THE CEDAR PROJECT: UNDERSTANDING THE SEXUAL VULNERABILITIES OF INDIGENOUS YOUNG PEOPLE WHO USE DRUGS IN BRITISH COLUMBIA, CANADA

by

Negar Chavoshi

MSc, The University of British Columbia, 2009
HBSc, University of Toronto, 2006

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Abstract

Background: For Indigenous communities in Canada, the legacies of colonization have severely compromised sexual wellbeing. Indigenous leaders are growing increasingly concerned for the sexual health of their young people, particularly those who use drugs to cope with adversity. However, there is a critical gap in evidence pertaining to the complex and multifaceted relationships between intergenerational trauma, self-medication, and sexual wellbeing.

Methods: Data was gathered from the Cedar Project: an ongoing prospective cohort study of Indigenous young people who use drugs and live in British Columbia. A multidisciplinary approach was used to investigate historical and lifetime factors that impact sexual health. Epidemiological analyses were used to determine the prevalence and correlates of Herpes Simplex Virus-2 (HSV-2) and syphilis positivity among 250 participants. An interpretive thematic approach was used to qualitatively analyze in-depth interviews with 28 participants.

Results: The seroprevalence of HSV-2 among women and men was 79% and 36%, respectively. For women, HSV-2 positivity was associated with being taken away from biological parents, involvement in survival sex work, and injecting drugs. For men, having ever been in prison was significantly associated with HSV-2 positivity. Young men who stated that culture played an important role during their developmental years were less likely to test positive for HSV-2. A history of syphilis infection was observed among 21 participants, 95% of which occurred among women living in Vancouver. Results from the qualitative study highlighted how sexual health continues to be negatively impacted by intergenerational trauma stemming from the residential school and child welfare systems. Participants' narratives demonstrated the protective effect of family and cultural connectedness on sexual wellbeing. Participants offered detailed recommendations on how to improve sexual health outcomes through culturally-safe and trauma-informed sexual health resources that are integrated with mental health and drug recovery programs aimed at supporting struggling families.

Conclusion: To support the sexual wellbeing of Indigenous young people who use drugs, the underlying causes of ongoing trauma and social marginalization must be urgently addressed. These findings call for the backing of Indigenous-led healing strategies that focus on young people's inherent strengths, and use Indigenous wellness frameworks to promote collective healing.

Lay summary

This study aimed to identify factors that impact sexual wellbeing among Indigenous young people who use drugs in British Columbia. A multidisciplinary approach used qualitative and quantitative analytic methods to unravel the complex aspects of sexual health and how they are influenced by the legacies of colonization, systemic racism, social marginalization, and cultural resilience. This was accomplished by interviewing 28 participants and determining the prevalence and correlates of ulcerative STIs among 250 young men and women participating in the Cedar Project. The findings validated that Indigenous young people who use drugs are coping with unresolved traumas rooted in historical, social, and structural barriers to sexual wellbeing. The protective effects of strong connections to traditional culture were also reconfirmed. This study contributes to the capacity of Indigenous leaders and service providers to raise awareness, identify needs, and advocate for culturally-safe and trauma-informed sexual health resources that respect and integrate Indigenous values.

Preface

This statement is to confirm that the work presented in this dissertation was conceived, conducted, analyzed, and written by Negar Chavoshi (N.C.). N.C. designed the research program, established the research objectives and hypotheses, collected significant parts of the data, conducted all the data analyses, and wrote each chapter of this dissertation, all with the guidance of the Cedar Project Partnership and the thesis committee, which consisted of supervisor Dr. Patricia M. Spittal (P.M.S.), and members Drs. Martin T. Schechter (M.T.S.), David M. Patrick (D.M.P.), Chris G. Richardson (C.G.R.), and Shannon T. Waters (S.T.W.) The quantitative data presented in Chapters 4 and 5 were gathered by Cedar Project study staff located in Vancouver, Prince George, and Chase, British Columbia. The qualitative data presented in Chapters 6 and 7 were gathered by N.C. The interpretation of the study results presented in Chapters 4 through 7 was guided by the expertise of the Cedar Project Partnership, the Indigenous governance body that provides oversight to the totality of Cedar Project's research, ethical, and knowledge translation activities. For the Recommendations and Conclusion chapter (Chapter 8), N.C. received guidance from S.T.W. (Stz'uminus First Nation), who is the Medical Director of Vancouver Island Health, Aboriginal Physician Advisor to the Provincial Health Officer, and a former Senior Medical Officer of the First Nations Health Authority. Guidance was received from Vicky Thomas (Wuikinuxv Nation), who has been involved with the Cedar Project as its Project Coordinator from the study's inception. This research was approved by the Cedar Project Partnership. In addition, it was given ethics approval by Providence Healthcare and the University of British Columbia Research Ethics Board (Research Ethics Board certificate number: H11-01004).

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Glossary

AIDS	Acquired Immune Deficiency Syndrome
BCCDC	British Columbia Centre for Disease Control
Cultural-safety	A care model that incorporates power imbalances, decolonization and self-determination within a framework that includes – but extends beyond – cultural sensitivity and competence (Health Council of Canada, 2012)
Decolonization	The act of reversing the legacies of colonization by 1) recognizing the past and present impacts of forced assimilation and 2) pursuing self-determination and healing through the rediscovery of ancestral traditions, teachings, and values (Aquash, 2013)
DTES	The Downtown Eastside neighbourhood of Vancouver, BC, Canada
HCV	Hepatitis C Virus
HIV	Human Immunodeficiency Virus
HSV-2	Herpes Simplex Virus type 2
Indigenous Person	A descendant of the First Nations Peoples of North America; including Indigenous, Aboriginal, Métis, First Nations, Inuit, and Status and non-Status Indians
INSITE	Vancouver's supervised injection site
Intergenerational trauma	The cyclical effects of collective emotional and psychological injuries stemming from colonization that extend over multiple generations (Yellow Horse & Brave Heart, 2004)
IV	Intravenous
On/Off-reserve	Living on or off a reserve, which is a tract of land, the legal title to which is held by the Crown, set apart for the use and benefit of an Indigenous band (Indigenous and Northern Affairs, Canada)
Trauma-informed care	A western term to describe the traditional style of healthcare that has always been practiced by Indigenous knowledge keepers. This care model recognizes trauma, understands its impact and prevalence, and responds to it through healing processes that do not re-victimize the care recipient (Schladale, 2013).
Sex-ed	Formal sexual education curriculum obtained at school
STDs/STIs	Sexually Transmitted Diseases/Infections

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My amazing parents, I owe you all my happiness. You sacrificed all you knew to give us a chance, and I hope that I have made you proud. My little sunshine, Mahssa, you give me warmth and the will to grow. #slay. My wonderful husband, Carl, thank you for filling my heart with love, assurances, and for believing in me when I didn't believe in myself. Noushins, my bestest, thank you for always knowing how to make me smile. Pearlie, "eye of the tiger"! Binoo, my soul sister, thank you for always being in my corner and letting me just be me. Mum and Dad Kapadia, thank you for giving me the gift of another set of parents to be loved by. Remy and Zola, thank you for being my therapeutic furbabies. I love you all to bits.

Dedication

For my father, who has addressed me as "Dr. Chavoshi" since I was 6.

Chapter 1: Introduction, background, rationale, and objectives

1.1 Background

1.1.1 The colonization of Indigenous people in Canada

The colonization of Indigenous people in Canada is one of the darkest chapters in the nation's history. Since laying claim to its Eastern shores over 500 years ago, British and French invaders aggressively enforced political, ideological, and economic agendas to assimilate Indigenous peoples and control their resources. The first barriers to survival that were erected by European colonizers included forced removal from traditional lands, economic and social deprivation, and cultural genocide (Red Road HIV/AIDS Network, 2006). Over the span of the last two centuries, numerous treaties and legislations have directly targeted the self-determination and wellbeing of Indigenous people (Truth and Reconciliation Commission of Canada (TRC), 2015; Wesley-Esquimaux & Smolewski, 2004). The most destructive of all was the Gradual Civilization Act of 1857, which formed the church-state partnership that created the residential school system. The first schools opened in the late 1840s. By the 1870s, the Indian Act mandated that all Indigenous children attend residential schools, many of which were hundreds of miles away from their native communities (Milloy, 2008). Over the span of 150 years, more than 150,000 Indigenous children were forcibly removed from their families and placed into institutions with the sole intent to "kill the Indian and save the man" (Fournier & Crey, p. 55).

The official agenda of the residential school system was to eradicate Indigenous ways of living. This was attempted by obstructing the intergenerational transmission of Indigenous knowledge systems and by imbuing a deep sense of shame, hatred, and

embarrassment in Indigenous identity. Traditional ceremonies were criminalized, students were physically punished if they acknowledged their culture, and were forcibly indoctrinated into European and Christian ways of living. By 1920, the Deputy Minister of Indian Affairs assured that the continued existence of the schools would exterminate Indigenous people as an identifiable group within the next hundred years (Fournier & Crey, 1997; Milloy, 1999; Royal Commission of Aboriginal Peoples (RCAP), 1996; TRC, 2015).

The residential schools were incompetently managed and subjected children to abhorrent living conditions. Poor sanitation, malnutrition, and overcrowding resulted in staggering death tolls. A government medical inspector estimated that a quarter of all Indigenous children attending residential school died, and many more succumbed to disease after being sent home (Milloy, 1999, p. 49). While forced assimilation operated under the pretense of providing Indigenous children with training that would ready them for modern "civilization", only a minimal level of schooling that focused on manual and domestic labour was provided. In truth, the schools utilized child labour to maintain their upkeep in what was known as the "half-day system", effectively neglecting every aspect of students' developmental needs (Legacy of Hope Foundation, 2013, p. 15).

The most damaging legacy of the residential schools was the rampant sexual abuse committed by the unchecked figures of authority who preyed upon the children in their care. As a result of "institutionalized pedophilia", almost every child in the system experienced some form of sexual abuse (Fournier & Crey, 1997, p. 72). Many of the perpetrators were the very religious figures who preached chastity, sexual abstinence, heterosexuality, and monogamy. This caused serious confusion among victims with

regard to the dynamics of sexual relationships and the meaning attached to sex (Fournier

& Crey, 1997, p. 129; Milloy, 1999, p. 296). Abuse coupled with the disruption of

fundamental familial ties that nurture the development of a child's psyche caused severe

harm. The "graduates" of residential schools entered society with deeply unresolved

trauma, self-shame, and broken identities. This in turn gave way to the devastating

consequences of intergenerational trauma (Aboriginal Healing Foundation, 2007).

1.1.2 Intergenerational trauma and the legacies of colonization

In the residential schools, total adult control reigned and abuse was treated as a

method of child rearing. Without positive role models and familial kinships to mirror,

many residential school survivors had very limited knowledge about the dynamics

surrounding family interactions. The burden of guilt, shame, and anger that survivors

brought home with them interfered with their ability to easily reconnect with families and

communities (LaFrance & Collins, 2003; TRC, 2015). As the traditional cultural values

that mediated against vulnerability had eroded, many residential school survivors

unintentionally replicated the cycles of abuse at home (Barlow, 2003; Chester et al.,

1994; Yellow Horse Brave Heart, 2003). The unhealed wounds that subjected Indigenous

people to inescapable cycles of pain, led to the lateral transmission of trauma like a

"disease ripping through our communities" (Grand Chief Edward John, 1992, from

Milloy, 1999, p. 295). Indigenous scholars describe this cyclical effect of collective

emotional and psychological injuries that extends over multiple generations as

intergenerational trauma (Yellow Horse & Brave Heart, 2004).

The legacies of the residential schools had resulted in "alienation, poor self-

concept and lack of preparation for independence, for jobs and for life in general"

(Kirkness, 1992, p.12). Many survivors found it challenging to succeed in the racist society that awaited them. Consequently, families struggling with poverty, ongoing marginalization, and unresolved trauma found it extremely difficult to create safe homes for their children (Chansonneuve, 2007; LaRocque, 1994; Tousignant & Sioui, 2009).

In the 1940's, the Canadian government concluded the residential schools to be costly and ineffective, and began winding them down (TRC, 2015). Eventually, child welfare was transferred from federal to provincial agencies in the 1950's, and ascribed to a per capita funding model that incentivized the long-term removal of Indigenous children from what were deemed "unfit" homes. A new era of dislocation, known as the "60's scoop", separated thousands of children from their families, communities, and culture, creating a new wave of collective pain (Blackstock & Trocmé, 2004; Fournier & Crey, 1997, p. 30; TRC, 2015; Trocmé et al., 2006). As the factors contributing to child apprehension - namely poverty, inadequate housing, and self-medication - remained unaddressed in Indigenous communities, the number of Indigenous children entering the foster care system grew substantially (Blackstock & Trocmé, 2004). By 1980, Indigenous children were six times more likely to be apprehended from their homes than non-Indigenous children (Durst, 2002). In 2011, while Indigenous children comprised only 7% of children under 14 in Canada, they represented 48% of all children in foster care (Statistics Canada, 2016).

The last residential school closed in 1996 (TRC, 2015). As survivors started stepping forward to disclose their harrowing experiences, apologies from the state and church were followed by criminal charges and class action suits (TRC, 2015). Today,

over 80,000 residential school survivors are still living, 35,000 of whom reside in British Columbia (BC) (Aboriginal Healing Foundation, 2007).

Indigenous scholars and leaders maintain that the legacies of the residential school systems continue to be iterated by the dismantling of Indigenous families and ways of living through the child welfare system (Christian, 2010; Fournier & Crey, 1997). The forcible apprehension of children continues to sever sacred familial and communal ties, depriving children of their cultural identity, and contributing to new cycles of intergenerational trauma. The long term mental health effects of the residential school system and child welfare systems are very much alive, manifesting as Post-Traumatic Stress Disorder, depression, self-medication, and suicide (Corrado & Cohen, 2003; Public Health Agency of Canada, 2006; Monirruzaman et al., 2009; Yellow Horse Brave Heart, 2003).

1.1.3 The sexual health of Indigenous communities in Canada

The legacies of colonization have particularly impacted the sexual wellbeing of Indigenous people and communities (Farmer et al., 1996; Vernon, 2001; TRC, 2015). The widespread sexual abuse that was inflicted upon Indigenous children in residential schools was combined with enforced silence. The colonizers further attacked the wellbeing of Indigenous people by attempting to eradicate the traditional values and cultural practices that safeguarded their sexual health for thousands of years (Bopp & Bopp, 1997). Consequently, many survivors were left to grapple with the long-term consequences of sexual abuse alone and received little to no support to restore their mental, emotional, physical, and spiritual wellness. This prevented healing and resulted

in the transmission of trauma through successive generations (Chansonneuve, 2007; Milloy, 1999; TRC, 2015).

To numb the immense pains of self-loss, some survivors turned to drugs and alcohol to cope (Chansonneuve, 2007; Gesink et al., 2016; Kendler et al., 2000). As drug use is associated with negative sexual health outcomes (Chavoshi et al., 2012; Devries, Free, & Jategaonker, 2007; First Nations Information Governance Committee, 2012; Kotchick et al., 2002), intergenerational trauma is directly impacting sexual vulnerability by way of self-medication with illicit drugs. These risks are intensified by a lack of sexual education in many Indigenous homes and communities. The legacies of the residential schools have made sexual discourse extremely difficult (Myers et al., 1999). The silence, stigma, and shame that has been historically attached to sexual matters jeopardizes the ability of many Indigenous young people to acquire critical sexual health information. Such risks are compounded by inadequate and/or inaccessible sexual health resources in rural or remote areas (Andersson et al., 2008; Yee, 2010). Consequently, many young people are left to learn about sex from self-exploration, media, peers, and even through sexual abuse (LaRocque, 1994, p. 80).

Communities are actively resisting the adversities that have been placed before them, and leaders are rigourously prioritizing the sexual health needs of young people. However, the barriers to sexual safety, health, and education are deeply embedded in the histories of colonization and continue to interfere with sexual wellbeing (Yee, 2010). The culmination of these factors has led Indigenous young people to experience high rates of unplanned pregnancies (Health Canada, 2001), teenage pregnancies (Cloe & Guimond, 2009; UNICEF Canada, 2009), inconsistent condom use (Chavoshi et al., 2012; Heath et

al., 1999; Shercliffe et al., 2007; Spittal et al., 2002; Weber et al., 2003), and STIs (Rotermann, 2005; Steenbeck et al., 2006). However, when such health disparities are reported in isolation, it can reinforce negative stereotypes toward Indigenous people and discrimination against them, and perpetuate self-blame within communities (Larkin et al., 2007; Health Canada, 1998). The World Health Organization (2006) defines sexual health as:

> "A state of physical, emotional, mental and social wellbeing in relation to sexuality; it is not merely the absence of disease, dysfunction or infirmity. Sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination and violence. For sexual health to be attained and maintained, the sexual rights of all persons must be respected, protected and fulfilled" (Chapter 3, p. 4).

As the aforementioned requirements to sexual wellbeing have been grossly compromised amongst Indigenous people, their sexual health outcomes must be interpreted within the context of the lifetime and intergenerational traumas that stem from the consequences of colonization.

1.1.4 Increased vulnerability to sexually transmitted infections among Indigenous people in Canada

The term *sexual vulnerability* is used to describe the disproportionate sexual health risks that Indigenous communities face. This concept locates any/all of the lifetime experiences that impact sexual health within a framework that accounts for the historical traumas that Indigenous people are living with.

Sexually transmitted infections (STIs) are considered to be effective biomarkers

for sexual vulnerability (Gallo et al., 2013; Weller & Davis, 2005). STI morbidity not only takes a detrimental physical toll, it can also devastate mental and emotional health by diminishing one's self-concept (Newton & McCabe, 2008). Ulcerative STIs such as syphilis and Herpes Simplex Virus Type-2 (HSV-2) are associated with HIV seroconversion (Galvin & Cohen, 2004; Centers for Disease Control and Prevention, 1998). Many Indigenous communities have tightly knit sexual networks, which allow STIs to spread rapidly even in the most geographically isolated areas (Wylie & Jolly, 2001). Consequently, Indigenous leaders and service providers are extremely concerned for the present and future health of their communities.

Statistics Canada (2003) reports that Indigenous people between the ages of 15-24 are 2.5 times more likely to acquire STIs when compared to non-Indigenous Canadians of the same age (Rotermann, 2005). The Public Health Agency of Canada (2010a) estimates that the rate of chlamydia among First Nations people is seven times that of the general population, and research has demonstrated that one in five chlamydia cases occurs among Indigenous people (Sevigny et al., 2003). An investigation of a gonorrhea outbreak in Northern Alberta reported that Indigenous people constituted 96% of cases (De et al., 2003), and were 2.6 times more likely to become reinfected when compared to non-Indigenous people who had contracted gonorrhea (De et al., 2007). Among street youth, Indigenous people are twice as likely to test positive for chlamydia (Shields et al., 2004).

Indigenous people also bear a disproportionate portion of Canada's HIV/AIDS burden. In 2011, they comprised 3.8% of the general population, but constituted almost 9% of all prevalent HIV infection cases and were 3.5 times more likely to be newly infected with HIV. The rates of HIV cases among Indigenous young people, women, and

people who use intravenous drugs are markedly higher than the rates for the same subgroups among other ethnicities (Public Health Agency of Canada, 2015).

International research has established that ulcerative STIs such as HSV-2 and syphilis increase the risk of HIV seroconversion by two- to three-fold (Freeman et al., 2006; Wald et al., 2002). Genital herpes is the second most prevalent STI in Canada and the most common cause of genital ulceration (British Columbia Centre for Disease Control (BCCDC), 2009). The prevalence of HSV-2 among Indigenous people in Canada is unknown. However, one study among STI clinic attendees in two Canadian cities reported the rate of HSV-2 infection among Indigenous patients to be 2.6 times higher than that of non-Indigenous patients (Singh et al., 2005). In 2013, the Annual Summary of Reportable Diseases in British Columbia identified that Indigenous people accounted for 9.1% (n=277) of the province's newly reported syphilis cases between 2004-2013, despite constituting only 5% of the population (BCCDC, 2013). Reports from syphilis outbreaks in the Western provinces of Canada also demonstrated that a disproportionate rate of syphilis infections occurred among Indigenous people (CBC, 2010; CBC, 2015a; Government of Alberta, 2010; Ogilvie et al., 2009).

As mentioned, the legacies of colonization have disproportionately burdened Indigenous communities with drug and alcohol dependence (First Nations Information Governance Committee, 2012). Drug use is associated with increased vulnerability to STIs (Devries et al., 2009a; Marshall et al., 2009; Ship & Norton, 2001). Yet, there is a paucity of literature pertaining to the complex interactions between historical trauma, self-medication, and sexual risk among Indigenous people in Canada. We must therefore look to data from the general population to understand sexual health risks due to drug

use. The literature demonstrates that people who use drugs are more likely to have multiple sex partners, be involved in survival sex work, and have sex with partners who use injection drugs (Booth et al., 2000; Booth et al., 2007; Irwin et al., 1993). Studies have reported that HSV-2 and syphilis infection rates among populations who use drugs are significantly higher than that of the general population (De Jarlais et al., 2010; Xu et al., 2006). For Indigenous people who use drugs, any sexual health risks due to drug use will be compounded by historical trauma, systemic racism, and social marginalization. However, their ramifications are not well investigated for Indigenous young people who use drugs.

1.2 Cultural resilience

Indigenous people have long been aware of their health needs and have a profound ability to overcome barriers to wellness. Despite 500 years of colonization, Indigenous communities continue to demonstrate their inherent strengths and cultural resilience by exercising resistance in the face of adversity. Indigenous authors and Elders emphasize that resilience is a cultural strength that mediates against adversity by acting as a psychological buffer against trauma stressors (Henderson, 2008; Kirmayer et al., 2003; McIvor et al., 2009; Walters & Simoni, 2002; Wexler et al., 2014).

The protective quality of cultural resilience on health outcomes has been established across Indigenous communities in North America (Devries et al., 2009a; Dion-Stout et al., 2001; Gesink et al., 2016; Kirmayer et al., 2003; Korhonen & Ajunniginiq, 2006; Lavallee & Clearsky, 2006; Wexler et al., 2014). Andersson and Ledogar's (2008) study among 622 Indigenous people in Manitoba found that young people who participated in traditional ceremonies had increased emotional competence,

and were less likely to drink alcohol or become involved in crime. Alcohol cessation was also observed among Indigenous adults who participated in traditional ceremonies and Indigenous spirituality in four American Indian reservations and five First Nations reserves in Canada (Torres Stone et al., 2006). One seminal study across 196 Indigenous bands in BC demonstrated that communities who engage in cultural continuity - which includes self-governance, preserving/renewing traditions, and speaking traditional languages - have drastically lower suicide rates (Chandler & Lalonde, 1998). In a prospective cohort study of Indigenous young people who use drugs in BC (the Cedar Project), participants who spoke their traditional language demonstrated higher resiliency, and living by traditional culture was shown to significantly decrease psychological distress (Pearce, 2014).

While forced assimilation obstructed the intergenerational transmission of Indigenous teachings about sexual matters, many Indigenous traditions, beliefs, ceremonies, and languages survived the devastations of colonization and continue to function as healing instruments (Gesink et al., 2016). Indigenous young people are reconnecting with their heritage (Statistics Canada, 2013), but those who have migrated to urban areas are often disconnected from their communities, families, and culture and may not readily access the therapeutic benefits of traditional practices (Fleming & Ledogar, 2008).

1.3 Rationale

The dearth of Indigenous-steered knowledge pertaining to the health of Indigenous people in Canada has been recognized (De et al., 2007; Law et al., 2008). This paucity of research led to the development of the Cedar Project, an Indigenous

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governed initiative addressing the health risks of Indigenous young people who use illicit injection and non-injection drugs in Vancouver, Prince George, and Chase, BC. Since 2003, the Cedar Project has provided Indigenous leaders with the epidemiological evidence base necessary to support meaningful public health interventions that reduce HIV and Hepatitis C (HCV) vulnerability among their young people. Indigenous collaborators and investigators, collectively known as the **Cedar Project Partnership**, have governed the entire research process and assure adherence to decolonizing research principles and ethical codes of conduct. Knowledge translation and community engagement is a hallmark of the Partnership. To our knowledge, the Cedar Project is the only cohort study of its kind globally. The focus of the Cedar Project has largely centered on injection drug use related health risks. The Cedar Project now aims to better understand other determinants of infectious diseases, including the lifetime experiences and risk/protective mechanisms that impact vulnerability to ulcerative STIs that are associated with HIV seroconversion.

To date, no known studies have examined the prevalence of and risk factors for syphilis or HSV-2 infection among Indigenous people who use drugs in Canada. The asymptomatic nature of ulcerative STIs raises concerns not only for people who remain untreated for life threatening yet controllable infections, but for the risks posed to their partners and to the neonates of pregnant women (BCCDC, 2007). Reporting ethnicity is not always mandated with STI testing, and the scale of morbidity is unknown. Inadequate access to and uptake of sexual health resources remains an ongoing challenge for many Indigenous people (First Nations Health Authority, 2013). Yet, there is very little

understanding of the specific mechanisms through which sexual health, education, and service utilization are influenced for Indigenous young people who use drugs in Canada.

The Indigenous Partnership that governs the Cedar Project identified the need for a multidisciplinary exploration of sexual wellbeing that centres the voices of Indigenous young people who face adversity. Such a study can shed much needed light on the historical and lifetime factors that are impacting the sexual health and experiences of Indigenous young people who use drugs, and is fundamental to the strengthening and development of meaningful sexual health resources. To address this need, this project extended routine HIV and HCV testing among Cedar Project participants to include syphilis and HSV-2. The study non-invasively detected life-long exposure to two ulcerative STIs to help investigate the determinants of sexual vulnerability within a historical trauma and cultural resiliency framework. To contextualize the epidemiological investigations of HSV-2 and syphilis positivity, the various systems and factors that impact the sexual knowledge, behaviours, and health of Indigenous people who use drugs were explored through in-depth interviews with Cedar Project participants. Using both qualitative and quantitative methodologies can provide critical information to help unravel the complex intersections that shape understandings of, and experiences with sex and sexual health from childhood onwards (Stark & Trinidad, 2007).

Lastly, this study aimed to address Indigenous leaders' concerns about the inadequacies of relevant sexual health programming and resources for their young people (Banister & Begoray, 2011; Clark & Hunt, 2011; Yee, 2010). The Public Health Agency of Canada (2008) describes sexual health as "a key aspect of personal health and social welfare that influences individuals across their life span", and has long recognized that

Indigenous people require new and effective approaches to sexual programming that are relevant to their communities, histories, and values (p. 2). The sexual health resources that *are* available to Indigenous young people who use drugs are often not culturally-safe, fail to take histories of trauma into account (Craib et al., 2003), and are not informed by the very population they aim to serve.

To address these deficiencies, participants' opinions and recommendations were sought on how to design and enhance sexual health resources tailored to Indigenous young people who use drugs. Cedar Project participants continually demonstrate strength and resistance in the face of the cumulative historical and lifetime adversities they face, and their voices will offer invaluable insight into the tools they deem necessary for sexual wellbeing. Indigenous leaders advise that strengths-based approaches at the individual, family, and community levels can successfully support the pursuit of wellness (The First Nations Health Authority, 2013). Accordingly, the primary goal of this study was to contribute to Indigenous service providers' capacity to raise awareness, identify needs, advocate for adequate sexual risk prevention, and develop a sexual health strategy that respects and integrates Indigenous values and strengths.

1.4 Conceptual framework

This study's framework is informed by theories that account for the cumulative consequences of colonization, forced assimilation, and historical injustices that span over centuries (Chansonneuve, 2005; Fournier & Crey, 1997; Wesley-Esquimaux & Smolewski, 2004). Any examination of the current sexual health of Indigenous people in Canada must examine the historical and intergenerational impacts of the residential school and child welfare systems (Fournier & Crey, 1997, p. 81). The disproportionate

sexual health risks that Indigenous communities face can only be fully understood by reflecting on the interrelated effects of attempted cultural genocide, ongoing social marginalization, familial fragmentation, poverty, self-medication, and hopelessness. Indigenous scholars stress that Indigenous people who use drugs do so to cope with unresolved trauma and ongoing pain (Walters & Simoni, 2002). Such social disparities and any associated coping strategies drive the health of communities and situate present day outcomes within a social ecological framework (Farmer et al., 1996; Vernon, 2001). We must emphasize that the chosen framework does not place blame on any person or community, but rather, centres the voices of Indigenous people to contextualize health outcomes within legislations that aimed to eradicate Indigenous cultures, traditions, values, identities, and self-determination (Brown & Sterga, 2005; Kovach, 2010).

The theoretical framework of this study is also informed by research paradigms that recognize the inherent strengths and cultural resilience of Indigenous people (Dion-Stout et al., 2001; Kirmayer et al., 2011). Indigenous scholars, Karina Walters and Jane Simoni, offer an "Indigenist stress coping model" (Figure 1) to researchers who examine HIV vulnerability among Indigenous young people who use drugs. This model explains that young Indigenous people use "cultural buffers" to cope with collective and individual trauma and stressors. These buffers include traditional ceremonies, spirituality, and healing strategies that mediate between lifetime adversities and negative health outcomes by "strengthening psychological and emotional health, decreasing substance use, and mitigating the effects of the traumatic stressors" (Walters & Simoni, 2002, p. S105).

Indigenous scholars and Elders maintain that traditional practices, teachings, ceremonies, and spirituality are the foundations of strength and resilience among Indigenous people (Brant Castellano, 2008; Brass, 2009; Kirmayer, Brass, & Tait, 2000). Luthar et al. (2000) define resilience as a "dynamic process encompassing positive adaptation within the context of significant adversity" (p. 543). Ungar (2008) explains that the ability to exercise resilience is highly dependent on the presence and quality of social and environmental resources that are available to individuals who face adversity. Therefore, the capacity for resilience among Indigenous young people who use drugs considers both their inherent strengths and the use of cultural mediators that mitigate against negative health outcomes, while recognizing the historical, institutional, and structural barriers that interfere with wellness.

Figure 1: Conceptual framework: "Indigenist" Stress Coping Model (Walters & Simoni, 2002)
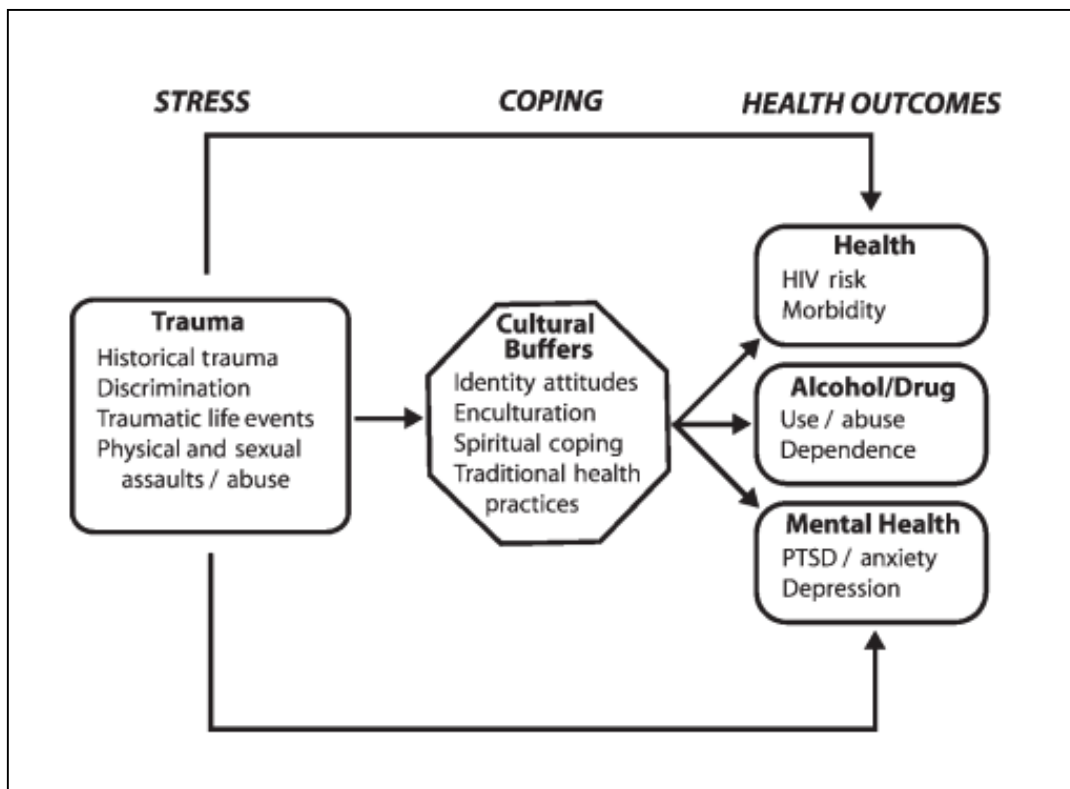
1.5 Objectives

The following study is a research endeavour between the Cedar Project Partnership and the researcher. Meetings with the Partnership affirmed that understanding participants' lived experiences and the pathways to sexual wellbeing and vulnerability are critical to generating recommendations on how to best support the sexual health of young Indigenous people who use drugs in Canada. In numerous consultations with the Partners, this dissertation aimed to examine the following objectives and hypotheses:

O1: Quantify the prevalence of HSV-2 and syphilis antigen positivity among young Indigenous people who use drugs as a biomarker of sexual vulnerability.

> **H1.1:** Self-reported STI rates will be lower than laboratory-based diagnosed rates.
>
> **H1.2:** Women are more likely to test positive for both HSV-2 and syphilis than men.

O2: Determine the protective and risk factors associated with HSV-2 positivity for young Indigenous men and women who use drugs.

> **H2.1:** Participants who test positive for HSV-2 are more likely to be involved in survival sex work.
>
> **H2.2:** Participants who test positive for HSV-2 are more likely to have survived intergenerational trauma (e.g. sexual abuse, foster care, parents in residential school)
>
> **H2.3:** Participants who test positive for HSV-2 are more likely to have used injection drugs.
>
> **H2.4:** Women will have more independent risk factors associated with HSV-2 seropositivity than men.

O3: Determine the protective and risk factors associated with syphilis antigen positivity among young Indigenous men and women who use drugs.

> **H3.1:** Participants who test positive for syphilis are more likely to be involved in survival sex work.
>
> **H3.2:** Participants who test positive for syphilis are more likely to have survived intergenerational trauma (e.g. sexual abuse, foster care, parents in residential school)
>
> **H3.3:** Participants who test positive for syphilis are more likely to have used injection drugs.

O4: Qualitatively investigate how Indigenous young people who use drugs conceptualize their sexual realities; explore how they understand sexual health risks; and examine the role of historical and other individual, social, cultural, and protective factors in sexual development, education, experiences, behaviours, relationships, and health.

> **H.4.1:** Lifetime trauma will be associated with past and present day challenges with respect to sexual health.
>
> **H.4.2:** Lifetime access to resources that facilitate positive health outcomes, such as cultural connectedness, stable housing, and family ties will be associated with sexual wellbeing.

O5: Seek recommendations from Indigenous people who use drugs on how to best support the sexual wellbeing of Indigenous you people who face lifetime adversities similar to their own by identifying protective factors and barriers to accessing and utilizing sexual health services/resources.

1.6 Overview of dissertation

This dissertation consists of eight chapters. Chapter 2 reviews the research literature pertaining to the sexual health of Indigenous people in Canada. Chapter 3 describes the methodological procedures undertaken for this entire study. The study uses an epidemiological and qualitative approach to consecutively address the aforementioned research objectives in Chapters 4 through 7. These four chapters were written as manuscript articles that will be submitted to peer-reviewed journals with the intent of publication. As such, the chapters will contain some repetition of methodology, historical context, and other background information pertinent to the study's rationale. Chapter 8 summarizes the findings of chapters 4, 5, 6 and 7, discusses the study's strengths and limitations, and offers recommendations for programming, policy, and intervention.

Chapter 2: Literature review

2.1 Contextualizing sexual health within a historical trauma paradigm

2.1.1 Colonization and the erosion of sexual health for Indigenous communities

Indigenous leaders stress that any discussion of Indigenous health in Canada must situate present day outcomes within the occurrence of intergenerational traumas that are rooted in forced assimilation. In order to meaningfully approach this complex topic, it is critical to contextualize both the general and sexual health of Indigenous people in Canada within the frameworks of the historical injustices they have experienced (Kirmayer, Brass, & Tait, 2000; Royal Commission on Aboriginal Peoples, 1996).

Prior to European contact, Indigenous communities had strong belief systems and health frameworks that were meant to uphold the sexual health of children and adults alike (National Collaborating Centre of Aboriginal Health, 2013). Both men and women were equally respected and each had specific roles and responsibilities with regard to the maintenance of harmony in families and communities (Boyer, 2009). Traditionally, Indigenous people viewed sex as a sacred gift meant to provide pleasure and sustain life (Kliest, 2008; Newhouse, 1998). Matters of sex were openly discussed and expressed, and sexuality was accepted as a healthy and vital component of human development (Aboriginal Nurses Association, 2002; McGeough, 2008; Newhouse, 1998).

Before colonization, Indigenous children were initiated into manhood or womanhood through coming-of-age ceremonies. These ceremonies were meant to facilitate a positive sense of identity at junctures where children were believed to be at risk for biological and psychosocial stress due to natural changes in their bodies, minds, and emotions. The ceremonies were fundamental to the healthy development of sexuality

because they transferred values pertaining to the sacredness of sex, its connection to spirituality, and how to create meaningful relationships (Markstrom, 2008). Prescribed rules, warnings, and proverbs guided appropriate sexual behaviours and set boundaries for those behaviours. Despite heterogeneity amongst the many Indigenous cultures and communities in Canada, the over-arching general approach to sexuality was healthy (Bopp & Bopp, 1997).

The strict European and Christian doctrines that deemed sex impure were a stark contrast to Indigenous traditions that celebrated it. European colonizers viewed the values of Indigenous cultures as a threat to the patriarchal and Christian society they sought to establish (Oliver et al., 2015). Indigenous scholars emphasize that dismantling Indigenous families aimed to eradicate the egalitarian and in some cases, matriarchal, nature of Indigenous societies (Barman, 1997). The residential school system severed the transmission of cultural wisdom from caregiver to child by forcibly removing tens of thousands of Indigenous children from their families and communities. The sexual abuse that was endured by almost every child in attendance attached a deep sense of confusion, pain and shame to matters of sexuality (TRC, 2015). The figures entrusted with caring for the children inflicted immense suffering and long-term damage by humiliating the children's identities and bodies, and ultimately, their psyches (Aboriginal Healing Foundation, 2007; Fournier & Crey, 1997; Milloy, 1999).

The survivors of residential schools then carried the immense burden of unresolved trauma and self-shame back home, along with the lessons they had learned about using complete adult control and abuse as a method of child rearing (Fournier & Crey, 1997, p.63). Experiencing violence in childhood is a strong risk factor for the

perpetration of violence during adulthood (Markowitz, 2001). Given the lack of emotional nurturing, familial kinships, and healthy role models to mirror, many residential school survivors found it incredibly difficult to build healthy relationships with their families. Unfortunately, when the survivors became parents, some began recreating the methods of child rearing that characterized their own upbringing in the residential schools. Stressful conditions at home were exacerbated by poverty, born of social marginalization and systemic racism, and the use of drugs and alcohol to cope with unresolved trauma (Bopp, Bopp, & Lane 2003, 49; Chansonneuve, 2007; Cripps et al., 2009, 484).

The difficult living situations and distress experienced by residential school survivors gave rise to a new wave of familial fragmentation through the child welfare system. Social workers who deemed Indigenous homes as "unfit" for childrearing removed thousands of children from their families and placed them in foster care. This second era of child apprehension served as another means of dismantling Indigenous ways and recreating new cycles of pain (Christian, 2010; Fournier & Crey, 1997). In an examination of psychological distress and maltreatment among Cedar Project participants, young people who were apprehended as children described the immense trauma of being torn from their families and endured gross neglect and abuse at the hands of foster parents. Such experiences led them to run away from home, develop mental illness, suffer immense stress, initiate drug use, and have difficulty building and maintaining relationships (Pearce, 2014). At baseline enrolment (n=605), 65% of Cedar Project participants reported that they had been placed into foster care as children. In this cohort, being part of the child welfare system was independently associated with having

been sexually abused (AOR: 2.6 [95% CI: 1.7–3.8]); having a parent who attended

residential school (AOR: 2.1 [95% CI: 1.4–3.2]); being diagnosed with a mental illness

(AOR: 1.6 [95% CI: 1.1–2.3), and homelessness (AOR: 1.7 [95% CI: 1.2–2.4]) (Clarkson

et al., 2015). The most troubling finding was the increased likelihood of having thought

about (AOR: 1.8 [95% CI: 1.3–2.6) and having attempted suicide (AOR: 1.4, [95% CI:

1.0–2.1]) among participants who had been in foster care (Clarkson et al., 2015).

The underlying causes that contribute to child apprehension among Indigenous

families remain largely unaddressed. Consequently, Indigenous young people continue to

be vastly overrepresented in the child welfare program, comprising almost half of all

children in foster care under the age of 14, while constituting only 7% of the child

population (Statistics Canada, 2016). Being part of the child welfare system is reported to

be the most common characteristic of young Indigenous women involved in survival sex

work in Canada (Sikka, 2009). Among Cedar Project participants, having been in foster

care was independently associated with ever having been involved in survival sex work

(AOR:1.7 [95% CI: 1.1–2.8]) and being HIV positive (AOR: 2.4 [95% CI: 1.2–5.1])

(Clarkson et al., 2015). This evidence highlights the sexual vulnerability of Indigenous

people who have been taken from their families and indicates the critical need for an in-

depth exploration as to how these experiences impact sexual health.

2.1.2 The impact of sexual abuse on sexual wellbeing

The most devastating corollary of colonization for the Indigenous people of

Canada is the transmission of intergenerational trauma in the form of sexual abuse. The

Canadian Incidence Study of Child Abuse and Neglect reports that Indigenous children

are 2.7 times more likely to be sexually abused than non-Indigenous children (Public

Health Agency of Canada, 2010b). The researchers acknowledge that the underreporting of sexual abuse continues to be a major impediment to recognition and intervention. In the 2008 British Columbia Adolescent Health Survey of over 3,300 Indigenous young people, 27% of female participants and 11% of male participants reported having ever been sexually abused. In the 2016 survey, the overall figure dropped to 15% (Tourand et al., 2016). However, as this survey was only distributed to students who were actively attending school, it may not have captured the experiences of the most at-risk young people. Collin-Vézina, Dion, & Trocmé (2009) examined over 20 published studies and reports on the prevalence of sexual abuse within Indigenous communities in Canada from 1989-2007. The researchers conservatively estimated the overall range of sexual abuse among all Indigenous people to be 25-50%. Fear of disclosure, shame, stigma, and proximity to abusers continues to result in the underreporting of childhood sexual abuse. As such, many children are left to cope alone with its devastating long-term consequences (Collin-Vézina, Dion, & Trocmé, 2009).

Sexual abuse can grossly impede healthy sexual development, especially during childhood. Very few studies have examined the mental and emotional sequelae associated with sexual abuse exclusively among Indigenous people who use drugs in Canada. To understand the psychological impacts of sexual abuse on lifetime sexual vulnerability, we must turn to literature that is informed by the non-Indigenous population. It is essential to distinguish between cause and effect when discussing sexual abuse in childhood and its resultant sexual health outcomes. Sexual abuse in and of itself does not necessarily cause such outcomes, but rather, increases the likelihood that victims will find themselves in situations that increase vulnerability to them (Stoltz et al., 2007). For example, a child

who has been sexually abused may not be able to focus in school and may withdraw from social engagements, peer networks, and community involvement. Such losses can negatively impact their self-sufficiency, confidence, and ability to succeed in various lifetime endeavours. Many victims are consequently at risk for experiencing poverty, running away from home, and becoming dependent on other exploiters or abusive partners to survive (Grauerholz, 2000; Johnson et al., 2006; Stoltz et al., 2007).

Coping strategies are also important mediators in the pathways of childhood sexual abuse and poor sexual outcomes. Sex itself, even when consensual, can trigger flashbacks, fear, and a sense of helplessness (Briere & Elliot, 1994; Harris, 1999). Survivors may suppress negative feelings through emotional avoidance, which can include self-medication, dissociation, and detachment. Over time, chronic emotional avoidance can inhibit the processing of information during sexual encounters and lead to a tendency to ignore/minimize danger cues, increasing susceptibility to re-victimization (Polusny & Follette, 1995). Further, the depression and grief that accompanies abuse can instill a sense of futility in living and a lack of self-protection. This hopelessness can lead sexual abuse survivors to seek the immediate gratification of risky sex with multiple short-term partners and be unconcerned about taking sexual precautions (Johnson et al., 2006; Slonim-Nevo & Mukuka, 2007).

