer health outcomes in Canada. Furthermore, these factors have influenced the decrease in the level of Indigenous knowledge transmission.

This study analyzed data from interviews with Aboriginal women, seven youth and three elders, in order to hear the narratives of participants' experiences and to bring in their perspectives in creating recommendations for increasing the level of knowledge transmission within the community. The data indicate that the intergenerational knowledge transmission is influenced by many factors, which were categorized into three major themes: experiences within the health care system, historical factors influencing knowledge transmission, and contemporary factors influencing knowledge transmission.

The health care experiences of many Aboriginal peoples are less satisfactory than the general Canadian population. The study's findings indicate that previous negative experiences with the health care system influenced the participants' decision about how to seek medical advice for their UTIs, or other health conditions. None had positive experiences with health care professionals, some were neutral and the rest were negative.

Historical factors influencing knowledge transmission were further categorized into three themes: the loss of language, unhealthy relationships, and spiritual oppression. These

factors were found to be due to the legacy of residential schools and hindered the participants' ability to fully immerse themselves in their traditional knowledge.

Contemporary factors influencing knowledge transmission were categorized into three themes: lifestyle changes, land development, and loss of familial ties. Many of these contemporary factors had direct relationships with urbanization of Aboriginal peoples. Life in the city for many participants did not enable them to access their families on a regular basis and, in turn, did not allow them to fully access their cultural practices. Other participants were adopted out of their culture and attributed their lack of Indigenous knowledge to this upbringing away from their biological family. Many participants felt that the Aboriginal programming available in Prince George was not relevant to them as the programming was either too superficial or only involved customs relating to the local nations.

Recommendations

The participants made recommendations on what they believed would improve intergenerational knowledge transmission. These themes were education through supportive communication, ownership, and an increase in language and cultural practice. When comparing the study's results with the existing literature, some similarities arise as well as some differences.

Education. The way in which knowledge is transmitted and taught has been discussed within the literature (Ohmagari & Berkes, 1997). However, the literature does not focus on education for older Aboriginal populations where the teaching is generally expected to originate. Due to colonization and the legacy of residential schools, much of the information has been forgotten or suppressed by older Aboriginal populations thus

programming that promotes learning to all generations would be of benefit. One participant suggested that by teaching the youth, they would then be able to teach the elders (Elder 3). Further considerations that must be addressed are the traditional relationships of elders and youth, and if role reversals would be welcomed culturally by both generations. Nonetheless, this multi-directional intergenerational teaching is an interesting perspective that may be a beneficial factor to increasing knowledge transmission across generations as well as building community.

Ownership. The participants discussed the need to take ownership over their knowledge in order for its transmission to be successful. Several participants mentioned their desire to learn and teach more but did not know how or where to begin this process. Frustrations were communicated about how so many people voiced these desires yet a lack of initiative to follow through continually led to no actions being taken. Some participants believed that the leadership needed to stem from the youth, while others believed it should come from elders or the whole community. Battiste (2002) implores the Government of Canada to express more support and create policies that foster the empowerment of Aboriginal peoples and affirm traditional ownership over Indigenous knowledge.

When comparing the participants' results with the literature, several observations arose. Both the participants and the literature recognize a need for ownership and have identified several levels where this can occur, ranging from the individual to community to government. Yet if all parties recognize this need, what are the barriers preventing implementation of action? Further research is needed in order to better understand the challenges facing the implementation of programs fostering knowledge transmission.

Language and cultural practice. Within Aboriginal culture, language, cultural practice, and knowledge are interrelated. The participants discussed the need to understand

their traditional languages in order to understand the nuances of Indigenous knowledge, as many words cannot be directly translated into English. They felt that the language barriers between generations created challenges in knowledge transmission.