The ability to regulate the dynamics of sexual encounters, such as voicing preferences on contraceptive use, or refusing to engage in any act that is uncomfortable necessitates self-esteem and assertiveness. Sexual abuse can inhibit the development of such protective qualities, and many survivors lack the ability to control their sexual environment, even when sex is consensual (Brown et al., 2014; Prentice, 2005; Ship &

Norton, 2001; Simoni, Seghal, & Walters, 2004). The use of drugs and alcohol as a means of numbing the immense pain of sexual maltreatment further increases these vulnerabilities (Walters & Simoni, 2002). This can be explained through heightened risk of being preyed upon when high/intoxicated, not being in control of the sexual encounter when under the influence, and becoming involved in survival sex work to support substance dependence (Barlow, 2003; Bell & Britton, 2014; Gesink et al., 2016; Schneider et al., 2012).

One of the most troubling findings from the Cedar Project is the high proportion of participants who have experienced childhood sexual abuse (69% of women, 31% of men), and its significant association with having ever attempted suicide (AOR: 2.02 [95% CI:1.36–3.01]) (For the Cedar Project Partnership, 2008). In the Cedar Project, childhood sexual abuse is independently associated with inconsistent condom use (AOR: 1.80 [95% CI: 1.01-3.20] (Chavoshi et al., 2012), homelessness (AOR: 2.08 [95% CI: 1.36-3.12], involvement in survival sex work (AOR:1.92 [95% CI: 1.25–2.96], and HIV positivity (AOR: 2.09 [95% CI (1.00–4.34]) (For the Cedar Project Partnership, 2008). The BC Adolescent Health Survey reported that young men who were sexually abused were 4.5 [95% CI: 1.69-12.09] times more likely to use condoms inconsistently (Devries, et al., 2009b). The Ontario Federation of Indian Friendship Centres surveyed 255 Indigenous young people in Ontario and found those who had endured childhood sexual abuse were more likely to have multiple sex partners and become pregnant (Anderson, 2002). Devries et al. (2009a) investigated the determinants of STI acquisition and pregnancy among the 445 young women and 360 young men who identified as Indigenous and reported ever having sex in the 2003 BC Adolescent Health Survey. Among men,

experiencing sexual abuse was significantly associated with causing a pregnancy (AOR: 4.30 [95% CI: 1.64-11.25]) and being diagnosed with an STI (AOR: 5.58 [95% CI:1.61-19.37]). For young women, a history of sexual abuse was independently associated with ever having become pregnant (AOR: 10.37 [95% CI: 4.04-26.60]).

2.1.3 The ongoing impacts of colonization on the sexual health of Indigenous women

Prior to European contact, Indigenous women often held positions of high social power, and rightfully exercised autonomy over their bodies and sexuality. Revered as the givers of life to subsequent generations and transmitters of knowledge, Indigenous women were perceived as a threat to the patriarchal agenda of the colonizers. The degradation of female sexuality, attempted eradication of egalitarian values, and objectification of Indigenous women critically wounded their safety, social status, and overall health (Oliver et al., 2015; Robinson, 2009). As a result of the complex intersections of race, gender, and social class, Indigenous women today experience higher rates of poverty, inadequate food security, and extreme violence and abuse (Callaghan et al., 2006; CBC, 2015b; Macdonald, 2005; van der Woerd et al., 2005; Milloy, 1999; Stout, Kipling & Stout, 2001; Yee, Apale & Deleary, 2011; Young & Katz, 1998). In 2010, 582 cases of missing and murdered Indigenous women in Canada were documented. More than half were under the age of 31 and 88% were mothers, and only a few cases have been solved (The Native Women's Association of Canada, 2010). By 2014, the Royal Canadian Mounted Police reported they were investigating over 1,200 cases of missing and murdered Indigenous women (RCMP, 2014). The Native Women's Association of Canada attribute this crisis to "the ongoing effects of Colonization in Canada (that) have led to the dehumanization of Native women and girls" (Gahagan,

2013; p. 19). The culmination of such disparities significantly impacts the sexual wellbeing of Indigenous women, who experience disproportionate rates of unplanned pregnancies, sexual violence, maternal mortality, and STIs (Oliver et al., 2015; Robinson, 2009; Stout, Kipling & Stout, 2001).

For Indigenous women, sexual abuse has been linked to HIV infection, self-medication, survival sex work, powerlessness in relationships, and a reduced ability to negotiate contraceptive use (Prentice, 2004; Ship & Norton, 2001; Simoni, Seghal & Walters, 2004; Sikka, 2009; Spittal et al., 2007). Indigenous women are more likely to suffer from the long-term mental health effects of childhood sexual abuse than non-Indigenous women. In Barker-Collo's 1999 study of 138 female survivors of childhood sexual abuse, Indigenous participants (n=60) were more likely to report trauma symptomology such as sleep disturbance, somatic symptoms, and sexual difficulties. Gesink et al. (2016) interviewed 25 Cree women in Alberta in an investigation of STI vulnerability. They found that both substance dependence and abuse in relationships greatly impacted women's sexual health risks. The authors explained how sexual abuse survivors turn to "healing" and "harming" medicines to overcome their suffering. "Harming" medicines included drugs, alcohol, and self-harming, which directly increased risk of contracting STIs. "Healing" medicines including engaging in traditional practices and ceremonies, which mediated against STIs.

The sexual vulnerability of Indigenous young women is compounded by their overrepresentation among women engaged in survival sex work (Chettier et al., 2010; Native Women's Association of Canada, 2008; Sikka, 2009; Seshia, 2005). Young Indigenous women involved in survival sex work face inadequate access to health

resources (Ontario Federation of Indian Friendship Centres, 2004) and are more likely to test positive for STIs (Shannon et al., 2007). In a study among 198 women who trade sex for survival in Vancouver, Indigenous participants were significantly more likely than non-Indigenous participants to avoid accessing health services and clean injection sites due to a fear of violence and policing (Shannon et al., 2008), with clear implications for treatment, prevention, and care.

As previously mentioned, precise estimates of STI prevalence and incidence among Indigenous people are not readily available in Canada. This is due to inconsistencies in ethnicity reporting and inadequate STI screening, particularly in rural and remote areas where many Indigenous communities are located. From the data that is available, Indigenous women are disproportionately represented (BCCDC, 2013; Healey et al., 2001; Vasilevska et al., 2012). Indigenous girls are more likely to have earlier sexual debuts than non-Indigenous girls (Larkin et al., 2007). This is concerning given that the cervixes of adolescent girls are not fully developed, increasing their susceptibility to STIs (Young et al., 1997). Indigenous women are also less likely to be screened for STIs, and more likely to experience the negative consequences of untreated infections, such as infertility, pelvic inflammatory disease, and ectopic pregnancies (Calzavara et al., 1998).

The historical and social adversities that Indigenous women experience not only increase vulnerability to STI acquisition independently, but many are experienced concurrently, resulting in a multifold cumulative risk for negative sexual health outcomes. Young women who use drugs are particularly vulnerable. Yet, no studies have independently examined the determinants of sexual health for Indigenous women who

use drugs in Canada. Research is urgently needed to identify not only the risk factors associated with increased sexual health risks, but also the protective mechanisms that support the sexual wellbeing of Indigenous women.

2.1.4 Social marginalization and accessing resources, treatment, and care

Indigenous people do not have equitable access to relevant sexual health resources that mitigate negative sexual health outcomes. This reality is a product of cultural, geographic, socioeconomic, and historical factors (Browne, 2011; First Nations Health Authority, 2013; Tang & Browne, 2008; Waldram et al., 1997). Wynne and Currie (2011, p. 115-116) argue that the underlying theme of such reduced access and uptake is *social exclusion* (or *social marginalization*), which they define as "the structures and processes that limit the full participation of certain groups or individuals in society due to inequalities in access to social, economic, political, and cultural resources". Social exclusion manifests in the forms of racism, poverty, and residential segregation, all of which can increase vulnerability to poor health outcomes. Consequently, socioeconomically disadvantaged groups face heightened risk for STI acquisition (Wynne & Currie, 2011). This is concerning, as almost half of all First Nations children in Canada are living below the poverty line in marginalized neighbourhoods. Indigenous children are thus facing increased exposure to a concentration of social risk factors that reduce sexual wellbeing. These include high rates of violence, addiction, survival sex work, and a lack of resources (McDonald & Wilson, 2013).

An important deterrent to healthcare access and uptake is systemic racism (Clark et al., 2013). Racism not only influences how healthcare providers treat patients belonging to a group perceived as unhealthy, which impacts how members of that group

internalize such perceptions (Williams & Mohammed, 2009). The overrepresentation of Indigenous people who have chronic healthcare needs, are economically disadvantaged, and/or substance dependent has been found to impact how healthcare providers interact with Indigenous patients in general (Tang & Brown, 2008). Tang and Brown's 2008 ethnographic study explored how ethnicity functioned as a barrier to the provision and uptake of equitable healthcare services among Indigenous people in Canada. While most healthcare providers believe they are dispensing indiscriminate care, many Indigenous patients report being racially typecast. A person who expects to be discriminated against by healthcare providers may refrain from seeking care unless it is absolutely necessary, or not seek care at all (Health Council of Canada, 2012). As STIs are often viewed as a product of personal decisions, the social and historical conditions that increase any particular group's vulnerability to STIs are often overlooked, which impacts both the provision of quality care and its frequency of uptake (Wynne & Currie, 2011).

Sexual healthcare resources are strikingly deficient in Indigenous communities located in rural or remote areas (Jackson & Reimer, 2008). Goldenberg et al. (2008) interviewed 25 young men and women in Northeastern BC, 10 of whom were Indigenous. The researchers identified five main barriers to STI testing, which included: limited opportunities to access STI testing; the geographic inaccessibility of clinics; local social norms/stigma; lack of information regarding STIs and testing options; and negative interactions with service providers. The latter included the inability to establish rapport, not receiving adequate lay information, discrimination, and being denied testing.

Goldenberg's (2008) study participants stated that a lack of anonymity was a deterrent to seeking STI care in many small towns. Such conditions were accompanied by

prevalent hypermasculine mentalities that deemed STI testing to portray weakness in men. Women also reported being subjected to gender stereotypes that prevented them from seeking STI screening. Disclosing sexual behaviours was associated with fear of judgment and was felt to compromise their reputations. Rusch et al. (2008a) assessed stigma attached to STIs among 126 women living in Vancouver's Downtown Eastside (the DTES). In their study, women of Indigenous ethnicity (40% of study participants) had higher scores for both social (views about women with STIs) and internal stigma (shame, embarrassment, etc. around having an STI). Internal stigma was present for Indigenous women even after adjustment for age, education, injection drug use, and survival sex work. The authors attributed their findings to the conflicting ideals of female sexuality between traditional Indigenous and western cultures. Indigenous women who had ever received STI testing or treatment had significantly lower social and internal stigma scores. The authors suggest that having received STI care and treatment may have mitigated some previously-held stigma (Rusch et al., 2008b).

2.2 Vulnerability to sexually transmitted infections among Indigenous people in Canada

2.2.1 Condom use among Indigenous people

The association between increased vulnerability to STIs and inconsistent condom use is clear and critical to the investigation of sexual health determinants. Statistics Canada survey data demonstrate that the odds of not using condoms among Indigenous men are twice that of non-Indigenous men (Rotermann, 2005). The First Nations Regional Health Survey 2008-2010 reported that only one-fifth of 11,043 participants reported always using a condom. In this study, participants who were substance

dependent were significantly less likely to report consistent condom use (First Nations Information Governance Centre, 2012). Condom use consistency for both the general and Indigenous population is largely dependent on type of sexual partner. Generally, condoms are infrequently used with regular partners, and varyingly with casual partners (Chavoshi et al., 2012; Devries et al., 2011; Hogg et al., 2005). In the Cedar Project 59% of women, and 46% of men reported inconsistent condom use, which was defined as "not always using condoms during vaginal and/or anal sex" (Chavoshi et al., 2012). The disproportionate representation of Indigenous people who have contracted STIs speaks to high rates of inconsistent condom use. A better understanding of the various determinants of condom use among Indigenous people is therefore required.

      The injustices of colonialism have resulted in an overrepresentation of Indigenous people involved in survival sex work (Chettier et al., 2010; Hunt, 2013). With few rights to protection and reduced social empowerment, people involved in survival sex work become especially vulnerable to violence, which often serves as a barrier to condom negotiation (Shannon & Csete, 2010). According to the Vancouver Injection Drug Users Study (VIDUS), 82% of Indigenous women who engaged in survival sex reported consistent condom use with their clients (Hogg et al., 2005). Among Cedar Project participants involved in survival sex work, consistent condom use with clients was reported by 89% of women and 63% of men. Only a minimal number of participants reported ever having accepted increased payment to not use a condom (16% of women, 0% of men) (Chavoshi et al., 2013). However, this must be interpreted with caution as results are based on self-reported data, which may be influenced by social desirability bias. Survival sex work is also strongly associated with drug use, particularly crack,

which is in turn associated with unprotected sex (Chavoshi et al., 2013; Chettier et al., 2010; Duff et al., 2013; Kuyper et al., 2005; Mehrabadi et al., 2008a). Therefore, even if the intention to use condoms is consistently present among people who engage in survival sex work, it may not readily be actualized while under the influence of drugs.

The severance of traditional wisdom regarding the sanctity and normalcy of sex, and intergenerational trauma have embedded the topic of sex among many Indigenous communities in silence (Yee, 2010). Consequently, bringing the topic of condom use to the forefront with communities that rarely discuss sex is challenging. Myers et al. (1999) investigated whether a relationship between cultural variables and risky sexual behaviors existed in a study among 556 Indigenous people in Ontario. Consistent condom use was reported by only 8% of participants. The authors found learning about sex through Indigenous traditions to be associated with reduced sexual activity (AOR:0.56 [95% CI: 0.33-0.95]). These findings illustrated the protective effect of cultural connectivity on sexual activity among young people. The same study found that participants who identified "family" as their source of sexual education were more likely to have unprotected sex (AOR: 2.50 [95% CI: 1.48-4.30]). Conversely, having received sexual education through health services was associated with a reduced likelihood of having unprotected sex (AOR: 0.51 [95% CI: 0.32-0.80]). The authors attributed these findings to the difficulty of addressing sexual matters in Indigenous homes that lack access to traditional teachings for sexual education. From the same cohort, Calzavara et al. (1998) reported that condom use consistency was positively associated with being male, not having a regular partner, having multiple partners, being concerned about pregnancy, having knowledge about HIV/AIDS, and not being embarrassed to purchase/obtain

condoms. Condoms were more commonly viewed as barriers to pregnancy than as barriers to STIs, heightening the risk for contracting STIs among people who used other methods of contraception (Calzavara et al., 1998).

In the most recent BC Adolescent Health Survey, 27% of Indigenous young men and 36% of Indigenous young women reported inconsistent condom use (Tourand et al., 2016). In Anderson's (2002) study, more than half the youth participants reported inconsistent condom use. The First Nations Regional Health Survey (2008-2010) reported that 28% of its 4,837 persons cohort (aged 12-17) was sexually active. Of this group, 79% reported using condoms, but 41% used them inconsistently. Among sexually active young people, only 9.6% had ever been tested for an STI (First Nations Information Governance Centre, 2012). The Nunavut Sexual Health Survey of 102 Inuit high school and college students reported 33% of young men and 42% of women use condoms inconsistently, only 20% of whom had been tested for an STI (Cole, 2004). Shercliffe et al.'s (2007) survey of 68 young Indigenous women in Regina reported that only half the participants had used condoms in their last sexual encounter. Despite their having knowledge about sexual health, sexual health awareness did not result in increased condom use. Instead, the authors found that having assertive communication skills determined their use (Shercliffe et al., 2007).

The reviewed studies did not address any historical or social factors that impact safe sex in their cohorts and excluded any young people who were not in school. Further, they did not examine the complex relationships between trauma, self-medication, and sexual health. Consequently, they may have underestimated risk due to sampling bias by missing critical information from the most vulnerable young people in society (Thomas,

2016). To appropriately design and develop sexual health programs that promote sexual safety among Indigenous young people who face adversities, the various factors that impact sexual education, attitudes, and behaviours need to be better understood.

2.2.2 Sexual health education, perceptions, and attitudes among Indigenous young people

The difficulty of discussing sex in many Indigenous communities obstructs the transmission of sexual health knowledge from adults to children. Indigenous researchers have greatly criticized the inadequacies of current sexual health education and programming. They have drawn attention to shortages of meaningful sexual health resources for Indigenous young people (Banister & Begoray, 2011; Clark & Hunt, 2011; Yee, 2010). While a critical lack of evidence pertaining to attitudes and knowledge about sexual health among Indigenous young people exists, a few researchers have addressed this important topic.

For Indigenous young men and women, strong cultural, family, community, and school connectedness has been found to instill self-care, which can in turn result in positive sexual health outcomes (Devries et al., 2009b). Indigenous young men with unstable family dynamics have reported engaging in risky behaviours by frequently migrating to larger cities to use alcohol and have sex (Devries et al., 2011). In a cross-sectional analysis of the BC Adolescent Health Survey, young women who reported involvement in their community or with strong connections to school were 26% less likely to have sex (Devries et al., 2009b). Devries et al. (2009b) reported that strong family connections decreased inconsistent condom use for both young girls (AOR: 0.43 [95% CI: 0.19-0.99]) and boys (AOR: 0.48 [95% CI: 0.26-0.91]). Consequently, Indigenous young men and women with strong connectedness to family and school were

less likely to report ever having an STI or having become pregnant (Devries et al., 2009a).

Larkin et al. (2007) developed a focus group study to assess understandings of HIV/AIDS among 48 young Indigenous participants aged 14-29 in Ontario. Participants struggling with poverty highlighted prioritizing the purchase of basic essentials such as food over contraception. This important finding speaks to a critical structural barrier to sexual safety that stems from ongoing marginalization. In Larkin's study, young people also discussed their strong community ties and the support they drew from it. Given that their communities lacked readily available sexual health resources, the researchers singled out strong community identification as an important factor for mitigating HIV/AIDS risks. In the most recent BC Adolescent Health Survey, Indigenous young people in BC who reported strong connectedness to school and family demonstrated a delayed sexual debut (Tourand et al., 2016). Unfortunately, any protective effect of school connectedness will not benefit Indigenous young people who are not attending school. This is particularly concerning given that ongoing social exclusion, child apprehension, and marginalization continue to interfere with regular attendance and graduating high school among Indigenous young people in Canada (Statistics Canada, 2011a; van der Woerd et al., 2005).

Sociocultural subtleties of sexual encounters and gender norms can additionally impact sexual behaviours. In Larkin et al.'s study, young Indigenous women were vocal about a prevalent mentality that labeled girls who purchase/carry condoms as promiscuous. Devries and Free (2010) interviewed 30 young Indigenous men and women in downtown Vancouver on gendered perspectives on sexual roles. Men were considered

to be the active pursuers of sex and young women were expected to resist their advances, but were also regarded as responsible for allowing sex to happen. Young girls who "gave in" to sex were viewed as trying to secure love or companionship if they were in a relationship, but were deemed "loose" if they were not. The respective active versus passive prescribed roles for men and women were apparent and influenced how they interpreted each other's behaviours.

In focus groups conducted with 35 young Mi'kmaq women and men in Nova Scotia, participants reported experiencing immense stress due to pressures to have sex while feeling the burden of sexual health concerns (McIntyre et al., 2001). The women perceived young men to not share such stresses, but acknowledged that this could be because men internalize their emotions. However, the 14 men who participated in this study listed relationships with girlfriends as the main stressor in their lives, followed by substance use, and financial troubles. These young men agreed that young women face increased pressure to have sex and risk of sexual violence and unplanned pregnancies. At the same time, they perceived young women who had sex to be promiscuous (McIntyre et al., 2001).

Masculine and feminine stereotypes can pressure young men and women to behave in an expected manner. However, Devries and Free (2010) demonstrated that sexual behaviours among Indigenous young people can contradict such hegemonic ideals. Women reported acting as the pursuers of sex while young men shared that they were coerced into having sex and/or to refrain from using protection. It is clear that young Indigenous men's and women's sexual behaviours are both within and outside of western masculine and feminine norms, which points to a need for a more in-depth investigation

of the factors shaping these understandings and the associated behaviours.

2.2.3 The epidemiology of HIV/AIDS, HSV-2 and syphilis among Indigenous people in Canada

A disproportionate burden of HIV/AIDS in Canada is borne by Indigenous people. HIV rates in the general population are low, but are reported to be as high as 20 times the national average (63.6/100,000) among people living on-reserve (CBC, 2015a). In 1998, only 2% of people with AIDS were Indigenous people. By 2006, this figure had increased over ten-fold (Public Health Agency of Canada, 2015). While Indigenous people only comprised slightly less than 4% of the general population in 2011, they constituted almost 9% of all prevalent HIV infections. Indigenous people were also 3.5 times more likely to be newly infected with HIV than non-Indigenous people (Public Health Agency of Canada, 2015).

The proportion of HIV incidence among young people, women, and people who use intravenous drugs is higher within the Indigenous population when compared to the general population. Between 1998 and 2012, persons aged 15-29 years comprised 32% of positive HIV tests among Indigenous people. In the general population, only 22% of positive cases belonged to that age category. In the 14-year span between 1998 and 2012, intravenous drug use was the main source of infection among Indigenous people (59% vs. 18% in the general population), followed by heterosexual transmission (30% vs. 32%), and transmission among men who have sex with men (7% vs. 46%) (Public Health Agency of Canada, 2015).

In 2012, BC reported its lowest provincial HIV infection rate since 2003 (5.2/100,000 people). Unfortunately, Indigenous people were still vastly overrepresented among new cases, with 29 new infections recorded (21.5/100,000 people). Although

Indigenous people represented only 5% of the provincial population, on average, they comprised 15% of new HIV cases between 2003 and 2012 (BCCDC, 2013).

A ten-year analysis of all syphilis cases reported by the British Columbia Sexually Transmitted Disease Surveillance Database revealed that Indigenous people comprised 17% of all (n=1,473) cases in BC from 1995 to 2005 and were at higher risk for reinfection (Hazard Ratio (HR): 2.4 [95% CI: 1.3–4.4]) (Oglivie et al., 2009). The Annual Summary of Reportable Diseases in BC identified that First Nations people accounted for 9.1% (n=277) of the province's newly reported syphilis cases between 2004-2013, despite comprising only 5% of the population. However, this estimate did not include data on Inuit, Métis people, or people living on-reserve. As a result, an accurate estimation of the prevalence of syphilis among Indigenous people in BC is not available.

While the rate of new syphilis cases among Indigenous people in BC declined between 2005 and 2010, it has started to increase once again (BCCDC, 2013). Over the past few years, Canada's western provinces have reported a surge in syphilis outbreaks. A disproportionate portion of these newly infected cases are occurring among Indigenous people (CBC, 2010; CBC, 2015a; Government of Alberta, 2010). Many are in remote areas with inadequate medical care, STI screening, and post-natal care. Despite such reports, the associated ramifications and risk factors are not well-established for Indigenous communities. Moreover, the prevalence of and risk factors for syphilis positivity among Indigenous people who use drugs has never been examined.

Genital herpes is the second most prevalent sexually transmitted viral infection in Canada. While HSV-1 can cause genital ulcerations too, genital herpes is largely attributed to the HSV-2 strain (BCCDC, 2007; WHO, 2016). A screening of 3,247 men

and women between 2009 and 2011 estimated the prevalence of HSV-2 among

Canadians aged 14-59 to be 13.6% (2.9 million people). Among this group, only 6% were

aware of their infection status. Data on Indigenous identity were not available, and

participants living on-reserve were excluded (Statistics Canada, 2011b).

In BC, over 2,500 positive cases of HSV-2 were reported in 2006 by the BCCDC

alone (Li et al., 2008). While the increased risk of HSV-2 among Indigenous people has

been monitored and documented by our Australian colleagues (Brazzale et al., 2010;

Butler et al., 2000; Communicable Disease Control Directorate Department of Health,

2010), there are very few estimates of HSV-2 prevalence among Indigenous people in

Canada. The only available data is from Singh et al. (2005). The researchers examined

HSV-2 positivity among 7,266 patients attending two STI clinics in Alberta from 1994 to

1995, 6% of whom were Indigenous. They reported a 19% overall prevalence, and found

that Indigenous patients were 2.6 [95% CI: 2.0-3.4] times more likely to test positive.

2.2.4 The epidemiology of HIV/AIDS, HSV-2 and syphilis among Indigenous women in Canada

In Canada's general population, HIV/AIDS and syphilis rates are higher among

men, but national surveillance data demonstrate that Indigenous women are almost

equally at risk. In 1995, Indigenous women represented only 12% of all Indigenous

people who were HIV positive; by 2012, this figure had more than quadrupled (Public

Health Agency of Canada, 2015). Between 1998-2012, while men comprised 80% of

HIV cases in the non-Indigenous population, Indigenous women were almost equally

represented as men in the Indigenous population (47% vs. 53%). Indigenous women were

also significantly overrepresented among all women, comprising 42% of all HIV cases.

The primary mode of transmission for Indigenous women was injection drug use (64%

vs. 24% in non-Indigenous women). Heterosexual transmission still accounted for 34.8%

of infections among Indigenous women (compared to only 21.5% of Indigenous men)

(Public Health Agency of Canada, 2015).

The BCCDC (2013) reported Indigenous women to be overrepresented among

women with HIV (37.9% of all cases among women) in British Columbia, with the

highest number occurring in the 25-29 year age category (53.6/100,000 people).

Indigenous women comprised 36.7% of new HIV infections among all Indigenous people

in the province, while non-Indigenous women accounted for only 7.6 % of new infections

in the non-Indigenous population of BC.

An overrepresentation of Indigenous women among syphilis cases has also been

reported. Indigenous men accounted for only 4.3% of all syphilis infections among all

men in BC. Indigenous women comprised, on average, 27% (n=118) of all cases among

women from 2004-2013, despite accounting for only 5% of women in the province.

During the same time period, non-Indigenous women comprised 11% of all syphilis cases

in the non-Indigenous population, while Indigenous women accounted for 43% of all

syphilis cases among the Indigenous population (BCCDC, 2013).

The rate of HSV-2 among Indigenous women in Canada is unknown. Kropp et al.

(2006) investigated rates of neonatal herpetic infections by actively soliciting reports

from all pediatricians in Canada over a three-year period (2000-2003). The authors

demonstrated that Indigenous women represented 10.5% of study cases, despite only

comprising 3.4% of the birthing population. In the general population, women are

reported to be at higher risk for HSV-2 infection than men. Of the 2,500 cases that were

reported by the BCCDC in 2006, women were 2.4 times more likely to be infected

(84/100,000 cases among women vs. 35/100,000 in men) (Li et al., 2008). The national screening of 3,247 Canadians aged 14-59 from 2009-2011 reported infection rates among women to be 1.5 times that of men (Statistics Canada, 2011b).

2.3 Drug use and sexual health risks

2.3.1 The association between substance dependence and STI risk among Indigenous people

      Indigenous scholars emphasize that self-medication is a coping mechanism for people who are suffering from unresolved trauma and psychological distress (Walters & Simoni, 2002). For Indigenous people who use drugs, having experienced lifetime trauma has been found to independently predict inconsistent condom use (Chavoshi et al., 2012). A five-year longitudinal analysis of inconsistent condom use among Cedar Project participants found a significant association between unsafe sex and daily crack smoking among women (AOR: 1.63 [95% CI: 1.02-2.61]), men (AOR: 1.58 [95% CI: 1.05-2.38]), and participants who use injection drugs (AOR: 1.59 [95% CI: 1.04-2.43]) (Chavoshi et al., 2013). Researchers have demonstrated a strong correlation between sexual activity and frequent alcohol use among sexually active Indigenous young people (Devries, Free, & Jategaonker, 2007; First Nations Information Governance Committee, 2012; Kotchick et al., 2002). Anderson's 2002 study found 17% of sexually active participants to cite being "drunk or high" as the reason for not only having sex, but for young women becoming pregnant.

      In a cross-sectional analysis of the BC Adolescent Health Survey of students grade 7 to 12, 26% of young men and 22% of young women stated that they were under the influence of substances during their last sexual encounter (Tsuruda et al., 2013). In

the most recent BC Adolescent Health Survey, one-quarter of Indigenous young people reported having used drugs and/or alcohol during their last sexual encounter. Ten percent reported having had nonconsensual sex while under the influence (Tourand et al., 2016). In the First Nations Regional Health Survey 2008-2010, of the 631 participants who reported not using condoms, 16.5% attributed the cause to drinking and/or having use drugs (First Nations Information Governance Centre, 2012). In the 2003 BC Adolescent Health Survey, young Indigenous men who used drugs were significantly more likely to have had an STI diagnosis (AOR: 4.60 [95% CI: 1.11-19.14]). For the young Indigenous women who participated in the survey, substance use was an independent risk factor for pregnancy (AOR: 3.36 [95% CI: 1.25-9.08]) and an STI diagnosis (AOR: 5.27 [95% CI: 1.50-18.42]) (Devries et al. (2009a).

2.3.2 Ulcerative STIs among people who use drugs in the general population

As previously mentioned, no known studies to date have examined the prevalence of or risk factors for HSV-2 or syphilis infection among Indigenous people who use drugs. To understand vulnerability to these ulcerative STIs due to drug use, we must rely on literature from the general population of people who use drugs. People who use drugs frequently do so during sexual encounters, which reduces the likelihood of condom use (Devries et al., 2008; Marshall et al., 2009; Rawson et al., 2002). They are also more likely to have sex with a partner who uses injection drugs, exchange sex for drugs or money, and have multiple sex partners. Consequently, people who use drugs face increased risk for STI acquisition when compared to people who do not (Booth et al., 2000; Booth et al., 2007; Irwin et al., 1993).

In the United States, HSV-2 infection rates among people who use drugs have

been found to be significantly higher than that of the general population (Des Jarlais et al., 2010; Xu et al., 2006). As HSV-2 is transmitted by sexual activity rather than drug use, it is considered an effective biomarker of sexual risk for people who use drugs (Des Jarlais et al., 2011). Among this already vulnerable group, the highest rates of HSV-2 infection are reported among men who have sex with men and women who engage in survival sex work (Des Jarlais et al., 2011; Plitt et al., 2005).

In a study of 1,418 people who use non-injection drugs in New York City, the prevalence of HSV-2 was 53% among men and 85% among women. In this study, a significant association was found between HSV-2 and HIV (AOR: 3.2 [95% CI: 2.3-4.5]) (Des Jarlais et al., 2010). The authors attributed this association to non-injection crack use and risky sexual behavior. They found that women who were HSV-2 positive were significantly younger than men who were HSV-2 positive. In Des Jarlais et al.'s 2011 study among 337 people who used injection drugs, HSV-2 prevalence was 39%. The authors reported an even higher association between HSV-2 and HIV (AOR: 7.9 [95% CI: 2.9-21.4]). These data yield a population-attributable risk percent (PAR%) of 71% for HSV-2 in the etiology of HIV infection.

Plitt et al. (2005) recruited people 15-30 years of age who used drugs in Maryland. HSV-2 positivity was found to be 59% among women and 22% among men. Predictors for HSV-2 positivity among women included being involved in survival sex work (AOR: 3.2 [95% CI: 1.2-8.6]) and daily heroin use (AOR: 3.6 [95% CI: 1.6-7.7]). Among men, HIV positivity (AOR: 11.1 [95% CI: 1.8-67.5]) and ever having been incarcerated (AOR: 2.7 [95% CI: 1.1-6.6]) were associated with HSV-2 positivity. In the same study, syphilis positivity was 4.3% among women, and 0.3% among men. The low

rates of self-reported STIs were attributed to low healthcare utilization, especially in cases of asymptomatic infections.

Hwang et al. (2000) examined STIs among 407 Texas-based people who used drugs. HSV-2 and syphilis prevalence were 44% and 3.4%, respectively. For both STIs, prevalence was significantly higher among women than men (75% vs. 33% for HSV-2; 6% vs. 3% for syphilis). Women who tested seropositive for syphilis were more likely to be involved in survival sex work (8% vs. 3%). HSV-2 positivity was significantly higher among individuals who used crack cocaine (53% vs. 28%) and who were involved in survival sex work (74% vs. 41%).

In a study of people who used crack in Texas, syphilis and HSV-2 prevalence was found to be 13% and 61%, respectively (Ross et al., 1999). Ross et al. (2002) later compared participants who preferred crack cocaine to other drugs. The authors found an increased likelihood of testing positive for both syphilis (9% vs. 3%, p<0.01) and HSV-2 (61% vs. 36%, p<0.01). Lopez-Zetina et al. (2000) enrolled 513 people in Los Angeles who used injection drugs. In this cohort, syphilis incidence was 26.0 per 1,000 person years, with women being at higher risk (Rate Ratio (RR): 2.70 [95% CI: 1.60, 4.55]). After controlling for age, sex, ethnicity, and survival sex work, recent transition to injection drug use was associated with syphilis infection (RR: 4.6 [95% CI: 1.1-18.8]).

2.4 Ulcerative sexually transmitted infections and HIV seroconversion

2.4.1 The association between HSV-2 and HIV seroconversion

Heightened vulnerability to ulcerative STIs is especially concerning as genital ulcerative diseases are associated with increased risk for HIV seroconversion (Brown et al., 2007; Chen et al., 2000; Celum et al., 2008; Grey et al., 2009; Hayes et al., 1995;

Kaul et al., 2004; Orroth et al., 2006; Serwadda et al., 2003; Sutcliffe et al., 2002). As no Canadian studies and no studies among Indigenous populations have examined the relationship between ulcerative STIs and HIV, we look to international studies among the general population to understand this association.

Kaul et al. (2004) evaluated the STI/HIV pathway among 466 Kenyan women engaged in survival sex work. The authors demonstrated the most pronounced association to be between HSV-2 and HIV (RR: 6.3 [95% CI: 1.5-27.1]). Sutcliffe et al. (2002) conducted a nested case control study within a prospective study of HIV seroconverters among sugar estate workers in Malawi. They reported the odds of HIV serocoversion due to HSV-2 to be 6.34 [95% CI: 1.24-32.45]. The researchers calculated the adjusted PAR% to be 69.3% [95% CI: 48.2%-81.8%]. Renzi et al. (2004) interviewed HIV seronegative men who have sex with men in the USA every six months over an 18-month period. Their case control study matched HIV seroconverters (n=116) to men who remained seronegative (n=342) based on sexual risk factors. HSV-2 seropostivity was associated with 1.8 times [95% CI: 1.1-2.9] the risk for HIV seroconversion in multivariate modeling, even after adjusting for injection drug use.

Two systematic reviews of longitudinal cohort studies examined scenarios wherein HSV-2 infection preceded HIV and then adjusted for sexual behavior. The authors demonstrated the HSV-2 related risk for acquiring HIV to be 3.1 [95% CI: 1.7-5.6] among women, 2.7 [95% CI: 1.9-3.9] among heterosexual men, and 1.8 [95% CI: 1.2-2.4] among men who have sex with men (Freeman et al., 2002; Wald et al., 2006). Chen et al. (2007b) conducted a systematic review of 17,000 HIV cases and 73,000 controls from 1986-2006. The authors used a random effects model, stratified by age,

time, background HIV prevalence, and other variables to evaluate the association between HSV-2 infection and HIV. The researchers reported the odds of HIV seroconversion due to HSV-2 to be 4.62 [95% CI: 2.85-7.47] among women and 6.97 [95% CI: 4.68-10.38] among men.

There are several biological mechanisms that facilitate the increased opportunity for HIV seroconversion due to HSV-2 infectivity. Genital ulceration caused by untreated STIs provides a portal for HIV entry through mucosal disruption (Centers for Disease Control and Prevention, 1998); the presence of untreated STIs in the human body can lead to immunosuppression and increase susceptibility to acquiring new infections; and recurrent infections disrupt epithelial cells in the ulcerated region, recruiting activated CD4 cells that are targeted by HIV (Celum, 2004). Brown et al. (2007) monitored HIV seroconversion among 8,346 women in Uganda and Zimbabwe. In their cohort, 211 participants seroconverted to HIV. The researchers calculated the PAR% and estimated that 42%-65% of new HIV infections could have be avoided if participants had been HSV-2 negative.

2.4.2 The association between syphilis and HIV seroconversion

As with HSV-2, any understanding of the increased risk for HIV seroconversion due to syphilis infection is reliant on data from other countries. Taha et al. (1998) examined the association of various STIs with HIV seroconversion risk among 1,196 women attending a neonatal clinic in Malawi. The researchers reported the odds of HIV seroconversion due to syphilis to be 3.65 [95% CI: 1.22-10.93].

Chesson and Pinkerton (2000) used annual incidence rates of gonorrhea, chlamydia, herpes, and syphilis to estimate the probability that an STI would facilitate

HIV seroconversion. Among the examined STIs, the "expected number of STI attributable HIV infections per STI" was highest for syphilis (0.024 new HIV cases per syphilis case). Chesson (1999) created two models to examine the association: one based on the per partnership probability of HIV transmission in the presence of an STI, the other based on a per sexual act probability, which takes into account both number of partnerships and differences in male and female transmission. From the per partnership model, they estimated that in 1996 alone, 1,082 new HIV cases in the USA were attributed to syphilis.

2.4.3 STI management for HIV prevention

HIV prevention through STI treatment relies heavily on symptomatic episodes that are identified during active infections. Many ulcerative STIs are asymptomatic and the need for treatment is often unrecognized (Korenromp et al., 2000). Mass STI screening for HIV prevention is effective in the early stages of an HIV epidemic, provided that the given population presents with high rates of curable and easily detectable STIs. Beyond that stage, or in populations with untreatable STIs, behavioural changes are necessary (Korenromp et al., 2002).

On an individual level, STI management has been identified to play an important role in reducing HIV transmission (Galvin & Cohen, 2004; Gray et al., 1999; Fleming & Wasserheit, 1999) and infectiousness (Ghys et al., 1997). However, HSV-2 management does not curb HIV seroconversion at the population level when it is solely approached through treatment. Watson-Jones et al. (2008) randomly assigned 821 participants to receive acyclovir to suppress HSV-2 (400 mg twice daily) or a placebo, but no overall reduction in HIV incidence was found (Relative Risk: 1.08 [95% CI: 0.64 to 1.83]).

Celum et al. (2008) conducted a double-blind, randomized, placebo-controlled study of HIV negative, HSV-2 seropositive women from three African countries, and men who have sex with men (MSM) in Peru and the USA. Half of the participants were randomly assigned to either daily acyclovir (n=1,637) or placebo (n=1,640) for 12-18 months, and genital examination and HIV testing were performed quarterly. While the incidence of genital ulcers was reduced by 47% in the acyclovir group, this suppression did not result in any reduction in HIV seroconversion. HIV incidence was 3.9 and 3.3 per 100 person-years in both the treatment and placebo groups respectively (HR: 1.16 [95% CI: 0.83-1.62]).

2.5. Summary of the literature

The purpose of this literature review was to provide a comprehensive overview of the literature that is relevant to this dissertation. The review provided a qualitative summary of the available research on sexual health and wellbeing of at-risk Indigenous young people in Canada. It demonstrated that the legacies of colonization have grossly compromised the sexual health of Indigenous people through complex intersections between historic trauma, social marginalization, race, gender, and sexual vulnerability. Drug and alcohol use as a means of coping with ongoing pain further exacerbates such risks. Additionally, stigma, systemic racism in the healthcare system, and the absence of relevant sexual health services obstruct access to sexual health resources. The overrepresentation of Indigenous people among people who have contracted STIs speaks to multiple social and structural barriers to sexual wellbeing.

The vulnerability of at-risk Indigenous young people to acquiring ulcerative STIs that increase risk for HIV seroconversion is concerning. Ulcerative STIs cause not only

physical ailments, but can result in immense psychological, mental, and emotional distress. Despite the increased risk for contracting ulcerative STIs among people who use drugs, to date, no study in Canada has quantified the prevalence of or risk factors for syphilis or HSV-2 seropositivity among Indigenous people who use drugs.

There is also very little understanding of the historical and lifetime factors that shape sexual behaviours, experiences, understandings or health among Indigenous young people in Canada. The few studies that are available (Anderson, 2002; Devries & Free, 2010; Devries et al., 2009a; Devries et al., 2009b; Devries, 2011; Larkin et al., 2007; McIntyre et al., 2001; Tourand et al., 2016) are largely based on survey data and do not investigate the pathways in which intergenerational trauma or the structure, design, and availability of current sexual health resources are impacting sexual wellbeing. The majority of these studies' participants were in school, missing potentially critical information from some of the most marginalized young people in society (Thomas, 2016).

The direct and indirect impacts of drug use on STI acquisition are well noted. Indigenous people in Canada are overrepresented among people who self-medicate with drugs (First Nations Information Governance Committee, 2012), and are disproportionately experiencing the factors that increase risk for contracting STIs through drug use. These include – but are not limited to – being involved in survival sex work, having unsafe safe, and transitioning to injection drug use (Chavoshi et al., 2012; Chettier et al., 2010; For the Cedar Project Partnership et al., 2008). As self-medication is a coping mechanism to deal with lifetime stress and ongoing pain (Walters & Simoni, 2002), it is critical to understand the association between historical and social factors,

drug use, and sexual wellbeing for at-risk Indigenous young people.

In summary, the paucity of information pertaining to the sexual health risks of Indigenous people who use drugs requires immediate attention. The literature review identified how knowledge gaps continue to limit public health's capacity to meaningfully support the sexual wellbeing of at-risk Indigenous young people who are coping with adversity. To mitigate these risks, it is imperative to locate these vulnerabilities within the context of unresolved trauma and social marginalization, and how they affect young men and women respectively. To meaningfully develop and deliver sexual health resources, it is critical to identify both the protective factors associated with sexual wellbeing and barriers to access and uptake of services. In order to strengthen relevant resources, we require the wisdom of Indigenous young people to inform the health community of the tools they identify as effective for positive sexual health outcomes and how they might be meaningfully implemented into current programming efforts.

Chapter 3: Methodology

This study was nested under the Cedar Project: an ongoing prospective cohort study of Indigenous young people who use drugs in Vancouver, Chase, and Prince George, British Columbia (BC). The quantitative component of this study included primary data collection for HSV-2 and syphilis testing and secondary data from the Cedar Project questionnaires. Participant recruitment, questionnaire data collection, blood sample collection, and data entry were done by Cedar Project staff. The qualitative component involved primary data collection, but Cedar Project staff helped recruit participants and coordinated interview times. The candidate conducted all qualitative interviews, developed the topic guide, and transcribed, coded, and analyzed all data. Cedar Project Partners, mentors, and study members oversaw the analytic approach and interpretation of all findings. The following chapter describes the study design, sampling methodology, data management decisions, research instruments, analytic approaches, and ethical considerations for this project.

3.1. The Cedar Project's ethical considerations

3.1.1 Partnership with Indigenous collaborators

The Cedar Project is funded by the Canadian Institutes for Health Research (CIHR). The Cedar Project enthusiastically embraces the CIHR Guidelines for Health Research Involving Indigenous People and incorporates them into our continued commitments to OCAP (Ownership, Control, Access, and Possession) and the 2010 CIHR Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS 2). We pay particular attention to Chapter 9, which references health research involving Indigenous people. The principles of these guidelines are supported and

advocated for by the Cedar Project Partnership, as they represent self-determination in the research process. The Cedar Project has approval from the University of British Columbia/Providence Healthcare Research Ethics Board (certificate H02-50304). This study has been approved by the University of British Columbia/Providence Healthcare Research Ethics Board as well (certificate H11-01004).

The **Cedar Project Partnership** is an independent body of Indigenous community experts and knowledge holders who govern and provide oversight to the entire research process, from ethics and study design to the formulation of research questions, conceptual frameworks, data interpretation, media relations, and knowledge translation. The Partnership provides governance, protection, leadership, and support for the Cedar Project, and confirms that the self-determining principles of OCAP are followed. Adhering to the OCAP principles ensures that: 1) the jurisdiction of all Cedar Project knowledge/data/information rests with the Partnership; 2) the relevance of Cedar Project research to Indigenous communities is determined by the Partnership; 3) the sharing of information gained from the Cedar Project evidence base is directed by the Partnership and; 4) a stewardship model is used whereby the Cedar Project database is housed on servers that are protected by firewalls within the Providence Healthcare Research Institute (Vancouver, BC). The Partnership regulates the right to access any Cedar Project information and data.

The Partnership meets every three months to review study protocols, manuscripts, ethics, and emergent data, and to address any issues related to knowledge translation. The governing body provides all Cedar Project researchers with mentorship from Indigenous experts and Elders throughout the research process. This mentorship directs research

endeavours through culturally-safe and decolonizing approaches, enriches the interpretation of findings, and ensures that the studies are relevant to Indigenous communities, experts, service providers, and young people who are impacted by the findings.

At present, the Cedar Project Partnership is comprised of Indigenous AIDS service providers, members of the community, including Elders, and a representation of on-reserve elected Chiefs. The following entities govern the Partnership on an ongoing basis: Vancouver Native Health, Red Road HIV/AIDS Network, Canadian Aboriginal AIDS Network, Carrier Sekani Family Services, Positive Living North, Prince George Native Friendship Centre, All Nations Hope (Saskatchewan), Splatsin Secwepemc Nation, Neskonlith Indian Band, and Adams Lake Indian Band. In addition, we are honoured by the continued contributions of wisdom support from Elders Violet Bozoki (Lheidli T'enneh Nation) and Earl Henderson (Métis, Cree Heritage).

The increasing complexity of this Project has required input and leadership from several additional committees, including a Measurement and Analysis Committee, a Clinical Outcomes Committee, and a Trauma and Resiliency Committee. It should be noted that a Cedar Youth representative has been identified in all three cities. The Cedar Project research assistants are working with all collaborators, governance bodies, and youth representatives to support their participation in the Cedar Project Partnership process. These collaborations are fundamental to the Project's success.

Knowledge translation and community engagement is a hallmark of the Cedar Project Partnership. For example, with support from a CIHR Dissemination Grant, the Cedar Project Partnership hosted a program of meetings called *The Cedar Project: Your*

Voice Making a Difference, which took place between January-March 2013. This event

included a learning potlatch with 250 people including study participants, families,

community members, Elders, traditional healers, Indigenous leadership, and health

service providers.

3.1.2 Confidentiality and participant care

The Cedar Project study team creates a culturally-safe environment for all

participants by ensuring all staff are knowledgeable of, and sensitive to the legacies of the

residential school and child welfare systems, and the consequent intergenerational

traumas that affect the health of Indigenous communities. Participants are invited to

spend time at the offices for non-research purposes in order to facilitate a friendly, safe,

and comfortable milieu. The Cedar Project staff and research team strive to take time to

get to know the participants and build trusting relationships with them. Cedar staff always

remind participants that they need only share what they wish to, and that they are never

under any pressure to participate in research or discuss subjects with which they are not

comfortable. Participants' safety, health, and comfort are the first priority for all staff.

Staff follow Cedar Project protocols regarding confidentiality, which mandate that

all data (questionnaires, forms, etc.) are kept within locked offices with security alarms.

Computerized data are made anonymous through the use of numerical IDs and stored at

the data management centre at St. Paul Hospital's Centre for Health Evaluation and

Outcome Sciences on secure servers with password and firewall protection. The Centre

has state of the art computing facilities with ORACLE™ as the main platform and a

number of statistical software packages. It has extensive experience with managing large

databases of sensitive information (i.e. HIV positive persons) without any breaches of

security. Access to data is strictly confined to investigators and staff. The database does not contain any identifying information. To ensure confidentiality we:

1.   Use pseudonyms

2.   Put no identifiers on documents other than study ID

3.   Strictly guard computer access

4.   Have all staff sign confidentiality agreements

All information linking participants' names to their pseudonyms and study IDs is locked in office cabinets that are only accessible to Cedar staff who are responsible for reporting and participant care.

3.1.3 Follow-up care

Cedar Project Research Personnel are involved in extensive street-based outreach to provide participants with follow-up opportunities for blood test results. Participants who desire to receive their results are given an appointment by the research nurse, as well as referral for care if requested. In cases where reportability is mandated, Cedar Project nurses contact the participants to come in for a follow-up appointment.

Cedar Project personnel actively provide various sources of support to all participants who have ever been enrolled and involved in the Cedar Project. Resources include, but are not limited to, access to secure housing, traditional healing, and addiction treatment. The Cedar Project routinely maintains contact with participants through street and personal outreach, and invitations to events, get-togethers, and memorials.

For the purposes of this study, the College of Registered Nurses of British Columbia provided Cedar Project staff with information, guidelines, and training materials pertinent to HSV-2 and syphilis counseling and treatment. All participants

received pre- and post-test counseling for syphilis and HSV-2 with Cedar Project nurses.

Participants who tested positive for HSV-2 and who returned for their test results were

provided with decision support tools to assist with treatment, follow-up, and counseling.

Partner notification was encouraged, but done at the participants' discretion.

Before testing for syphilis, participants were advised that a positive test would

result in notification to the Provincial Health Services Authority (PHSA) and that

antibiotics would be prescribed to treat any cases of untreated syphilis as necessary.

Participants were informed that their partners would need to be notified for testing and

treatment. PHSA sent all positive syphilis reports to the BCCDC STI/HIV Division

where they were entered into the surveillance system. All positive test results were

reviewed by the clinic physician and/or Registered Nurse (RN) for diagnosis, treatment

recommendations, and partner follow-up. The Cedar Project received copies of all

syphilis results.

Only 1 of the 21 positive syphilis cases required treatment (as determined by the

reviewing BCCDC clinic physician). BCCDC contacted Cedar Project nurses to discuss

follow-up actions. Cedar Project nurses relayed the positive lab results to study

participants in person and ensured that participants either received treatment as

prescribed by the BCCDC Clinic Physician or had previously completed treatment.

Treatment could be done through the Cedar Project or referred to the BCCDC STI

outreach team in Vancouver (as all positive cases occurred among participants in

Vancouver). Cedar Project nurses counseled all participants regarding partner

notification. They also notified BCCDC regarding treatment completion.

During data collection, participants were informed that the findings of this study would be made available to them if they were interested. The recommendations presented in Chapter 8 incorporate wisdom gathered at a Cedar Project knowledge translation event that took place in March, 2015. This event was hosted through a *CIHR-funded Meetings, Planning and Dissemination grant*. The findings of this study were presented, and garnered feedback and direction from Indigenous leaders, participants, and young people on how to incorporate the inherent strengths and cultural resilience of Indigenous people to support sexual safety, education, and health.

3.2 The Cedar Project's study design, setting, and questionnaires

3.2.1 Cedar Project setting

The Cedar Project is a tri-city cohort study located in Vancouver, Prince George, and Chase, BC. In 2006, an estimated 82,000 Indigenous people under the age of 34 were living in BC, almost three-quarters of whom lived off-reserve (BC Statistics, 2006).

The Vancouver Cedar Project office opened its doors in 2003 and has recruited 395 participants to date. Vancouver is the province's largest metropolitan centre and is located on the unceded traditional territory of the Musqueam First Nation. In 2006, over 40,000 Indigenous people (2.4% of the city's population) were living in Vancouver (Milligan, 2010b). For over four decades, Vancouver has remained Canada's epicentre of drug use and survival sex work. The highest concentration of people who use drugs can be found in one of the city's oldest neighbourhoods, the Downtown East Side (DTES). Over 18,000 people call the DTES home, 10% of whom are Indigenous (City of Vancouver, 2012). Many DTES residents are struggling with substance dependence, mental illness, infectious diseases, and poverty (Adilman & Kliewer, 2000). Indigenous

people in the DTES are becoming infected with HIV at twice the rate of non-Indigenous people in the DTES (Craib et al., 2003). The Vancouver Injection Drug Users Study (VIDUS) reported that Indigenous people comprised over 25% of their 1,500 person cohort (Heath et al., 1999). Despite provincial initiatives to increase active antiretroviral therapy and harm reduction efforts, Vancouver had the highest incidence of HIV infections in BC in 2013 (3.2 per 100,000), with Indigenous people disproportionately represented among cases of new infections (BCCDC, 2014).

Prince George is the largest city in BC's Northern Health Authority (NHA). The NHA has experienced the province's second highest HIV incidence (2.8 per 100,000), with Indigenous people disproportionately represented among new infection cases (Public Health Agency of Canada, 2015). Prince George is a forestry and mining city, located on the unceded traditional territory of the Lheidli T'enneh First Nation. Its 2006 population was 80,500 people, with 11% identifying as Indigenous (Milligan, 2010a). Prince George is centrally located between two major provincial highways, which has partly contributed to the high rates of violent crimes that the city has experienced due to drug and sex trafficking (Brennan, 2012). Indigenous service organizations and health practitioners who were concerned about the health of their communities, invited the Cedar Project to open an office in downtown Prince George in 2003. Since then, 392 participants have been recruited at this location.

Chase is a rural logging and tourism town located outside the mid-sized city of Kamloops in southwestern BC. While 11% of the town's 2006 population was comprised of Indigenous people (Statistics Canada Census, 2007), the actual figure at any given time is higher, as many Indigenous people travel frequently between the surrounding

First Nation communities in the Kamloops/Chase region. While HIV incidence was below the average provincial rate in 2012 (1.5 vs. 6.5 per 100,000), the incidence of HCV infection was higher (43.6 vs. 42.1 per 100,000) (Interior Health Authority, 2012). Given the disproportionate health risks experienced by Indigenous young people in other parts of the province, the leaders of Secwepemc Nation invited the Cedar Project to open its third office in Chase in 2012. Since then, the Cedar Project has recruited 153 participants in this town.

3.2.2 Cedar Project study design

For baseline interviews (ongoing since 2003), eligibility criteria stipulate that participants be between 14 and 30 years of age and have smoked or injected illicit drugs in the month prior to enrolment. Drug use is confirmed using saliva screens (Oral-screen, Avitar Onsite Diagnostics). For the Cedar Project, Indigenous ethnicity is based upon self-reported identification as a descendent of the First Peoples of Canada, and is inclusive of status and non-status First Nations, Métis, and Inuit (for detailed definitions refer to RCAP, 1996, pp. 1-22, Vol.1). Cedar Project staff non-randomly recruit participants through community outreach, referral by healthcare providers, and word of mouth.

All participants meet with one Indigenous study coordinator who explains procedures, confirms study eligibility, and seeks informed consent. All participants are informed of research confidentiality limitations, including the reporting of communicable diseases (HIV, Hepatitis B, C, and tuberculosis) and cases of self-harm and sexual abuse among minors, as required by child welfare legislation. Participants complete interviewer- and nurse-administered questionnaires. Venous blood samples are drawn to

test for HIV and HCV antibodies by Cedar nurses, and interviewers are blinded to clinical test results. All participants have private interviews, including pre- and post-test counseling with trained nurses. Each participant receives a $25 honuorarium for their time. Follow-up interviews are conducted every six months.

3.2.3 Cedar Project questionnaires

The Cedar Project questionnaires are administered by trained Indigenous and non-Indigenous interviewers and nurses in all three study locations. One Baseline questionnaire is used at enrollment and follow-up questionnaires are administered every six months. This study used cross-sectional data obtained from the baseline questionnaire *and* follow-up that participants provided blood samples in for HSV-2 and syphilis testing (either Follow-up 16 or 17). The questionnaires elicit data on sociodemographic characteristics, injection and non-injection drug use patterns, sexual practices, service utilization, and experiencing violence. A separate nursing questionnaire assesses participants' health status by asking clinical questions pertaining to symptoms of infectious diseases, prescribed medications, suicide ideation/attempts, and other general health information.

The Cedar Project baseline questionnaire (administered once at enrolment) obtains time-invariant information such as sex (men vs. women), study location (Chase, Prince George, or Vancouver), having biological parents and/or family members who attended residential schools (yes vs. no/unsure), having been taken away from biological parents and placed in foster care (yes vs. no), sexual identity (gay/lesbian/bi-sexual/transgender/queer (GLBTQ) vs. straight) and education level (less than high school vs. high school graduate). Participants were also asked whether the presence of

Indigenous culture and tradition during their developmental years played an important role in who they are today (yes vs. no).

The follow-up questionnaires include time-varying factors that may have changed in the 6 months between follow-up interviews. Many of these variables are included in the baseline questionnaires but are asked in the context of whether *they have ever occurred* (vs. whether *they have occurred in the past 6 months* in follow-up questionnaires). "Living on the street" is defined as having lived on the streets for at least three nights at any point (yes vs. no). "Being incarcerated" is defined as having been placed in prison or jail overnight or longer (yes vs. no).

Drug use questions seek information on injection drug use, type of drug(s) used, bingeing, and overdose experiences. "Heavy alcohol drinking" is defined as drinking four or more times per week. "Binge drug use" is defined as periods where drugs are used more frequently than usual. Injection drug use variables are restricted to participants who have reported ever using injection drugs in their lifetimes (yes vs. no). "Opiate use" includes the use of any of the following drugs: morphine, heroin, methadone, Talwin® (Pentazocine with Naloxone) and/or Dilaudid® (hydromorphone hydrochloride). "Speedballs" are a combination of cocaine and heroin.

The questionnaires include a number of variables that are used to assess sexual vulnerability. "Sexual abuse" is defined as any sexual activity that participants are forced or coerced into (molestation, rape, and sexual assault). Interviewers give this definition to participants prior to asking: "Have you been forced to have sex against your will and/or been molested"? Participants are asked about condom use consistency (always vs. sometimes/never) with regular, casual and/or client partners, and whether they have had

an STI (if yes, by type). "Regular partners" are partners with whom a sexual relationship has lasted over three months. "Casual partners" are partners with whom sexual relationships have lasted less than three months. "Clients" are defined as partners with whom sex is traded for survival (e.g. drugs, food, money, shelter, etc.). Other measures of sexual vulnerability include having sex partners who inject drugs and/or are known to be HIV positive.

Variables that may offer protective effects are investigated, and include having accessed alcohol or drug treatment (yes vs. no), having accessed counseling (yes vs. no), and having tried to quit using drugs (yes vs. no). The questionnaires also explore the effects of having participated in any traditional ceremonies (never/rarely vs. often/always). This includes having attended or taken part in ceremonies such as: potlatch, feast, fast, burning ceremony, washing ceremony, naming ceremony, big/smoke house, rites of passage, smudge, and dances.

All questionnaire variables include "unsure" and "refused" as valid response options.

3.3 Dissertation methods

The Cedar Project's focus to date has largely centered on injection related health risks. However, it is now aiming to better understand other health determinants for Indigenous young people living in BC, including the factors that impact sexual wellbeing. This imperative led to the development of the present dissertation, where the prevalence of and risk factors for syphilis and HSV-2 seropositivity as biomarkers for sexual vulnerability were investigated. To expand the examination of sexual health, participants were interviewed about their perceptions of and experiences with sexual wellbeing,

education, behaviours, relationships, and sexual health resources. The following section will summarize the quantitative and qualitative methodologies utilized for this dissertation.

3.3.1 Rationale for selecting syphilis and HSV-2 as biomarkers for sexual vulnerability

While all STIs can serve as biomarkers for sexual vulnerability, we were limited to choosing those most relevant to, and feasible for the purposes of this study. Testing for STIs such as chlamydia and gonorrhea not only requires an active infection, but involves a sample collection that may be invasive. Syphilis and HSV-2 sample collection involves blood withdrawal, a sampling method that Cedar Project participants have routinely undergone for HIV and HCV testing. Both infections are detectable lifelong and positive serological tests provide evidence of a history of disease.

Among all STIs, syphilis and HSV-2 are deemed to be the most highly associated with increased risk for HIV seroconversion (UNAIDS, 2004). Testing for these two ulcerative STIs and offering participants relevant preventative, treatment, and counseling options may benefit them. The inferences made from the test results will not only quantify the scope of vulnerability to these two STIs, but will allow service providers to identify associated needs and advocate for appropriate resources. After careful consideration of the study's goals, it was concluded that syphilis and HSV-2 are the most appropriate STIs to assign as biomarkers for sexual vulnerability among Indigenous young people who use drugs.

3.3.2 Quantitative data collection

During routine interviews (either Follow-ups 16 and 17) from December 2012 through to October 2013, Cedar staff invited Cedar Project participants to partake in an "STI study". Participants were informed that they would be asked to provide additional blood samples to test for HSV-2 and syphilis. The goals and objectives of the study were communicated by Cedar Project staff, as were the reportability clauses for syphilis positivity and mandatory treatment for untreated syphilis infections. Participants were informed that they would receive a $10 honorarium in addition to the $25 honorarium provided for participating in other elements of the study, and were given an opportunity to ask questions. All participants who were invited to participate agreed to do so.

Informed consent was sought, and participants were given the choice to be tested during routine sample collection for HIV and HCV testing, or to come in for testing at a later time if they wished. The same pre-test counseling, collection, storage, and shipping protocols followed for HIV and HCV testing were followed for HSV-2 and syphilis testing. All test tubes were marked with the study number of each participant, and samples were refrigerated and stored in locked offices before being shipped to the BCCDC High Volume Serology Program in the Central Processing & Receiving Laboratory. The samples were destroyed immediately after clinical testing was completed.

HSV-2 testing was conducted via the Central Processing & Receiving (CPR) Analytical (High Volume Virology) Program for Herpes simplex virus-2 (HSV-2) type-specific serology. Samples were first batch tested for HSV via the Siemens Enzygnost Herpes Simplex assay. Positive samples were type tested using the Focus Diagnostics Herpes Select 2 assay. Syphilis testing was conducted using the *Treponema pallidum*

particle agglutination (TPPA) test. The TPPA has 85-100% sensitivity, and 98-100% specificity to detect primary syphilis, and 98-100% sensitivity for secondary, latent, or tertiary syphilis (Creegan et al., 2007). Indeterminate TPPA results were further tested for recombinant antibodies using the LIA assay. Positive TPPA results were tested with rapid plasma regain (RPR) to determine a past or active infection.

3.3.3 Quantitative data analysis

Prevalence rates for Syphilis and HSV-2 and corresponding 95% confidence intervals were calculated for all study participants. Data from the Cedar Project Demographic and Nursing follow-up questionnaires were linked to participants' blood test results (from samples provided in either Follow-up 16 or 17) to investigate variables associated with HSV-2 and syphilis positivity in separate analyses. Variables included in the analysis were chosen based on not only their statistical significance, but their theoretical relevance and empirical importance to the study's hypotheses.

HSV-2 analysis

Contingency tables were used to examine associations between HSV-2 seropositivity and several study variables, including demographic characteristics, drug use patterns, and sexual vulnerabilities. Categorical data were explored using Pearson's chi-squared tests. Fisher's exact test was used when 25% or more of the expected cell frequencies in a contingency table were less than 5. Means and standard deviations were calculated for continuous variables (e.g. age at enrolment). Student's t-test was used for comparing the means of different groups. Medians and ranges were calculated for non-normally distributed variables. The Wilcoxon rank sum test was used for comparing the medians of different groups. Because of the known gender differences in sexual risk-

taking behavior, parenteral drug use, and lifetime vulnerabilities (Hunt, 2013; Miller, 2002; Spittal et al., 2007), the analysis was stratified by gender to control for any modifying effect this variable may have.

Multivariable logistic regression analysis was used to quantify the unique contribution of each independent covariate after controlling for other covariates of interest from the unadjusted analyses. As many trauma variables are experienced together, multicollinearity among variables considered for multivariate analysis was examined and dealt with accordingly. Similarly, missing values were examined using appropriate statistical techniques (for details, please see section 4.2). The adjusted regression model considered all variables that were statistically associated with HSV-2 seropositivity at $p<0.10$ in bivariate analysis. Hosmer and Lemeshow (1989) recommend this logistic model building strategy in order to allow researchers to identify variables that may be important but fall outside the predetermined significance range of $p<0.05$. In addition, any variables that were not found significant but still had empirical or theoretical importance were considered for inclusion in the final models. Unadjusted and adjusted odds ratios with 95% confidence intervals were calculated to examine the magnitude and significance of each association before and after controlling for other covariates. All analyses were done separately for men and women.

Syphilis analysis

Bivariate analyses were conducted to examine differences in demographic characteristics, drug use patterns, and sexual vulnerabilities among participants who tested positive for a history of syphilis infection and participants who did not. Women living in Vancouver comprised 95% of all positive cases of syphilis (20 of 21 cases). In

order to draw meaningful comparisons with participants who tested negative, the analysis

of syphilis was restricted by gender (women only) and location (Vancouver only) to

control for any confounding effects that these variables may have. The bivariate analyses

conducted for HSV-2 analysis were also used for syphilis. Given the proportion of

syphilis cases, the sample size was not large enough to accommodate stable multivariate

models (Peduzzi et al., 1996). It was therefore deemed not appropriate to perform

multivariate modeling in order to determine the variables that were independently

associated with a history of syphilis infection.

All statistical analyses were performed on SPSS software, version 22.

3.3.4 Qualitative data collection
Benefits of a multidisciplinary approach

The factors that influence sexual experiences, understanding, and safety for

Indigenous young people who use drugs are multifaceted and complex. Qualitative

methods "enable health sciences researchers to delve into questions of meaning, examine

institutional and social practices and processes, identify barriers and facilitators to change,

and discover the reasons for the success or failure of interventions" (Stark & Trinidad,

2007, p. 1). The exploratory and flexible nature of in-depth interviews allows the

researcher to not only examine the topic of interest, but to explore and incorporate any

new ones that may arise (Schensul et al., 1999). These methodologies have the ability to

provide a broader understanding of the interconnected and complex pathways that impact

sexual health and can greatly inform quantitative findings.

Using in-depth interviews, the voices of Indigenous young people who use drugs

were heard to better understand the multifaceted lifetime experiences that impact their

sexual experiences, education, and health. Additionally, the sources of strength and protective factors that support sexual wellbeing were identified. Participants were also asked to offer recommendations on how to enhance sexual health resources by identifying barriers to access and uptake of these resources and strategies to overcome them.

Participants were eligible for an in-depth interview if they were enrolled as an active participant of the Cedar Project and had partaken in the quantitative component of this study. This purposive sampling methodology accommodated the exploratory nature of the qualitative inquiry and the goal of confirming patterns in the experience of sexual vulnerability among Indigenous young people who use drugs (Schensul, Schensul, & LeCompte, 1999). This approach allowed us to triangulate findings of the broader dissertation and add richness and rigour to the analyses. Methodology triangulation permits researchers to use more than one approach in a research inquiry to produce a deeper understanding of the complementary facets of an investigated phenomenon (Patton, 1999). The two methods were meant to inform one another: while the epidemiological study aimed to investigate *determinants* of sexual health by quantifying the prevalence of and risk factors for ulcerative STIs, the qualitative methods allowed the researcher to seek an *understanding* of how these various factors (and other factors) impact sexual health. Such triangulation of methods strengthens both the reliability and validity of the analytic evaluation (Golafshani, 2003; Patton, 1999). Using qualitative observations allowed the researcher to validate the epidemiological findings that emerged in the investigation of HSV-2 and syphilis positivity and to facilitate an opportunity to generate new hypotheses that could be tested quantitatively if need be.

Participant recruitment and interviews

Cedar Project staff at the Vancouver office informed potential participants that a female doctoral student was interested in conducting an in-depth, open-ended interview to ask questions about their understandings and experiences around sexual education, encounters, and health, and to obtain recommendations on how to enhance resources that would support their sexual wellbeing. Cedar Project staff have excellent rapport with participants, and extended these invitations to those whom they felt would be willing to discuss matters of sexuality with a female student.

Participants were informed that they would receive an additional $20 honorarium for starting the interview process, even if they chose to terminate the interview. A sign-up sheet with preferred interview appointment times was made available. Participants were given appointment cards with their interview time as a reminder. To increase participants' comfort, they were given the option of having another Cedar Project staff member sit in on the interview with them. All participants declined this option. The interviews were conducted at the Vancouver Cedar Project office during both open and closed hours.

N.C. spent non-research related time at the Vancouver offices between interviews where she was introduced to participants by Cedar staff. During these sessions, the researcher aimed to develop rapport with participants and have her presence as a Cedar Project team member known. A total of 28 participants signed up over the course of six months (May-November, 2013). In-depth responses were obtained from 28 interviewees: 13 were young men, 15 were young women; 17 were based in Vancouver, and 11 were based in Prince George. The very first interview was facilitated by Nancy Laliberte, a

qualitative researcher of Métis ancestry with a rich experience of interviewing Cedar Project participants. Ms. Laliberte approved N.C.'s interviewing techniques and provided feedback, training, and guidance on how to approach and conduct future interviews.

Written consent was obtained from participants prior to commencing the interview. Participants were given time to review the detailed consent form and N.C. reemphasized the limitations regarding the disclosure of harm to a child before the form was signed. Throughout the interviews, any observed differences in N.C.'s socioeconomic status, gender, culture, or ethnic background may have led participants to withhold sensitive or personal information (Patton, 1999). The interviewer aimed to overcome any such barriers by dressing casually and consistently maintaining an atmosphere of comfort throughout the course of the discussions. N.C. strove to facilitate casual, safe, open, friendly conversations by mirroring traditional storytelling practices and emphasizing the value of the participants' contributions to the study's goals.

A loosely structured topic guide directed the interviews. The topic guide was informed by the available literature and research framework of this study. The guide was developed by N.C. and Cedar Project staff (interviewers and nurses), and finalized with Dr. Shannon Waters (Stz'uminus First Nation) and Janine Stevenson (RN). Dr. Waters is a Cedar Project Partner, the Medical Director of Vancouver Island Health, Aboriginal Physician Advisor to the Provincial Health Officer, and a former Senior Medical Officer of the First Nations Health Authority. Dr. Waters is also a Cedar Project knowledge user, and her practice focuses on sexual and maternal health for Indigenous young people. Janine Stevenson is a Registered Nurse with the First Nations Health Authority and BCCDC STI division. Ms. Stevenson has extensive experience working with Indigenous

young people as a Street Outreach Nurse in the DTES, and is knowledgeable of Indigenous community health and wellness, with particular focus on sexual health and harm reduction.

The topic guide included the following areas of exploration: a) unraveling the influences of residential school histories and intergenerational trauma on sexual experiences, education, and safety; b) tracing the influence of family, school, peers, sexual partners, and drug use on sexual development, education, relationships, and experiences; c) exploring risk taking or risk minimizing behaviours; d) understanding experiences with STIs; e) identifying social and structural barriers to sexual safety and health and to accessing preventative/treatment services; and f) identifying key resources that support healthy sexual development and wellbeing for Indigenous young people who face adversity, and how current ones can be improved. Categories of exploration were kept as broad as possible to allow relational understandings to emerge about both risk and protective factors participants associated with sexual vulnerability.

The interviewer memorized the topic guide well in advance to allow for a natural conversation to occur. The participants were asked to simply tell their story. The interviews were loosely structured to allow responses to flow inductively through the participants' narratives, and sensitive probing on difficult topics helped detailed discussions to proceed. This approach is appropriate as loosely structured opened-ended interviews allow flexibility to discuss any new topics that may arise (Schensul et al., 2009). Indigenous young people often use storytelling to illustrate the sequence of life events that have shaped their past and present (Brant Castellano, 2000; Kovach, 2010; Tousignant & Sioui, 2009) and this approach permits them to express their narratives as a

logical unraveling of their accumulated lifetime experiences.

All interviews were recorded using a digital recording device and lasted between 30 minutes and 2.5 hours. The researcher took extensive field notes after each interview to capture any observations that may have been missed on the audio recording and to document any insights, thoughts, questions, and comments that may have arisen during the course of the interview. Frequent debriefing sessions with Cedar Project mentors allowed the researcher to evaluate these considerations with integrity.

Positionality and reflexivity

It is important to discuss the role of positionality and how it may have impacted the researcher's qualitative approach, interview methods, and decision-making. The researcher brought her *ways of knowing* both as a student who has been trained in western research methods and as an immigrant and former war-displaced refugee who has lived in five different countries and fifteen different homes. Her personal experiences with displacement, discrimination, political injustice, bullying, racism, illness, and marginalization peaked her interest in critically engaging in research that assesses the intersections of class, ethnicity, gender, cultural differences, and power imbalances in health inequities (LeCompte & Schensul, 1999).

As required by LeCompte et al. (1999), a central priority for the researcher was to rigorously self-reflect on her personal biases, and regularly examine if and how they could be influencing her research methods. This self-awareness is a necessary component of qualitative research, and boosts the *credibility* of the researcher (Koch, 1994). The researcher aimed to be not only reflexive, but exercise cultural humility through her research process. Cultural humility is defined as "a process of self-reflection and self-

critique to understand personal biases and to develop and maintain mutually respectful partnerships based on mutual trust" (First Nations Health Authority, 2016b). To assess reflexivity and strengthen her ability to practice cultural humility, a log of observations was kept in a field journal that included extensive notes on her thoughts and reactions during the interviews and analytic process (Koch, 1994). Frequent conversations with Cedar Project Partners and mentors allowed the researcher to assess her perspective and ensure that she was meaningfully forming relationships with the ideas that were being studied. In doing so, the researcher aimed to hold herself accountable to the Cedar Project Partners and the participants who entrusted her with their stories (Wilson, 2008).

3.3.5 Qualitative data analysis

The data was analyzed using N-Vivo 10, a computer software package designed for organizing and coding qualitative data. An interpretive thematic approach informed the analysis of the data (Starks & Trinidad, 2007). This approach supported a detailed interpretation of responses in relation to each research question and subject of interest (Braun & Clark, 2006), and allowed the researcher to engages as a witness of the accounts of lifetime experiences that protected against and increased risk for sexual vulnerability. All data was transcribed verbatim and reread carefully by the researcher so that she could become familiar with the body of information in order to identify patterns, evaluate contradictions, and explore assumptions.

Codes were created by grouping specific statements into meaningful categories. When the data was collapsed, the researcher paid special attention to the *what*, *how* and *why* components of the feelings, actions, and experiences described in participants' statements (Stark & Trinidad, 2007). Using the 'constant comparison method', the

produced data was analyzed inductively. This approach gave each described incident an opportunity to be reflected as a concept (LeCompte & Schensul, 1999), and allowed central themes to be drawn across the body of narratives (Starks & Trinidad, 2007). Codes were combined into overarching themes that represented the data and fit within the framework informing the study. All decisions made regarding the identification and categorization of coding and themes were carefully recorded to allow for an inquiry audit to increase the *dependability* of the analytic process (Golafshani, 2003; Koch, 1994). Reflective quotes were drawn from the transcripts to illustrate the conceptual patterns and derived themes. Pseudonyms were used to protect the identity of the participants. The researcher constantly evaluated themes to ensure the stories were analyzed coherently and distinctively, and illustrated by excerpts that fit the analytic claims (Braun & Clark, 2006). Context for each illustrative quote was provided to allow for the judgement of *transferability* to be made by the reader (Koch, 1994).

The researcher continually presented her analytic approach and findings to committee members and Cedar Project mentors in order to address assumptions, generate hypotheses and gather feedback. All analytic claims were compared to existing Cedar Project findings in order to map out congruence or contradictions with previously collected/analyzed data. These methods enriched the rigour, quality, and trustworthiness of the analysis (Golafshani, 2003; Koch, 2010; Stark & Trinidad, 2007). The coding scheme, thematic analysis, and interpretations were presented to Cedar Project Partners in March, 2015 for recommendations and approval.

Chapter 4: The prevalence and correlates of Herpes Simplex Virus 2 in a cohort of Indigenous young people who use drugs in British Columbia, Canada

4.1 Introduction

The determinants of health include social, cultural, economic, and environmental factors that impact the overall wellbeing of an individual or community (World Health Organization). Health disparities result when these determinants are compromised. In Canada, Indigenous communities have been subjected to historical, structural, and social barriers to wellbeing for over 500 years. European colonizers who sought to control Indigenous peoples' land and resources systemically attacked their self-determination through forced removal from traditional lands, cultural genocide, and apprehension of their children. The devastating consequences of colonization continue to impede wellbeing through ongoing pain, and social and racial marginalization (Red Road HIV/AIDS Network, 2006; First Nations Health Authority, 2013; Wesley-Esquimaux & Smolewski, 2004).

In particular, the legacies of the residential school and child welfare systems have severely impacted the sexual wellbeing of Indigenous communities (Farmer et al., 1996; Vernon, 2001). In the residential schools, Indigenous children were subjected to widespread sexual abuse, and the Indigenous wellness frameworks that historically upheld sexual wellbeing were systemically dismantled (TRC, 2015). Consequently, Indigenous communities are experiencing disproportionate rates of sexual violence, HIV/AIDS, involvement in survival sex work, and STIs (BCCDC, 2013; For the Cedar Project Partnership et al., 2008; Native Women's Association of Canada, 2010; Public Health Agency of Canada, 2015; Sikka, 2009; Steenbeck et al., 2006). Indigenous leaders and scholars stress that any examination of the present-day sexual health challenges that

Indigenous people face must move away from individual risk behaviours and focus on the complex health determinants that stem from colonization and intergenerational trauma (Christian & Spittal, 2008; Duran & Walters, 2004; Vernon, 2001; Walters et al., 2011).

It is difficult to establish the precise magnitude of STI morbidity faced by Indigenous people, as ethnicity is often not reported in surveillance data. Among STIs, international research demonstrates that the biological pathways of ulcerative STIs, such as Herpes Simplex Virus Type 2 (HSV-2), increase the likelihood of acquiring HIV infection by 2-3 fold (Freeman et al., 2006, Wald et al., 2002). Often, this STI is asymptomatic, and many individuals are not aware of their serostatus (BCCDC, 2007). Genital herpes is the second most prevalent STI and the most common cause of genital ulceration in Canada (BCCDC, 2009). While HSV-1 can cause genital ulcerations, genital herpes is predominantly attributed to the HSV-2 strain (BCCDC, 2007; WHO, 2016). The overrepresentation of Indigenous people in terms of both the prevalence and incidence of HSV has been monitored and documented internationally (Brazzale, et al., 2010; Butler et al., 2000; Communicable Disease Control Directorate Department of Health, 2010). However, there are no estimates of HSV-2 prevalence for Indigenous people in Canada.

The use of illicit drugs to numb the immense pains of self-loss endured by Indigenous people who face adversities exacerbates the risk of experiencing negative sexual health outcomes (Gesink et al., 2016; Kendler et al., 2000). Still, very little research has investigated the interaction between historical trauma, self-medication, and sexual risk among Indigenous people in Canada. The dearth of information pertaining to

the health of Indigenous people who use drugs led to the development of the Cedar

Project: an Indigenous governed cohort study among Indigenous young people who use

illicit drugs in British Columbia (BC). Examinations of HIV and Hepatitis C (HCV)

infection among Cedar Project participants have provided in-depth understandings of the

historical and lifetime experiences that increase vulnerability to these infections (Craib et

al., 2009; Mehrabadi et al., 2008b; Spittal et al., 2007; Spittal et al., 2011). To date, the

focus of the Cedar Project has largely centered on injection related health risks. Now, the

Project aims to better understand the sexual acquisition of infectious diseases. HSV-2 is

an effective biomarker that merits such attention, as it is highly prevalent, is only

transmitted through sex, and is detectable through blood sampling at any point

subsequent to infection. To address the knowledge gap pertaining to the prevalence and

correlates of HSV-2 seropositivity among Indigenous young people who use drugs, this

study extended routine HIV and HCV testing among Cedar Project participants to include

HSV-2. This ulcerative STI will serve as a biomarker of sexual vulnerability for

Indigenous young people who use drugs. Therein, the study will help meaningfully

situate sexual health risks within the context of historical trauma among Indigenous

young men and women who continue to demonstrate strength and resilience in the face of

adversity.

4.2 Methods

4.2.1 The Cedar Project study design

The Cedar Project is an ongoing prospective cohort study among young

Indigenous men and women who use drugs in Vancouver, Prince George, and Chase, BC.

The study includes data from the 250 participants who completed the follow-up

questionnaires between December 2012 and October 2013. The Cedar Project's

enrollment eligibility criteria stipulate that participants be of self-reported Indigenous

ancestry, be between the ages of 14 and 30 at the time of study enrolment, and have

smoked or injected illicit drugs one month prior to enrolment. Please refer to Chapter 3.2

for complete details on the Cedar Project's study methods, recruitment, data variables,

and questionnaires.

4.2.2 Data collection

During the Cedar Project's 16th and 17th round of follow-up interviews, research

staff invited participants to partake in an "STI study" that aimed to quantify the

prevalence and correlates of HSV-2. Participants were informed that they could provide

an additional vial of blood to test for HSV-2 during routine blood sample collection for

HIV and HCV testing by Cedar Project nurses. They were told that a $10 honorarium

would be offered for participating in the study. Participants were given the opportunity to

ask questions and to review the consent form.

The College of Registered Nurses of British Columbia provided Cedar Project

staff with information, guidelines, and training materials pertinent to HSV-2 treatment

and counseling. To uphold our commitment to participant care and safety, all participants

received pre-test counseling by Cedar Project nurses. Cedar Project Research Personnel

are involved in extensive street-based outreach to provide participants with follow-up

opportunities for blood test results. Participants who desired to receive their results were

given an appointment by the research nurse, as well as support tools to assist in decision-

making and referrals for treatment and follow-up care. Partner notification was

encouraged, but done at participants' discretion. Please refer to Chapter 3.1 for specific

details on participant care and follow-up, and the confidentiality and ethical protocols followed by the Cedar Project.

The protocols to collect, store, and ship blood samples that were followed for routine HIV and HCV testing were also followed for HSV-2 testing. Test tubes were marked with each participant's study number, and were refrigerated and stored in locked offices prior to being shipped to the Central Processing & Receiving Laboratory of the British Columbia Centre for Disease Control (BCCDC) High Volume Serology Program. HSV-2 testing was conducted via the Central Processing & Receiving (CPR) Analytical (High Volume Virology) Program for HSV-2 type specific serology. Samples were first batch tested for HSV via the Siemens Enzygnost Herpes Simplex assay. Positive samples were type tested using the Focus Diagnostics Herpes Select 2 assay. All samples were destroyed immediately after testing was completed.

4.2.3 Statistical analysis

Prevalence rates for HSV-2 and corresponding 95% confidence intervals were calculated for the entire cohort, then separately for men and women. Data from the Cedar Project Demographic and Nursing Follow-up questionnaires were collected for each participant who provided blood samples (in either Follow-up 16 or 17). Questionnaire data from the Follow-up in which blood was provided in were linked to participants' blood test results to investigate the correlates of HSV-2 positivity. Chapter 3.2.3 includes complete details on the variables that were considered for this study.

Contingency tables were used to examine associations between HSV-2 seropositivity and several study variables, including demographic characteristics, drug use patterns, and sexual vulnerabilities. Categorical data were explored using Pearson's

chi-squared tests. Fisher's exact test was used when 25% or more of the expected cell frequencies in a contingency table were less than 5. Means and standard deviations were calculated for continuous variables (e.g. age at enrolment). Student's t-test was used for comparing the means of different groups. Medians and ranges were calculated for non-normally distributed variables. The Wilcoxon rank sum test was used for comparing the medians of different groups. Because of the known gender differences in sexual risk-taking behavior, parenteral drug use, and lifetime vulnerabilities (Hunt, 2013; Miller, 2002; Spittal et al., 2007), the analysis was stratified by gender to control for any modifying effect this variable may have.

Multivariate logistic regression analysis was used to quantify the unique contribution of each independent covariate after controlling for other covariates. The multivariate model considered all variables that were statistically associated with HSV-2 seropositivity at $p<0.10$ in the bivariate analysis. In addition, any variables that were not found significant at $p<0.10$ but still had empirical or theoretical importance to the study's hypotheses were considered for inclusion in the final models. Hosmer and Lemeshow (1989) recommend this logistic model-building strategy because it allows researchers to identify variables that fall outside a predetermined significance range, but may still be important.

Handling missing data

Variables considered for inclusion in the adjusted models were examined for missing data. Among women, all covariates of interest had 100% response rate, with the exception of *having a mother who attended residential school*. This question had 74.1% respondents answer either "yes" or "no"; the remaining 25.9% answered "unsure". In a

separate analysis, respondents who answered "unsure" to this question were treated as missing cases to test whether they significantly differed from those who answered "yes" or "no". Little's MCAR (missing cases at random) test was used to assess the randomness of missing values. The p-value for Little's MCAR test was not significant (p=0.28). The respondents who answered "unsure" may therefore be assumed to not significantly differ from those who responded "yes" or "no". For this model, listwise deletion of observations with missing values was appropriate (Little, 1998). Separate adjusted models were fit for participants that answered "yes/no" and "unsure", and compared to assess whether excluding "unsures" impacted the multivariate results. No changes in the direction or significance of covariates was found between stratified analyses. As such, the model that is presented (Table 4.4) includes only women who answered either "yes" or "no" to *having a mother who attended residential school* (n=106).

For men, *having culture play an important role in development* and *ever having been sexually abused* had 96.3% and 95.3% response rates, respectively (combined response rate of 91.6% for both variables). The remaining variables had 100% response rates. A missing rate of less than 10% is not likely to bias results (Bennett, 2001), therefore the model that is presented (Table 4.6) only includes participants that answered either "yes" or "no" to both these questions (n=98).

Handling multicollinearity

As many trauma variables are interrelated and experienced simultaneously, multicollinearity testing was done between covariates considered for multivariate analysis. For women, **two** adjusted models were built (Tables 4.4 and 4.5). This was done to avoid placing any correlated variables within the same model. This approach helped

avoid diminishing the effect of potentially significant associations by not including mediators in the model.

For women, two variables were omitted from the final models altogether due to their correlation with multiple covariates. *Ever being on the street for more than 3 nights* was correlated with *survival sex work*, *having ever used injection drugs*, and *living in Vancouver*. *Ever being on the street for more than 3 nights* was therefore removed from multivariate modelling. *Smoking crack in the past 6 months* was correlated with *survival sex work, having been taken away from biological parents,* and *having ever used injection drugs*. Because *smoking crack in the past 6 months* was only marginally significant in the bivariate analysis, it was excluded from the multivariate analysis. The decision to omit these two variables was based on their theoretical importance relative to the variables they were correlated to. Overall, these methods intended to best explain the unique contributions of the constellation of highly correlated risk factors that are associated with HSV-2 infection.

Unadjusted and adjusted odds ratios of each covariate were compared in all final models, and no concerning changes in their direction or magnitude were found. All analyses were conducted on SPSS statistical software package, version 22.

4.3 Findings

Of the 250 participants tested for HSV-2 seropositivity in the Cedar Project cohort, 57% were women, and 42% lived in Vancouver. After clinical testing, 61% [95% CI: 55%-67%] of participants were found to be seropositive, 74% of whom were women. The odds of testing positive among women was 6.52 times [95% CI: 3.74-11.53] that of men.

4.3.1 HSV-2 seropositivity among women

Among all women (n=143), 79% [95% CI: 72%-86%] tested positive for HSV-2. Only 9% of the women who tested seropositive self-reported HSV-2 positivity and 8% reported ever having an outbreak (Table 4.2).

In bivariate analyses, historical and lifetime variables that were significantly associated with HSV-2 positivity included having been taken from biological parents (73% vs. 47%; p<0.01), having a mother who attended residential school (59% vs. 35%; p=0.04), ever having slept on the street for 3 or more nights (64% vs. 40%; p=0.02) (Table 4.1), and ever having been involved in survival sex work (68% vs. 40%; p<0.01) (Table 4.2). With respect to drug use, women who tested positive for HSV-2 were significantly more likely to have ever injected drugs (59% vs. 30%; p<0.01), and reported heavy alcohol drinking (74% vs. 53%; p=0.03) (Table 4.3).

Variables that had marginally significant associations with HSV-2 positivity included living in Vancouver (44% vs. 27%, p=0.08), HCV (40% vs. 23%; p=0.09); syphilis (18% vs. 0%; p=0.08), and HIV positivity (18% vs. 3%; p=0.08); ever being pregnant (74% vs. 57%; p=0.10); and smoking crack in the past 6 months (82% vs. 62%, p=0.10). When compared to women who tested seropositive for HSV-2, those who tested *seronegative* were marginally less likely to report condom use with a casual partner (25% vs. 83%, p=0.05) and with clients (50% vs. 100%, p=0.09) (Table 4.2).

In multivariate analyses, HSV-2 positivity among women was significantly associated with having been taken from biological parents (Adjusted Odds Ratio: 3.25, 95% Confidence Interval [1.34-7.88]); ever being involved in survival sex work (AOR: 3.15 [95% CI: 1.13-8.79]); and ever having injected drugs (AOR: 3.39 [95% CI: 1.32-

8.67]). Variables that were marginally significant included drinking alcohol heavily (AOR: 2.37 [95% CI: 0.99-5.65]) and having a mother who attended residential school (AOR: 2.52 [95% CI: 0.90-7.09]) (Tables 4.4 and 4.5).

4.3.2 HSV-2 seropositivity among men

Among all men (n=107), 36% [95% CI: 30%-48%] tested seropositive for HSV-2. Among them, only 8% self-reported HSV-2 positivity or ever having an outbreak (Table 4.2).

In bivariate analyses, men who tested positive for HSV-2 were significantly more likely to have ever been in prison (79% vs. 54%; p<0.01) and self-report ever having an STI (54% vs. 25%; p<0.01) (Table 5.2). Marginally significant associations with HSV-2 positivity included living in Vancouver (56% vs. 38%, p=0.07) and having a history of sexual abuse (36% vs. 23%, p=0.10). Participants who stated that culture played an important role during their developmental years were marginally less likely to test HSV-2 seropositive (40% vs. 59%; p=0.07) (Table 4.1).