In terms of cultural practice, there are many barriers that arose from the discussion with the participants that have not been given attention within the current literature. Although the participants knew of programs within Prince George for Aboriginal peoples, many felt that they could not participate because the cultural practices and teachings of a culture other than their own. Many of the participants relocated to Prince George and the customs of the Aboriginal peoples within Prince George did not reflect their specific nation. Despite the fact that they respected the local customs, they still felt disconnected from their own culture. Furthermore, some participants felt silenced because the programs claimed to welcome all Aboriginal peoples yet only acknowledged customs of the local territory. Alternatively, some programs perhaps acknowledged the diverse Aboriginal population in Prince George and attempted to respect these differences by only teaching widely recognizable Aboriginal practices such as beading and drumming. These pan-Aboriginal attempts were found by some to be too superficial and some participants questioned how the level of traditional knowledge could increase if only broad stroke attempts at cultural practices were taught.

After reflecting on my participants' frustrations, many questions arose. With such varied levels of knowledge among elders and youth, what is a safe starting point from which to teach cultural practices? Furthermore, with such a diverse Aboriginal population gathering from all over the region to an urban area, how do you accommodate cultural differences within teachings without silencing any one group yet being able to respect the local customs?

One of the immediate steps that organizations offering Aboriginal programming can do is to acknowledge the diverse population of Aboriginal nations taking part in their

programs. This may be a way to alleviate the 'silencing' effect that some elders feel when their cultural practices are not recognized.

In an ideal world, Aboriginal programming to improve knowledge transmission would be available for different cultures from around the region such as language and culture classes. Since urbanization of Aboriginal peoples is rapidly increasing, more and more Aboriginal peoples from the region and elsewhere are coming to live in cities, whether it be for temporary needs or longer periods of time. Aboriginal peoples are increasingly contributing to urban landscapes and there should be initiatives that foster environments for cultural prosperity. Unfortunately, barriers to implementation are resources and capacity. An evaluation should be done to better understand the desires of Aboriginal peoples for more specific cultural programming and whether there are knowledge holders able to provide this programming. Hopefully, with future research, the challenges that urban Aboriginal populations face in regards to knowledge transmission may be diminished and solutions can be found that benefits the whole community and future generations.

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Appendix 1: Questions and Probes For Youth Interview

1. Please tell me about yourself. Where are you from, your life experiences, family, etc.
    a. Look for cultural background and community affiliation/relation
2. I'd like to ask you some questions about your knowledge on urinary tract infections (UTI). What type of knowledge do you have on UTIs?
    a. Look for personal experiences with UTI (have they had one before?)
    b. Look for knowledge of causation/symptoms/treatments/prevention of UTIs
3. I'd like to ask you some questions about your knowledge of different types of medicine. Are you familiar with traditional Indigenous medicine and plants?
    a. Look for how/where knowledge was gained about UTIs
    b. Definition of traditional Indigenous medicine. What do they consider it to be?
    c. Difference between western and Indigenous medicine/knowledge?
    d. Contact with elders in the community?
    e. Ask participant to assess their own level of Indigenous knowledge on health and UTIs
4. Lastly, I'd like to ask you about what you think the level of Indigenous knowledge transmission is like in your community.
    a. Do they think this level is sufficient?
    b. What are their suggestions/recommendations?
5. Do you have any questions you'd like to ask me?

Appendix 2: Questions and Probes for Elder Interview

1. Please tell me about yourself. Where are you from, your life experiences, family, etc.
    a. Look for cultural background and community affiliation/relation
    b. Role as an elder, process of knowledge acquisition
2. I'd like to ask you some questions about your knowledge on urinary tract infections (UTI). What type of knowledge do you have on UTIs?
    a. Look for personal experiences with UTI (have they had one before?)
    b. Look for knowledge of causation/symptoms/treatments/prevention of UTIs
3. I'd like to ask you some questions about your knowledge of different types of medicine. Are you familiar with traditional Indigenous medicine and plants?
    a. Look for how/where knowledge was gained about UTIs
    b. Definition of traditional Indigenous medicine. What do they consider it to be?
    c. Difference between western and Indigenous medicine/knowledge?
4. Lastly, I'd like to ask you about what you think the level of Indigenous knowledge transmission is like in your community.
    a. Contact with youth in the community? What are these experiences like?
    b. Ask participant to assess level of knowledge transmission currently between Elders and youth
    c. What are their suggestions/recommendations?
5. Do you have any questions you'd like to ask me?