In multivariate analysis, HSV-2 positivity among men was significantly associated with ever having been in prison (AOR: 2.99 [95% CI: 1.11- 8.07]). Having culture play an important role in development was found to have a significant protective effect on HSV-2 positivity (AOR: 0.41 [95% CI: 0.19-1.00]) (Table 4.6).

Table 4. 1: Comparison of demographic and traumatic life events among women who tested positive for HSV-2 (n=113) vs. women who tested negative (n=30); and men who tested positive for HSV-2 (n=39) vs. men who tested negative (n=68)

	Women				Men		
Variable	**HSV-2 + N (%)**	**HSV-2 - N (%)**	**p-value**		**HSV-2 + N (%)**	**HSV-2 - N (%)**	**p-value**
Baseline interview location Vancouver Prince George/Chase	*50 (44%)* *63 (56%)*	*8 (27%)* *22 (73%)*	*0.08*		*22 (56%)* *17 (44%)*	*26 (38%)* *42 (62%)*	*0.07*
Mean age (SD)	*23.0* *(4.17)*	*21.4* *(4.16)*	*0.07*		**24.3** **(3.76)**	**22.6** **(4.59)**	**0.04**
Sexual identity LGBTQ	11 (10%)	5 (17%)	0.28		4 (10%)	6 (8%)	0.99
Father attended residential school	39 (53%)	8 (33%)	0.09		11 (48%)	22 (51%)	0.79
Mother attended residential school	**49 (59%)**	**8 (35%)**	**0.04**		12 (50%)	20 (42%)	0.50
Ever taken from biological parents	**82 (73%)**	**14 (47%)**	**<0.01**		25 (64%)	40 (59%)	0.59
Relationship status not single	49 (54%)	5 (42%)	0.41		13 (42%)	21 (45%)	0.81
Ever on streets for >3 nights	**72 (64%)**	**12 (40%)**	**0.02**		28 (72%)	39 (57%)	0.14
Ever on streets for >3 nights past 6 months	17 (19%)	0 (0%)	0.12		6 (19%)	13 (27%)	0.39
Ever been in prison	59 (78%)	14 (74%)	0.64		**31 (79%)**	**37 (54%)**	**<0.01**
Been in prison since last visit	13 (72%)	2 (50%)	0.99		7 (22%)	16 (33%)	0.99
Ever attempt suicide	38 (70%)	9 (75%)	0.99		11 (58%)	15 (56%)	0.86
Ever diagnosed mental illness	27 (24%)	8 (28%)	0.69		15 (39%)	20 (29%)	0.34
Ever received counseling	31 (44%)	8 (57%)	0.38		8 (50%)	6 (38%)	0.48
Counseling past 6 months	19 (21%)	4 (29%)	0.51		4 (13%)	12 (26%)	0.25
Ever been denied services due to drug use	20 (18%)	3 (10%)	0.41		5 (13%)	11 (16%)	0.68
Ever been denied shelter due to drug use	23 (21%)	2 (7%)	0.10		6 (15%)	15 (22%)	0.40
Experienced violence past 6 months	15 (17%)	1 (7%)	0.69		7 (22%)	8 (17%)	0.56
Did not graduate high school	92 (82%)	25 (83%)	0.88		28 (72%)	54 (79%)	0.37
Culture played an important role in developmental years	14 (15%)	2 (14%)	0.92		*15 (40%)*	*39 (59%)*	*0.07*
Participated in Traditional ceremonies past 6 months	49 (48%)	3 (21%)	0.12		9 (28%)	12 (25%)	0.76

Table 4. 2: Comparison of sexual vulnerabilities among women who tested positive for HSV-2 (n=113) vs. women who tested negative (n=30); and men who tested positive for HSV-2 (n=39) vs. men who tested negative (n=68)

	Women				Men		
Variable	**HSV-2 +** **N (%)**	**HSV-2 -** **N (%)**	**p-value**		**HSV-2 +** **N (%)**	**HSV-2 -** **N (%)**	**p-value**
Median (range) (for women) **Mean (SD) (for men)** **age of first willing sex**	14 (10-22)	15 (12-21)	0.39		15.3 (2.53)	14.6 (1.72)	0.14
Median age of first sexual abuse (range)	6 (1-18)	9.5 (2-18)	0.16		5 (2-10)	6 (2-13)	0.39
Ever sexually abused	69 (62%)	14 (50%)	0.26		*14 (36%)*	*15 (23%)*	*0.10*
Sexually abused past 6 months	4 (4%)	0 (0%)	0.99		0 (0%)	1 (2%)	0.99
Ever involved in survival sex	**77 (68%)**	**12 (40%)**	**<0.01**		3 (10%)	3 (6%)	0.66
Survival sex past 6 months	27 (34%)	2 (22%)	0.71		2 (13%)	1 (4%)	0.55
Ever been pregnant	*76 (74%)*	*13 (57%)*	*0.10*		N/A	N/A	N/A
Pregnant in last 6 months	12 (14%)	3 (25%)	0.39		N/A	N/A	N/A
Ever had an abortion	28 (35%)	5 (33%)	0.88		N/A	N/A	N/A
Abortion since last visit	12 (14%)	3 (25%)	0.25		N/A	N/A	N/A
Condom use for insertive sex with regular partner*	16 (26%)	1 (14%)	0.67		1 (15%)	5 (21%)	0.99
Regular sex partner uses injection drugs*	11 (18%)	0 (0%)	0.59		3 (23%)	6 (24%)	0.99
Regular sex partner HIV+*	7 (13%)	0 (0%)	0.99		1 (8%)	2 (8%)	0.99
Casual sex partner HIV+* (13 unsure)	1 (3%)	0 (0%)	0.99		1 (8%)	2 (10%)	0.99
Condom use for insertive sex with casual partner **	*15 (83%)*	*1 (25%)*	*0.05*		6 (40%)	7 (44%)	0.99
Casual sex partner uses injection drugs **	1 (6%)	0 (0%)	0.99		3 (23%)	5 (36%)	0.68
Condom use for insertive sex with clients **	*19 (100%)*	*1 (50%)*	*0.09*		2 (100%)	0 (0%)	0.33
Offered money not use condom**	52 (81%)	6 (60%)	0.21		0 (0%)	0 (0%)	N/A
Accepted money to not use condom**	15 (29%)	3 (50%)	0.36		0 (0%)	0 (0%)	N/A

Table 4. 2 (continued): Comparison of sexual vulnerabilities among women who tested positive for HSV-2 (n=113) vs. women who tested negative (n=30); and men who tested positive for HSV-2 (n=39) vs. men who tested negative (n=68)

	Women			Men		
Variable	**HSV-2 + N (%)**	**HSV-2 - N (%)**	**p-value**	**HSV-2 + N (%)**	**HSV-2 - N (%)**	**p-value**
Use drugs with clients***	12 (44%)	1 (50%)	0.99	1 (50%)	0 (0%)	0.99
Ever had a bad date***	5 (19%)	0 (0%)	0.99	2 (100%)	0 (0%)	0.99
Ever had STI	67 (59%)	19 (63%)	0.69	**21 (54%)**	**17 (25%)**	**<0.01**
Had an STI in the past 6 months	7 (8%)	2 (17%)	0.31	2 (7%)	0 (0%)	0.16
Ever treated for STI	**63 (55%)**	**13 (43%)**	*0.08*	**15 (38%)**	**9 (13%)**	**<0.01**
Ever had an outbreak	9 (35%)	2 (67%)	0.53	3 (43%)	1 (11%)	0.26
Self-reported chlamydia	52 (46%)	9 (30%)	0.12	8 (21%)	7 (10%)	0.15
Self-reported gonorrhea	16 (14%)	2 (7%)	0.36	3 (8%)	2 (3%)	0.35
Self-reported HSV-2	10 (9%)	0(0%)	0.12	*3 (8%)*	*0 (0%)*	*0.05*
Self-reported syphilis	**9 (100%)**	**3 (16%)**	**<0.01**	1 (3%)	1 (2%)	0.99
History of syphilis	*20 (18%)*	*0 (0%)*	*0.08*	1 (3%)	0 (0%)	0.40
HIV+	*20 (18%)*	*1 (3%)*	*0.08*	6 (15%)	6 (9%)	0.31
HCV+	*45 (40%)*	*7 (23%)*	*0.09*	12 (31%)	12 (18%)	0.12
Pap smear in the past 6 months	88 (99%)	12 (100%	0.99	N/A	N/A	N/A
Abnormal pap	16 (18%)	1 (8%)	0.69	N/A	N/A	N/A
Regular pap smears	67 (76%)	9 (82%)	0.99	N/A	N/A	N/A
On birth control	54 (61%)	7 (58%)	0.88	N/A	N/A	N/A

*   Restricted to participants who reported having regular sex partners

**   Restricted to participants who reported having casual sex partners

***Restricted to participants who reported having clients

Table 4. 3: Comparison of drug related vulnerabilities among women who tested positive for HSV-2 (n=113) vs. women who tested negative (n=30); and men who tested positive for HSV-2 (n=39) vs. men who tested negative (n=68)

	Women				Men		
Variable	**HSV-2 +** **N (%)**	**HSV-2 -** **N (%)**	**p-value**		**HSV-2 +** **N (%)**	**HSV-2 -** **N (%)**	**p-value**
Ever overdose	31 (28%)	7 (23%)	0.62		8 (21%)	23 (34%)	0.17
Overdose past 6 months	4 (12%)	0 (0%)	0.99		1 (17%)	0 (0%)	0.30
Heavy alcohol drinking	**83 (74%)**	**16 (53%)**	**0.03**		24 (62%)	49 (72%)	0.26
Blackout past 6 months	23 (44%)	5 (56%)	0.72		9 (36%)	17 (43%)	0.60
Non-injection drugs past 6 months	71 (78%)	13 (93%)	0.29		22 (69%)	38 (81%)	0.22
Crack smoking past 6 months	**61 (82%)**	**8 (62%)**	*0.10*		17 (71%)	22 (58%)	0.30
Cocaine smoking past 6 months	20 (27%)	2 (15%)	0.50		7 (29%)	8 (21%)	0.47
Crystal smoking past 6 months	21 (28%)	3 (23%)	0.99		8 (33%)	20 (53%)	0.14
Heroin smoking past 6 months	9 (12%)	1 (8%)	0.99		5 (21%)	4 (11%)	0.29
Binge non-injection drug use past 6 months	25 (41%)	3 (27%)	0.51		4 (21%)	6 (21%)	0.98
Ever inject drugs	**67 (59%)**	**9 (30%)**	**<0.01**		19 (49%)	25 (37%)	0.25
Inject drugs past 6 months	37 (55%)	4 (45%)	0.35		13 (33%)	16 (24%)	0.22
Binge injection drug use ^ past 6 months	5 (15%)	0 (0%)	0.99		3 (25%)	3 (20%)	0.99
IV crack past 6 months^	1 (6%)	0 (0%)	0.99		9 (69%)	7 (44%)	0.21
IV crystal past 6 months^	15 (41%)	1 (25%)	0.99		9 (69%)	14 (88%)	0.36
IV cocaine past 6 months^	10 (27%)	1 (25%)	0.99		4 (31%)	2 (13%)	0.36
IV heroin past 6 months^	25 (68%)	2 (50%)	0.59		8 (62%)	7 (44%)	0.34
IV morphine past 6 months^	12 (32%)	0 (0%)	0.30		5 (39%)	5 (31%)	0.68
IV dilaudid 6 months^	10 (27%)	0 (0%)	0.56		4 (31%)	5 (31%)	0.98
IV speedballs past 6 months^	4 (11%)	0 (0%)	0.99		1 (7%)	4 (25%)	0.34
Ever need help injecting^	38 (75%)	6 (86%)	0.99		12 (80%)	12 (57%)	0.28
Need help injecting past 6 months^	10 (29%)	1 (17%)	0.99		2 (17%)	10 (83%)	0.41
Ever use INSITE^	16 (47%)	2 (50%)	0.99		7 (58%)	9 (60%)	0.99
Drug or alcohol treatment past 6 months	39 (43%)	6 (43%)	0.97		11 (34%)	13 (27%)	0.49

Table 4. 3 (continued): Comparison of drug related vulnerabilities among women who tested positive for HSV-2 (n=113) vs. women who tested negative (n=30); and men who tested positive for HSV-2 (n=39) vs. men who tested negative (n=68)

	Women			Men		
Variable	**HSV-2 + N (%)**	**HSV-2 - N (%)**	**p-value**	**HSV-2 + N (%)**	**HSV-2 - N (%)**	**p-value**
Tried to quit drugs past 6 months	35 (66%)	5 (63%)	0.99	14 (70%)	17 (50%)	0.15
Relapsed when trying to quit past 6 months	14 (64%)	3 (60%)	0.99	7 (58%)	4 (25%)	0.12
Ever in methadone treatment program	34 (40%)	6 (46%)	0.67	6 (19%)	7 (16%)	0.67
Currently in methadone treatment program	24 (71%)	5 (83%)	0.99	4 (67%)	3 (43%)	0.59

^restricted to participants who reported injection drug use in the past 6 months

Table 4. 4: Model 1: Correlates of testing HSV-2 positive among the young women participating in the Cedar Project (n=106)

Variable	UOR	95% CI	AOR	95% CI	p-value
Age	*1.09*	*0.99-1.21*	1.10	0.96-1.25	0.16
Location Vancouver	2.11	0.86-5.13	1.85	0.56-6.12	0.31
Mother attended residential school	**2.70**	**1.03-7.08**	*2.52*	*0.90-7.09*	*0.08*
Ever involved in survival sex	**3.21**	**1.39-7.36**	**3.15**	**1.13-8.79**	**0.03**
Heavy alcohol drinking	**2.42**	**1.06-5.55**	*2.37*	*0.99-5.65*	*0.05*

UOR: Unadjusted odds ratio from contingency tables
AOR: Adjusted odds ratio from multivariate regression analysis

Table 4. 5: Model 2: Correlates of testing HSV-2 positive among the young women participating in the Cedar Project (n=143)

Variable	UOR	95% CI	AOR	95% CI	p-value
Age	*1.09*	*0.99-1.21*	1.05	0.94-1.17	0.41
Location Vancouver	2.11	0.86-5.13	1.70	0.65-4.48	0.28
Ever taken from biological parents	**3.02**	**1.32-6.92**	**3.25**	**1.34-7.88**	**<0.01**
Ever inject drugs	**3.39**	**1.43-8.08**	**3.39**	**1.32-8.67**	**0.01**

UOR: Unadjusted odds ratio from contingency tables
AOR: Adjusted odds ratio from multivariate regression analysis

Table 4. 6: Correlates of testing HSV-2 positive among the young men participating in the Cedar Project (n=98)

Variable	UOR	CI	AOR	CI	p-value
Age	**1.10**	**1.01-1.22**	1.05	0.95-1.16	0.33
Location Vancouver	*2.09*	*0.93-4.65*	1.47	0.61-3.53	0.99
Ever been in prison	**3.25**	**1.30-8.08**	**2.99**	**1.11-8.07**	**0.03**
Ever sexually abused	2.16	0.89-5.23	1.91	0.74-4.93	0.18
Culture played an important role in developmental years	*0.47*	*0.21-1.07*	*0.41*	*0.19-1.00*	*0.05*

UOR: Unadjusted odds ratio from contingency tables
AOR: Adjusted odds ratio from multivariate regression analysis

4.4 Discussion

This investigation of HSV-2 infection among a cohort of Indigenous young people who use drugs revealed a prevalence of 61%. As HSV-2 is a non-reportable disease, and is often asymptomatic, the true prevalence in Canada's general population is unknown. However, Statistics Canada estimates it to be 13.6% (2011b). In British Columbia, over 2,500 positive cases of HSV-2 were reported by the BCCDC in 2006 alone (Li et al., 2008). National and provincial estimates do not report on Indigenous identity and exclude participants living on-reserve (Statistics Canada, 2013b). To our knowledge, only two Canadian studies have examined HSV-2 rates among Indigenous people. One study included 7,266 STI clinic attendees in Edmonton and Calgary where the overall HSV-2 prevalence was 19%. In that study, Indigenous clinic attendees were 2.6 times more likely to test positive than non-Indigenous attendees (Singh et al., 2005). The second study highlighted the disproportionate number of neonatal herpes infections among Indigenous newborns in Canada. The researchers actively solicited neonatal reports from all pediatricians across Canada from 2000-2003, and found Indigenous women represented 10.5% of all cases, despite comprising only 3.4% of the birthing population (Kropp et al., 2006).

In this study, the limited number of participants who were aware of their seropositive status prior to clinical testing raises concerns. Upon further examination of the data, the ten women who self-reported HSV-2 positivity were the same women who had self-reported ever having an outbreak. It is important to note that HSV-2 can shed even in the absence of an outbreak, and the virus can be transmitted during both oral and genital sex (Tronstein et al., 2011). While most HSV-2 infections do not lead to serious

physical complications, the virus is associated with ophthalmological ailments, encephalitis, aseptic meningitis, and vertical transmission that may result in neonatal injury or death (Center for Disease Control, 2015). STI diagnoses, particularly incurable ones such as HSV-2, can also have detrimental emotional, mental and psychological impacts, and severely interfere with personal relationships and one's self-concept (Newton & McCabe, 2008).

The association between HSV-2 and HIV seroconversion

The prevalence of HSV-2 within the Cedar Project cohort is especially concerning given the recognized association between HSV-2 infectivity and increased risk for HIV seroconversion. There are several biological mechanisms that facilitate the increased opportunity for HIV seroconversion due to HSV-2 infectivity. Genital ulceration caused by untreated STIs provides a portal of entry for HIV through mucosal disruption (Centers for Disease Control and Prevention, 1998); the presence of untreated STIs in the human body can lead to immunosuppression and increase susceptibility to acquiring new infections; and recurrent infections disrupt epithelial cells in the ulcerated region, recruiting activated CD4 cells that are targeted by HIV (Celum, 2004).

As no Canadian study has examined the association between HSV-2 and HIV, we rely on international data to understand it. Among people who use non-injection drugs in the United States, a significant association was found between HSV-2 and HIV (AOR: 3.2 [95% CI: 2.3-4.5]) (Des Jarlais et al., 2010). In another US study among people who use injection drugs, this association was even higher (AOR: 7.9 [95% CI: 2.9-21.4]). These data yielded a population attributable risk of 71% for HSV-2 in the etiology of HIV infection (Des Jarlais et al., 2011). Two systematic reviews of longitudinal cohort

studies examined scenarios in which HSV-2 infection preceded HIV, and after adjusting

for sexual behavior, the relative risk of contracting HIV due to HSV-2 was reported to be

3.1 [95% CI: 1.7-5.6] among women, 2.7 [95% CI: 1.9-3.9] among heterosexual men,

and 1.8 [95% CI: 1.2-2.4] among men who have sex with men (Freeman et al., 2002;

Wald et al., 2006). Another systematic review of 17,000 HIV cases and 73,000 controls

from 1986-2006 reported the odds of the HIV/HSV-2 association to be 4.62 [95% CI:

2.85-7.47] among women (Chen et al., 2007b). In one study among 8,346 women in

Uganda and Zimbabwe, HIV seroconversion was observed in 211 participants. The

authors estimated that 42-65% of new HIV incidents could have been avoided if the

participants had not been co-infected with HSV-2 (Brown et al., 2007).

HIV prevalence rates in Canada are generally low, however, they are reported to

be as high as 20 times the national average (63.6/100,000) among people living on-

reserve (CBC, 2015a). Yet, the association between high rates of HSV-2 and HIV

infection remains unknown for Indigenous people, and HIV prevention efforts remain

largely centered on parenteral transmission. While the presence of HSV-2 can increase

risk for HIV seroconversion, treatment has not been found to mitigate this risk (Celum et

al., 2008; Watson-Jones et al., 2008). As such, the most effective approach to interfering

in the HSV-2/HIV pathway is to keep at-risk individuals seronegative. After that, sexual

health services should help at-risk people learn how to identify herpetic ulcers, know

when to seek treatment, and to refrain from sex during outbreaks. Early STI recognition

and treatment can help circumvent HIV seroconversion, especially for asymptomatic

infections (Fleming & Wesserheit, 1999; Orroth et al., 2003). To meaningfully support

Indigenous people who use drugs, any such services should be developed within

culturally-safe and trauma-informed frameworks that account for the complex

relationships between self-medication and sexual risk.

HSV-2 and the increased vulnerability of Indigenous women who use drugs

In this study, women were 6.5 [95% CI: 3.74-1.53] times more likely to test

positive for HSV-2 when compared to men. As previously mentioned, the rate of HSV-2

among Indigenous women in Canada is unknown. However, estimates from the general

population reveal that women are 2.4 times more likely than men to be infected with

HSV-2 in BC (Li et al., 2008). Nationally, Canadian women are 1.5 times more likely to

test positive when compared to Canadian men (Statistics Canada, 2011b). Among people

who use drugs in the United States, the prevalence of HSV-2 positivity is markedly

higher among women (Des Jarlais et al., 2010; Hwang et al. 2000; Plitt et al., 2005).

Apart from the anatomical factors that increase susceptibility to contracting STIs

among all women (Center for Disease Control, 2013), it is critical to emphasize that the

reduced health status of Indigenous women who use drugs can be entirely attributed to

historical and social barriers to health. If the prevalence of HSV-2 in this cohort is

reported in isolation, it can reinforce negative stereotypes toward Indigenous women,

discriminate against them, and perpetuate self-blame (Larkin et al., 2007; Health Canada,

1998). In order for such sexual health outcomes to be understood, they must be

interpreted within the context of colonization and historical trauma.

The continued racialization and sexualizing of Indigenous women have been

exacerbated by the ongoing social disparities that have diminished their traditionally safe,

powerful, and autonomous positions in society (Oliver et al., 2015; Robinson, 2009). As a

result, Indigenous women today are at extreme risk for poor sexual health outcomes due

to violence, sexual assault, poverty, inadequate food security, involvement in survival sex work, and self-medication (Callaghan et al., 2006; CBC, 2015b; Gesink et al., 2016; Healey et al., 2001; Macdonald, 2005; Milloy, 1999; van der Woerd et al., 2005; Walters et al., 2011; Young and Katz, 1998). The ways in which these lifetime vulnerabilities intersect with each other inform and affect the sexual wellbeing of Indigenous women who use drugs.

Access to and uptake of sexual health services is a challenge for many Indigenous women. Barriers to utilizing health resources that have been identified by researchers and Indigenous women (in Chapter 7) include: a shortage of female practitioners in many remote communities; the stigma of STIs; fear of disclosing sexual activity; lack of symptom recognition; and being subject to discrimination in the healthcare system (Goldenberg et al., 2008; Jackson & Reimer, 2008; Rusch et al., 2008b; Williams & Mohammed, 2009). To adequately support Indigenous women who use drugs, sexual, drug recovery, and mental health programs should incorporate gendered and culturally-safe approaches to care that address the underlying causes of negative sexual health outcomes. Indigenous researchers have identified multiple large-scale actions to support the sexual health of Indigenous women in Canada. These approaches have been summarized in Chapter 8.3.

Familial fragmentation and increased sexual risk

The continued impacts of the legacies of the residential school and child welfare systems on the health of Indigenous young people was, regrettably, demonstrated in this study. In the adjusted analysis, women who had been taken away from their biological parents and who had a mother who attended residential school were respectively 3.25

[95% CI: 1.34-7.88] and 2.52 [95% CI: 0.90-7.09] times more likely to test positive for HSV-2. At baseline enrolment, 65% of all Cedar Project participants reported that they had been in the foster care system (Clarkson et al., 2015). The accumulation of risk-factors that are born of instability, displacement, detachment, and the traumas associated with being taken from one's family places apprehended children in constant situations of vulnerability (Clarkson et al., 2015; Pearce, 2014). Cedar Project participants who have been in the child welfare system have shared the immense stress they experienced when they were torn from their families. They described how they ran away from foster homes, suffered from mental health illness, had difficulty building and maintaining relationships, and turned to self-medication to cope with their pain (Pearce, 2014). Having been apprehended as a child has also been independently associated with sexual abuse, HIV-positivity, homelessness, survival sex work (Clarkson et al., 2015), and reduced resilience (Pearce, 2014). This study's findings therefore add to the body of work that demonstrates the immense health vulnerabilities of Indigenous young people who have been in foster care, such as their increased risk for HSV-2 infection.

Today, changes to child welfare policies have transferred the jurisdiction of child protection on-reserves to First Nations child and family service agencies. These agencies utilize Indigenous-based models that support families while keeping children connected to their communities and culture (Simard, 2009). Unfortunately, they are limited in number and unable to meet demands, as they receive minimal funding and cannot serve Indigenous families who live off-reserve (Blackstock & Trocmé, 2004). In order to protect Indigenous children, Indigenous leaders demand that the underlying causes of child apprehension, which are rooted in colonization, self-medication, and reduced self-

determination, be urgently addressed (Christian, 2010). To that end, in place of removing Indigenous children from their families, it is critical to boost the financial and social capital available to Indigenous community-based agencies that provide care to families who are struggling with poverty, substance dependence, and intergenerational trauma. This would enable service providers to invest in substantive cultural interventions for collective healing, improve short- and long-term health outcomes, and break the cycles of intergenerational trauma (Blackstock & Trocmé, 2004; Frohlich et al., 2006; Tousignant & Sioui, 2009; Ungar, 2008).

Drug and alcohol use and HSV-2 positivity

In this study, women who tested seropositive for HSV-2 were 3.39 [95% CI: 1.32-8.67] and 2.37 [95% CI: 0.99-5.65] times more likely to inject drugs and drink alcohol heavily, respectively. For Indigenous young people who have experienced childhood maltreatment and violence, using drugs and alcohol is a means of coping with stress, anxiety, and pain (Gesink et al., 2016; Keyes et al., 2012; McEvoy and Daniluk, 1995; Pearce, 2014). Many Indigenous young people who use drugs recognize that substance dependence is a symptom of profound trauma (Pearce, 2014). They attribute such dependence to cultural losses, the loss of family and community members who had shortened lives (Whitbeck et al., 2009), extreme violence (Gesink et al., 2016; Pearce, 2014), and fragmented families (Pearce, 2014; Wexler et al., 2014).

As previously noted, no known study to date has examined the prevalence or risk factors for HSV-2 among Indigenous people who use drugs in Canada. In the United States, HSV-2 prevalence among people who use drugs is significantly higher than that of the general population, ranging from 22-53% among men and 59%-85% among women

(Des Jarlais et al., 2010; Plitt et al., 2005). The independent association between injection

drug use and HSV-2 seropositivity among women in this cohort is alarming, as

Indigenous women who use drugs have been found 1.98 [95% CI: 1.06–3.72] times more

likely to transition to injection drug use when compared to Indigenous men who use

drugs (Miller at al., 2011).

Drug use increases risk for contracting STIs through the exchange of sex for

drugs or money, having multiple sex partners, and/or having sex with partners who use

injection drugs (Booth et al., 2000; Irwin et al., 1996). From survey data, researchers

have demonstrated a correlation between frequent substance use and unsafe sex among

Indigenous young people who use drugs (Anderson, 2002; Devries, Free, & Jategaonker,

2007; First Nations Information Governance Committee, 2012; Kotchick et al., 2002). In

provincial surveys, between 17-26% of sexually active Indigenous young people have

reported being "drunk or high" during sex (Anderson, 2002; Tsuruda et al., 2013).

Among Indigenous young women, substance use is an independent risk factor for both

pregnancy and an STI diagnosis (Devries et al., 2009a). Young women who use drugs are

particularly at-risk of experiencing negative health outcomes, as the intersections of race,

social class, and gender are intensified by the sexual risks associated with self-medication

(Baldwin et al., 2000; Craib et al., 2003; Schneider et al., 2012).

It is clear that increased substance dependence among Indigenous communities

(Walls et al., 2013) has immediate and dire consequences for sexual health, including

contracting HSV-2. Indigenous scholars emphasize that Indigenous young people who

use drugs do so to cope with ongoing trauma (Walters & Simoni, 2002). While culturally-

safe and trauma-informed interventions that address the link between substance

dependence and STI risk can support sexual health (Chersich & Rees, 2010; Schneider et al., 2012), it is critical to couple such programs with mental health services. Without addressing the root causes of self-medication, the sexual health risks of Indigenous young people who are living with unresolved pain cannot truly be mitigated. The integration of services that are built upon Indigenous models of care and which incorporate strengths-based approaches can help expand care delivery to provide accessible, realistic, and relevant treatment and prevention options.

HSV-2 risk among Indigenous women who use drugs and who are involved in survival sex work

In this study, despite higher self-reported condom use consistency with casual sex partners and clients, a significant association between survival sex work and HSV-2 positivity was found (AOR: 3.15 [95% CI: 1.13-8.79]). While there is no Canadian data to draw from, researchers in the United States have demonstrated a similar association in the general population of people who use drugs. Plitt et al. (2005) reported HSV-2 infection to be 3.2 [95% CI: 1.2-8.6] times higher among women who engage in survival sex work. Hwang et al. (2000) demonstrated the prevalence of HSV-2 positivity among women who use drugs and who engage in survival sex work to be 74% (vs. 41%. among women who use drugs but do not engage in survival sex work).

Although social desirability bias may be influencing self-reported data, this study's findings may suggest that the risk of contracting STIs among women involved in survival sex work is largely driven by injection drug use and heavy alcohol consumption, both of which are associated with inconsistent condom use (Devries, Free, & Jategaonker, 2007; First Nations Information Governance Committee, 2012). It is also

important to consider the role of crack smoking on condom use consistency. Smoking

crack was correlated with injection drug use, heavy alcohol drinking, and survival sex

work, it was therefore deemed not appropriate for inclusion in the multivariate models as

it may have diminished the significance of other important associations. However, studies

among people who use drugs in the United States have demonstrated significantly higher

HSV-2 prevalence among people who use crack when compared to people who use other

drugs (Hwang et al., 2000; Ross et al., 1999; Ross et al., 2002). Among Indigenous

women who use drugs, crack use has been associated with unsafe sex (Chavoshi et al.,

2012; Duff et al., 2013; Mehrabadi et al., 2008a) and survival sex work (Chettier et al.,

2010). It is critical that resources designed to support young Indigenous women who are

involved in survival sex work focus their efforts on harm reduction and drug recovery, as

the intent and ability to consistently use condoms is not always possible in the presence

of drug and alcohol use.

Vulnerability of incarcerated men

In this study, having ever been in prison was significantly associated with HSV-2

seropositivity in adjusted analysis among men (AOR: 2.99 [95% CI: 1.11- 8.07]). Plitt et

al. (2005) demonstrated a similar finding in a cohort of men who use drugs and who had

ever been incarcerated (AOR: 2.7 [95% CI: 1.1-6.6]). While the temporal sequence of

infection cannot be determined in this study, the strengthening of culturally-safe sexual

health resources both within and outside of prison before, during, and after incarceration

is important. Such resources can help inmates learn when to seek testing, treatment, and

how to take preventive measures. Current guidelines in correctional facilities stipulate

that HSV-2 testing will only be provided if inmates present symptoms (Public Health

Agency of Canada, 2013). Given the findings of this study, the disproportionate number of Indigenous men who are incarcerated, the asymptomatic and highly infectious nature of HSV-2, and the increased risk of acquiring HIV due to HSV-2 (Freeman et al., 2002, Wald et al., 2006), it is highly recommended that HSV-2 testing be incorporated into routine STI screening in prison.

Culture as protection

In this study, the protective effect of traditional culture on sexual health was demonstrated. Among men, those who reported that culture played an important role during their developmental years were significantly less likely to test positive for HSV-2 (AOR: 0.41 [95% CI: 0.19-1.00]). The buffering impacts of Indigenous traditions, languages, and spirituality has been demonstrated across a multitude of Indigenous populations in North America (Andersson & Ledogar, 2008; Chandler & LaLonde, 1998; Clark et al., 2013; Currie et al., 2013; McIntyre et al., 2001; Pearce, 2014; Torres Stone et al., 2006). Participation in traditional activities among Indigenous young people has been associated with alcohol cessation and decreased criminal activity (Andersson & Ledogar, 2008) − two factors that were found independently associated with HSV-2 seropositivity in this study. In Canada, Indigenous culture and traditions have been identified as healing "medicines" that mitigate STI risks among Indigenous women who have experienced sexual abuse (Gesink et al., 2016). Cultural connectedness is tied to strong school and community involvement among Indigenous young people (Tourand et al., 2016), both of which reduce the likelihood of engaging in unsafe sex (Devries et al., 2009a, Tourand et al., 2016). Cultural connectedness has also been shown to reduce stress (McIntyre et al., 2001) and increase resilience (Pearce, 2014), which mitigates against substance use, and

consequently, negative sexual health outcomes (Tourand et al., 2016).

Despite heterogeneity across Indigenous Nations, the overarching traditional beliefs around sex in Indigenous culture are healthy. Indigenous health frameworks view sex as a sacred gift (Kliest, 2008; Newhouse, 1998) and shun sexual violence (Bopp & Bopp, 1997, p. 8). Prior to European contact, matters of sexuality were openly discussed, expressed, and accepted as a natural and vital component of development (Aboriginal Nurses Association, 2002; McGeough, 2008; Newhouse, 1998). Indigenous young people were initiated into adulthood with coming-of-age ceremonies that supported their physical, psychological, and emotional transformations. Such traditions facilitated a positive sense of identity and transmitted lessons on egalitarianism, the sacredness of sex, its connection to spirituality, and how to create meaningful relationships (Markstrom, 2008). This study's finding demonstrates that these valuable beliefs continue to shield against negative sexual health outcomes, even in the face of lifetime adversity.

Unfortunately, many Indigenous young people are not accessing their culture due to the interruption of the intergenerational transmission of traditional ways. Many who live in urban dwellings and/or are disconnected from their communities are unable to benefit from its positive health impacts (Fleming & Ledogar, 2008; Goodkind et al., 2012). Given the association between child apprehension and poor sexual health outcomes, and the protective effect of culture on sexual wellbeing observed in this study, service providers should support Indigenous young people who have been taken from their families and reconnect them with their communities and culture. Sexual health programs that integrate cultural interventions can help facilitate healing, instill self-care practices, strengthen identities, and reinstate traditional values that support positive

sexual health outcomes (Brant Castellano, 2008; Kliest, 2008; Newhouse, 1998; Oliver et al., 2015).

Limitations and conclusions

The limitations of this study must be acknowledged. First, only data for participants who returned for a follow-up interview were included, and potentially crucial information from participants who were lost to follow-up may have been missed. Second, as the focus of this study was restricted to Indigenous young people who use drugs, it cannot be generalized to all Indigenous people in Canada. Third, the Cedar Project has a non-random recruitment methodology, which may not capture the most vulnerable members of society. However, the connectedness of the recruitment team with the community as well as its rigourous recruitment methods and eligibility criteria give us confidence that the study has a representative sample of Indigenous young people who use drugs in BC. Lastly, this study largely relied on self-reported data. Therefore, it cannot account for social desirability or recall bias, especially for events that occurred during early childhood, or while under the influence of drugs.

To our knowledge, this is the first study that has examined the prevalence and correlates of HSV-2 seropositivity among Indigenous young people who use drugs in Canada. While the direct and indirect impact of drug use on increased risk for STI acquisition is well known, this study sheds light on how such risks are compounded for Indigenous people who experience them together with historical trauma and social marginalization. These findings suggest that the ongoing impacts of colonization and self-medication are exacerbating the risk for contracting HSV-2 among Indigenous young people who use drugs. Cultural interventions built upon Indigenous wellness frameworks

can help Indigenous young people who face adversities achieve emotional, spiritual, physical, and psychological balance, and consequently, experience improved sexual health outcomes. This is especially true for Indigenous people who have been in foster care, been incarcerated, and/or use drugs/alcohol to cope with unresolved trauma. If interventions are developed meaningfully and involve the very young people they aim to serve, they can provide alternate strategies for healing and support sexual wellbeing.

Chapter 5: The prevalence and correlates of syphilis positivity among Indigenous young people who use drugs in British Columbia

5.1 Introduction

STIs are considered to be effective biomarkers for sexual vulnerability (Gallo et al., 2013; Weller & Davis, 2005). Syphilis in particular has detrimental consequences if left untreated (Center for Disease Control, 2014), and can increase susceptibility to acquiring HIV (Chesson & Pinkerton, 2000; Taha et al., 1998). The Annual Summary of Reportable Diseases in British Columbia (2013) identified that between 2004 and 2013, First Nations people accounted for 9.1% (n=277) of newly reported syphilis cases, despite comprising only 5% of the provincial population (BCCDC, 2013). This estimate did not include data on Inuit, Métis, or people living on-reserve. As such, an accurate estimation of syphilis prevalence among Indigenous people in BC is unknown.

While the annual representation of Indigenous people among newly reported syphilis cases in BC declined from 2005 to 2010, it has started to increase once again (BCCDC, 2013). Since 2010, surveillance data from syphilis outbreaks in the Western provinces of Canada report that a disproportionate number of cases have occurred among Indigenous people (CBC, 2010; CBC, 2015a; Government of Alberta, 2010; Ogilvie et al., 2009). Wylie and Jolly (2001) suggest that many Indigenous communities have tightly-knit sexual networks where STIs can spread rapidly, which can be detrimental to the sexual wellbeing of communities. Such health disparities are unacceptable, and speak to what Indigenous scholars, leaders, and experts have contended for years: the legacies of colonization continue to subject vulnerable Indigenous young people to sexual health risks. Indigenous scholars stress that any investigation of such disparities must shift away

from individual behaviours and focus on historical contexts they are situated within (Christian & Spittal, 2008; Duran & Walters, 2004; Vernon, 2001; Walters et al., 2011)

The paucity of information on the sexual health of Indigenous young people who use drugs in Canada led to the development of this study. Sexual vulnerability was investigated by quantifying the prevalence of syphilis and establishing the risk factors associated with syphilis positivity among 250 young Indigenous men and women who participated in the Cedar Project: an Indigenous-governed initiative addressing the health risks of Indigenous young people who use injection and non-injection drugs in BC. This investigation locates risk factors associated with sexual vulnerability within a framework of intergenerational trauma. Further, the study will help identify participants who are most at-risk for sexual vulnerability within a cohort of Indigenous young people who continue to demonstrate resilience in the face of ongoing pain, historical trauma, and social marginalization.

5.2 Methods

5.2.1 The Cedar Project study design

The Cedar Project is an ongoing prospective cohort study of Indigenous men and women who use injection and non-injection drugs in three Canadian cities. This study includes all data from the 250 participants who completed the 16th and 17th rounds of routine follow-up questionnaires. The Cedar Project's enrollment eligibility criteria stipulate that participants be of self-reported Indigenous ancestry, be between the ages of 14 and 30 at the time of study enrolment, and have used illicit drugs one month prior to enrolment. Please refer to Chapter 3.2 for complete details on the Cedar Project's recruitment strategies, eligibility criteria, questionnaires, study methods, and description

of variables.

5.2.2 Data collection

During Cedar Project follow-up interviews conducted from December 2012 to October 2013, Cedar Project staff invited actively enrolled participants to partake in this study. Participants were informed that they could provide an added blood sample to test for syphilis during routine sample collection for HIV and Hepatitis C testing. The Cedar Project provided its customary $25 honorarium during routine follow-up interviews, and an additional $10 honorarium for participation in this study. All the young men and women who were extended the invitation to participate, accepted.

As with HIV and HCV testing, participants received counseling from Cedar Project nurses prior to testing and after the results were received. The College of Registered Nurses of British Columbia provided Cedar Project staff with guidelines and training materials pertaining to syphilis treatment and counseling. Before signing the consent form, participants were advised that a seropositive test would result in notification to the Provincial Health Services Authority (PHSA) and antibiotics would be prescribed to treat any cases of active or untreated syphilis as necessary. Participants were informed that their partners would require notification for testing and treatment. No participants withdrew their agreement to partake in this study upon receiving this information. Informed consent was obtained from the 250 men and women who volunteered to participate.

All test tubes were marked with the study number of each participant. Blood samples were refrigerated and stored in locked offices before being shipped for testing to the BCCDC High Volume Serology Program in the Central Processing & Receiving

Laboratory. Syphilis testing was conducted using the *Treponema pallidum* particle agglutination (TPPA) test. The TPPA has 85-100% sensitivity and 98-100% specificity to detect primary syphilis, and 98-100% sensitivity for secondary, latent, or tertiary syphilis (Creegan et al., 2007). Indeterminate TPPA results were tested for recombinant antibodies with the LIA assay. Positive TPPA results were tested with rapid plasma regain (RPR) to determine past or active infection. Samples were destroyed immediately after clinical testing was completed.

All positive syphilis reports were sent to the BCCDC STI/HIV Division by the PHSA Laboratory, entered into the surveillance system, and reviewed by the clinic physician and/or Registered Nurse (RN) for diagnosis, treatment recommendations, and partner follow-up. The Cedar Project received copies of all syphilis test results. Only 1 of the 21 positive syphilis cases required treatment (as determined by the reviewing BCCDC clinic physician). The BCCDC contacted Cedar Project nurses to discuss follow-up procedures. Cedar Project nurses relayed clinical results to study participants in person and ensured that all those who tested positive either received treatment or had previously completed treatment. Treatment could be administered through the Cedar Project or referred to the BCCDC STI outreach team in Vancouver. Cedar Project nurses counseled all participants who tested positive regarding partner notification.

Please refer to Chapter 3.1 for detailed information on the Cedar Project's ethics protocols, confidentiality agreements, and commitment to participant follow-up and care.

5.2.3 Statistical analysis

Prevalence of a history of syphilis infection and corresponding 95% confidence intervals were calculated for all study participants. Data from the Cedar Project

Demographic and Nursing follow-up questionnaires that participants provided blood samples in were linked to their test results to investigate variables associated with syphilis positivity. Detailed descriptions for study variables are available in Chapter 3.2.3.

Of the 250 participants who provided blood samples, a history of infection with the syphilis bacterium (*Treponema pallidum*) was found among 21 participants. Women who were living in Vancouver comprised 95% of all positive cases (n=20). In order to draw meaningful comparisons with participants who tested seronegative, the analysis of risk factors related to syphilis was restricted by gender (women) and location (Vancouver).

Bivariate analyses assessed differences in demographic characteristics, drug use patterns, and sexual vulnerabilities between participants who had a history of syphilis infection to those who did not. Categorical data were explored using Pearson's chi-squared tests. Fisher's exact test was used when 25% or more of the expected cell frequencies in a contingency table were less than 5. Means and standard deviations were calculated for continuous variables (e.g. age at enrolment). Student's t-test was used for comparing the means of different groups. Medians and ranges were calculated for non-normally distributed variables. The Wilcoxon rank sum test was used for comparing the medians of different groups.

Unadjusted odds ratios were calculated for all covariates and presented at 95% confidence intervals. Odds ratios were not calculated when 25% or more of the expected cell frequencies in a contingency table were less than 1 (denoted as "N/A" in Tables 5.1-5.3). Given the sample size and the proportion of participants who tested positive for

syphilis, it was not appropriate to conduct multivariate modeling (Peduzzi et al., 1996).

However, by restricting bivariate analyses to only *women* in *Vancouver*, two potential

confounders (gender and location) were controlled for. All statistical analyses were

performed on SPSS software, version 22.

5.3 Findings

Among the 250 participants who were tested, 143 (57%) were women, of whom,

58 (41%) lived in Vancouver. A history of syphilis was found among 21 participants (8%

[95% CI: 5%-11%]), 20 of whom were women living in Vancouver. One woman had

active syphilis and was followed up by Cedar Project nurses for treatment. The remaining

participants had previously completed treatment (confirmed by Cedar staff).

Tables 5.1-5.3 compare demographic characteristics, behavioural, drug use, and

other putative risk factors for all women living in Vancouver who tested positive for

syphilis (n=20) versus women who did not (n=38). Of the 20 women who tested positive,

only 9 (45%) self-reported ever having syphilis (Table 5.2). Among women who tested

positive for a history of syphilis infection, 95% tested positive for HSV-2, 25% were

HIV+, and 40% were HCV+ (Table 5.2).

In bivariate analyses, a history of syphilis was significantly associated with

experiencing violence in the past six months (43% vs. 4%; $p<0.01$) (Table 5.1), having

binged on non-injection drugs in the past six months (82% vs. 31%; $p=0.02$); injecting

drugs in the past six months (75% vs. 18%; $p<0.01$); and currently being in a methadone

treatment program (100% vs. 53%; $p<0.01$) (Table 5.3). Marginally significant

associations with syphilis positivity included having a mother who attended residential

school (69% vs. 36%; p=0.09) and smoking heroin in the past 6 months (46% vs. 10%, p=0.07).

Women who tested *negative* for syphilis were significantly more likely to self-report ever having a chlamydial infection (61% vs. 25%; p=0.01) (Table 5.2).

Table 5. 1: Comparison of demographic and traumatic life events among women living in Vancouver with a history of syphilis (n=20) vs. women without (n=38)

Variable	Syphilis + N (%)	Syphilis - N (%)	p-value	Odds Ratio (95% CI)
Mean age (SD)	23.8 (3.21)	22.5 (4.33)	0.11	1.03 (0.84-1.12)
Sexual identity LGBTQ	3 (15%)	4 (11%)	0.68	1.50 (0.30-7.48)
Father attended residential school	6 (60%)	8 (36%)	0.27	2.63 (0.57-12.18)
Mother attended residential school	*9 (69%)*	*9 (36%)*	*0.09*	*4.00 (0.95-16.77)*
Ever taken from biological parents	12 (60%)	30 (79%)	0.13	0.40 (0.23-2.31)
Relationship status not single	6 (43%)	9 (41%)	0.91	1.25 (0.33-4.79)
Ever on streets for >3 nights	15 (75%)	28 (74%)	0.91	1.07 (0.31-3.71)
Ever on streets for >3 nights past 6 months	5 (36%)	3 (13%)	0.12	3.89 (0.76-19.86)
Ever been in prison	12 (100%)	26 (93%)	0.99	N/A
Ever attempt suicide	7 (78%)	11 (61%)	0.67	2.23 (0.35-13.96)
Ever diagnosed mental illness	3 (15%)	11 (31%)	0.33	0.40 (0.09-1.66)
Ever received counseling	5 (42%)	12 (50%)	0.64	0.71 (0.18-2.89)
Counseling past 6 months	3 (21%)	3 (13%)	0.65	1.91 (0.33-11.08)
Ever been denied services due to drug use	4 (20%)	8 (22%)	0.99	0.88 (0.22-3.37)
Ever been denied shelter due to drug use	6 (32%)	7 (19%)	0.29	1.98 (0.56-7.04)
Experienced violence past 6 months	**6 (43%)**	**1 (4%)**	**<0.01**	**17.25 (1.79-166.09)**
Did not graduate high school	16 (80%)	29 (78%)	0.99	1.10 (0.29 - 4.24)
Participated in Traditional ceremonies past 6 months	*4 (29%)*	*1 (4%)*	*0.05*	*9.2 (0.91-93.03)*
Culture/Tradition played important role in development	9 (57%)	9 (38%)	0.27	3.0 (0.76-11.81)

Odds ratio of "N/A" denotes one or more cells <1

Table 5. 2: Comparison of sexual vulnerabilities among women living in Vancouver with a history of syphilis (n=20) vs. women without (n=38)

Variable	Syphilis + N (%)	Syphilis - N (%)	p-value	Odds Ratio (95% CI)
Median age of first willing sex (range)	15 (11-20)	15 (10-22)	0.83	0.97 (0.78-1.12)
Median age of first sexual abuse (range)	6 (2-18)	5 (1-15)	0.69	1.06 (0.91-1.24)
Ever sexually abused	12 (60%)	23 (62%)	0.87	0.91 (0.29-2.78)
Sexually abused past 6 months	2 (14%)	0 (0%)	0.13	N/A
Ever involved in survival sex	16 (80%)	23 (61%)	0.16	2.61 (0.73-9.33)
Survival sex past 6 months	7 (54%)	5 (29%)	0.18	2.8 (0.61-12.66)
Ever been pregnant	17 (85%)	25 (68%)	0.14	2.72 (0.67-11.11)
Pregnant in last 6 months	0 (0%)	4 (18%)	0.14	0.32 (0.03-3.21)
Ever had an abortion	13 (77%)	13 (50%)	0.12	3.25 (0.84-12.65)
Abortion since last visit	1 (11%)	4 (19%)	0.63	N/A
Condom use for insertive sex with regular partner*	2 (25%)	2 (14%)	0.60	2. 0 (0.22-17.89)
Regular sex partner uses injection drugs *	1 (12.5%)	2 (14%)	0.99	0.86 (0.07-11.26)
Regular sex partner HIV+*	1 (13%)	1 (7%)	0.99	1.86 (0.10-34.44)
Casual sex partner HIV+* (2 unsure)	2 (9%)	0 (0%)	0.99	0.86 (0.04-16.85)
Condom use for insertive sex with casual partner **	3 (75%)	4 (100%)	0.99	N/A
Casual sex partner uses injection drugs **	1 (6%)	0 (0%)	0.99	N/A
Condom use for insertive sex with clients ***	4 (100%)	4 (100%)	N/A	N/A
Offered money not use condom***	11 (79%)	15 (88%)	0.64	0.49 (0.07-3.44)
Accepted money to not use condom ***	4 (36%)	6 (40%)	0.99	0.86 (0.17-4.27)
Use drugs with clients	6 (86%)	4 (80%)	0.99	1.50 (0.07-31.57)
Ever had a bad date	3 (43%)	0 (0%)	0.24	N/A
Ever had STI (self-reported)	13 (65%)	30 (79%)	0.25	0.49 (0.15-1.65)
Had an STI in the past 6 months	1 (8%)	3 (16%)	0.63	0.44 (0.04-4.82)
Ever treated for STI	13 (65%)	27 (71%)	0.30	0.55 (0.16-1.85)
Ever had an outbreak	1 (50%)	2 (100%)	0.19	N/A
Outbreak in the past 6 months	0 (0%)	1 (50%)	0.31	N/A

Table 5. 2 (continued): Comparison of sexual vulnerabilities among women living in Vancouver with a history of syphilis (n=20) vs. women without (n=38)

Variable	Syphilis + N (%)	Syphilis - N (%)	p-value	Odds Ratio (95% CI)
Self-reported chlamydia	**5 (25%)**	**23 (61%)**	**0.01**	**0.22 (0.07-0.72)**
Self-reported gonorrhea	4 (20%)	9 (24%)	0.99	0.81 (0.21-3.04)
Self-reported syphilis	**9 (45%)**	**3 (8%)**	**<0.01**	**9.55 (2.19-41.59)**
Self-reported HSV-2	3 (15%)	6 (16%)	0.99	0.94 (0.21-4.24)
HSV-2 +	19 (95%)	31 (82%)	0.24	4.29 (0.49-37.64)
HIV+	5 (25%)	8 (21%)	0.73	1.25 (0.35-4.49)
HCV+	8 (40%)	17 (45%)	0.73	0.82 (0.27-2.47)
Pap smear in the past 6 months	14 (100%)	22 (100%)	N/A	N/A
Abnormal pap	3 (21%)	1 (5%)	0.28	5.72 (0.53-61.75)
Regular pap smears	12 (86%)	16 (73%)	0.44	2.25 (0.38-13.16)
On birth control	11 (79%)	12 (55%)	0.18	3.06 (0.66-14.08)

*   Restricted to participants who reported having regular sex partners
** Restricted to participants who reported having casual sex partners
***Restricted to participants who reported having clients
Odds ratio of "N/A" denotes one or more cells <1

Table 5. 3: Comparison of drug related vulnerabilities among women living in Vancouver with a history of syphilis (n=20) vs. women without (n=38)

Variable	Syphilis + N (%)	Syphilis - N (%)	p-value	Odds Ratio (95% CI)
Ever overdose	*7 (37%)*	*6 (16%)*	*0.08*	*3.01 (0.84-10.82)*
Heavy Alcohol Drinking	16 (80%)	29 (76%)	0.99	1.24 (0.33-4.68)
Blackout past 6 months	4 (50%)	6 (67%)	0.64	0.50 (0.07-3.55)
Non-injection drugs past 6 months	11 (79%)	19 (79%)	0.99	0.96 (0.19-4.84)
Crack smoking past 6 months	11 (100%)	16 (80%)	0.27	N/A
Cocaine smoking past 6 months	3 (27%)	5 (25%)	0.99	1.13 (0.21-5.97)
Crystal smoking past 6 months	3 (27%)	5 (25%)	0.99	1.13 (0.21-5.97)
Heroin smoking past 6 months	*5 (46%)*	*2 (10%)*	*0.07*	*7.5 (1.14-49.26)*
Binge non-injection drug use past 6 months	**9 (82%)**	**3 (31%)**	**0.02**	**9.90 (1.54-63.69)**
Ever inject drugs	13 (65%)	20 (53%)	0.37	1.67 (0.55-5.11)
Inject drugs past 6 months	**9 (75%)**	**3 (18%)**	**<0.01**	**14.0 (2.29-85.22)**
IV crystal past 6 months^	1 (25%)	4 (29%)	0.99	0.44 (0.07-10.59)
IV cocaine past 6 months^	1 (25%)	6 (43%)	0.99	0.44 (0.04-5.41)
IV heroin past 6 months^	3 (75%)	10 (71%)	0.99	1.2 (0.09-15.26)
Ever need help injecting^	7 (64%)	11 (65%)	0.99	0.95 (0.19-4.64)
Ever use INSITE	3 (75%)	11 (85%)	0.99	0.55 (0.04-8.27)
Drug or alcohol treatment past 6 months	9 (64%)	9 (39%)	0.14	2.80 (0.71-11.09)
Tried to quit drugs past 6 months	11 (79%)	17 (71%)	0.72	1.51 (0.32-7.12)
Ever in methadone treatment program	10 (71%)	15 (63%)	0.73	1.50 (0.36-6.23)
Currently in methadone treatment program	**10 (100%)**	**8 (53%)**	**0.02**	N/A

^ restricted to those participants who reported injection drug use in the past 6 months
Odds ratio of "N/A" denotes one or more cells <1

5.4 Discussion

Syphilis and the increased vulnerability of Indigenous women who use drugs

This examination of STI vulnerability among 250 Indigenous young people who use drugs in British Columbia found that 8.4% of all participants had become infected with syphilis during their life. The substantial overrepresentation of Indigenous women who use drugs among positive syphilis cases speaks to their immense vulnerability to negative sexual health outcomes. Provincial data have demonstrated the disproportionate representation of Indigenous women among people who have acquired syphilis in BC as well. From 2004-2013, Indigenous women accounted for only 5% of all women in the province, but comprised over one quarter of all syphilis cases among women in BC. While only 11% of syphilis cases in the non-Indigenous population occurred among women, Indigenous women accounted for 43% of all syphilis infections among all Indigenous people (BCCDC, 2013). Data from a 2009 syphilis outbreak in Alberta reported the majority of cases occurred among non-Indigenous men in the general population. However, when the rate of infection was calculated, Indigenous women were 20.5 times more likely than non-Indigenous men to have been affected (Government of Alberta, 2010).

In BC, Indigenous women comprised less than half of all syphilis cases among Indigenous people from 2004-2013 (BCCDC, 2013). In this study, 95% of cases occurred among women. In order to understand such disparities, it is critical to discuss them in the context of the historical traumas that impact sexual wellbeing. The compromised health status of Indigenous women is not a new phenomenon; it is a direct product of colonization (Native Women's Association of Canada, 2010). Prior to European contact, Indigenous women often held equal power to men in society, and in some cases, lived in

matriarchies. While heterogeneity does exist across Indigenous tribes and Nations, on the whole, women were venerated as the givers of life and bearers of tradition. Indigenous women practiced rightful autonomy over their bodies and sexuality. These social dynamics stood in stark contrast to the European doctrine of male dominance. The legislations that aimed to eradicate Indigenous ways of living were not only influenced by colonial beliefs that Indigenous people were racially inferior, but also by sexist ideologies that deemed women to be subordinate to men. The colonizers attempted to diminish the social status of Indigenous women by way of cultural genocide, objectification, and familial fragmentation through the residential school and child welfare systems (Oliver et al., 2015; Robinson, 2009).

As a result of these historical injustices, Indigenous women in Canada are subjected to poverty, high rates of violence, and abuse (CBC, 2015b; Callaghan et al., 2006; Gesink et al., 2016; Macdonald, 2005; Milloy, 1999; Stout, Kipling & Stout, 2001; van der Woerd et al., 2005; Yee, Apale & Deleary, 2011). In this study, women who tested positive for syphilis were more likely to report having experienced recent violence. While all Canadian women face higher risk of experiencing sexual violence when compared to men (Libby et al., 2005), this risk is substantially higher among Indigenous women (Amnesty International, 2014; Evans- Campbell et al., 2006). Indigenous women who are in abusive relationships are particularly vulnerable to contracting STIs, as they are more likely to have unsafe sex when compared to non-Indigenous women (Devries et al., 2008; Saewyc et al., 2006; Simoni, Seghal, & Walters, 2004). Unfortunately, many sexual health programs are designed to only address the dynamics of consensual encounters and fail to consider the complex psychological effects of abusive relationships

on the ability to demand condom use and self-protect against STIs (Craib et al., 2003; Muldoon et al., 2015).

The historical and lifetime disparities that impact the sexual vulnerability of Indigenous women who use drugs are accompanied by a general biological vulnerability to STI acquisition among females. The thin and delicate lining of the vagina is highly susceptible to viral and bacterial infections, and the moisture in female genitalia provides an ideal environment for bacteria to grow (Center for Disease Control, 2013). Many STIs are asymptomatic, or present with symptoms that are difficult to identify. Cases of primary syphilis may easily be missed because they do not cause vaginal pain, which can delay treatment (Center for Disease Control, 2013). As explained by the young women who participated in the in-depth interviews in Chapter 6, lack of symptom recognition is also due to the presence of ulcers and skin infections caused by injection drug use in the upper thigh area.

As the mediating factors that heighten vulnerability to negative sexual outcomes among Indigenous women are rooted in colonization, culturally-safe, trauma-informed health outreach programs that address the legacies of the residential school and child welfare systems are necessary. These programs should back Indigenous women's self-determination and self-sufficiency in order to best support their sexual health. The integration of Indigenous traditions and wellness frameworks into gender-specific programs can help intervene in the pathways of risk to contracting ulcerative STIs, such as syphilis (Native Women's Association of Canada, 2010). These strategies have been described in Chapters 7.4 and 8.3.

STI risks and drug use

In this study, injecting drugs was significantly associated with a history of syphilis. Transition to injection drug use has been independently associated with a 4.6-fold increase in the risk of syphilis infection among people who use drugs in the United States - even after controlling for age, sex, race, and survival sex work (Lopez-Zetina et al., 2000). This is concerning, as Indigenous young people who face adversities and use drugs do so as a coping strategy to disconnect from their lived traumas (Walters & Simoni, 2002). When drugs are used with this intent, injection can quickly become the preferred mode of administration, as disassociation from pain occurs more quickly and effectively. For individuals living with such pain, managing emotional suffering may take precedence over taking steps to avoid contracting infectious diseases (Pearce, 2014).

Syphilis positivity was also associated with binging on non-injection drugs, smoking heroin, and being in methadone maintenance treatment (MMT). While opioids such as heroin may suppress sexual desires, they can still profoundly impact sexual health, as a person in withdrawal may be more likely to exchange unprotected sex for drugs, or be suffering from the pain of dope-sickness, which can interfere with the ability to prioritize condom use (Bryan et al., 2000). Such vulnerabilities were confirmed by the young women who were interviewed in Chapter 6. Upon closer examination of this study's data, the young women who reported heroin use were those receiving MMT. The women in this study may be accessing methadone not to stay off drugs, but instead, to control withdrawal symptoms and decrease the risk of experiencing violence during dope-sickness (Spittal, 2008). Nonetheless, MMT has been associated with reduced high-risk sexual behaviours (Iguchi, 1998; Sees et al., 2000; Sorenson & Copland, 2000; Wells

et al., 1996). Unfortunately, Indigenous people are inadequately accessing MMT due to a lack of culturally-safe programming, the prevalence of abstinence-based treatments, and/or the fear of having their children apprehended (Benoit et al., 2003; Canadian Aboriginal AIDS Network, 2004; Kerr et al., 2005; Methadone Strategy Working Group, 2004; Poole & Trainor, 2000).

It is worth mentioning that all women who tested positive for syphilis in this study and who used non-injection drugs, reported smoking crack. The established literature demonstrates that crack use increases high-risk sexual behaviours. These include having sex partners who inject drugs, exchanging sex for drugs or money, using drugs during sex, having multiple sex partners, and not using condoms consistently (Booth et al., 2000; Booth et al., 2007; Chavoshi et al., 2012; Irwin et al., 1996; Shannon et al., 2007; Shannon et al., 2008). Syphilis positivity has been reported to be as high as 13% among people who use crack in the general population in the United States (Ross et al., 1999). People who use crack have also been found three times more likely to test positive for syphilis when compared to individuals who use other drugs (Ross et al., 2006).

In the Cedar Project, Indigenous women who use drugs are particularly vulnerable to such harms, as crack use is independently associated with survival sex work (AOR: AOR:2.9 [95% CI: 1.6, 5.2]) (Mehrabadi et al., 2008a). Treatment for crack cocaine can reduce the sexual risks associated with crack use (Wimberly et al., 2016), but accessing treatment continues to be impeded by systemic discrimination and the lack of meaningful drug treatment programs for Indigenous people (Clark et al., 2013; First Nations Health Authority, 2013; Goldenberg et al., 2008; Rusch et al., 2008b; Tang & Brown, 2008). Culturally-safe and gender-specific harm reduction and recovery programs should

therefore collaborate with sexual health providers in order to deliver relevant information, testing, treatment, and preventative options.

The need for accessible and effective sexual health resources

In this study, only 9 of the 20 women who tested positive for syphilis had self-reported ever having syphilis. This may have been due to recall bias. In studies among people who use drugs in the United States and who have tested positive for syphilis, low rates of self-reported positivity have also been found. Researchers attribute such findings to low healthcare utilization among people who use drugs, especially in cases of asymptomatic infections (Plitt et al., 2005). However, as 19 of the 20 women with a history of syphilis had received treatment, their hesitation to disclose may have been due to the stigma that often accompanies STIs. In a study among women living in Vancouver's Downtown Eastside (DTES), Rusch et al. (2008a) demonstrated that women of Indigenous ethnicity had higher scores for both social STI stigma (views about women who have STIs) and internal STI stigma (shame, embarrassment, etc. around having an STI). The authors attributed their findings to the conflicting ideals of female sexuality between traditional Indigenous and western cultures. In their study, Indigenous women who had ever received STI testing or treatment had significantly lower social and internal stigma scores. The authors suggest that having received STI care and treatment may have mitigated some previously-held stigma.

Upon consultations with Cedar staff who verified syphilis treatment, it was discovered that not all women who tested positive had received treatment in the DTES. As described in chapter 6, negative experiences with sexual healthcare providers was described in detail by participants who had utilized sexual health resources outside of the

DTES. Discrimination and a lack of culturally-safe, trauma-informed, and gender-specific approaches to care were found to intensify feelings of self-blame and shame around STIs. As such, the hesitation to self-report syphilis positivity in this cohort may be due to having experienced ineffective and discriminatory STI counseling that attached stigma to syphilis diagnoses.

While it is promising that all participants who tested positive had received treatment, inadequacies in care provision highlighted above can greatly jeopardize Indigenous people who do not have access to culturally-safe sexual health resources. Even if testing and treatment are sought, measures that focus on long-term prevention and continuity of care are needed. We were pleased to observe that no participants in Chase or Prince George had ever contracted syphilis. In BC, the majority of syphilis cases occur among Caucasian men in urban areas (BCCDC, 2013). We assume that Indigenous women living in Vancouver are more likely to be exposed to sexual partners who have infectious syphilis. It is important to evaluate how differences in sexual networks between Vancouver, Prince George, and Chase are impacting STI risks.

The potential for an epidemic in other parts of the province must still be considered. The surge of syphilis infections in Canada's western provinces have occurred in regions where many Indigenous communities are located. Indigenous people are disproportionately bearing the burden of these outbreaks, and sexual health resources that mitigate the ramifications of syphilis infection are greatly lacking in such areas (CBC, 2010; CBC, 2015a; Government of Alberta, 2010; Ogilvie et al., 2009). A longitudinal examination of condom use among Cedar Project participants has demonstrated that both young men and women in Prince George were significantly less likely to use condoms

consistently when compared to participants living in Vancouver (Chavoshi et al., 2013).

As has been mentioned, tightly knit sexual networks and frequent migrations between

Indigenous communities can allow STIs to spread rapidly (Devries et al., 2011; Wylie &

Jolly, 2001), particularly for a highly infectious STI such as syphilis (Center for Disease

Control, 2014). If syphilis is not recognized or treated, it continues to persist in the body

even after symptoms have disappeared. It is readily transmitted through vaginal, anal, and

oral sex. While most people do not develop late stage syphilis, those who do will be at

risk of paralysis, blindness, dementia, internal organ damage, and even death (Center for

Disease Control, 2014). Vertical transmission can greatly endanger neonates, as almost

40% of infants who are infected will die. For infants that survive, congenital syphilis can

cause extensive damage to bones, vision, and hearing, and severely delay mental and

physical development (Government of Alberta, 2010).

The increased vulnerability of Indigenous women who use drugs to syphilis is

particularly concerning, as international research demonstrates that among all STIs,

syphilis has the highest probability of facilitating HIV seroconversion and transmission

(Chesson & Pinkerton, 2000). The presence of syphilis can increase the odds of

seroconverting to HIV during sex by almost 4-fold (Taha et al., 1998). HIV prevention

through STI treatment relies heavily on symptomatic episodes that are identified during

an active infection (Korenromp et al., 2000). Mass screening and treatment are only

effective in a population with high-risk partnerships who have curable and easily

detectable STIs. In any other population, preventative efforts are needed to keep at-risk

individuals negative (Korenromp et al., 2002), as researchers have demonstrated that

more than 1,000 new HIV cases in the USA were attributed to syphilis alone (Chesson, 1999).

It is critical that sexual health programs offer preventative and treatment options through culturally-safe measures that incorporate the needs and values of the communities they serve. Partnerships between provincial governments and Indigenous health organizations can improve outreach. Indigenous women's health clinics in particular can act as appropriate liaisons for STI screening, pre- and ante-natal care, and treatment measures for syphilis. Collaborations between non-Indigenous health organizations and Indigenous Nations can help develop best approaches for testing, partner notification, and treatment on-reserves. In particular, screening should be extended to the most vulnerable members of society, which include people who are homeless, self-medicate, and who engage in survival sex work (Government of Alberta, 2010).

Limitations and conclusions

The limitations of this study must be considered. First, findings cannot be generalized to all Indigenous young people in Canada as the potential risk factors for syphilis was only examined among Indigenous women who use drugs in Vancouver. Due to the non-random outreach methodology of the Cedar Project and the cross-sectional clinical testing that was done, the sample may not have included Indigenous young people who are most vulnerable and isolated. However, the connectedness of the Cedar Project team with the community and its rigourous recruitment methodology and eligibility criteria give us confidence that the sample is representative. Second, the Cedar Project Demographic and Nursing questionnaires predominantly rely on self-reported

data. Responses may have been affected by both recall and social desirability bias. Third, multivariable modeling was not appropriate for this sample size. A longitudinal examination of syphilis incidence is required to better understand the independent risk factors for contracting syphilis among Indigenous young people who use drugs over time. This will allow for multivariate modelling to be conducted in order to examine the independent determinants of syphilis infection.

This study is the first known exploration of syphilis positivity among Indigenous young people who use drugs in British Columbia. Its findings demonstrate that the legacies of colonization continue to negatively impact the health of Indigenous women. We are particularly concerned about the surge of syphilis in areas where sexual health resources are most lacking (CBC, 2010; CBC, 2015a; Government of Alberta, 2010). To support the long-term sexual health of Indigenous women who use drugs, harm reduction centres, mental health services, and sexual health programming should incorporate culturally-safe, trauma-informed approaches to care that are built upon Indigenous health frameworks. Enhancing telehealth and online resources tailored to Indigenous communities can serve as timely, safe, and confidential platforms to answers questions and connect individuals with appropriate resources. The development and strengthening of such comprehensive strategies can raise awareness about syphilis infection, help identify the need for testing, advocate for preventative measures, and ultimately support positive sexual health outcomes.

Chapter 6: "Sex itself is one thing, but there's so much more to it": Indigenous young people's voices on sexual experiences, education, and safety

6.1 Introduction

The cumulative grief and social disparities that Indigenous communities in Canada have been subjected to through colonization situate them at higher risk for negative health outcomes (Farmer et al., 1996; Vernon, 2001; TRC, 2015). For over 150 years, European colonizers systematically attacked the Indigenous identity and self-determination through forced removal from traditional lands, cultural genocide, control of resources, and child apprehension (TRC, 2015). In particular, the legacies of the residential school and child welfare systems severely undermined the sexual wellbeing of Indigenous people. In the residential schools, Indigenous traditions that celebrated sex were replaced with strict doctrines that deemed it impure (Pauktuutit Inuit Women of Canada, 2006). Widespread sexual abuse was inflicted by the very perpetrators who preached chastity, abstinence, heterosexuality, and monogamy (Fournier & Crey, 1997, p.129; Milloy, 1999, p. 296). Victims were utterly traumatized and confused about the dynamics of sexual relationships and the meaning attached to sex. This unchecked abuse of power was coupled with enforced silence. Residential school survivors were left to grapple alone with the long-term consequences of sexual abuse, with little support or resources to restore balance to their mental, emotional, physical, and spiritual wellness. The traditional health belief systems that had long safeguarded sexual wellbeing had eroded, greatly obstructing opportunities for healing (Fournier & Crey, 1997, p.129; Milloy, 1999, p. 296).

Survivors returned to society with burdens of unresolved trauma, pain, and broken identities. Deprived of the protective effects of family and traditional wellness

frameworks, residential school students had internalized what they had learned about total adult control and abuse as methods of child rearing (Barlow, 2003; Fournier & Crey, 1997; Hylton, 2002; Milloy, 1999; Royal Commission of Aboriginal Peoples (RCAP), 1996). Such stressful living conditions were exacerbated by social marginalization and the use of illicit drugs to numb the pains of self-loss. Consequently, families struggling with poverty, substance dependence, and unresolved trauma found it extremely difficult to create safe homes for their children (Chansonneuve, 2007; LaRocque, 1994; Tousignant & Sioui, 2009). The intergenerational transmission of trauma, which includes anger, emotional detachment, shame, and abuse within Indigenous families is described as *lateral violence* (Chansonneuve, 2005; Walters & Simoni, 2002). When child welfare transferred from federal to provincial agencies in the 1950's, a per capita funding model incentivized the long-term removal of Indigenous children from what were deemed "unfit" homes. Thousands of children were subsequently apprehended, giving rise to a new wave of collective pain (Chansonneuve, 2005; LaRocque, 1994; Tousignant & Sioui, 2009). Today, child welfare policies continue to interfere with family dynamics by prioritizing the removal of children from their families over supporting family reunification and healing (Christian & Spittal, 2008; Fournier & Crey, 1997). Consequently, Indigenous children remain vastly overrepresented among all children in foster care (Sinha et al., 2011; Statistics Canada, 2016), a lifetime vulnerability which has been associated with negative sexual health outcomes (Clarkson et al., 2015).

The legacies of the residential schools have embedded the topic of sex in deep silence, pain, and shame, and the underlying conditions that perpetuate child apprehension and intergenerational trauma remain largely unaddressed. Inadequate

sexual health resources are denying many Indigenous young people access to the necessary support systems that foster sexual wellbeing (Yee, 2010). Indigenous scholars stress that understanding the sexual health risks of vulnerable Indigenous young people can only be done within a framework that considers both the consequences of colonization and the cultural resilience that is inherent in Indigenous people (Kirmayer et al., 2003; Lavallee & Clearsky, 2006; Walters et al., 2002). "Sexual vulnerability" describes the disproportionate burden of the sexual health risks that Indigenous communities bear. These include high rates of STIs, HIV/AIDS infection, and unplanned/teenage pregnancies (Chen et al., 2007a, Myers et al., 1999; Oliver et al., 2015; Pauktuutit Inuit Women of Canada, 2006; Yee, 2010). The concept of sexual vulnerability locates such disparities within the context of ongoing colonization.

To date, no known qualitative study has investigated the pathways to sexual vulnerability or asked Indigenous young people to share their perspectives on the interrelated historical and lifetime factors that have impacted their sexual health, behaviours, and safety. Further, no known study has asked Indigenous young people who face adversity to identify the protective mechanisms that lead to positive sexual outlooks and experiences. This represents a critical gap in research, as investigations of historical and lifetime trauma have empirically been shown to intensify negative sexual health outcomes among young Indigenous people who use drugs to cope with adversity (Clarkson et al., 2015; For the Cedar Project Partnership et al., 2008). As such, it is imperative for intervention purposes to identify both the *risk* and *protective* factors that shape and influence the sexual realities of Indigenous young people.

6.2 Objectives and rationale

The factors that influence sexual experiences, understanding, and safety for Indigenous young people who use drugs are multifaceted and complex. Qualitative methods "enable health sciences researchers to delve into questions of meaning, examine institutional and social practices and processes, identify barriers and facilitators to change, and discover the reasons for the success or failure of interventions" (Stark & Trinidad, 2007, p. 1). The exploratory and flexible nature of in-depth interviews allows the researcher to not only examine the topic of interest, but to explore and incorporate any new ones that may arise (Schensul et al., 1999). These methodologies have the ability to provide a broader understanding of the interconnected and complex pathways that impact sexual health and can greatly inform quantitative findings.

This study used in-depth interviews to centre the voices of the Indigenous men and women who participate in the Cedar Project to understand the historical and lifetime circumstances that impact sexual health. The objective of this study was to grasp a deeper understanding of how intergenerational trauma and other individual, social, cultural, structural, and protective factors influence sexual development, education, behaviours, relationships, and wellbeing for Indigenous people who use drugs. The participants' narratives helped contextualize the epidemiological investigation of risk factors associated with ulcerative STIs in Chapters 4 and 5. Their accounts unraveled the complex intersections that shape understandings of and experiences with sex from childhood to the present day, which can in turn, inform health programming, policies, and services meant to support the sexual wellbeing of Indigenous young people who use drugs.

6.3 Review of study setting, theoretical framework, and participants

This study was informed by theories that recognize the cumulative impacts of forced assimilation on present-day health outcomes among Indigenous families (Chansonneuve, 2005; Fournier & Crey, 1997; Wesley-Esquimaux & Smolewski, 2004). This theoretical approach is also informed by previous Cedar Project studies that demonstrate that Indigenous people who use drugs do so to cope with unresolved lifetime and intergenerational trauma (Craib et al., 2009; For the Cedar Project Partnership et al., 2008). The study's framework recognizes the strengths and cultural resilience that are inherent in Indigenous people, and are exercised in the face of lifetime adversities (Brown & Strega, 2005; Dion-Stout et al., 2001; Kirmayer et al., 2011). Chapter 1.4 describes the theoretical framework that informed this study's objectives, methodologies, analysis, interpretations, and recommendations in detail.

This qualitative examination of sexual health among Indigenous young people involved conducting in-depth interviews with 28 men and women who participate in The Cedar Project. The Cedar Project is an ongoing prospective cohort study of Indigenous young people aged 14-30 (at baseline) who use drugs and live in BC. The Cedar Project began in 2003 and is governed by a Partnership comprised of Indigenous scholars, leaders, researchers, and service providers. The Partnership provides oversight and guidance to the entire research process. Recruitment is ongoing, with eligibility criteria stipulating that participants be of self-reported Indigenous ancestry and have smoked or injected illicit drugs in the month prior to enrolment. Chapter 3.1 outlines details pertaining to the Cedar Project's ethical considerations and participant care. Chapters 3.2.1 and 3.2.2 outline details pertaining to the Project's study design, setting, and recruitment methods.

During the months of May-November 2013, Cedar Project research staff invited participants to partake in this qualitative study. Staff informed participants that a female doctoral researcher (N.C.) wished to conduct in-depth interviews in order to better understand the multifaceted lifetime factors that have impacted their sexual health, development, and experiences. Participants were informed that a $20 honorarium would be provided for participating in the interviews, even if they chose not to complete all parts of it.

Interviews with 15 young women and 13 young men were conducted over the span of 7 months. Seventeen participants were based in Vancouver, and 11 in Prince George. However, the majority had spent at least part of their childhood in other towns and cities across BC and Canada. At the time of the interviews, the average age for women was 27.4 years, and the average age for men was 26.9 years. Sixteen participants had experienced sexual abuse during childhood, 18 had been apprehended from their families as children, and 12 had ever been involved in survival sex work. Fourteen participants had received some form of sexual education in school. Twelve participants tested positive for HSV-2, 3 were HIV seropositive, and 2 had tested positive for a history of syphilis.

6.4 Data collection and analysis

6.4.1. Data collection

The interviewer utilized a loosely structured topic guide developed in collaboration with Cedar Project interviewers, nurses, mentors, and Partners. The topic guide explored the following areas of interest: a) unraveling the influences of residential school histories and intergenerational trauma on sexual education, experiences, and safety; b) tracing the

influence of family, school, peers, sexual partners, culture, and drug use on sexual

decision-making, education, and experiences; c) understanding risk taking or risk

minimizing behaviours; d) seeking perceptions of personal sexual health risks and

experiences with STIs; e) identifying barriers to sexual safety and health, and to

accessing preventative and treatment services; and f) identifying key resources that

support healthy sexual development for Indigenous young people who face adversity.

Categories of exploration were kept broad to allow relational understandings to emerge

about both *risk* and *protective* factors associated with participants' experiences. This

study presents findings from topics A-D; the results from the final two topics of

exploration are presented in Chapter 7.

Prior to conducting the interviews, N.C. memorized the topic guide to permit

natural conversations to occur. Loosely structured interviews allowed participants'

narratives to flow inductively, and sensitive probing on difficult topics facilitated an in-

depth, detailed discussion. This method is flexible and allows space for the discussion of

any new topics that may arise during the course of the interview (Schensul et al., 2009).

This approach also accommodates the nature of storytelling, which is frequently used by

Indigenous people when they describe their past and present lived experiences (Brant

Castellano, 2000; Tousignant & Sioui, 2009). Interviews were digitally recorded, and

detailed field notes were taken after each interview to document any observations,

insights, thoughts, questions, and comments that arose.

The researcher continually self-reflected to assess her personal biases, reflexivity,

and positionality by keeping a diary of all thoughts and reactions during the interviews

and how they may have impacted her research methods and analysis. Frequent

discussions with Cedar Project mentors allowed the researcher to evaluate herself with

integrity to add *credibility* to her research process (Koch, 2010). Please refer to Chapter

3.3.4 for complete details on the data collection methods undertaken for this study.

6.4.2 Analytic approach

The data was analyzed using an interpretive thematic approach (Starks & Trinidad,

2007). All data was transcribed verbatim and reread carefully to gain familiarity with the

body of information, identify patterns, evaluate contradictions, and explore assumptions.

To create codes, statements were categorized into meaningful groups by focusing on the

what, *how* and *why* components of the feelings, actions, and experiences described in the

statements when collapsing data (Starks & Trinidad, 2007). The 'constant comparison

method' was used to reintegrate the data in order to draw central themes and relationships

across all the narratives (LeCompte & Schensul, 1999, p. 75). Codes were combined into

overarching themes by identifying, organizing, and analyzing data patterns within the

theoretical framework informing the study (Braun & Clark, 2006). Quotes that

represented the themes were extracted from the transcripts to illustrate concepts, and

context was provided for each quote to enable the judgement of *transferability* for the

reader (Koch, 1994).

The researcher regularly presented the analytic approach and coding scheme to

committee members and the Cedar Project Partnership. This was done to help to boost

credibility and rigour by addressing assumptions, gathering feedback, and receiving

recommendations on the researcher's methods and interpretations (Golafshani, 2003;

Stark & Trinidad, 2007). All analytic claims were compared to existing knowledge in

order to map out any congruence or contradiction with previously collected/analyzed

data. In order for the study to be *dependable*, all decisions made regarding the identification and categorization of coding and themes were carefully recorded to establish an audit trail (Koch, 2010).

N-Vivo 10, a software package for qualitative research, was used to organize the data and create the codes. For more details on these analytic methods, please refer to Chapter 3.3.5.

6.5 Findings

Participants' recollections of the factors that had impacted their sexual behaviours, understandings, and health, were both vivid and vague. This may have been an indication of their level of comfort discussing these memories, or how clearly they remembered them. The narratives of participants who were based in Prince George were very similar to those who were based in Vancouver. This was because the majority of all participants had moved across multiple towns and cities during their developmental and adult years. Their sexual health was greatly affected by the level of stability they experienced during childhood. The devastating impacts of both the residential school and child welfare systems manifested throughout their narratives. More than half the interviewed participants had experienced childhood sexual abuse. They indicated that the assaults had taken place under adverse conditions, including poverty and living with caregivers who were grappling with their own mental and emotional distress for which they self-medicated. The offenders were sometimes family members, and at other times, people who participants became exposed to while in foster care, at parties, while living on the street, or during survival sex work. Almost two-thirds of the participants had been taken from their families and many experienced abuse while in foster care. Not one

participant shared having a positive experience with foster parents; they depicted their foster years to be a time of being unloved, unsupervised, not in school, and facing constant uprooting. Their childhoods were predominantly characterized by neglect, loneliness, and trying to fill emotional voids often by finding older, usually predatory, partners to take care of them. These distressing experiences were identified as the origin of initiating drug use to cope with the trauma, neglect, and losses they had endured. Collectively, their sexual realities were described to be a product of multiple lifetime adversities that interfered with opportunities to experience safe and meaningful sexual relationships or access the necessary resources that would have supported their ability to make informed decisions during sex.

This qualitative analysis aimed to unravel these multifaceted factors throughout the course of participants' lifetimes. Excerpts from the interviews are presented to illustrate the five broad themes (and subthemes) that emerged from the narratives. They include: 1) the role of intergenerational trauma through the residential school and child welfare systems; 2) the impact of sexual abuse during childhood and as an adult; 3) sexual education at school, at home, through culture/traditions/spirituality, prison, and through peers, media, and self-learning; 4) the "intangible" components of sex, which included attitudes around condoms, pregnancy, trust/fidelity, and experiences with STIs; and 5) the role of substance use on sexual health, such as the impact of using drugs and alcohol during sex, the experience of violence in relationships among people who use drugs, and methods to self-protect when using drugs during sex.

6.5.1 Intergenerational trauma

Sexual abuse in the residential schools

Throughout the interviews, participants' narratives highlighted how intergenerational trauma continues to impact Indigenous communities who are grappling with collective distress. Their understanding of the historical pathways that affect sexual health outcomes were largely influenced by their connectivity with Indigenous people and communities. Young men and women who had spent part or most of their life among Indigenous communities discussed the link between cycles of historical trauma and present day sexual health disparities. Many had witnessed the pain that was endured by survivors of the residential schools, and knew of friends, family members, and loved ones who had withstood its horrors. Through their narratives, the transmission of lateral violence was believed to occur because "people did what was done to them". Participants explained that in the residential schools, traditional spirituality was shunned and Christianity was forced upon students by the same individuals who abused them. They believed that for residential school survivors, faith was lost and replaced with trauma. Such experiences were explained to attach confusion, shame, and guilt to sex, and impede survivors' abilities to even think about sex:

> *"They* (residential school survivors) *lost their faith in priests and nuns, they were the ones doing all that* (sexual abuse)*. So no faith. After the res*(idential) *schools, Christianity still tries to get forced on them, sometimes it confuses people. Is sex good? Is sex bad? Do we use sex to hurt people, or do we use it to pleasure?"*
> – Flynn, 33

> *"When it comes to the residential schools, and the abuse, and the many many many other abuses that were experienced there…I'm sure there are people out there that just don't have sex, and they definitely don't wanna think or talk about it. It's traumatizing."* – Miriam, 24

Participants reiterated that for residential school survivors, the topic of sex is associated with immense suffering, resulting in an inability to discuss sex in general, which is transferred through generations. This was the case for Isabelle, whose mother was sexually abused as a young girl in residential school. When Isabelle got her period, her mother was unable to talk to her about puberty. For Isabelle's mother, any conversation pertaining to the human body and/or sexuality triggered her immeasurable trauma, which would cause her to dissociate to cope with the pain:

> *"My mom was abused* (in residential school) *when she was little. She wouldn't talk to us about sex stuff at all. I wanted to ask her about my period even, and she just wouldn't go there and go all quiet. I guess she just got, uncomfie, like, anything that talked about down there was a no-go for her cause it reminded her* (of the abuse).*"* – Isabelle, 24

Participants conveyed their disapproval of how historical trauma has been and is being addressed. Carinna was raised off-reserve, but lived on-reserve for a few years after she got married. During that time, she met many residential school survivors and was taken aback by the profound trauma that they were living with. Her ex-husband's Nation had successfully sued the federal government, but Canada's accountability to the survivors was only in the form of a bank check. Carinna stressed that financial compensation must be supplemented with mental health services to support large-scale healing. In the absence of true accountability in the form of care provision, she believed that ongoing pain would persistently diminish both general and sexual wellbeing:

> *"It's gut wrenching to hear the stories. To hear. It's amazing what they did* (in the residential schools)*. To know that, today, the people down here, that are getting these payouts. You've already taken everything from them. Can you return somebody's soul? Can you get a refund for that? Their* (government's) *idea is give them money; they're giving them ropes to hang themselves with. Here I bought you off, I stole your innocence, I messed you up. Sorry I screwed your life. For years and years to come, this is still going to affect Native people."* – Carinna, 28

The participants' narratives demonstrated that intergenerational trauma impacted their sexual wellbeing through lateral violence, not receiving any sexual education at home, and by living with caregivers who self-medicated to cope with unresolved trauma. Parents who used drugs were often unable to adequately care for their children. Being unsupervised increased the chances that children would find themselves in unsafe spaces (e.g. attending parties where drugs and alcohol were used or falling prey to sexual predators). This was true for Emerson, who described that his parents' drinking interfered with their ability to supervise his whereabouts. Emerson would frequently attend parties as a teenager. On one occasion, he found himself far from home with few options to find his way back. He accepted a ride from a stranger, and was unfortunately molested during the drive back home:

> *"You would go out till the middle of the night, ending up god knows where, not even knowing how to get back home. It's not like you could afford a cab, and there are no buses running. So you have to chat someone up to maybe give you a ride."* – Emerson, 27

Many similar accounts were described by participants whose parents struggled to keep them safe and supervised. Such troubled living conditions were identified as the reason for being apprehended and placed into foster care.

Foster care

The impacts of unresolved trauma, self-medication, and social marginalization rooted in the legacies of the residential school and child welfare systems, had disrupted the family dynamics of many participants during their childhood. The adversities they had experienced in their own adult lives helped them understand those of their caregivers'. They explained that in the face of ongoing psychological and emotional pain, their caregivers' capacity to offer safe environments for their children, to transmit love,

and to provide lessons about self-care, was severely challenged. Such stories were shared

by 18 participants who had been apprehended from their families and placed in the child

welfare system. However, for all 18 young men and women, being placed in foster care

failed to offer safer living conditions. Foster parents were described as strangers who "did

not care". This resulted in inadequate supervision, missing school, running away, self-

medicating, and having difficulty finding stability, all of which directly impacted sexual

health. This was the case for Maisie, a 28-year-old young woman, who lived with her

grandparents on-reserve as a child. Her grandparents were residential school survivors

and drank heavily to cope with their trauma. They struggled to keep Maisie and her

siblings safe. Maisie was eventually apprehended and placed into multiple foster and

group homes. She felt her fragmented childhood impacted her sexual health as she was

often left unsupervised. Maisie shared that she still struggles with stability to this day.

She believed that a "better home" would have circumvented some of her negative sexual

experiences:

> Maisie: *"The one thing that I needed was a better home. Put me in a better home. But they just take you from one foster to another, one group home to another. So that stays with you, now I can't live in one place 'cause I don't know what that means. I was always on my own. Up to no good, no one watching over."*
> N.C.: *"What do you mean when you 'say up to no good'?"*
> Maisie*: "You know, hooking up with randoms, drinking, that kinda stuff."*

Most disturbingly, many participants described experiencing maltreatment, including

sexual abuse, while in foster care. Jonas, 29, shared that his parents self-medicated to

cope with unresolved trauma. He was particularly close to his younger brother, and

recalled the devastation of being separated from him. Jonas suffered sexual abuse while

in foster care, for which he is still receiving counseling. He believed that instead of being

placed with abusive strangers, his care should have been transferred to his extended

family:

> Jonas: *"I lived on-reserve till I was 7. My parents had problems, so they took us away. That didn't help. Foster home to foster home, group home to group home. No one to care for us. My one brother I never saw till we were adults, he was my little brother and I loved him. I got really badly* (sexually) *abused in foster* (care). *They should have let us stay together with other family."*
> N.C.: *"Who is they?"*
> Jonas: *"The people who took us."*

The legacies of colonization were thus found to impede sexual wellbeing by interfering in

the transmission of valuable self-care lessons from parent to child, and through the

impacts of familial fragmentation. The pain of being torn from one's family was severely

intensified for 9 participants who experienced sexual abuse while they were in foster

care. Their stories described how the culmination of such losses deeply impacted their

sexual wellbeing.

6.5.2 Sexual abuse

Childhood sexual abuse

Through the narratives, it was evident that the experience of sexual abuse during

childhood critically damaged the sexual wellbeing of survivors. Sixteen of the

interviewed participants shared that they had endured sexual abuse as children, with the

median age of abuse being 11 years old. They demonstrated immeasurable pain when

they spoke of their harrowing experiences, but also portrayed strength and a deep

perceptiveness of how the abuse had impacted their lives. The devastating effects of

childhood sexual abuse manifested in multiple ways. One of its most distressing

consequences was the loss of self-worth that subsequently followed survivors into

puberty, teenage years, and adulthood. Every survivor shared how the abuse injured their

self-esteem, self-confidence, and self-image. Such negative self-perceptions resulted in an inability to trust others, and interfered with survivors' ability to connect with intimate partners later in life. This was the case for Effie, who explained how being sexualized and objectified as a child shattered her self-esteem to the point that she would try and hide the womanly aspects of her body when she was around men. She shared how she lost all desire to become close to or connect with another person:

> *"It made me not feel good about myself and others. It made me distant. I try to get close to nobody. Still am like that. I don't ever like, see me like, outside, wearing revealing clothes. Going through puberty was the worst for me, I always tried to cover my chest. I was uncomfortable around most guys. Still am."* – Effie, 27

In situations where sexual abuse preceded any consensual sexual activity, it created immense confusion about a survivors' virginity status. This led some to have consensual sex shortly after being abused to settle the confusion. Often, survivors would have sex with multiple partners as a coping mechanism. Carinna had such an experience after she was sexually abused as a child. She shared how the abuse robbed her of her sexual wellbeing. By engaging in multiple consensual encounters, Carinna hoped to replace past experiences with new ones in which she controlled the dynamics. However, she was never able to place enough distance between her consensual encounters and her non-consensual one to ease some of her agony:

> *"You have this part of you that was stolen, and you try to get it back by, just seeing whether it can finally become normal with someone, so you just have sex to replace old memories with new ones, but it never works."* – Carinna, 28

Survivors explained how childhood sexual abuse caused them to relive pain even during consensual sex. Childhood sexual abuse left survivors to believe that they had a duty to provide pleasure during sex. This perception had carried forward into later relationships, in which they continued to expect minimal personal satisfaction, only pain. Often,

resurfacing trauma would cause them to avoid sex completely or dissociate during sex to cope. This was true for Tate, 38, who explained how her body continues to freeze during consensual encounters to this day, mimicking the body language she assumed when she was sexually abused as a child:

> *"I would just lay there while he would finish. I thought that's what I had to do. I still do that sometimes. Like just get it over with." –* Tate, 38

It was apparent that sexual abuse devastated the psychological wellbeing of children, and inculcated deep feelings of shame, stigma, and fear of judgement. This prevented many children from stepping forward to disclose the violence they were being subjected to. It was particularly troubling to find that some survivors kept silent out of fear of being taken away from home, and be placed in the hands of potentially abusive foster parents. This was true for Mason, a 19-year-old young man, who was repeatedly molested by a male relative who lived in his home. He shared how frequently he considered asking for help. However, he knew of friends who had disclosed and were taken away, only to become re-victimized in foster care. Fear of being separated from his siblings only to endure more abuse by strangers, secured his silence:

> *"If you would go tellin someone they'd say 'yea what makes you so special'? Or they'd just take you away and put you in another place where you'd be abused. That happened to my friends." –* Mason, 19

For others, disclosure not only carried the threat of being torn away from home, but rather, intensified the threats that already existed at home. Often, participants were reluctant to come forward in an attempt to protect their younger siblings, or other family members whom the abuser threatened to target. Iris remembered how her sexually abusive foster parent warned that the same would be done to her sister if she ever

revealed his actions. Consequently, Iris internalized her confusion, shame, and guilt to

safeguard her family in the most adverse of circumstances:

> *"It was about being ashamed and not knowing. Like, 'why me'? I was told that if I said anything, they would do it to my younger sister, we shared a room. I felt like it was my fault and I had to protect her, right?"* – Iris, 32

Iris shared that sex has always been "taboo" for her as a result of sexual abuse. One of

Iris' younger sisters lived with their aunt, and was raised traditionally in a safe home and

never endured sexual abuse as a child. Iris described her sister as sexually "healthy" - in

that she did not face the same challenges as Iris (self-medicating, becoming involved in

survival sex work, and contracting multiple STIs). She believed that their different

upbringing equipped one sister with the power to self-care, and deprived the other of

developing such an ability:

> *"It's* (sex) *taboo because of what happened to me as a kid. But for my younger sister, she may have a different story. When my mom got sick, she went to live with my aunt, they were able to be brought up in potlatches, in the culture, and language. And it has a lot to do your early childhood, what happens when you grow up. We all came from the same household, the ones who got abused just don't care* (about self-care during sex). *So abuse impacts people's attitudes towards sex."* – Iris, 32

Through participants' stories, the feelings of guilt, shame, and resurfacing trauma that

accompanied sex and made survivors averse to discussing sex, often resulted in their

isolation. This was true for Irma, whose distressing childhood experiences infused into

various aspects of her life, such as her ability to remain connected to a strong peer circle.

Irma recognized that young people frequently discuss sex, and recalled how she would

shy away from her friends during such discussions. She was afraid that if she engaged in

the topic, she would make the fact that she had been abused apparent. Irma shared that

she eventually withdrew from her peer network in order to avoid having to think or talk about sex:

> *"Because I was abused, I never talked about sex with my friends. They would talk about it all the time but I just listened. I was always afraid that I would somehow give myself away. They thought I was a virgin and would tease me about it, but I wasn't. At least, in my body. Maybe in my head I was still a virgin. I don't know. So I just avoided them whenever those talks came up."* – Irma, 30

Participants' narratives made it clear that childhood sexual abuse severely damaged sexual wellbeing by isolating victims, instilling misconceptions about their role during sex, reducing their self-esteem, and shutting them down towards the topic of sex. Ultimately, these effects interfered with their sexual outlooks and capacity to discuss sex openly, safely, and without fear. As a result, their ability to access counseling, sexual education, and sexual health services was challenged. Ultimately, the cumulative impacts of sexual abuse made it very difficult for them to heal or find safety, comfort, and meaning in relationships.

Experiencing sexual abuse as an adult

Experiencing sexual abuse during adulthood did not present with the same magnitude of confusion or shame, but continued to profoundly impact relationships, the ability to trust others, reduced self-image, and attached pain to the topic of sex. It was troubling that the concept of "adulthood" was described by participants as the years following the mid-teens (14+), when they were still very young. Participants who experienced sexual violence as teenagers found it difficult to establish safety or intimacy in later relationships. They explained how sexual assault diminished the value and significance of sex for them. The majority of discussions around sexual abuse during adulthood pertained to survival sex work. Young women described extremely violent

encounters with clients who preyed on their vulnerability. Pilar was repeatedly raped when she was engaged in survival sex work. This led her to remain on guard at all times, even in her non-client relationships, impacting her ability to trust her partners:

> *"It* (sexual abuse during survival sex work) *made me feel very uncomfortable about sex. And nobody did anything to make me comfortable. Now, I'm very careful. I'm always alert, like I know there are bad people out there who may want to hurt you. So I'm always careful. Of everyone."* – Pilar, 23

At the time of the interview, Iris was actively involved in survival sex work in the Vancouver's Downtown Eastside (DTES). She believed that many of the men who seek sex in the DTES are predators. On occasion, the pain of drug withdrawal would force Iris to exchange rough sexual acts that she would have otherwise not consented to. These experiences made her fearful of both men and sex, and she perceived sex to be a tool that men used to inflict pain upon vulnerable women:

> *"People come down here because they know they can prey on people that they see as weaker. Sometimes women are addicted and the promise of good dope takes them places they don't necessarily want to go. That makes you scared. Scared of men. Scared of sex."* – Iris, 32

Participants who had endured sexual abuse as young adults shared how they developed an erroneous understanding of what consensual sex entailed. When Arya was 16, she lived with an older man who drank heavily, was violent, and eventually forced her into survival sex work. At the time, she was unable to refuse his sexual demands, and felt she had a duty to provide pleasure to him and the clients he brought home for her. This belief persisted until she met a partner who helped her discover that she, too, can derive pleasure from sex. After years of maltreatment and exploitation, she was on her path to healing through a partnership that made her feel safe, cared about, and listened to. For

Arya, the experience of a healthy relationship allowed her to differentiate it from an

unhealthy one:

> *"I was 16 when I was with this guy. First he was nice, but after, he started making*
> *me have sex with his friends, and other guys for drugs* (and) *money. I wasn't*
> *getting any pleasure, just pain, I felt like it was my duty to please the person. And*
> *now, to know the difference between making love and sex. Making love is when*
> *you have feelings for the person, and you can talk about what you like. I was*
> *confused for the longest time. I didn't know the difference." –* Arya, 28

Importantly, even when sexual abuse was not personally experienced, tales from friends

and family members who had been assaulted impacted attitudes towards sex. Miriam's

mother was involved in survival sex work when she was young, and had been raped

countless times. Her traumatic experiences with men led her to believe that she was a

lesbian. What her mother endured served as a cautionary tale for Miriam, who shared that

she had the same difficulty establishing trust with men:

> *"My mom was a sex trade worker before, she had issues with men, to the extent*
> *that she thought she was a lesbian for years, but through counseling she*
> *discovered she wasn't a lesbian, but that she had issues with men because she had*
> *been raped so many times. That becomes even worse when it happens to them*
> *young. I always remember what happened to her and know to be careful." –*
> Miriam, 24

Participants' narratives on sexual abuse during adulthood spoke to its destructive impacts

on sexual health. The lost intrinsic value of sex, and the inability to trust others or be able

to differentiate between healthy and unhealthy relationships greatly distorted sexual

outlooks. As bonds of love are crucial for emotional wellbeing, sexual abuse was found

to not only threaten the sexual health and safety of victims, but denied them their rightful

opportunity to form meaningful relationships with intimate partners.

6.5.3 Sexual education

Throughout the interviews, participants were asked to describe any lessons on sexual health, safety, relationships, and/or puberty they may have received during their developmental years. The majority never had an opportunity to learn about sexual wellness from a trusted, reliable, and informed source in a safe environment. Participants overwhelmingly spoke to the lack of adequate sexual health resources for Indigenous young people. However, in the face of such obstacles, they demonstrated resourcefulness. Roman, 29, and his friends lived in a small community with limited resources. He shared how they would reach out to telephone operators to ask their questions:

> Roman: *"I know that a whole bunch of us if we had questions around drugs, alcohol and the odd sex question, we would go to the payphone and telephone the operator and that worked."*
> N.C.: *"Like what kind of questions?"*
> Roman: *"We once called to ask where to get condoms and how to put one on. Or one time, it was about oral sex."*
> N.C.: *"What did the operator say?"*
> Roman: *"They told us about this health clinic we could go to but it was too far. They tried to answer questions best they could."*

While participants highlighted the shortage of sexual health resources, they did recall obtaining both informal and formal modes of sexual education (sex-ed) throughout their life. The home environment, school, and culture/religion/spirituality were understood to be formal sources of education, as lessons were transmitted by someone older. Other important, but informal, sources of sexual education included peers, the media, self-learning, and prisons.

Sexual education in the home environment

When recollecting past lessons on sexual health, participants identified the home as their earliest source of sexual education. This included their own homes as well as those of family members or friends whom they would visit or stay with. Experiences of

sexual health education in this environment ranged from positive to strained. Very few

participants reported having sexual health discussions with trustworthy adults whom they

felt comfortable with. Most attributed this to their caregivers' struggles with substance

dependence and unresolved trauma. As such, the sexual education participants received

in the home environment was described to occur mainly through observation. Ten

participants described learning about sex at home by witnessing it between people who

were drinking alcohol or using illicit drugs. Such scenes elicited immense confusion and

fear in their young minds. Emerson, 27, remembers how this impacted his perception of

gender roles during sex, and his belief that alcohol was a necessary component of having

sex:

> *"I figured it* (sex) *out seeing my uncles doing it to women that were passed out at*
> *parties. I would question it: why they were doing that, why they drank, and why*
> *they would do that to different women? Is this how it's supposed to be done? –*
> Emerson, 27

As the home environment was identified as a primary source of sexual education,

participants were asked if they felt comfortable teaching their own children about sex.

The ability to do so was largely influenced by participants' relationships with their own

guardians. Those who described positive relationships with their parents articulated

healthy understandings of sex, relationships, and safety. They demonstrated tremendous

communication skills when discussing ownership of their bodies, had a late sexual debut,

and were knowledgeable about sex, STIs, and self-protection. All had been raised at

home and/or in their communities by their parents or extended kin, and none had

experienced childhood sexual abuse. Each spoke of their parent figures highly and as of

someone who had nurtured their sense of self-worth. This was the case for Zane, whose

uncles and cousins taught him about sexual safety, values that he was able to pass down

to his younger sister (whom he was a guardian of as their parents had passed):

> *"My uncles and cousins were there to talk to me about sex. Kids need role models. That helped me talk to my sister about it, tell her how to protect herself and how men are evil. I saw the walks of shame of other women and didn't want her to do that walk." –* Zane, 32

Kane, too, recalled his childhood fondly, he was raised by his father and extended family

members in Northern BC. He differentiated between his own healthy sexual experiences

as a teenager and the many unhealthy ones he had witnessed among his friends. Kane

believed that the reason he was spared such negative outcomes was because of his father,

who Kane described as a strict parent that kept him under close supervision:

> *"My father, would give me a curfew. If I came home* (late)*, I was in trouble. He wouldn't hit me, just would say 'go to your room'. My father knew where I was; no one else I knew had that"* - Kane, 29

Participants who did not have a strong relationship with a parent figure communicated

their desire to transmit lessons about sexual safety to their children, but found it difficult

to do so as they lacked an example to draw from. The same historical and lifetime

challenges that had prevented many of their parents from teaching them about sex also

impacted participants' ability to guide their own children. The difficulty of breaking the

cycles of intergenerational trauma was strikingly evident. This was true for Arya, who

had been sexually abused and placed into foster care, where she endured even more

maltreatment. Arya turned to drugs to cope with her pain, and as a result, had her

daughter taken away from her. She described the crippling fear she felt for her daughter's

safety, but found that her own life circumstances challenged her ability to support her

daughter:

"I'm scared. My daughter's going to be 12 this year and I think of all the stuff when I was 12, I was doing all sorts of things, I'm terrified. I don't know how to be a mother to anybody because I never had one." – Arya, 28

Still, the resilience of participants to overcome their lifetime adversities was repeatedly demonstrated. Iris had been separated from her children due to her struggles with self-medication. She conveyed frustration and helplessness about having her children taken away, but found motivation to seek recovery in order to secure visitation rights. Her family was her source of strength, and she utilized any available opportunity to guide her children by using her own experiences to inform and caution:

"With me and my daughter, I haven't had her since she was one. I know she's angry with the situation, but I do talk to her when we do have a good relationship. I tell her to use condoms and what happened to me. I try to keep clean enough so that I can see her." – Iris, 32

Through these narratives, the role of family connectedness on producing positive sexual outlooks was clear. Once again, historical and structural barriers to sexual health education were demonstrated for participants who had been taken away from home or whose parents were coping with ongoing trauma and marginalization. As such, sexual education was often left to be received through other sources.

Sexual education in school

Only fourteen participants had partaken in a sexual health education class during their schooling years. Participants who had not received sex-ed attributed missing the session to irregular schooling due to being in multiple foster homes, or because they were attending Christian schools that did not offer sexual education curricula. Participants who *had* received some form of sexual education at school described the experience as uncomfortable, ineffective, and lacking in opportunity for safe dialogue or follow-up counseling. Fear of being teased and judged by their peers prevented many from asking

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questions during the sessions. In addition, the small community setting that some

participants had received sex-ed in was identified as a major barrier to open discussion,

as many educators were known to students outside of school:

> *"At school, everyone was Native, and the counselors were there to help and to tell us what to do but kids didn't wanna go. It was weird, like I know this guy." –* Benson, 25

> *"I wasn't able to get information from the counselor because they were a family member, it was my cousin, it was a conflict of interest." –* Roman, 29

Sex-ed at school was criticized for only scratching the surface of the sexual realities

participants were living with and for being inadequately designed to meaningfully serve

the audience they were delivered to. Participants who were survivors of childhood sexual

abuse were most critical of sex-ed. Their narratives recurrently spoke to the deepened

sense of shame, discomfort, and confusion that emerged *during* and *after* the session.

They were mortified by how this sensitive topic was delivered in front of the entire

classroom, without any regard for the reactions that it may induce in children who had

endured sexual abuse. In particular, the "good touch/bad touch" component of sex-ed was

recollected as extremely unsettling. This lesson was described to involve dolls and

diagrams, and the educator would point to various body parts to differentiate between

appropriate and inappropriate physical contact. These relayed messages stood in stark

contrast to the children's personal experiences. The poor delivery of sexual education

triggered the trauma of survivors, some of who had crippling panic attacks during the

session. Iris shared how helpless and confused she felt when the sex-ed counselors

discussed "bad touch":

> *"It was kinda confusing because I got sexually abused at a young age, so when it came to learn about that kinda stuff, I felt that I had already lost that part of my life. This lady is telling me about good touch, bad touch, but I've already been bad touched, so what do I do now?" –* Iris, 32

Ultimately, the messages that were conveyed during sex-ed were done so ineffectively

that the information was often left unabsorbed. The triggering of trauma and shame for

survivors of childhood sexual abuse turned an experience that was meant to be

educational to one that was psychologically, emotionally, and mentally disturbing.

Participants provided detailed recommendations on how to address the shortcomings of

sex-ed programs in school. Their voices are shared in Chapter 7.4.2.

Traditional teachings, culture, and spirituality

The interviews explored relationships between culture, traditions, spirituality, and

sexual outlooks. Participants who had connections to their Indigenous culture during their

developmental years spoke of *culture* and *spirituality* interchangeably. As a tool of sexual

education, culture was recognized as a powerful source of positive sexual outcomes.

Kane, a young man who demonstrated healthy understandings and notions around sex,

shared how as a boy, he would often accompany his father to traditionally gather food. It

was during these traditional activities that his father transferred values on respecting all

living things, including his own body:

> "*My dad took me out in the spring and fall, we collected food the old way.
> Fishing, hunting, preparing the meat, we did that together. Those were the times
> he would talk to me about how the ground, the animals, life, are to be respected,
> and how we should respect them and respect ourselves.*" – Kane, 29

Culture emerged as a protective factor for sexual health as it facilitated healing and

instilled self-esteem during adulthood, especially for participants who had not been raised

in their ancestral ways. As the majority of participants had sought cultural practices to

overcome addiction, culture helped mitigate the negative impacts of substance use on

sexual health. Further, participating in traditional practices allowed participants to

connect with and become knowledgeable of Indigenous wellness frameworks that support

both general and sexual health. This was especially true for participants who were two-

spirited, who located their identity in the esteem that Indigenous cultures traditionally

grant to two-spirited people. This was the case for Jonas. While he had some connection

to his culture during childhood, he became immersed in it to overcome trauma and

addiction. Through these experiences, he learned about the reverence of two-spirited

people in Indigenous culture and drew great strength from it, which motivated him to

protect himself both spiritually and physically:

> *"I got clean for two years, and part of my healing process was being part of traditional stuff, dancing, and sweatlodges, and being in the fire. It helped. It got my mind off of everything. There was a spiritual connection. I was balanced emotionally, mentally, physically. I felt like I belonged. That's where I learned about the two spirited roles. I seeked it* (cultural lessons) *out myself. That helped me feel good about myself. To respect my body."* - Jonas, 29

Jaxton had been raised in a Christian household. As a two-spirited man, Christian

teachings never offered him any spiritual comfort. After becoming involved in traditional

culture, he found an important source of strength and hope. He located his spirituality in

the power of traditional teachings, and advocated for their role in nurturing and restoring

sexual health and wellness for Indigenous people:

> *"From a cultural standpoint, before the residential schools, it* (sex) *was normal. Those traditions should come back."* – Jaxton, 28

Participants who had been disconnected from their culture demonstrated the desire to

access traditional ceremonies, practices, and spirituality. Lack of cultural connectivity

was attributed to being in foster care, leaving their communities, or the perceived

inability to engage in spiritual practices due to drug use. Miriam was raised by her

mother, but grew up in Vancouver, far from her Indigenous community. Miriam shared

how she wished to be more connected to her culture, especially to overcome substance

dependence, but believed that she was unable to do so because of drug use:

> *"I've sought a lot of support. I've always been self-aware of what I've needed and where to find it. I don't know. Culture is what I need. I wish I had more access to my history. I really wish I could know more about my tribe and my history on my Native side. I gotta overcome my addiction first though. But I need culture to help me with that. It's a chicken or egg thing."* – Miriam, 24

Participants were asked to discuss puberty and whether they were prepared for the

physical and emotional changes that accompanied it. Only two had their coming-of-age

honoured with traditional puberty rites. The continued impacts of colonization and the

losses of such valuable rites of passage were, regrettably, obvious. This was particularly

the case for young men. Emerson spoke of puberty as a time of heightened sexual desires

and predictable physical changes. He placed little emphasis on the spiritual, emotional, or

mental supports he may have required at that sensitive juncture:

> *"Puberty wasn't a big deal. I'm a boy. You get some armpit hair; your voices go funny and you get horny! Haha! Not much to worry about."* – Emerson, 27

Young women's recollections of coming-of-age also highlighted the losses of traditional

resources that support transition to womanhood. Women recalled their first menstruation

as "shocking" and "disgusting". Discussions about menstruation and the changing female

body occurred largely after the fact, if at all. Some young women addressed their

questions to their mothers, sisters, and aunties after their first period. However, many had

to rely on media, friends, and themselves to learn about their bodies. When participants

were asked whether they would have benefitted from a coming-of-age ceremony, many

thought deeply about the question, and all answered in the affirmative. Helena was one of

the young women who remembered her first period as shocking. She shared that she

menstruated at age 9, before she received sex-ed in school. Helena had lived with her

grandmother, who never discussed matters of sexuality or puberty with her. As the only

girl in the family, she had little sexual health knowledge or sources of support. Helena

shared that a coming-of-age ceremony would have circumvented the shock she felt when

she had her first period, as she would have anticipated its arrival positively:

> *"I didn't know about periods. If someone had told me about it and if it was done like a whole thing* (ceremony) *like I've seen them do on this other reserve when I was living there, it wouldn't have been so shocking or gross and just normal, even good."* – Helena, 25

Participants went on to attribute the loss of cultural traditions and ceremonies to the

Christianization of Indigenous people. Those who had been reared in Christian

households recalled discussing sex with their caregivers to be difficult, even impossible.

For many, sexual education was unavailable at school. Strict Christian teachings

inculcated a great sense of fear and guilt with respect to sex. Tate's mother had been

sexually abused in residential school, where religious doctrine taught her that sex was

impure - a lesson she passed to her own daughter. Tate believed she used this lesson to

make sense of her own experiences as a child:

> *"My mom tried to raise me Christian. She'd tell me and tell me 'it's* (sex) *a sin. It's dirty. It's a sin.' I didn't really talk to my mom about these things because she wasn't comfortable talking to me about it. I think maybe because she was abused* (in residential school) *and she didn't like talking about sex. Church also said it was a sin, so I didn't know who to ask."* – Tate, 38

Austin, a 26-year-old man, ran away from home when he was no longer able to live under

the stringent religious rule of his adoptive parents. He was frequently propositioned for

sex in exchange for money and housing when he was surviving on the streets, and

eventually contracted HIV through sex. He displayed great shame and self-blame about

his illness. The reluctance of Austin's adoptive parents and educators to provide him with

any sexual knowledge left him to learn about it on his own, with dire consequences:

> *"Never had sex-ed in Christian high school. They don't do it there. It was frowned up. Couldn't talk about it. I learned on the streets and paid the price."*
> – Austin, 26

Zane discussed how the transference of traditional practices pertaining to sex and healthy relationships had been disrupted in Indigenous communities due to the legacies of colonization, and stressed that its rekindling was fundamental to sexual wellbeing. Zane was one of the young people who articulated healthy understandings of sexuality, and attributed his awareness to his grandmother, who passed down invaluable traditional teachings about sex to him and his sister:

> *"Listen, our teachings tell us how to be good, and just, how to BE. There are rules. Men have roles. Women have roles, and this is how men and women should be together. But kids need to learn these lessons from someone good. Someone who knows the teachings, and isn't afraid to tell kids how it's done right, and how it's done wrong. We don't have enough of those people. Me and my sis, we were lucky, we had our grandmother, and she knew about the old ways and taught us kids to respect ourselves and each other."* – Zane, 32

Peers

When discussing sexual education during youth, peers were frequently cited as a source of information, particularly for young people who had been in foster care or whose guardians had been residential school survivors. This was true for Natalia, who had lived with her mother and grandmother as a child. Her mother had survived residential school, and used drugs to cope with her pain. Natalia's mother never talked to her about puberty or sex, and their relationship was often strained due to drug-related bursts of violence. When Natalia menstruated, she turned to her female friends for support:

> *"I didn't know that I was going to get my period. I was at battles with my mom at that phase in life. It was really hard. My friends from school helped me to understand that part of it, taught me how to use a tampon, everything pretty much."* – Natalia, 29

Many young men recounted having difficulty discussing sex with teachers, parents, or counselors, and relied on their peers to learn about women and relationships. This was mainly approached through story sharing. However, such conversations did not provide opportunities for constructive educational discourse, given that their peers were of similar age, backgrounds, and sexual knowledge. Young men shared that they were reluctant to demonstrate a lack of knowledge or experience, as asking too many questions would have subjected them to teasing. Irvin, 22, would use humour to inquire about his friends' sexual experiences, but found it difficult to engage in "serious" conversations regarding any feelings, questions, and insecurities he had about sex:

> Irvin: *"Being a kid, I was always curious* (about sex), *so I was always cracking jokes and making fun of people. Like 'haha you did it! Yea man what did you do last night'? I was kinda scared to come out with that stuff to anyone. I don't know why, it was just weird, like I would joke about it but I wasn't comfortable actually asking serious questions."*
> N.C: *"Do you think you know why you felt too shy to ask?"*
> Irvin: *"Cause guys don't want to admit they don't know anything. Everyone wants to be a stud. So you just play along."*
> N.C: *"What kind of questions would you have liked to ask if you were comfortable?"*
> Irvin: *"Anything really. I wasn't a player but they didn't know that and I wasn't gonna make them think I was like a loser or nothin'. I didn't know some stuff. Like 'hey, how long are you supposed to last?' Haha!"*

Conversely, for young women, the challenge was not asking questions, but rather, receiving truthful answers. Maisie described how stereotypical gendered expectations label young women who are knowledgeable about sex as promiscuous. Such fears led her friends to pretend they knew very little about the topic:

> *"I could ask my girlfriends for help but lots of them played coy. I knew they were doing it, but they pretended they were all goody two shoes."* – Maisie, 28

Although peers were not the ideal source of sexual education, a strong social network provided support and a sense of belonging. Those who did not have peer circles recalled

feeling isolated. This was described by participants who were two-spirited, who had been taken away from their families, and/or had endured childhood sexual abuse. For them, sexual education was often obtained through the media or self-learning.

Self-learning

Through the narratives, participants' self-learning was found to be essential to sexual education. Even if young people had received sex-ed from parents, schools, or other sources, their personal experiences were described to have made significant contributions to their understandings about sex. Self-learning was described as the main source of sexual education for most women, as very few had received sexual education at home, and were often not comfortable to have candid conversations with their girlfriends. This was the case for Natalia. After discussing puberty, she went on to share that she learned about sex all on her own. She described that she had great difficulty discussing sex with her peers, and attributed this to the silence that surrounded sex in her childhood home:

> Natalia: *"I learned all by myself. I couldn't talk to anyone…so who would I ask? I was too shy to ask my dad when I went to him."*
> N.C.: *"What about your friends? The ones that helped you when you got your period?"*
> Natalia: *"I could have asked them, I guess…but. I don't know. I just didn't. I don't know I think all the hush hush about sex that was in our house just made me not talk about it with anyone else. I lost those friends when I moved to my dad anyway, so..."*

Self-learning was occasionally the only mode of learning for participants who were taken away (or ran away) from home and who had survived living on the street. Unfortunately, this mode of "learning" often occurred through the devastation of contracting STIs. The detrimental consequences of intergenerational trauma emerged once again. Theon had been sexually abused and ran away from his foster home when he was a teenager. He

shared that while he had learned about sex in school and through media, the majority of

his learning came directly off the streets. Theon's fragmented and painful childhood left

him homeless and dependent on drugs to cope with trauma. He eventually contracted

HIV by having unprotected sex while he was high:

> *"I learned in school and TV and stuff. The other half was me figuring it out on my*
> *own. But growing up on the street, you learn faster, it's more direct. I got HIV*
> *from a girlfriend cause I wasn't wearing a condom. I was too high and didn't*
> *care."* – Theon, 33

Participants explained that self-learning was inevitable when communities remain silent

about sex. In their narratives, they expressed incredible frustration about the

consequences of having been uninformed as adolescents. This was the case for Isabelle,

who grew up in a small community and had never received any sexual education. She had

an unplanned pregnancy at the age of 13 that she had to terminate. She demonstrated

immense pain when she spoke about the abortion and later described how she fell into

depression over the guilt. The distress of withstanding this loss at such a young age was

still very apparent more than one decade later:

> *"I didn't learn the role of any of it* (condoms). *I had no idea how a guy put one*
> *on. Nobody there to tell me. It's really sad, I was making choices I had no idea I*
> *was making. I had an abortion at 13. I didn't know about the pill; I didn't know*
> *anything."* – Isabelle, 24

Self-learning was highly evident among two-spirited participants, who claimed they

knew they were "different" during their developmental years, but did not know how or

why. As young people, they described feeling very isolated, fearful, and confused about

their feelings, and experienced difficulty approaching a trusted person to confide in and

ask questions of. Jaxton shared that as a teen, he lived in a strict Christian household and

attended Christian schools where there was very little discussion about non-heterosexual

identities. Jaxton knew he was different and shared how he isolated himself as a teenager. He was only able to make sense of his feelings when he moved to the city and met other gay men:

> *"I kinda found out on my own. In high-school, I didn't know anything about gay people. I kinda like hid all through my adolescence. When I was 22, I found out there was other people like me. I started going out and discovered that lifestyle."*
> – Jaxton, 28

The lack of sexual discourse and stigma attached to sexual activity was found to devastate sexual wellbeing by preventing young people form learning valuable lessons about their sexual identities, and how to protect themselves from STIs and unwanted pregnancies. As such, self-learning was identified as the primary source of knowledge for participants who continued to be impacted by intergenerational trauma as children and young adults, often with destructive consequences.

Media

The role of media as a tool of sexual education spoke to the immense dearth of appropriate, safe, and realistic sexual education resources that help young people make informed decisions. Movies, television, and pornography were identified as sexual education tools, but were perceived negatively. Participants explained that misconstrued portrayals of sexual dynamics were felt to create misconceptions about sex. Arya shared that romantic depictions of relationships in films create unrealistic expectations that lead young girls to seek out love and comfort from older men. She noted this to be especially true for young women who have been abused or not loved, as it was for her when she was younger:

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"People (men courting younger girls) *talk about stuff like it's a movie, where the fuck did you get that from? Did that really happen? When I was just a kid, I found a guy who was older than me, and he said 'I will take care of you', little did I know he was just a pedophile."* – Arya, 28

Participants shared that many young people watch pornography to learn about conventional and non-conventional sexual practices. Zane believed that pornography gives young men unrealistic expectations about their own performance and is disrespectful towards women. He connected the use of media as a tool of sexual education to the absence of appropriate sexual education sources for young people:

"It's the media. It destroys people's respect for sex. These flicks make the guy look like he can go on forever, and if the woman is moaning and screaming. That's not real life, so you got guys thinking they're inadequate and that women all have to do acrobats, it just messes you up till you finally grow up and realize oh shit this ain't how it works! People are raised by T.V. You need to be raised right." – Zane, 32

The Internet was cited as a frequent go-to source for sexual information, particularly for individuals who were reluctant to speak directly to others about sex, or felt that their questions would render judgment. This was true for Pilar, who described that she had questions about pregnancy for which she turned to Google. In other parts of her interview, she explained that she has a regular doctor in the DTES whom she trusts, but requires appointments to be made months in advance. Pilar explained that she avoided walk-in clinics, due to the high turnover and random assignment of physicians in these clinics. As a woman who was involved in survival sex work, her past experiences with unfamiliar doctors had left her to feel discriminated against. As a result of these negative experiences, she turned to online sources rather than healthcare providers to have her questions answered:

"I Google it! A couple weeks ago I wanted to know how long sperm lasts inside the vagina, and Google told me 3-4 days. I don't want to ask a doctor a question if Google can give me the answer." – Pilar, 23

Social institutions such as the healthcare system, prisons, and communities were also discussed as educational platforms that shaped understandings of sexual health. The role of prisons is discussed below. The functions of the healthcare system and community setting as sources of sexual education are discussed in Chapter 7, as participants largely spoke of them within the context of how they can be improved, rather than how they contributed to their sexual development.

Prison

Seven of the thirteen participants who had ever been detained recalled obtaining information on sexual safety, STI testing, and drug counseling while they were serving time. For four participants, this was the first time that any sexual health services had been offered to them, speaking to the gross systemic failure of current sexual health programming. Natalia was offered STI testing in prison. She was raised in a small community and had very little prior information about STIs. She identified prison as her very first source of sexual health education.

"I got them (STI testing) *done in jail. That's the first time I heard about them. It was good, there was a woman* (nurse) *there who explained a lot of things, I had questions and she answered them."* – Natalia, 29

Participants spoke to the importance of sexual health programs in prison, as they described the prevalence of unsafe and/or forced sex among inmates. They recognized that obtaining sexual education and testing in prison allows people who are serving time to become more informed about sexual health in general. Benson, 25, also received HIV testing and STI information while he was in prison. He felt that the HIV testing was

related to both needle sharing and sexual activity among inmates, and stressed that STI

testing could mitigate a potential for contracting or transmitting STIs both within and

outside of prison:

> *"They do HIV testing and awareness in jail, people can get tested. It's not like you have anything better to do, might as well…I guess it's good though, you learn something, but I dunno, is it cause of sex? Or are they worried about the people who are shooting* (up)*? It's good they do it, otherwise lot of people can get sick. Then they go back out and make their girlfriends* (or) *wives sick too."*
> – Benson, 25

In summary, the education sources that participants had received sexual health

information from collectively spoke to critical shortcomings of the social institutions

responsible for dispensing culturally-safe and trauma-informed sexual health education.

This forced many young people to learn about sex through other avenues that were often

ineffective, and even dangerous. As children and young adults, they were often

unknowingly making decisions, and left to deal with the devastations of STIs, unwanted

pregnancies, and traumatic relationships.

6.5.3 The "intangible" components of sex

Through the narratives, other influential factors that set the precedent for

outlooks, beliefs, and behaviours around sex emerged. These included attitudes towards

condom use, trust in relationships, self-perceived risks, and experiences with STIs and

pregnancy. The term "intangible" was used to describe these elements collectively, and

was inspired by Zane, who revealed this philosophical take on sex:

> *"Sure you got sex itself. Sex itself is one thing, but there's so much more to it. So many parts. Parts that you can't even feel, that aren't part of the sex, but still are. You know? They're operating and you don't even realize they're there! It's the intangible pieces that really make sex more than just the act." –* Zane, 32

Attitudes around condom use

Condom use was found to be largely dependent on the type and length of partnership, and gender and power roles. Generally, condoms were viewed favorably and identified as barriers to pregnancy and/or STIs. Women who were engaged in survival sex work shared that condoms served the additional role of differentiating between client and non-client relationships. Condoms were perceived necessary in new relationships, which were defined vaguely as those in which the partner was not yet "well known" or "trusted". When asked, the transition to a known partner was described to take between 2 weeks and 6 months. Most women claimed they would refuse sex if a new partner declined to wear a condom, and most men stated that they would use a condom if a woman asked them to. Poppy, 17, would always use condoms with new partners and conveyed that sex without a condom was non-negotiable. Poppy had not endured childhood sexual abuse, had received sexual education in school, and was raised in her community by her family, specifically, her older sister who Poppy spoke fondly of as someone who guided her. It was evident that her stable childhood and presence of role models allowed her to demonstrate strong and assertive communication skills that helped her control her sexual environment:

> *"Oh it's natural for me. I have no problem* (asking to use a condom). *They get mad but I say 'you know what? If that's all you want then see you later!'"*
> – Poppy, 17

While the intent to consistently use condoms was communicated by most women, those who had lived in (or still visit) small communities described their reluctance to purchase condoms while in these areas due to confidentiality threats and fear of judgment. When faced with such perceived threats, young women often relied on their male partners to supply and use the condoms. When asked whether pregnancy would invite comparable

fears and reputational threats, Carinna responded that pregnancy was socially looked

upon as the product of a committed relationship to one man, whereas condoms were seen

to suggest promiscuity:

> *"It's like if you get pregnant, it's cause you've been with your old man, but if you use condoms, you're fucking around."* – Carinna, 28

One concerning finding was the discrepancy between whether condoms *should* be used

and whether they *were* used. This was most evident among young men who

communicated that although condom use was important, it did not determine whether the

sexual encounter would take place. With respect to condom use, the interviewed young

men unanimously appointed women as the ultimate decision-maker. Irvin and Emerson

both advocated for condom use, but they shared that they had refrained from doing so

when their female partner asked them not to use one.

> *"You should wear a condom every time, depending on…well it's up to them but I think condom use is the right way to go."* – Irvin, 22

> *"I told her, 'I'm not gonna have sex without me using a condom and that's that'. After a while she had to agree, well she didn't have to, you know. I'm not gonna say 'no' to her."* – Emerson, 27

Men who were the clients of women engaged in survival sex work stated that on

occasion, they would be asked not to use a condom. Young men described that women

involved in survival sex work use their intuition and people skills to assess regular clients

and determine if condoms were necessary. However, women actively involved in

survival sex work stated they would invariably use condoms. Iris shared that for her, the

extra money was not worth the risks that accompanied unsafe sex:

> *"If they don't want to* (use a condom), *I say 'see ya!'. What? $50 is gonna cover me having AIDS? To me it isn't worth the risk."* – Iris, 32

Yet, women who were no longer involved in survival sex work shared that on occasion, they had forgone condom use due to offers of increased payment, when they were with a familiar client, or while they were going through withdrawal:

> "*I would always try and use condoms with them* (clients). *If I didn't, it was cause I was desperate for drugs.*" – Isabelle, 24

Unfortunately, condoms were not perceived as necessary during oral sex, irrespective of partner type or sexual orientation:

> "*He didn't want to and I didn't argue. He just went down on me. In that situation, we didn't need to use one. I thought about it.*" – Jaxton, 28

While the majority of participants recognized the importance of condom use in new/client relationships, power dynamics were found to significantly impact that use, as both men and women recounted situations in which their desire to use condoms was not satisfied due to their partner's reluctance. Women who engaged in survival sex work shared how refusing to have sex without a condom could result in violence. When they were in such situations, they explained that they try and escape or simply succumb in order to minimize physical danger. Occasionally, clients who initially refused to wear condoms would relent, but subsequently remove the condom during sex. Poppy, 17, described that despite refusing to engage in unsafe sex with clients, condom negotiation had the potential to lead to violent encounters:

> "*It's very dangerous* (condom negotiation), *sometimes they will be very forceful and try to take off the condom, or force you to have sex with them without one.*" – Poppy, 17

Trust and fidelity in relationships

Condoms were not viewed as barriers to intimacy, but rather, as barriers to trust. Participants reiterated that using condoms depended on the seriousness of a relationship. Condoms were wholly perceived as unnecessary in long-term relationships. Participants

in such relationships reported using other forms of birth control (e.g. the pill or the pull-out method) if they wanted to avoid pregnancy. As previously stated, participants reported they would stop using condoms if their partner was felt to be "known". This was described vaguely, as someone they felt they could "trust", an assessment that was informed by their intuition and people skills. The timeline in which this sense of knowing occurred varied from a few weeks to months. For young men, the timeline was generally shorter. Although participants stated that they would ask new partners about STI testing, they did not request and inspect the test results, because they felt it would convey mistrust. Requesting condom use with a regular partner was generally reported to provoke suspicion for both men and women. This was the case for Irma, who questioned her regular partner's motives when he would consistently ask to use condoms:

> *"I was with a guy for two years, but we always used condoms. He said he didn't want to get me pregnant, but I don't know, it was suspicious."* – Irma, 30

Conversely, participants who wanted to use condoms with their regular partners (either to prevent pregnancy or if they were concerned with fidelity) conveyed frustration about the insinuations that arose due to the request, and reported being coerced into using other methods of birth control by their partners. Such situations were described to have led to emotional, psychological, and even physical abuse. When Arya developed a health condition that required treatment, she found the medication interfered with her birth control. She asked her former long-term boyfriend to use condoms. In response, he accused her of cheating and physically assaulted her:

"With my ex, I was on birth control, they (doctors) *didn't tell me that the* (medication) *pills would mess up my birth control, we ended up getting pregnant. I was like clearly the pill* (birth control) *isn't working so you gotta wear a condom. And he said 'I'm not wearing a fucking condom and the only reason I would is cause you admitted that you're a whore and you're sleeping around on me'. To the point you're getting pushed around and slapped out, cause this guy's thinking you asking him to use a condom is a confession to an affair."* – Arya, 28

Kane sympathizes with women who face such risks:

"Say a woman and her partner, they were fighting, or drunk, or the girl suspected the guy was cheating, she might want him to use a condom cause she didn't know what he was doing last night. It's supposed to save your life, but it can be a danger too cause he can get violent if you ask him. She doesn't want to get pregnant because she doesn't want to raise a kid in this environment. He thinks she's sleeping around even though he's the one doing it." – Kane, 29

The subtleties of relationship characteristics such as gender expectations, attitudes around condom use and trust greatly impacted sexual behaviours and the ability to consistently self-protect. It was clear that decision-making around sex was not simple, and was navigated by these complex factors.

Experiences with STIs

Participants were asked to describe their personal experiences with STIs, to self-evaluate their risks for acquiring STIs, and how they protect themselves from infection. Most respondents had strong faith in their partners' fidelity and did not recognize themselves to be at great risk. They stated that their use of condoms with people they were unfamiliar with sufficed as a preventative measure. For women who were involved in survival sex work, inspecting a client's genitals for any signs of disease was cited as a first line of defense against contracting STIs. Edeline, 29, shares:

"I won't go down on a trick if he's got like stuff there or anything. That's gross. I don't want to catch anything." – Edeline, 29

Eighteen participants had received some form of STI testing, but few went for regular 6 month check-ups. Participants were unaware of the association between ulcerative STIs and HIV seroconversion. When information about this increased risk was shared, they conveyed shock and concern, and were eager to obtain more information (N.C. coordinated with Cedar nurses to offer all participants post-interview counseling). Eleven participants self-reported ever having an STI diagnosis (Herpes, chlamydia, syphilis, and HIV). Participants who had tested positive for an STI identified broken condoms and/or dishonest partners as the cause. The reaction to the STI diagnosis was always recollected as one of shock, shame, betrayal, and even self-judgment. The magnitude of negative emotional reactions to STI diagnoses were similar across all STIs, except for HIV. HIV was identified as a major source of fear for most participants, as many had lost friends and loved ones to AIDS. This was the case for Benson, who shared that he became more diligent about condom use after two of his friends had contracted HIV sexually, and eventually passed away from AIDS:

> *"I care now. I see all these people down here, they're sick and dying from AIDS, my friends got it. So I don't want to end up like that." –* Benson, 25

An HIV diagnosis was described to be particularly devastating by the three participants who disclosed their status during the interview. When discussing HIV/AIDS, it became clear that the majority of participants used condoms with new partners and clients to self-protect against this particular STI. This finding provided clarity to what participants meant by no longer using condoms after they got to "know" a partner. Roman explained that he would ask new partners if they had an STI, and used condoms for a few weeks to assess whether they presented with any symptoms of illness (including taking any medications):

"I always have condoms on me; after two weeks of being with a girl, I take the condoms off. Men don't like it because it's a trust thing. But there are a lot of sick people who want to give others sickness, so you gotta trust your partner."
– Roman, 29

Most participants reported avoiding sexual activity when they were aware of having an active STI. However, regular screening was not sought due to the barriers to STI testing. These included a shortage of culturally-safe trauma-informed care providers who allowed the participants to receive testing and treatment in an environment of safety and trust (discussed in detail in Chapter 7.4). STIs were unanimously viewed with extreme revulsion. Herpes and chlamydia were described as "gross" due to the nature of symptoms. Genital herpes was viewed as a serious concern, but syphilis was rarely mentioned. A few participants shared that they had never heard of syphilis until they were asked to participate in the STI study presented in Chapter 5. Participants who had received STI treatment shared that they were prompted to seek testing upon feeling itchiness, burning, and/or discomfort in their genitals. The presence of sores/ulcers was not necessarily considered to be an indication of an STI, unless it persisted or was painful. This was mainly attributed to skin lesions that occur when injecting in the upper thigh area. When Maisie noticed a rash on her inner thigh, she did not obtain medical attention until it became chronically irritated:

"I didn't know I had anything cause I have like… a rash? Bumps. My skin's fucked up, it's hard to notice. But I got itchy down there, that's when I went to the doctor and he told me I had it (an STI).*"* – Maisie, 28

Other reasons for STI testing included personal initiative to be screened, involvement with research projects, or by the recommendation of a healthcare practitioner. Jonas was receiving regular counseling for sexual abuse, which had left him with the pain of always

feeling "dirty". His counselor recommended he request full blood work from his primary

care provider to put his mind at ease:

> *"I just got an STD testing, I thought I was dirty. My counselor told me maybe you should get STD testing. I thought I had syphilis. I felt dirty. I told my doctor, I think I'm dirty, and he did the full tests and I was good."* – Jonas, 29

A diagnosis for an untreatable STI led to heighted diligence towards symptom

recognition and increased condom use. However, this increased condom use was not

primarily intended for self-protection from future infections, but rather, to protect

partners from risk:

> *"I use condoms now. All the time. I don't want to pass my disease* (HIV) *to somebody else."* – Austin, 26

When participants were diagnosed with treatable STIs (e.g. chlamydia), they would no

longer trust the partner whom they contracted the infection from. However, the diagnosis

did not necessarily improve their taking protective measures in future relationships,

provided they felt that trust had been established.

Pregnancy

Pregnancy was held in high regard as a sexual health outcome. For many, it was

accompanied with optimism as it signified a second chance, served as motivation to

overcome addiction, and instilled a positive feeling of responsibility. Consequently, STI

screening during pregnancy was viewed as a necessity. Young women conveyed the

importance of protecting their unborn child. They stated that any sexual health

training/information received during their term was absorbed deeply and impacted their

day-to-day decision-making processes. Ava and Helena both shared how their sense of

duty to protect their unborn child led them to actively seek healthcare, when they may

have not done so otherwise.

"You don't wanna pass anything to your kids. Some stuff can be prevented. You don't wanna pass nothing to your kids." – Ava, 29

"You have to get tested, you're responsible for someone else's life." – Helena, 25

Young men echoed how health concerns during pregnancy drive expectant mothers to seek out health services. They viewed pregnancy as a blessing, source of strength, and incentive to overcome addiction. Kane shared how his ex-girlfriend struggled with drug and alcohol dependence. He frequently encouraged her to seek recovery, but she persistently rejected help. They eventually parted ways, but when she became pregnant, Kane reunited with her during her pregnancy, and was amazed by her transformation:

"What surprised me is how she came down off of everything (drugs) *for that baby. I was proud of her. Anything is possible in the world if you put your mind to it. A child can do that for you." –* Kane, 29

Most participants spoke fondly of their role as a parent, and recognized the significant value and meaning that it added to their lives. Pregnancy emerged as a positive sexual health outcome by increasing healthcare and drug recovery utilization, and by facilitating positive emotional and psychological changes. Unfortunately, becoming a parent did not alter post-partum sexual practices or uptake of services. Participants were willing to face the barriers associated with sexual healthcare when it concerned another life, but often avoided accessing it for themselves, as STI screening and physical examinations were described to be distressing and unsafe (discussed in detail in Chapter 7.4). The ability to abandon the need to self-medicate and utilize any healthcare services that were available to protect their child demonstrated both the strength of participants and the protective impact of family on sexual health outcomes.

6.5.4 Drug use and sexual health

Self-medicating lifetime trauma

Throughout the interviews, participants shared personal details regarding the impact of substance use on their sexual health. For many, self-medication with drugs and alcohol was described to be an effective coping mechanism for profound trauma. This was particularly true for young people who had endured the horrors of childhood sexual abuse. For them, substances helped restore the self-esteem that was lost due to maltreatment. This was the case for Mason, who was sexually abused by a man as a teenager. He identified as heterosexual and explained how the abuse damaged his self-esteem. Mason shared how he required drugs and alcohol to feel confident in his capability to perform sexually:

> *"I can only have sex when I'm high. I'm afraid of not being able to please my partner, but the alcohol gives me balls of steel! Drugs too…depends on which type."* – Mason, 19

Pilar, who suffered sexual abuse as a young girl and was later diagnosed with a stress disorder, also shared how she turned to drugs and alcohol to cope with resurfacing trauma and anxiety that she felt during sex:

> *"I was really confused and angry, hurt, disturbed. I pushed* (had) *PTSD without even knowing it. The only way I could solve it was doing lots of drugs or alcohol* (during sex)*."* – Pilar, 23

Alcohol was identified as a significant risk factor for unsafe sex, especially during the experimental teenage years. It was involved in many first-time consensual encounters, and was described to loosen inhibitions and instill confidence. Illicit drugs were described to have the dual function of enhancing and suppressing sexual desire. Even if a drug served as a sexual suppressant, it still impacted sexual health through the increased likelihood of exchanging sex for drugs. Drug use was found to heavily impact condom

use during opiate withdrawal, as participants reported an increased willingness to exchange unsafe sex to obtain heroin:

> *"People will do anything when they're* (dope) *sick. You'll do anything."* – Iris, 32

> *"I didn't care about them* (condoms) *before because all I wanted were the drugs. I was bad into the drugs."* – Theon, 33

Episodes of cocaine or methamphetamine binging were associated with blackouts, not recalling whether condoms were used, or not "caring" to use condoms while under the influence of drugs. This was true for Morris who shared that he has had unsafe sex while under the influence of crack-cocaine:

> *"I have had unsafe sex. It is what it is. Sometimes you're just too high. The coke. Crack. And you just brush it off."* – Morris, 18

Many participants conveyed their desire to overcome their substance dependence, but in the absence of alternative therapies that could help them cope with their lived traumas, they felt their only resort was to continue self-medicating the pain. As such, the ongoing effects of intergenerational trauma and the lack of appropriate mental health services continued to threaten their sexual wellbeing by way of drug use.

Violence in relationships among people who use drugs

When discussing sexual partnerships, participants spoke of the challenges that arise when two substance dependent people are in a relationship. They acknowledged that disagreements are a natural part of any relationship, but noted that when they transpire between people who are under the influence, the potential for violence escalates rapidly. Trust was considered a key component of any serious relationship, and participants shared how people who use drugs often suffer from the side effects of paranoia. Due to the high prevalence of survival sex work in the DTES, many participants who had non-client relationships with women involved in survival sex work reported a general sense of

mistrust, discomfort, and concern about contracting STIs. They stated that such

uneasiness had led to many violent disagreements. Young women were more likely to

describe episodes of violence with casual partners rather than regular partners when they

had sex under the influence of drugs and alcohol. Miriam described a traumatizing sexual

encounter with a casual boyfriend. She initially perceived him to be calm and kind, but

described how he quickly turned violent after injecting drugs:

> *"*(After the attack) *Now I don't get people close to me when I'm high. I may have consented to sex, but I didn't consent to anything rough. I struggle with whether it was considered a sexual assault. The assault wasn't sexual, but we were…he was so high. I was so high I couldn't get him off of me. Don't put yourself in a closed room with someone you don't know or you think you know. I had a lot of self-blame for that one, I put myself in that room with the door closed and decided to be intimate. When it comes to drugs, you can't trust people, cause you don't know how people are going to behave under* (the influence)*"* – Miriam, 24

Young men who were in intimate relationships with women who use drugs also revealed

that they were the victims of many drug-fueled altercations. This was the case for Kane,

who had described a relationship with a girlfriend who had endured childhood sexual

abuse. He described how she needed to use drugs during sex to dissociate from her

childhood trauma, but instead, would become extremely angry while under the influence.

Kane stated that he tried on multiple occasions to avoid having sex with her while she

was "rough" with him, and these instances led her to physically assault him:

> *"She'd want to get high and have sex. It* (violence) *would come out when we'd get close* (have sex)*. One time I grabbed her and I told her to smarten up, and I told her that drugs aren't that important and she wanted to rip my head off, she hit me."* – Kane, 29

These episodes of violence impacted sexual health by forcing men and women to

consider the risks associated with voicing their preferences and concerns during sexual

encounters. As such, drug use was found to not only impact the likelihood that an

individual may engage in unprotected sex when high, but that they may find themselves

in situations where a partner's drug use interferes with their safety.

Self-protection while using drugs

Participants were keenly aware that drug use situated them at increased risk for

both predation and risky sexual behaviours. To avoid such circumstances, they used

drugs in solitude and avoided dangerous situations after learning from personal

experience (or after hearing of friends or family members who had had been subjected to

violence while under the influence). Pilar explained that living on the streets and

exchanging sex for survival solidified her intuition, which she relies on to safeguard

herself:

> *"Growing up on the street and being part of that lifestyle* (involved in survival
> sex work)*, I had to look out for myself. When I was dope sick, or if I had a bad
> feeling, I wouldn't go with the trick. Something would warn me inside and it saved
> my life I few times, and the times I didn't listen to my intuition are the times I got
> in trouble."* – Pilar, 23

Many women relied on their friends and partners to "watch out" for them. This was true

for Carinna, who described how she and her fellow survival sex workers would keep an

eye out for one another during survival sex work:

> *"I ask my friends to watch out for me. I tell them where I'm going and if I don't
> come back to come find me. I also tell them to check the guy out that I'm with, so
> like, if I need to identify him later for something or the other, they can help."*
> – Carinna, 28

Flynn candidly declared that in the past, he simply did not prepare for a situation in

which he might engage in risky sexual behavior due to drug use. He explained that this

behaviour parallels a state of mind in which difficult times coincide with a lack of self-

care, including a failure to use condoms. Flynn believed this to be true for many young

people who are struggling with unresolved pain and lifetime grief:

"Kids who are going through a rough life are not going to care. I didn't care. I was with one or two who had Hep C. I've got an STD. There were times in my life when I didn't care, if she didn't use (condoms)*, I wouldn't say anything."*
– Flynn, 33

The sense of duty to protect others emerged once again when the topic of sexual safety and drug use was discussed. Two participants who were HIV positive shared that they abstain from sex to avoid transmitting the virus, and use opiates to curb their sexual desires. Theon became infected with HIV from his girlfriend. He resorted to extreme drug binges to cope with his diagnosis, and after recovering from the initial shock, turned to heroin as a sexual suppressant:

"I got diagnosed with HIV, I don't want to give it to anyone so when I wanna feel like having sex, the heroin makes me not want it no more." – Theon, 33

Participants' desire to protect themselves from the harms of drug use was obvious, but the ability to do so was affected by the circumstances that they were experiencing on a day-to-day basis. Despite their lifetime struggles, every single participant had found the strength to pursue drug and alcohol recovery at least once, and some had remained sober for years at a time. Unfortunately, the deeply seated traumas that drug use medicated remained largely unaddressed for most participants. Consequently, drug use continued to impact sexual health risks by increasing the likelihood of having unsafe sex while high or engaging in survival sex work to support drug dependence. To overcome drug use, participants identified the critical necessity for culturally-safe, trauma-informed mental health services that address the underlying causes of self-medication. Their recommendations are described in Chapter 7.4.

6.6 Discussion

Indigenous scholars, historians, and researchers have long emphasized the continued struggles and challenges that Indigenous young people endure as a result of intergenerational trauma rooted in the legacies of colonization. They stress the importance of integrating the voices of young people when attempting to understand how historical trauma and cultural resilience shape pathways to both vulnerability and wellbeing (Brant Castellano, 2000; Clark & Hunt, 2011; Walters et al., 2002). The qualitative inquiry performed in this study aimed to identify the historical and lifetime experiences that impact sexual health, attitudes, and behaviours among Indigenous young people who use drugs within a theoretical framework that accounts for both the legacies of colonization and the inherent strengths of Indigenous people and communities.

In the interviews, participants demonstrated an acute awareness of the multilayered components that had shaped their sexual selves. They eloquently described their sexual health as a product of multiple moving parts born of the lived experiences and circumstances related to intergenerational trauma, home environments, sexual abuse, schooling, cultural values, Christian upbringing, relationship dynamics, and drug use. It was clear that sexual wellness extended far beyond personal decision-making to include multiple historical and lifetime factors that collectively shaped and impacted their sexual realities.

The impacts of intergenerational trauma, foster care, and sexual abuse on sexual wellbeing

Participants' narratives highlighted the profound impact of intergenerational trauma on sexual development, attitudes, and health. Young men and women who had

been raised in Indigenous communities were acutely aware of the historical roots of sexual trauma. They described the pain of self-loss that accompanies lifetime trauma, and drew sequential connections between present day sexual health challenges and the residential school system. Even participants who had not personally experienced sexual abuse demonstrated sensitivity to its damaging effects, as many knew of friends and family who had endured its devastating impacts in the residential schools. Participants who were brought up by residential school survivors described how the topic of sex was painful for their caregivers, interfering with their ability to teach children about sex.

For participants who had been raised outside of their communities or by non-Indigenous foster parents, the same in-depth understanding of present day sexual health disparities and historical injustices among Indigenous communities was not evident. Many had endured sexual abuse while in foster care and demonstrated great self-blame and shame when recollecting their painful pasts. It is critical to connect at-risk young people who are displaced from their communities and families with culturally-safe, trauma-informed care that will allow them to unravel the historical contexts in which their own vulnerabilities are situated within. This will enable them to deal with any feelings of confusion, self-blame, or shame that may be attached to their personal circumstances and move towards healing (Larkin et al., 2007; Natives Women's Association, 2010; Pearce, 2014). A critical finding from this study was the healthy sexual outlooks demonstrated by young people who had been raised by their families. This finding is not new or surprising, and speaks to the imperative necessity of breaking the cycles of child apprehension. The sexual health corollaries of being placed in the child welfare system, and the necessary measures to interrupt these destructive cycles are

discussed in detail in Chapters 4.4, 7.5, and 8.3 of this dissertation.

Participants described that, for sexual abuse survivors, sex is often accompanied with pain, fear, and discomfort. They explained that sexual abuse shuts down a victim's response to sex in general; instills feelings of powerlessness, guilt, and confusion; reduces self-esteem; minimizes pleasure-seeking; and can result in increased sexual activity as a healing strategy that aims to normalize sex. Further, young women shared how the confusion of whether one was a virgin after sexual assault drove some to seek out a consensual encounter to settle the uncertainty. Sexual abuse was described to increase risk for re-victimization, as a survivor would be more likely to run away from home, be placed in foster care, and not be able to differentiate between healthy and unhealthy relationships. Survivors described how they were less able to focus in school, and more likely to withdraw from protective networks provided by social engagements, peers, and their community. These narratives support previous investigations of sexual abuse that have demonstrated that survivors continue to be placed in environments of risk in which they experience ongoing vulnerability. Such isolation negatively impacts self-sufficiency, self-worth, and the likelihood to prosper (Stoltz et al., 2007).

Indigenous scholars have emphasized that for many Indigenous young people who endure childhood sexual abuse, disclosure is difficult and may result in shame, shunning, and a loss of social support (Collin-Vezina et al., 2015). Participants reiterated these realities and spoke to the difficulty of disclosure when living in a tightly-knit community. It was particularly disturbing to find that for some participants, the threat of having a loved one attacked as punishment for exposing their abuser secured their silence. Indigenous researchers stress that fear of being taken away from family and the

proximity to abusers leaves many victims to cope alone with the devastating long-term consequences of sexual abuse (Collin-Vézina, Dion, & Trocmé, 2009). Regrettably, this silence still persists, and the associated underreporting of sexual abuse is a persistent barrier to recognition and healing for Indigenous communities (LaRocque, 1994; Collin-Vézina, Dion, & Trocmé, 2009; Native Women's Association of Canada, 2010; Ross, 2006).

Among participants who had survived sexual abuse, concurrent interests for care, attention, and filling emotional voids jeopardized their sexual health. Participants explained how abuse creates an erroneous perception that violence in relationships is normal, which can extend into adult partnerships. Survivors in need of affection and acceptance may be more willing to remain in relationships where the partners are abusive and controlling (Grauerholz, 2000; Shapiro & Levendosky 1999; Steel & Herlitz, 2005). Indigenous scholars suggest that in order to mitigate such risks, service providers should identify young people who require emotional support and connect them to community resources, networks, and organizations that facilitate a sense of belonging, involvement, and help form meaningful relationships with strong members of the community (Banister & Begoray, 2006; Larkin et al., 2007).

The narratives of participants who had been sexually abused shed light on their reduced self-confidence and self-image, and on how they believed that it was their duty to provide pleasure during sex, without expecting any in return. The ability to regulate the dynamics of sexual encounters, such as voicing preferences on contraceptive use, or refusing to engage in any act that is uncomfortable, necessitates self-esteem and assertiveness. Unfortunately, sexual abuse can inhibit the development of such protective

qualities, and many survivors lack the ability to control their sexual environment, even when sex is consensual (Brown et al., 2014; Prentice, 2005; Ship & Norton, 2001; Simoni, Seghal, & Walters, 2004).

The use of illicit drugs to cope with the immense pains of self-loss exacerbates the short- and long- term corollaries of sexual abuse. Participants who had survived childhood sexual abuse emphasized that drugs and alcohol helped numb their immeasurable pain, while simultaneously boosting the self-confidence they had lost through maltreatment. Such coping strategies are important mediators in the pathways of sexual abuse and poor sexual outcomes. Even consensual sex can trigger flashbacks and resurrect feelings of helplessness (Briere & Elliot, 1994; Harris, 1999). Chronic emotional avoidance through self-medication, dissociation, and detachment during sex can help survivors suppress negative feelings and avoid the resurrection of trauma. Over time, information processing during sexual encounters can become inhibited and lead to re-victimization if danger cues are ignored or minimized (Polusny & Follette, 1995).

Sexual abuse studies from the general population suggest that survivors who suffer from unresolved depression, grief, or a sense of hopelessness about living may prioritize immediate gratification over taking precautions during consensual sex, leading to sexual compulsivity (Slonim-Nevo & Mukuka, 2007; Johnsen et al., 2006). In this study, participants explained that increased sexual activity stemming from sexual abuse was a healing strategy that aimed to normalize sex. By having multiple consensual encounters, survivors were attempting to place distance between themselves and the distressing memories of sexual abuse.

The participants' accounts on the impacts of sexual abuse during childhood supports other epidemiological studies and survey data among Indigenous young people that have demonstrated the association between childhood sexual abuse and various lifetime vulnerabilities. These include: having a parent who attended residential school; having been in the child welfare system; self-reported mental illness; involvement in survival sex work; increased risk for injecting drugs; and testing positive for HIV and Hepatitis C infection (For the Cedar Project Partnership et al., 2008). Childhood sexual abuse is also associated with inconsistent condom use (Chavoshi et al., 2013; Devries, et al., 2009b); teenage pregnancy; STIs (Devries, et al., 2009a); having multiple sex partners; having sex while under the influence of drugs and alcohol (Tourand et al., 2016); and having riskier sex at younger ages (First Nations Information Governance Committee, 2012).

Our findings reinforce the messages that have been stressed by Indigenous leaders and scholars for years: the health and wellbeing of Indigenous people must be addressed within historical trauma frameworks that explain increased vulnerability to poor health outcomes through the legacies of colonization. Programming and policies that integrate traditional healing processes can help overcome the silence that surrounds sex and sexual abuse. Such efforts should move beyond personal behaviours to address individual, family, and community traumas in order to heal wounds and reinstate collective sexual and mental wellness (Christian, 2010; Christian & Spittal, 2008; Duran & Walters, 2004; Fournier & Cray, 1997; Walters et al., 2011). Lack of access to mental and sexual health services remains a critical issue for many Indigenous young people in BC. In Chapter 7, young people have emphasized that the integration of culturally-safe sexual healthcare

with mental health services is critical to ameliorating the need to self-medicate trauma. Indigenous experts identify effective strategies that promote sexual wellbeing among Indigenous young people to include: counseling with trusted service providers for help with trauma, substance use, and sexual safety; working with Elders; peer-based education; incentivized youth workshops; cultural promotion through the community; and equipping parents with tools to communicate with their children about sex, particularly sexual violence (First Nations Information Governance Committee, 2012; Yee, 2010). The methods through which such interventions can be best achieved are discussed in further detail in sections 7.4 and 8.3.

Sexual education

The silence, stigma, and shame that is attached to sex jeopardizes the ability of many Indigenous young people to acquire critical sexual health information. Sexual health risks are compounded by a lack of adequate and accessible sexual health education resources in rural or remote communities (Andersson et al., 2008; First Nations Health Authority, 2013; Yee, 2010). When these conditions combine with the interruption of the generational transmission of traditional lessons that uphold sexual wellness, many Indigenous young people are left to learn about sex through other portals.

When discussing the sexual education that participants had received throughout their life course, they identified the home, school, culture/religion/spirituality, peers, media, prison, and self-learning as sources of sexual education. Participants who received sexual education, support, and guidance from a trusted family member highlighted how positive role models constructed healthy sexual outlooks and allowed them to transfer such values to their own children and younger siblings. Even for Indigenous young

people who have experienced sexual abuse, the presence of a supportive adult can mitigate the negative mental health sequelae associated with their lived trauma (Tourand et al., 2016). Unfortunately, the narratives that emerged demonstrated that effective sexual education was not consistently provided at school or at home. These findings mirror those generated by Indigenous scholars in Canada, who emphasize that lack of culturally-safe, relevant, and decolonized sexual education tools frequently threaten the sexual health and wellbeing of many Indigenous communities (Yee, 2010).

When participants reflected upon their past, they demonstrated immense frustration with the little sexual knowledge and decision-making tools at their disposal. They attributed this to the ongoing effects of their caregivers' unresolved grief and personal struggles, being brought up under Christian doctrines that shun sexual activity, and to being constantly uprooted. Participants recalled relying on their peers, media, and personal encounters to learn about sex. They acknowledged that their peers were supportive, but lacked the life experience to offer the sexual health information they truly required. Young women found that speaking candidly about sex posed a threat to their reputation. Young men felt that being too inquisitive would give away their lack of experience. Self-learning was accompanied with trauma, regret, and devastating consequences. These included having acquired an STI, having an abortion, or being in unhealthy relationships. Participants discussed the role of media in how it created unrealistic depictions of intimate relationships that distorted their expectations of themselves and their partners. Collectively, their accounts spoke to the immense shortcomings of sexual education sources for Indigenous young people who face adversity.

Other explanations for inadequate sexual education included not attending school regularly and missing sex-ed classes. Participants who *did* attend sex-ed classes described it as ineffective and uncomfortable. This was especially true for young people who had experienced sexual abuse. In particular, the "good touch/bad touch" component of sex-ed was described to trigger trauma and intensify feelings of shame and isolation. The educational sessions did not offer safe opportunities for meaningful dialogue, and failed to recognize the true issues that their audience faced. Those who identified as two-spirited shared how the focus on heterosexual relationships deepened their feelings of confusion and loneliness.

To address the deficiencies of sexual health education among Indigenous young people, particularly those who are not in school, Indigenous leaders strongly urge for the strengthening of community-based education resources that are built upon Indigenous wellness frameworks (Cole, 2004; Anderson, 2002; First Nations Information Governance Committee, 2012; Pauktuutit Inuit Women of Canada, 2006). Education programs should mobilize human and material resources from within the community to address local needs and promote self-efficacy to safeguard against negative sexual health outcomes (Steenbeek, 2004). Such community-based resources (e.g. workshops, presentations, youth groups) can serve as effective platforms for learning. Further, it is important to equip parents with communication tools and support them in discussing sexual matters with their children. Using 'culture as intervention' can help both young people and adults overcome the cycles of trauma that result in shame and silence, and restore the traditional values that support sexual wellbeing (Duran & Walters, 2004).

As many young people are turning to their peer networks for sexual health information, it is equally important to endorse Indigenous youth programs. These include incentivized youth workshops, culturally relevant community programs, and peer-based education and mentorship that focus on sexual safety. Such programs can help encourage young people to share their stories with peers whom they can relate to and seek support from (Mental Health Commission of Canada, 2013; Schladale, 2013). This is particularly the case for young men who may be hesitant to voice their concerns, questions, and fears. It is critical to involve young people in the design and implementation of any such sexual education programs. In chapter 7, participants' accounts will be referenced to generate recommendations on how to develop and strengthen such resources.

The "intangible" components of sex

Participants described how sexual behaviours are influenced by relationship characteristics, mindsets around contraceptive use and pregnancy, and experiences with STIs. They unanimously viewed condoms as effective barriers to STIs. However, they indicated that its use was contingent upon the nature of the relationship, whether a partner is known, and a partner's stance on condoms. Young women drew attention to the threat that purchasing condoms in small communities posed to their reputations. Therefore, the responsibility for obtaining condoms was transferred to the man. Men and women felt conflicted about whether condoms *should* be used when one partner opposes them. Young men were unsure about their right to demand using condoms, especially if their female partner did not want to. While some women stated they would refuse sex in a situation where the man refused to wear a condom, others recognized that it might lead to mistrust or violence, particularly for women involved in survival sex work. Violence can

often accompany condom negotiation in relationships with power imbalances (Teitelman et al., 2008). Women who have little power or control in intimate relationships may be unable to assert themselves, and the request to use condoms in such situations can be met with violence, suspicion, or even abandonment (Gesink et al., 2016; Muldoon et al., 2015). In the interviews, young women who suspected their male partners of adultery shared that requesting condom use to self-protect against STIs was often responded to violently, as if it was a confession to infidelity. Young men were not immune from intimate partner violence, as incidents of physical assault were also described by them.

Indigenous researchers have highlighted the challenges faced by young men and women due to the sociocultural subtleties of sexual encounters, which are often navigated by double standards in gender norms (Devries et al., 2010). However, young people also behave contrary to hegemonic gender norms, with young women being the active pursuers of sex and young men being coerced into having sex (Devries et al., 2010; McIntyre et al., 2001). Shercliffe et al. (2007) suggest that sexual health awareness does not necessarily translate into contraceptive use among Indigenous young people. They argue that assertive communication skills control the conditions of sexual encounters. Participants' narratives supported these findings, as they demonstrated operating both within and outside of western masculine and feminine norms, with power roles and communication skills greatly impacting the dynamics of sexual encounters. Sexual health programs for Indigenous young people can mediate risk by focusing on strengthened inter-partner communication skills and the ability to recognize, respond to, and speak up against sexual violence (Shercliffe et al., 2007; Teitelman et al., 2008; Yee, 2010). Further, researchers emphasize that it is critical for community supports to ensure victims

who disclose domestic abuse are not alienated, isolated, or stigmatized (Collin-Vezina et al., 2015; Gesink et al., 2016).

In the interviews, women who were actively engaged in survival sex work reported that they used condoms consistently with their clients. Conversely, women who were formerly involved with survival sex work shared that they had unprotected sex if more money was offered or if they were in withdrawal. Among Cedar Project participants who are women, despite reports of consistent condom use with clients, being involved in survival sex work was independently associated with HSV-2 positivity. Social desirability bias may have led some participants to report higher condom use consistencies with sex work clients, or they may have failed to recall instances in which condoms were not used while they were under the influence of drugs and alcohol. Further, survival sex work is strongly associated with drug use, particularly crack, which is in turn associated with unprotected sex among Indigenous women (Chettier et al., 2010; Kuyper et al., 2005; Mehrabadi et al., 2008a; Chavoshi et al., 2013). Cedar Project data demonstrates that survival sex work is highly correlated with injection drug use, which was independently associated with HSV-2 positivity in Chapter 4. Women engaged in survival sex work are also especially vulnerable to violence (Shannon & Csete, 2010). Therefore, the intention to consistently use condoms cannot always be actualized in the face of such barriers.

The participants' narratives revealed that condoms serve the purpose of differentiating between relationship types. Condoms were felt to be unnecessary if a partner was trusted. In the general population, relationship characteristics such as length, seriousness, and the presence of love inversely predict the likelihood of condom use

(Civic, 1999). Examinations of condom use among Indigenous young people demonstrate varying uptake (Calzavara et al., 1998; Chavoshi et al., 2012; Cole, 2003; First Nations Information Governance Centre, 2012; Myers, 1999; Rotermann, 2005; Shercliffe et al., 2007; Tourand et al., 2016). Further, participants state that they did not use condoms during oral sex, when many STIs, including syphilis and HSV-2, can still be transmitted (National Health Services, 2015). It is thus critical for sexual health programming to reinforce the protective function of condoms. Youth advocates and peer networks should be supported to help shift attitudes and promote the use of condoms, particularly among regular partners and during oral sex.

Attitudes towards pregnancy were found to greatly impact sexual health and safety. Young women brought attention to social norms that consider pregnancy to be indicative of stable relationships. Pregnancy brought positive changes with it, including abstinence from substance use, uptake of healthcare, STI screening, and increased emotional wellbeing. Many participants viewed pregnancy as a second chance for love. Women felt a deep responsibility to provide a healthy body for their unborn child. Unfortunately, the self-care that was exercised during pregnancy was not maintained post-partum. The barriers associated with regular sexual healthcare and the need to self-medicate unresolved trauma were tackled head-on by pregnant women to protect their child, demonstrating their commendable strength to overcome adversity for their loved ones.

Pregnancy is highly valued in Indigenous communities and traditionally viewed as a blessing from the creator, even among young parents (Devries et al., 2009a, Devries et al., 2011b; FNIGC, 2012). Anderson (2002) suggests that Indigenous young people

who have experienced instability in their lives may see pregnancy as a chance to cultivate love and family ties. It must be stressed that the topic of birth control remains a highly sensitive one in Indigenous communities as a consequence of colonial interference in family planning through forced sterilization and familial fragmentation (Chen et al., 2007a; McIntyre et al., 2001; Tourand et al., 2016). It is critical that service providers who offer sexual health resources do so within a culturally-safe framework that takes traditions, history, and community values into consideration. Prenatal care providers have a vital opportunity to provide pregnant women with information on STIs, encourage regular check-ups, introduce alternate forms of contraception (e.g. female condom), and connect expectant mothers to women's health and harm reduction resources and facilitate ante-natal continuity of care.

Substance dependence and sexual health

The final message that emerged from the narratives described the association between substance use and sexual health risks. The complex relationships between self-medication and historical and ongoing suffering have been discussed in previous sections of this dissertation. Participants identified their origins of self-mediation to lie with intergenerational trauma. For many, drugs helped dissociate and numb the immeasurable pains of having experienced sexual violence and/or being torn from families. Alcohol was used to help restore the self-confidence that was lost as a result of maltreatment, suppressed resurfacing trauma, and minimized fears, anxiety and stress. Participants spoke to the complexity of inter-partner violence that occurs when two people in a relationship use drugs. Distressing episodes of violence were described by both the young men and women, and was found to impact their ability to control their sexual

environments. Further, participants whose parents self-medicated to cope with lifetime trauma discussed how such stressful living conditions impacted their sexual health by increasing their likelihood of being unsupervised, being in unsafe places, falling victim to violence or predation, attending school irregularly, and being taken away from home.

Participants' narratives reiterate what Indigenous scholars have known for years: Indigenous young people turn to drugs and alcohol to numb the pain of historical and lifetime losses (Barlow, 2003; Walters & Simoni, 2002). This is concerning, as epidemiological investigations and survey data among Indigenous young people in school have demonstrated a strong correlation between frequent drug and alcohol use and risky sexual behaviours (Devries, Free, & Jategaonker, 2007; First Nations Information Governance Committee, 2012; Kotchick et al., 2002; Tsuruda et al., 2013). Devries et al., (2009) reported that Indigenous young people who use drugs were significantly more likely to have an STI and/or an unplanned pregnancy (Devries et al., 2009a). Substance use increases the risk of being preyed upon when high/intoxicated; not being in control of the sexual encounter when under the influence; and becoming involved in survival sex work to support dependence (Barlow, 2003; Bell & Britton, 2014; Mehrabadi et al., 2008a; Schneider et al., 2012; Simoni, Seghal, & Walters, 2004). In the epidemiological studies conducted in Chapters 4 and 5, heavy alcohol drinking and injection drug use were both associated with HSV-2 positivity among women. Injection drug use, heroin smoking, and binging on non-injection drugs were associated with syphilis positivity in this cohort.

Drug and alcohol use remains an alarming health crisis for many Indigenous communities whose members self-medicate to cope with trauma-related psychological

distress (First Nations Information Governance Centre, 2012). In Chapter 7, using drugs or alcohol was cited as a means to not only deal with lifetime trauma, but to overcome feelings of hopelessness, especially for young people who do not have access to activities that are meaningful. Indigenous scholars stress that the loss of cultural connectivity through the legacies of colonization deprives many Indigenous young people of the traditional socializing opportunities that were meant to stimulate and motive them (Jervis et al., 2003; Musharbash, 2007; Rasmus, 2008; Schladale, 2013). Participants have recommended that young people be provided with music, arts, and sporting activities that channel their youthful energies and build upon their interpersonal skill-sets and aptitudes. Researchers call for the provision of accessible traditional activities that instill a sense of purpose, direction, and involvement. Such activities can deter young people from using drugs and alcohol as a means to deal with stress or a sense of hopelessness while strengthening their cultural pride and identity. Coupling harm reduction services with mental health and culturally tailored youth engagement programs can greatly support spiritual healing and boost self-esteem. Consequently, when young people's psychological and emotional pains are ameliorated through meaningful relationships and community engagements, the need to use harming medicines to cope with trauma and hopelessness diminishes (Anderson, 2002; Chansonneuve, 2007; First Nations Health Authority, 2013; Kirmayer, Brass & Tait, 2000).

Restoring sexual wellness

Participants' narratives highlighted the therapeutic properties of cultural connectedness by incentivizing young people to overcome substance use and to pursue healing. While most participants engaged in traditional practices to overcome addiction,

they simultaneously connected to cultural values that uphold sexual wellbeing. These include the prohibition of sexual violence, the reverence of women and two-spirited people, and the sacredness of sex and its connection to spirituality (Aboriginal Nurses Association, 2002; Boyer, 2009; Kliest, 2008; McGeough, 2008; Newhouse, 1998). On the pathway from psychological distress to sexual vulnerability, drugs and alcohol function as catalysts to numb pain (Walters & Simoni, 2002). The spiritual healing that participation in traditional activities offered Indigenous young people who use drugs directly improved their sexual wellbeing by way of drug recovery, and connections to meaningful values around sex, self-care, and cultural pride.

In this study, only two participants had their coming-of-age honoured with puberty rites. Young women recalled puberty as shocking and young men found it insignificant. It was clear that the interruption of traditional practices that historically supported Indigenous young people at these sensitive junctures continues to negatively impact their sexual wellbeing. While many Indigenous young people are reconnecting with their heritage (Statistics Canada, 2013), those who have migrated to urban areas are often disconnected from their communities, families, and culture and may not readily access the therapeutic benefits of traditional practices (Fleming & Ledogar, 2008). This was confirmed by participants in this study who wholeheartedly desired to reconnect with their heritage, but did not know how.

Indigenous scholars have empirically demonstrated that traditional cultures, languages and ceremonies shield against negative health outcomes (Andersson & Ledogar, 2008; Chandler & Lalonde, 1998; Dion-Stout et al., 2001; Kirmayer et al., 2003; Korhonen & Ajunniginiq, 2006; Lavallee & Clearsky, 2006; McIntyre et al., 2001;

Pearce, 2014; Torres Stone et al., 2006; Tourand et al., 2016; Wexler et al., 2014). In a study among Cree women who had survived sexual abuse, Indigenous traditions and ceremonies were found to protect against STI risks by reducing the likelihood that women would turn to drugs, alcohol, and self-harming to cope with their pain (Gesink et al., 2016). It is imperative that such connections are integrated as early as possible, as the epidemiological investigation of STI vulnerability in Chapter 4 demonstrated that young men who reported that culture played an important role during their developmental years, were significantly less likely to test positive for HSV-2. Ceremonies that support transition into manhood or womanhood can facilitate a positive sense of identity and mitigate the biological and psychosocial stresses that characterize the natural physical and emotional changes of puberty (Markstrom, 2008). In this qualitative study, young people who had connections to traditional values demonstrated a critical lesson that they absorbed: to respect their minds and bodies.

The empirical evidence and the findings of this qualitative inquiry support the message that Indigenous leaders and knowledge keepers have long emphasized: Indigenous traditions, culture, and languages draw upon young people's inherent strengths to foster resilience and restore balance to their physical, spiritual, psychological, and emotional wellbeing (Dion-Stout et al., 2001; Duran & Walters, 2004; Kirmayer et al., 2003). Indigenous scholars stress the importance of integrating traditions, values, and ceremonies into health resources and connect young people with their culture, Elders, and strong community members who can act as mentors (National Collaborating Centre of Aboriginal Health, 2013). The development of Indigenous-led and decolonized strategies built upon traditional wellness frameworks can support self-esteem, drug recovery,

spiritual healing, violence prevention, and ultimately, sexual wellbeing (Yee, 2010).

Coupling such resources with mental health, harm reduction, and family support services

can greatly reduce the associated harms of substance use on sexual health, and support

self-care measures to protect against STIs.

Limitations and conclusions

In closing these discussions, certain limitations must be acknowledged. Interviews

were only extended to participants who had returned to complete routine follow-up

questionnaires and who had partaken in the epidemiological examination of ulcerative

STIs. As such, valuable information from participants who were lost of follow-up may be

missing. Further, any observed differences in the interviewers' socioeconomic status,

gender, or ethnic background may have led participants to withhold sensitive or personal

information. To overcome this potential bias, the interviewer was introduced by Cedar

Project staff and spent non-research related time in the Cedar Project offices to develop

rapport with participants. The interviewer dressed casually, offered participants the

choice of having a staff member with whom they were comfortable to co-facilitate the

interview. The interviewer consistently strove to create and maintain a non-judgmental,

friendly, and safe atmosphere and emphasized the value of the participants' contributions

to the Cedar Project's advocacy goals.

In conclusion, participants' narratives supported theoretical perspectives that

illustrate the necessity of situating the present-day health disparities of Indigenous people

who use drugs within historical trauma and cultural resiliency paradigms. Further, this

study demonstrated the profound importance of centering the voices of Indigenous people

when investigating the lifetime factors that impact their wellbeing. Sexual health

resources can best support Indigenous people by employing a syndetic approach that utilizes a systems-level perspective to address the multifaceted elements of sexual wellness. The transfer of care from provincial and federal governments to Indigenous communities is imperative. Adequately supported communities can respond to health needs internally and greatly improve access to care, support families who are struggling, enhance the cultural-safety of resources, and utilize decolonized approaches to reinstate traditional wellness frameworks (First Nations Health Authority, 2013). Public health partnerships with Indigenous communities and collaborative initiatives are effective first steps to identifying needs. However, the underlying historical, social, and economic factors leading to the disproportionate prevalence of substance dependence and negative sexual health outcomes among Indigenous people must urgently be addressed (Wynne & Currie, 2011). Family and cultural connectedness greatly support sexual wellness, and large-scale strategies are required to reunify Indigenous young people who face adversity with their families, communities, and culture. It is critical that the cycles of trauma be broken.

Chapter 7: "Here's what we need…": Indigenous young people's voices and wisdom on how to support sexual wellbeing

7.1 Introduction

For over 500 years, Indigenous communities in Canada have been subjected to systemic oppression through numerous legislations, laws, and policies that have directly attacked their strength, culture, and self-determination (Chansonneuve, 2007; Milloy, 1999; TRC, 2015). The largest blow came from the *Gradual Civilization Act of 1857*, which established the residential school system, which forcibly removed over 150,000 Indigenous children from their communities. The agenda of the schools was to eradicate Indigenous ways of living by severing family ties and attaching shame and hatred to the Indigenous identity. The most damaging legacy of the residential schools was the rampant sexual abuse committed by unchecked figures of authority who preyed upon the children in their care (TRC, 2015). As a result of "institutionalized pedophilia", almost every child in the system endured some form of sexual abuse (Fournier & Crey, 1997, p. 72). Such assaults inflicted immense suffering and long-term damage on the children's identities and psyches, and attached a profound sense of pain, confusion, and shame to the topic of sex (Aboriginal Healing Foundation, 2007; Fournier & Crey, 1997; Milloy, 1999).

Before European contact, traditional values and cultural practices safeguarded the sexual health and wellbeing of Indigenous communities for thousands of years (Aboriginal Healing Foundation, 2007). These included norms surrounding the sanctity of sex, the reverence of women and two-spirited people, the shunning of sexual violence, and invaluable coming-of-age ceremonies that transmitted such values to support young people at sensitive developmental junctures (Barlow, 2003; Bopp & Bopp, 1997; Hylton

2002). The systemic dismantling of such health frameworks was attempted by interrupting the transmission of traditional knowledge from adults and children, and forced indoctrination into European and Christian belief systems that shunned sexuality (Oliver et al., 2015; TRC, 2015). As the cultural values that mediated against vulnerability had eroded, many residential school survivors were deprived of the tools needed to heal their emotional, psychological, and spiritual wounds (Barlow, 2003; Chester et al., 1994; Yellow Horse Brave Heart, 2003).

Today, the cumulative impacts of these cultural losses and the transmission of intergenerational trauma have impeded open sexual discourse by embedding matters of sexuality in immeasurable pain. As a result of the silence that surrounds sex, many Indigenous parents are not able to teach their children about sexual health and safety (Myers et al., 1999). Such challenges are compounded by lack of relevant, accessible, and culturally-safe sexual health resources in many Indigenous communities (Andersson et al., 2008; Yee, 2010). Consequently, Indigenous young people are facing increased risk of experiencing unplanned pregnancies (Health Canada, 2001); unsafe sex (Chavoshi et al., 2012l Devries et al., 2010; Heath et al., 1999; Shercliffe et al., 2007; Weber et al., 2003); and consequently, STI acquisition (Rotermann, 2005; Steenbeck et al., 2006).

Any attempt to understand the health needs of Indigenous people must take a decolonized approach that accounts for lived traumas that are rooted in colonization, while recognizing inherent strengths and capacity to exercise resistance and resilience in the face of adversity (Walters & Simoni, 2002). The Public Health Agency of Canada (2008) describes sexual health as "a key aspect of personal health and social welfare that influences individuals across their life span", and has long recognized that Indigenous

people require new and effective approaches to sexual programming that are relevant to their communities, histories, and values (p. 2). Yet, no large-scale programs have been put forth to exclusively cater to their needs. The sexual health resources that *are* available are often not trauma-informed, and fail to consider the historical, social, systemic, and structural inequities that impact sexual health (Craib et al., 2003; Yee, 2010). Further, such resources are not developed with the involvement of the very population they aim to serve, and do not address the complex intersections of trauma, social marginalization, and self-medication on sexual risk.

To date, no known study in Canada has asked young Indigenous people who use drugs to inform the health community of the resources they identify necessary for sexual wellbeing. To address this gap in knowledge, in-depth interviews were conducted with the young men and women participating in the Cedar Project: an Indigenous governed research study examining the health of Indigenous young people who use drugs in British Columbia (BC), Canada. The interviews aimed to unravel the individual, social, cultural, structural, and protective factors that have influenced sexual development, education, behaviours, relationships, and wellbeing for Indigenous young people who use drugs. Throughout the interviews, participants were asked how to best develop and strengthen sexual health resources tailored to Indigenous young people who face vulnerabilities similar to their own. This study presents the recommendations offered by participants, where they identified gaps in education programs, barriers to accessing and utilizing sexual health services, as well as the protective factors and sources of resilience that support sexual wellbeing.

Cedar Project participants demonstrate strength in the face of the cumulative historical and lifetime adversities they face, and their voices will offer invaluable insight into the resources that support sexual wellbeing. Indigenous leaders advise that strengths-based approaches on individual, family, and community levels are needed in order to understand and pursue wellness (The First Nations Health Authority, 2013). Accordingly, the primary goal of this study was to share the wisdom of Indigenous young people and contribute to the capacity of service providers to raise awareness, identify needs, advocate for sexual risk prevention measures, and develop sexual health strategies that respect and integrate Indigenous values.

7.2 Data collection methods

The Cedar Project is a prospective cohort study of young Indigenous men and women who use drugs in Vancouver, Prince George, and Chase, BC. The Project has been actively recruiting participants since 2003. Eligibility criteria require participants to be of self-reported Indigenous ancestry, be between 14 and 30 years of age at baseline, and have smoked or injected illicit drugs in the month prior to enrolment. An Indigenous-led coalition of leaders, scholars, and community service providers known as the **Cedar Project Partnership** has been involved in its entire research process and guides all research endeavours and knowledge translation activities. Please refer to Chapters 3.1-3.2.2 and 3.3 for complete details on the Cedar Project's study methods, Partnership, recruitment, ethical considerations, and participant care. Chapter 1.4 summarizes the historical trauma and cultural resiliency framework that informed this study's objectives, methodologies, analysis, interpretations, and recommendations.

From May to November of 2013, Cedar Project research staff informed

participants that a female doctoral candidate (N.C) was interested in conducting in-depth interviews about sexual health with them. Staff explained that the goal of the study was to better understand the multifaceted lifetime experiences that strengthen or impede sexual wellbeing and to generate recommendations on how to develop and/or enhance appropriate sexual health resources. Participants were eligible for an in-depth interview if they were actively enrolled in the Cedar Project and had partaken in the epidemiological component of this broader study. This purposive sampling methodology was chosen in order to triangulate findings across the qualitative and quantitative examinations of sexual vulnerability in order to add richness and rigour to the analyses (Golafshani, 2003). Participants were informed that they would receive a $20 honorarium for their time, even if they chose not to complete all or parts of the interview.

Participants were given the option of having a Cedar Project staff member with whom they were comfortable to co-facilitate the interview. All participants decline this option. The interviews took place at Cedar Project offices during open and closed hours. Twenty-eight participants were interviewed over the course of seven months in Vancouver. Written consent was obtained prior to starting the interview. Participants were given time to review the detailed consent form. N.C. reemphasized the limitations regarding the disclosure of harm to a child before the form was signed.

A topic guide developed with Cedar Project Partners, staff, and mentors directed the interviews to identify key resources that support healthy sexual development and sexual wellbeing for Indigenous young people. Categories of exploration were kept as broad as possible to allow relational understandings to emerge about risk, vulnerability, and protective factors. The interviews were loosely structured to allow responses to flow

inductively through the participants' narratives, and sensitive probing on difficult topics allowed for a detailed discussion to proceed (Schensul et al., 2009). All interviews were recorded using a digital device and lasted between 30 minutes and 2.5 hours. The researcher took detailed field notes after each interview to capture any observations that may have been missed on the audio recording and to document any thoughts, questions, or theoretical insights that may have arose during the course of the interview.

Please refer to Chapter 3.2.6 for complete details on the data collection methods of this study.

7.3 Analytic approach

The data was analyzed with N-Vivo 10, a computer software package designed for organizing and coding qualitative data. An interpretive thematic approach helped identify, organize, and analyze data patterns as themes (Starks & Trinidad, 2007). This approach facilitates a detailed interpretation of responses in relation to each research question and subject of interest (Braun & Clark, 2006). All data were transcribed verbatim and reread carefully for the researcher to become familiar with the body of information in order to identify patterns, evaluate contradictions, and explore assumptions. Codes were created by grouping statements into specific categories of meaning. When the data was collapsed, special attention was paid to *what*, *how* and *why* components of the feelings, actions, and experiences described in the statements. Codes were then combined into overarching themes that represented the data and framework informing the study. The 'constant comparison method' was used to ensure that all the produced data could be analyzed inductively and that each described incident could be reflected as a concept (LeCompte & Schensul, 1999, p. 75).

All decisions made regarding the identification and categorization of coding and themes were carefully recorded to establish an audit trail (Golafshani, 2003). Reflective quotes were drawn from the transcripts to illustrate conceptual patterns and derived themes. While the researcher aimed to present participants' stories, the constant evaluation of themes ensured that each story was analyzed coherently and distinctively, and balanced by excerpts fitted to the analytic claims (Braun & Clark, 2006). Pseudonyms were used to protect the identity of the participants.

The researcher presented her analytic approach to committee members and Cedar Project mentors to address assumptions and evaluate interpretations. Analytic claims were compared to existing Cedar Project findings to map out agreement/contradictions with previous data. The thematic analysis was later presented to the Cedar Project Partners in March, 2015 in order to gather feedback, recommendations, and approval of the interpretations.

Please refer to Chapter 3.2.7 for complete details on the analytic methods used in this study.

7.4 Findings

Interviews were conducted with 13 young men and 15 young women; 17 of whom were based in Vancouver and 11 in Prince George. The majority of participants had moved across many cities and towns in BC and Canada, and often drew comparisons between the availability of sexual health resources in the smaller communities they had lived in to the Downtown East Side (DTES). Participants were taken aback when asked for their feedback. It was clear that they had never been granted the opportunity to offer their wisdom on this important topic. They enthusiastically shared their knowledge and

would pause and critically think about each recommendation before offering it. Their tone during this part of the interview was light and energetic. Many statements started with "I wish I had…" and "Kids need…". Participants were reflecting upon their own experiences, and that of their loved ones when identifying strategies to support sexual health.

Throughout the interviews, every recommendation was centred upon interrupting the cycles of intergenerational trauma by addressing the root causes of vulnerability that heighten risk of child apprehension, experiencing sexual abuse, becoming involved in survival sex work, and turning to drugs to cope with pain. Participants' narratives supported the need for decolonizing strategies that incorporate traditional wellness frameworks into culturally-safe, trauma-informed approaches to sexual education and care. They emphasized that without collective healing and breaking the cycles of trauma, the sexual health of Indigenous people who face adversities will continue to be jeopardized. Overall, they identified six key strategies to support the sexual wellbeing of Indigenous young people: providing safe homes for children and adults; enhancing sexual education; building upon community strengths; an effective healthcare system (that delivers culturally-safe and trauma-informed care); strengthening mental health services; and boosting self-esteem.

7.4.1 Safe homes

The first key message that emerged through the narratives was the critical importance of having a safe home during childhood and as an adult. Eighteen participants had been in the foster care system, all of whom described the immense pain and instability they experienced during this time. Many recognized that the

overrepresentation of Indigenous children in foster care as an outcome of colonization. In Chapter 6, they spoke to the damaging impacts of the cycles of intergenerational trauma through the residential school systems, the sixties scoop, and ongoing child apprehension through foster care. Participants understood that caregivers who endured ongoing psychological and emotional pain were severely challenged in their capacity to establish safe environments for themselves and their children. They shared how unresolved trauma, self-medication, and social marginalization disrupted their family dynamics. These difficult living conditions were described to result in being apprehended from their families, only to be placed in multiple foster and group homes where they suffered immense emotional and psychological distress. Gross neglect resulted in inadequate supervision, missing school, running away, and having difficulty finding stability, all of which directly impacted their sexual health. Importantly, most participants endured numerous abuses in foster care, including sexual abuse. Such losses and suffering led many to turn to drugs and alcohol to cope with their pain, which intensified sexual vulnerability. Participants stressed that the vicious cycles of familial fragmentation need to be broken. They believed that maintaining connections to community and family from early childhood to be critical for positive sexual health outcomes. Arya emphasized the importance of restoring traditional communal childcare practices where children can live with adults who are familiar to them, love them, and can keep them safe:

> *"Before they* (Europeans) *came, everyone would pitch in to raise the children. The grandmas, aunties. That should come back. Kids need people who love them to show them what's wrong and what's right. So they know that someone is watching out for them and they stay out of trouble and have a place that's safe."*
> – Arya, 28

Zane advocated for the restoration of families, the interruption of intergenerational trauma, and healing. He believed such interventions would enable children to mirror

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healthy parenting practices and transmit valuable lessons to future generations. He

identified these factors as the building blocks of healthy sexual outlooks and self-care:

> *"Parents, myself included, kids didn't choose to be born, it was our* (parents')
> *choice, some people need more patience and more understanding, and more love*
> *for their kids, and love for their selves. To know it's wrong to hurt them, what*
> *they reap is what they grow.* (If) *they grow up in dysfunction, they will raise in*
> *dysfunction. It's really important to plant the healthy seed young so kids can learn*
> *to be right and not hurt themselves. But how do we stop the cycle from spinning?"*
> – Zane, 32

In stressing the importance of safe homes, the necessity of providing a safe haven for

adults was also discussed. Participants pointed out that the historical and lifetime

struggles of many Indigenous young people who use drugs increases their risk for

homelessness. Jaxton explained that needing a place to sleep may force distressed young

people to turn to strangers who offer lodging in exchange for favours, drugs, or sex. He

believed that secure lodging was essential to sexual safety, independence, and motivation

to overcome substance use (as sobriety was sometimes a requirement to maintain

housing):

> *"We need more safe places, safe housing, say something goes wrong, there's a*
> *place they can go into, be protected and secure, and not do anything and*
> *everything just for a place to sleep."* – Jaxton, 28

Jonas, 29, lived on the street for several months and was very averse to homeless shelters.

He felt that standing in line for a roof over his head was shameful and reduced his self-

worth. He avoided any situation that revealed his homelessness and would turn to

survival sex work to secure a place to sleep. Jonas was recently granted a single

occupancy residence in the DTES and explained he longer depends on survival sex work

for shelter:

"I'm really proud of my place. It's MY place. No more standing in line (for shelters). *No more hookin up with any old gross fag who wants to touch you so you have a place to sleep. I wanna make sure they don't take it away from me so I keep my shit together."* – Jonas, 29

In bringing attention to the cycles of child apprehension and ongoing social marginalization that deprive many children and young people of the fundamental right to have a safe place to call home, participants' narratives highlighted the connection between the ongoing cycles of trauma and their direct and indirect impacts on sexual health. They stressed that safe homes would prevent children from being exposed to situations that heighten their sexual vulnerability, and moved on to explain how young people also require sound sexual health education to support their ability to make informed decisions.

7.4.2 Enhancing sexual education

The second message that emerged through the narratives was the critical need to redesign sexual health education programs for Indigenous children and adults, both within and outside of schools. This was stressed by Austin, who grew up in a strict Christian household, attending Christian high schools, and never received any sexual education in either location. He believed that a lack of sexual education during his developmental years led him to contract HIV through sex. He urged that sexual education should be delivered to children very early, and support self-protection as soon as possible:

> *"The younger the better* (to start sexual education)*, lotta kids are learning too soon, so they get a head start. Compared to twenty years ago, it's a lot different, there are diseases, STDs, HIV, if you don't use protection, you take the risk. I've never injected drugs, yet, I contracted HIV. I wasn't wearing a condom. No one told me. I didn't know who to ask neither."* – Austin, 26

For participants who had received some form of sexual education in school, the manner in which it was dispensed brought forth unanimous criticism. Participants identified sex-ed classes as an important source of sexual education, but recalled that in their own experiences, they had been poorly delivered. Their central critique rested on their inability to safely ask questions during the session. They felt they had been burdened with information that was embarrassing, incomplete, and confusing, and were given little time to evaluate their reactions or develop questions that they could follow-up on. Participants who identified as two-spirited recalled how sex-ed was largely focused on heterosexual relations. They suggested that educators discuss the spectrum of sexual identities to allow two-spirited young people obtain a greater sense of belonging and inclusion. Participants stressed that educators should: design sex-ed classes by understanding students' backgrounds first; provide students with different educators to select who they are most comfortable with; and provide sex-ed through culturally-safe approaches that reflect community needs and values. Poppy and Kane both highlighted how students are often reluctant to ask questions, and require confidential one-on-one sessions with educators. They suggested that schools develop a system that allows students to submit questions that they may not feel comfortable asking during sex-ed, or even privately with a counselor:

> *"If it were a combination of both in class and then, one on one discussions with kids about not sex, 'cause that would be weird, but about the more sensitive stuff, like good touching bad touching. You can't do that in a big group of people."*
> – Poppy, 17

"Say, I had a question. I knew the counselor was there, but was too shy to ask. If I could have just had a…what's the word?? Pseudonym! Yea that. I like that word. Or a code! Like on a piece of paper, and it had a number that was all mine. And she could respond and leave the answer somewhere with my code on the envelope. That would have been cool. I know it doesn't leave much room for a back and forth, but it's better than nothing. And anytime of year, that should be available. I couldn't think of all my questions during sex-ed. And they only do it once. Or twice. What if someone has a question in-between?" – Kane, 29

Participants suggested that in the case of small, tightly-knit communities, having both local and non-local staff provide sexual education and counselling could mediate conflicts of interest and perceived threats to confidentiality. The distribution of information pamphlets with vetted sexual health resources (e.g. sex-ed websites) was identified as an effective tool to initiate dialogue. They mentioned that sex-ed was often a single session that could have easily been missed. Regular access to counselors was considered necessary for continuity of care, follow-up, and one-on-one support. Pilar believed that such an approach would have the added benefit of facilitating a sense of control, as the decision to seek out a counselor would be made by the individual:

"Hand out pamphlets, put up signs. Pictures on the walls like 'come see counselors if you have any questions about this that'. Kids are too cocky on the outside and too shy on the inside to ask the serious questions, so there should be counselors around who they can pop by to when they're ready, one on one." – Pilar, 23

Participants recommended that schools invite volunteer speakers who are young parents or who have contracted HIV to share their experiences in class. This approach was recommended by participants who had learned about the repercussions of unsafe sex on their own:

"Give sex-ed for the real world. When they get to 12,13, they should be talking about safe situations, unsafe ones, using real examples. They do it with cars, and drugs, so let them listen to other women's stories. People think it can never happen to me, like with cancer. So having somebody that's gone through it helps." – Arya, 28

Participants suggested schools provide videos to showcase the dangers of STIs and pregnancy. Miriam shared that videos would provide students a more comfortable medium to receive sexual education from. Further, it would give them the necessary time to process the information they were receiving, assess their responses to the information, and develop questions that they could decide to follow-up on when they felt ready to do so:

> *"Show them* (students) *videos, it's weird when someone is standing there talking, but if they see a video then you can just think about it without having to have a response. Then there should be a place to ask those questions after you've had time to think about it. Not a one hour event and that's that. Like you gotta process. It's a process. Learning."* – Miriam, 24

When participants were asked who they thought was responsible to teach young children about sex, the majority identified teachers and guardians/parents. However, they recognized that many Indigenous parents are not in positions to provide sexual education due to unresolved trauma (as discussed in Chapter 6). Participants acknowledged that the legacies of the residential schools have attached stigma to sex, and highlighted the necessity for Indigenous adults to be equipped with both mental and sexual health resources to overcome the silence surrounding sex:

> *"Also, parents get uncomfortable asking about sex, so the teachers need to play that role in teaching them* (parents) *too. Show videos, talk to them, put the message out there."* – Emerson, 27

Kane described that having strong sexual education programs that reach both Indigenous children and adults can offer young people options about whom they would like to seek information from:

"There should be a balance between being able to go to a parent, and a counselor or nurse in school 'cause I'm sure there are questions kids aren't comfortable asking their parents, and questions that they're not comfortable asking a stranger. Make sure to let them know that they can speak to them. But also teach the parents how to speak to them. Most of these parents didn't get proper sex-ed themselves, so if a kid goes to them, they won't know how to answer." – Kane, 29

The most critical recommendation for sex-ed was made by survivors of childhood sexual abuse, who stressed the necessity of incorporating trauma-informed approaches to sexual health education. They emphasized that educators must first become aware of whether and how intergenerational trauma is impacting the communities they serve, and then develop strategies to discuss sexual abuse without triggering survivors' trauma. They spoke of the delicate balance of bringing this difficult topic forward in a safe way. When survivors of sexual abuse recollected sex-ed, they discussed how ineffectively it was delivered as it candidly discussed "good touch/bad touch" without accounting for how potential victims may react to the information. Survivors described how they suffered from crippling panic attacks during sex-ed, which deepened their guilt, pain, and trauma. This was experienced by Mason. He explained that for some children, sex-ed is the first time they ever hear about "bad touch", which can make them feel alone and humiliated. He then shared that for communities coping with collective distress, children may feel that disclosure will not benefit them and continue enduring the abuse, as he did. He recommended that educators speak to how commonly "bad touch" can occur, which would prevent deepening feelings of shame and isolation, while stressing the importance of stepping forward and providing opportunities for children to do so safely:

"Tell kids that bad touch is not uncommon. Everyone thinks it happens just to them, so they don't want to single themself out. Then again, you have those places where it happens to everyone! Then the kids will think okay so it happens to everyone, why should I say something? So the kids gotta know that hey it does happen to a lot of people, and it's NOT okay. It's never okay. Ever." – Mason, 19

Iris too suffered the immense pain of childhood sexual abuse. Most disturbingly, she was threatened by her abuser that disclosure would result in her younger sister to be targeted. She shared that as a child, she was not able to understand that disclosure would have safeguarded them both. Iris stressed that sex-ed needs to equip young people with the ability and skillsets to identify dangerous situations, avoid them if possible, and come forward to disclose any such incidents:

> *"They have to teach more than just good touch bad touch for younger children, they should tell them that if someone says not to tell anyone that is the first clue that you should tell somebody."* – Iris, 32

Through the narratives, participants who had experienced constant upheaval from multiple foster homes spoke to how such living conditions resulted in irregular attendance at schooling. As a result, many had missed sex-ed at school. Further, they had very few support systems, role models, or trusted caregivers from whom they seek advice from. Community health centres were therefore identified as ancillary settings to promote sexual awareness and safety, as discussed below.

7.4.3 Building upon community strengths

Community health centres designed specifically for Indigenous young people were identified as safe spaces for sexual education and support for young adults. However, the inadequate supply of such centres in small or remote regions was repeatedly mentioned. A lack of privacy was identified as a major barrier to accessing care in such areas. Participants who were raised outside of Vancouver, constantly drew comparisons to illustrate the extent of resource deficiency. Natalia, 29, grew up in a small reserve outside of BC and later moved to a reserve near Prince George. She shared:

"Where I come from, I've never seen a place that has condoms or information or stuff. I've never seen a health clinic even. It's run by people you know right, so how can you go get a condom if your cousin is running it?" – Natalia, 29

Participants who had grown up in smaller communities explained that being able to live openly as a person who uses drugs in the DTES improved their uptake of health resources on the whole. Readily accessible and free injection equipment and condoms in the DTES encouraged many to take preventive measures. The availability of sexual health information and counseling increased their awareness of STIs, how to avoid STI acquisition/transmission, how to identify the need for testing, and where to receive treatment from. In contrast, using drugs and having sex outside of the DTES was associated with secrecy, shame, and an inability to self-protect. Poppy, 17, grew up in a small northern community where a lack of confidentiality obstructed her access to sexual health resources. She believed that fear of judgment and imprisonment prevents many young people from utilizing resources in such areas:

"Here, I go in to get a needle exchange, there's condoms there too and I just take a fistful, so I know it's okay to have sex, and it's okay to do drugs, just do it safely. Most people, especially in my reserve, when they think what they're doing is wrong, don't wanna do it safe, 'cause they're afraid of getting judged or getting in trouble. Especially when you're younger. I didn't really know about condoms until I moved in the city. 'Cause growing up in a small community where I'm from there's not really too much safe sex-ed or harm reduction supplies floating around freely on the streets like there is here. And even back home, you have to pay for condoms. You can't just go to a public drop in centre where they're guaranteed to have them." – Poppy, 17

To overcome such barriers, Flynn suggested that community centres be operated by both community and non-community members. This would allow community needs to be met and values be upheld, and confidentiality threats to accessing care avoided:

"They (healthcare staff) *gotta be a mix too. Like some locals so they know the culture, the people, and some not so that you don't have to be concerned about running into somebody you know."* – Flynn, 33

Ava suggested that centres should provide free condoms, especially in smaller

communities where buying condoms can accompany a fear of judgment, gossip, or

punishment:

> *"Put condoms everywhere, free! Free condoms everywhere! Nobody wants to go to the grocer on the res*(erve) *to get it, especially if you're a girl! They'll think you're a slut or they can go tell your folks. But in Vancouver, they have condoms in all the health clinics for free!"* – Ava, 29

Participants suggested that community centres be designed as safe spaces for young

people to "hang out", seek information, and find support. They explained that young

people are often too shy to talk about sex and turn to the Internet where information is

often inaccurate. They stressed that online materials did not offer any opportunities for

the catered one-on-one discussions that participants felt were imperative to sexual

education. They recommended that centres be staffed by culturally sensitive counselors

and nurses who could build relationships with young people, and safely provide

information and counseling, and connect them to appropriate resources:

> *"Kids need someone to talk to and can trust. These centres are great 'cause kids can just hang out. There's no pressure of having to talk to someone. But if someone is there, and they eventually feel comfortable, they have a place to go to and ask for help."* – Carinna, 28

Community centres were identified as suitable venues to hold workshops or small group

sessions about sexual health. Participants stressed that many people forgo condom use in

long-term relationships, but are still at risk of contracting STIs. In Chapter 6, self-

reported STI positivity was mainly attributed to unfaithful partners. However,

participants highlighted the difficulty and dangers of condom negotiation in long-term

relationships, as it was understood to be either an accusation of or confession to cheating.

Miriam recommended community centres offer educational sessions on the proper use of

female condoms, as it would diminish the challenges associated with condom

negotiation:

> *"They* (community centres) *should teach more about the female condom. Street nurses should always at least give mandatory female condom directions. A lot of women look at it, they see it, and are like what the heck? It's like this big* (thing)*, it's a monster. And they're free at She-way which is great. There's a ring, you can keep it in, I recommend you take it out, you use it one time. I think it's a good idea for women to use, you can keep it inside you for 8 hours at a time. It's good for working girls. It's good for those guys who don't want to use a condom."*
> – Miriam, 24

Participants explained that young people living in smaller communities not only

experience a paucity of sexual health resources, but many lack opportunities to engage in

constructive and healthy activities. They acknowledged that all young adults are naturally

inquisitive and may experiment with sex and drugs. However, participants stated that in

the absence of stimulating activities, the risk that they may do so will increase:

> *"They've* (young adults) *got nothing up there. Give them sports, or crafts, something to occupy them. Kids have sex 'cause they're bored, they have no motivation."* – Maisie, 28

When Zane was young, he took up drumming and shared how he spent hours at a time

playing them at home. He believed that his drums kept him engaged, occupied, and away

from parties and trouble. He strongly encouraged that children be given music, as he felt

music "saved him":

> Zane: *"A lot of us rebel and not listen, we think we're in control of our own lives, but we're not. Put children in things so that they feel part of something and wanna achieve; not just party and rebel."*
> N.C.: *"What things do you think kids should be part of?"*
> Zane: *"I don't know. Sports, theatre. Classes. Martial arts! Music. Music would be amazing. I learned drums when I was a kid and I swear, I spent so much time on my drums, I wouldn't go out to party 'cause I was drummin'. They probably saved me a few times. Give kids music."* – Zane, 32

Lastly, in discussing how to support sexual wellbeing, participants identified the critical need for mental health services for communities struggling with unresolved trauma and collective distress. Their accounts and recommendations are discussed in Chapter 7.4.5.

7.4.4 An effective healthcare system

Participants stressed that for sexual healthcare to be effective, it needs to be delivered by experienced, respectful, and compassionate workers. Sexual health experiences with providers varied from excellent to poor, and influenced whether participants would receive regular check-ups and/or follow-ups. Notions around respect, trust, support, and autonomy largely impacted willingness to seek out sexual health services. Isabelle shared that good bedside manner is critical, yet, many service providers are disrespectful. She believes that some providers abuse their position and unburden their personal difficulties onto patients whom they perceive as vulnerable:

> *"We need respect. Good bedside manner, there are people that are so rude, and some are super nice. I just hate when people come down here and take their issues at home on the people down here, like their personal punching bags. This is our life; sorry that it's just your career."* – Isabelle, 24

When Irvin was in a relationship, his girlfriend contracted chlamydia and referred him to a health clinic in a large Vancouver hospital. He not only felt that he was inadequately cared for through the entire process, but that he was not treated as a "human being". He now has regular testing done at the Vancouver Native Health Clinic in the DTES, where the friendly and compassionate form of support he seeks is provided:

> *"They can do their job when they treat you like human beings, more as a friend, than a client. But at* (hospital name) *it's not like that, they just revive you and throw you back on the street. But it's bad when they contact you. It's scary. Even after when you get the treatment you think do I still have it? Vancouver Native Health is great. I get tested every 6 months, I'd rather know that I don't have anything when I sleep with a girl so I don't jeopardize myself."* – Irvin, 22

Austin, 26, believes that some healthcare workers can be too aggressive and police residents. He noticed a surge in STI testing on the streets. He felt he was "pushed" into taking the rapid HIV test, and was not given adequate support to prepare for it. As a result, he experienced residual trauma and anxiety that lasted for weeks after the test:

> *"Some of them* (healthcare workers) *are a little too pushy to get the testing done, especially the 60 second results one. I wouldn't go for those. It's the longest 60 seconds of your life. But they were so pushy I finally just did it 'cause she was the nurse I'd talk to when I had questions. I still get stress from that experience."*
> – Austin, 26

Autonomy over treatment and testing options was recognized as a critical factor in seeking testing and adhering to treatment. Poppy, 17, feels the overall provision of care and options in the DTES are "good", so long as her boundaries are respected:

> *"They're doing a good job. Depends on the doctor. If the client says 'no', it means 'no!', but they still do it. Like respect your boundaries."* – Poppy, 17

Participants who reported negative experiences with the healthcare system did not identify racism as an issue Vancouver. Rather, they found being labeled as an "addict" or "sex worker" discriminatory. Participants emphasized that specialists who have expertise and sensitivity towards people who use drugs and who engage in survival sex work are critical for good patient outcomes. When Jonas received his HIV diagnosis, he was referred to a physician who did not provide the support he hoped for. The doctor failed to listen to Jonas and refused to discuss his treatment preferences:

> *"There was one doctor when I found out about my diagnosis* (HIV*), who was bad, but I told him right off. I was talking about getting on the meds right after I seroconverted and he said 'we will wait until your immune system is compromised'. I was like no. I read studies on starting meds early and its benefits. And he said 'well I'm not going to put you on them' and he didn't explain himself. I did not agree with his quality of care. Put a bad taste in my mouth, he was very desensitized towards addicts. I didn't even get it from drugs, it was from sex. I was clean when I got it. But he just thought I was a junkie. He didn't know that my boyfriend gave it to me and he didn't care to ask."* – Jonas, 29

INSITE, Vancouver's supervisory injection site, was spoken of as a vital source of information and referrals to compassionate healthcare workers who provide effective medical care. Jonas was referred to another physician by them, whom he now regularly visits. Jonas felt that this doctor did not hold judgment against him, and demonstrated compassion and respect. This gave him comfort and helped establish trust:

> *"The INSITE people told me about another doctor, he's a lot nicer. I was all high when I saw him, he was really really nice, he didn't care that I was high. I told him about the situation. He asked if I wanted him as my GP. I said okay. I've never been asked that. I'm always asking if they're taking new patients, I haven't had a doctor since PG* (Prince George). *After that, I'm good. I feel very comfortable with him."* – Jonas, 29

Racism did present as a major barrier to healthcare uptake in smaller communities that were staffed by non-Indigenous service providers. Participants indicated that there is a shortage of culturally-safe practitioners and specialists outside of the DTES. They felt that a lack of knowledge about the health needs, culture, and history of Indigenous people impact healthcare providers' respect for patient autonomy, as well as their course of treatment.

> *"You get these doctors up there from other countries, doing stints. The government puts them in towns with the biggest health issues but they don't know nothing about us. 'Why are you all alcoholics?' The least they can do is ask why or understand why, before they just think that everyone comes for scripts and painkillers 'cause they're addicts."* – Roman, 29

Participants who grew up in smaller communities consistently drew comparisons between the supply of sexual health resources in the DTES and their hometowns. They explained that having healthcare options gave them the ability to choose where and from whom they preferred to receive care from. The majority of women who lived in the DTES reported receiving regular pap smears, which they attributed to low staff turnover in the DTES's women's health clinics. This allowed patients the time and opportunity to build

relationships with healthcare providers. Having a regular physician increased their

likelihood of getting annual check-ups and adhering to the course of treatment. When

Pilar, 23, moved to the DTES, she was able to find a regular doctor. She commended his

ability to empathize with her substance dependence. Pilar stressed that for healthcare

services to be effective, the patient-provider relationship had to encompass trust, respect,

and continuity of care:

> *"He understands how drug addicts work. He has lots of empathy. You can't always think by the rules, you gotta* (go) *by instinct, you have to trust the patient you're giving your prescription to. Trust and respect. You get these doctors, nurses, who have been in the East Side forever. They get it. They understand how we work, what we need. They laugh and joke with us, they say 'hi' on the street, they know we're more than just addicts or hooker*(s)*, that we're people. We need that. It's the only way we can get the care we need." –* Pilar, 23

Receiving sexual health services was described to be invasive, embarrassing, and

frightening. Participants shared that the sensitive nature of sexual healthcare necessitates

patient-provider relationships that are built over time with preferred practitioners who

earn patients' trust. Carinna expressed the difficulty of exposing her body and her sexual

health needs to a doctor, especially if he were a man:

> *"We need more women doctors. They're not enough up there. Men doctors just don't work for me. Plus, it's embarrassing. Like I don't know this guy. I can't start talking about all my crap with him. Get me a woman! Even still, I gotta know her. I need time." –* Carinna, 28

Women identified shortages of female physicians in small communities as a major barrier

to receiving regular check-ups. Tate, 38, shared that she had contracted various STIs

throughout her life. She did not feel comfortable discussing sexual health with a male

physician. She explained that after enduring sexual abuse, she was extremely

uncomfortable around men, and did not trust them. In her community, female physicians

were so overwhelmed with patient care that lengthy wait times forced her to visit a male

physician. Occasionally, she chose not to seek treatment at all:

> *"Where I was up North, there were only two female doctors so I forced myself to see a male. Sometimes I just wouldn't go."* – Tate, 38

Continuity of care was especially important for participants who had survived sexual

abuse. Young men and women who had endured its devastating effects spoke to the

anxiety that accompanies sexual healthcare. This was the case for Effie, who was

sexually abused when she was a young girl. She described how resurfacing trauma forces

her to avoid seeking sexual healthcare at all costs. For her, the risks of having an STI

outweigh the distress that accompanies an examination:

> *"Because of the, of the abuse, I can't just get naked in front of* (just) *anyone. I have to know the doctor, and trust them. I don't even think that anyone could really, even if they haven't been abused. But it's a lot worse when you have been. Like my body is mine now, I will protect it. So if that means that I gotta deal with some STD, I'll figure out how to get some meds for it, but I won't be spreading my legs for some stranger to look inside. I've got antibiotics before just from a friend, and it cured it* (an STI).*"* – Effie, 27

In summary, participants' narratives highlighted the critical importance of enhancing

sexual healthcare services through the provision of culturally-safe, trauma-informed care.

It was evident that without appropriately designed services, sexual health needs would

not be met.

7.4.5 Mental health provision

When discussing the support systems necessary for sexual wellbeing, participants

unequivocally stressed the need for mental health services. Participants stressed the need

for reliable, accessible, and culturally-safe mental healthcare. Zane explained that despite

increased awareness surrounding the legacies of residential schools, many survivors are

still not coming forward with their grief. He believes that *hearing* must be accompanied

with *speaking*. In other words, for trauma to be resolved, it requires a *discussion* of

historical and personal suffering to promote both individual and collective healing:

> *"It's* (sexual health) *about how you're raised. A lot of kids were taken away. It* (sexual abuse) *became a cycle. People talk about it now more, but it's always like you're finding out about the bad stuff that happened to others, without talking about yourself. There's no therapy in that."* – Zane, 32

Participants knew of many Indigenous young people who shared life experiences similar

to their own, but had not been treated for stress, trauma, or anxiety. They emphasized that

the goal of therapy should be to restore any self-worth that has been lost through

maltreatment. Mason, had been sexually molested as a child. He contended that without

mental wellness, he cannot attain physical wellness:

> *"Without help, my mind can't heal, and my body pays the price."* – Mason, 19

Participants shared how the caliber of counselors in many small communities is subpar.

The issue of confidentiality in small communities was brought up once again. Kane

described how he wanted to seek counseling for alcohol dependence, but the only service

providers on his reserve were known to him and often drank heavily themselves:

> *"There's no confidentiality, no services. Especially on reserves. I wanted to go to AA* (Alcoholics Anonymous)*, and the guy running it was at all the parties."* – Kane, 29

As with sexual health services, the recommendation to overcome such barriers was to

staff mental health services with both local and non-local providers who were cognizant

of and sensitive towards Indigenous culture, experiences, and histories:

> *"Put people in services that are familiar with the culture, but not the people. So people feel safe to go to them and tell them their dirty little secrets."* – Roman, 29

Many counselors who participants had met were ill-equipped to effectively address the

complex and multifaceted impacts of unresolved intergenerational trauma. A few

participants had been appointed counselors who were new graduates whom they felt were

inexperienced. The counselors' inability to comprehend the historical origins of their

lived traumas was described to result in frustration and embarrassment. In their view,

counseling is deeply flawed if it further victimizes patients by resurfacing their pain.

Participants described how counseling, like other healthcare services, requires an

environment of mutual trust and respect. They shared that they would reject help if the

counselor displayed pity. Often, counselors were perceived to be overtly sympathetic,

which exuded insincerity. Irma, 30, stated that she had difficulty working through her

pain with people who could not relate to her experiences, and suggested that survivors of

sexual abuse be involved in the development and training of mental health service

providers:

> Irma: *"You have to have an empathetic point of view, not sympathetic. Someone that you can feel you can open up to, who understands. Not that pity side. You can tell when somebody is like 'aww it's going to be okay blah blah' but they've never experienced it and you can tell by their body language and their verbal communication. But empathetic, they've already walked in those shoes. They get you and they can help."*
> N.C.: *"That definitely makes sense, but, it may be hard to find enough counselors who have walked in those shoes, so, what do you think is the best way to achieve this?"*
> Irma: *"Yea…have people who have gone through it* (sexual abuse) *train them* (the counselors). *That way, even if they haven't experienced it, they can learn how to help people who have, in a way that is real."*

Kane reiterated this message. He recommended that providers focus on good couch side

manners, and the cultivation of attitudes that are respectful, pity-free, and stigma-free. He

stressed that in place of sympathy, counselors should listen to their clients and offer them

information and tools that can help them overcome pain:

> *"It's like don't ask me to tell you a really hard thing I've been through and then look at me with puppy dog eyes and say 'Aww'. I don't need that from you to know that what I'm going through is shitty. If you can maintain eye contact, let me know you heard me, say something informative, but don't give me sympathy. I just can't take that. Especially with counselors."* – Kane, 29

Participants noted that high turnover among mental health providers instills a feeling of abandonment, which obstructs their ability to form trusting relationships with future counselors. They stressed the importance of continuity of care, and shared that having to restate traumatic experiences with new counselors intensified pain, rather than ameliorate it. This was the case for Iris, who had been reassigned a new counselor without any notice. Iris shared that she no longer seeks out counseling as her faith in the system has been diminished:

> *"Counselors just move to another job. It's disturbing. You've been seeing them for months, you feel like you're down to the point where you're about to figure out what's been angering you all these years, and they move on. I came in for my appointment and their desk was clear, she was gone. I was like why bother? You create the relationship and they abandon it."* – Iris, 32

Jonas emphasized that if continuity of care is not provided by mental health *specialists* (i.e. psychiatrists and psychologists), it can trigger unresolved grief and force the client to relive their harrowing experiences without receiving appropriate support. Jonas explained how such experiences with counselors had led him to use drugs and alcohol to numb resurfaced trauma:

> *"Sometimes it's* (counseling) *helpful when I want to vent. But when I want to deal with issues, I need to go deeper, like with a psychologist, who actually deal with the problem. I'm finding that going to recovery like so many times, the alcohol and the drugs I go back to be…*(unclear)*, it's 'cause the issues haven't been dealt with. I think if I had less baggage and I learned how to process a situation, and feel my feelings without having to use, things would be better. Counseling is just 'blah blah blah'. To go deeper to deal with my abuse and anger, I need more specialists."* – Jonas, 29

7.4.6 Boosting self-esteem

Through the narratives, participants regarded poor self-esteem as the root of negative sexual health outcomes. They insisted that young people require self-esteem and a sense of importance in order to take care of their bodies:

N.C: *"What do you think makes people care about being sexually healthy?"*
Poppy: *"If they have a positive image of themselves?"*

Participants conveyed that this could be achieved by reconnecting Indigenous young

people with their traditions and culture to foster strengthened identities. When Flynn

learned that his stepfather had been an esteemed community member, he became

interested in his own history, culture, and heritage. Flynn described how this discovery

immersed him in learning about traditional wellness frameworks. The valuable teachings

that he came across on this journey helped him engage in self-care by respecting both his

body and mind.

> *"I found out my stepdad was a pipe carrier and a medicine man, very well respected from my reserve and the surrounding reserves. He built a lot of sweatlodges. That got me interested in it, so I learned about our history, and I felt that I was getting respect and that felt good. So I started respecting myself, my body and my mind."* – Flynn, 33

Zane believes that having children involved in the community and teaching them the

traditional language makes them feel important, while simultaneously stimulating their

naturally inquisitive minds and spirits. He stressed that when children feel special, they

don't turn to potentially unhealthy relationships to fill emotional voids:

> *"In different communities, they're getting the kids when they're young into sports, games, activities, to learn the language. Making them feel that they're important. Make them feel welcome. Make them feel that what they have to say is important. That THEY are important. The change starts with the young kids, and they become leaders not followers. Structure. Get involved with the kids. Get involved with making them feel special so they don't go looking for love in the wrong places."* – Zane, 32

Jaxton reiterated this message and stressed that reinstating pride among Indigenous

young people can help them attain positive outcomes:

> *"You need pride, you gotta have something to show for it. That's what people don't have, pride in themselves. We have to figure out how to instill some pride in people. Give them roles, give them sense of accomplishment. The best thing out there is to have support."* – Jaxton, 28

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Young men stated that many boys lack confidence, may be too shy to ask questions about sexual health, and use humor and teasing to gain information from their peers. Kane stressed that sexual health programs should encourage dialogue among young men:

> *"Guys are like. Dudes. You know. They can't admit they don't know something. His buddies will destroy him! So he's gotta pretend he knows. Guys have questions too, and someone needs to tell them that it's okay to not know."*
> – Kane, 29

Participants saw merit in assigning designated teams of street nurses to approach young people and make their availability and support known. They noted that simply providing business cards, pamphlets, and posters are ineffective modes of establishing relationships, as individuals most in need of services may lack the self-esteem needed to seek help. Participants felt that being approached would be beneficial to those who are uncomfortable initiating contact on their own, as it would create rapport. This could provide a person with a sense of importance and the ability to accept or decline the invitation for care on their own terms. Maisie explained how the presence of such healthcare providers would help young people feel important, and will in turn, encourage them to seek care from service providers who they feel truly care for them:

> *"We need more people to walk around, ask the kids if they're okay. Like the teenagers joining gangs. They need more attention. They need to know they care about them 'cause all their life these kids didn't have anyone to care about them."*
> – Maisie, 28

When participants were asked to identify their personal sources of strength, they mentioned their partners, culture, the community, pets, children, and other women who engage in survival sex work. For most, their families and children were their greatest sources of support. Some found strength within themselves. Collectively, their narratives demonstrated their tremendous capacity to critically reflect upon their own lives and

experiences, and that of their loved ones, to put forth meaningful recommendations that they hoped would support other Indigenous young people. Most participants framed the advice they offered as preventative measures. It was clear that they wanted to have a part in breaking the cycles of trauma, and offered suggestions that would not only support young people who faced adversities similar to themselves, but protect against such adversities from even occurring. In truth, their recommendations aimed to replace the barriers that obstruct *wellness* with barriers that would obstruct *vulnerability*.

7.5 Discussion

This qualitative examination of sexual health incorporated the views of young Cedar Project participants with respect to therapies, services, and interventions that can improve sexual health outcomes. The recommendations highlighted the tools needed to overcome personal, social, and structural barriers that hinder sexual wellness. Their narratives contributed to research paradigms that recognize the strength and cultural resilience of Indigenous peoples who face adversities (Dion-Stout et al., 2001; Kirmayer et al., 2011). Throughout the interviews, participants identified six key interdependent areas of focus to support the sexual wellbeing: the provision of safe housing and the restoration of fragmented families; improved sexual education; community support systems; culturally sensitive and trauma-informed care; enhanced mental health services; and building upon the strengths of young people by boosting their self-esteem.

Holistic, culturally-safe, and trauma-informed sexual and mental health resources

Health services for Indigenous young people can only be delivered effectively if they recognize historical trauma, understand cultural values, take time to get to know care recipients, and respect their wishes and autonomy (Aboriginal Healing Foundation, 2008;

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First Nations Health Authority, 2016; Henderson, 2008). When Cedar Project participants were asked how to enhance sexual health outcomes, their recommendations reiterated the critical need for culturally-safe and trauma-informed therapeutic approaches to healthcare provision.

Culturally-safe models of care recognize the necessity of incorporating power imbalances, decolonization and self-determination within a framework that includes – but extends beyond – cultural sensitivity and competence (Health Council of Canada, 2012; Shah & Reeves, 2015). Cultural-safety entails understanding the impacts of colonization and the cultural differences between Indigenous and non-Indigenous people; acknowledging the client's self-awareness; building relationships of trust, respect, and empathy; setting appropriate health goals; and sharing the responsibility for care with the client. Service providers view this form of care from a lens of social justice that accounts for social power imbalances. They aim to counter these imbalances through advocacy and building upon clients' strengths (Aboriginal Nurses Association of Canada, 2009; Brascoupé & Waters, 2009; Health Council of Canada, 2012; Indigenous Physicians Association of Canada, 2008; National Aboriginal Health Organization, 2006; Shah & Reeves, 2015).

Cedar Project participants explained that healthcare service providers should comprehend the challenges associated with addiction without treating patients like "addicts". They discussed the continued impact of racism and classism on the quality of care they have received, and their propensity to avoid or reject treatment based on negative encounters with healthcare providers. They identified that service providers need not all be Indigenous, but cognizant of Indigenous needs, values, cultures, and

histories. This is consistent with findings from other investigators who have examined the general health needs of Indigenous young people in BC (Clark et al., 2013). Participants did not identify racism as a barrier to healthcare uptake in the DTES, but this finding must be interpreted with caution. Racism is often highly underreported among Indigenous young people who are substance dependent and/or living on the streets. This is because they may attribute discrimination to their homelessness, involvement in survival sex work, or substance dependence, rather than ethnicity (Thomas, 2016). Clark et al. (2013) suggest that young Indigenous women are significantly less likely to speak up against racism than young Indigenous men. Research has demonstrated that Indigenous people who do report experiencing discrimination hesitate to utilize health services (Browne et al., 2011; Clark et al., 2013; Harris et al., 2006; Health Council of Canada, 2012).

As STIs are often viewed as a product of personal decision-making, the socio-historical pathways that increase the STI vulnerability of any particular group are often overlooked. This impacts both the provision of quality care and frequency of uptake (Wynne & Currie, 2011). Vigorous STI testing among Indigenous people in the DTES may cause individuals to feel targeted (Rusch et al., 2008). Participants stressed that STI testing and sexual health counseling can be traumatic, and needs to be delivered within relationships of trust, respect and mutual understanding that are built across a continuum of care. Participants voiced their rejection of sympathy, as it was equated with pity, and induced feelings of inferiority and weakness. Instead, they stressed the need to be heard, to be provided with care options that are explained, and to make their decisions in consultation with their care team. In short, an efficacious service provider was described to be empathetic, understanding, and respectful of autonomy.

Participants stressed the critical urgency of addressing the unresolved traumas that many at-risk young people live with. They shared that culturally-safe mental health services continue to be lacking, and ongoing pain continues to impair the ability to self-protect. Participants who had survived sexual abuse were especially weary of seeking out sexual healthcare due to resurfacing trauma, the difficulty of discussing sex, the inability to trust strangers, and a reluctance to undress or be examined. Reliving traumatic experiences during the course of treatment was explained to potentially result in heightened substance use as a means to numb re-emergent pain.

These recommendations are aligned with the voices of previous researchers who endorse the necessity of incorporating *trauma-informed* approaches into treatment interventions (Amaro et al., 2007; Messina et al., 2014; Strehlau et al., 2012). Any attempt to boost sexual wellbeing must account for the adverse life events that impact decision-making capabilities during sex. Trauma-informed approaches to sexual healthcare require service providers to recognize trauma, understand its impacts and prevalence, and respond to it by employing various healing processes that do not re-victimize the individual (Schladale, 2013). Trauma-informed care can be best achieved by supporting empathy-based conversations that address the spiritual effects and emotional responses associated with lived experiences (Pearce, 2014).

For sexual health programs to be effective and safe, they require trauma-informed therapies that provide emotional safety, establish trust, support autonomy, and involve coordination and advocacy between various care providers (Brown et al., 2013; Schladale, 2013). Such supports can allow vulnerable Indigenous young people unravel the historical and personal circumstances surrounding the adversities they have faced, and

move away from any feelings of self-shame or blame towards healing (Larkin et al., 2007; Natives Women's Association, 2010; Pearce, 2014). The interventions will have the best chance of success if providers create genuine relationships with the client, communicate hope for change to the client, and set goals to pursue that change together (Duncan et al., 2009).

Interrupting the cycles of child apprehension

When discussing sexual safety, safe and stable home environments were deemed fundamental to positive outcomes and experiences. The historical origins of the overrepresentation of Indigenous children in the foster care system have been described in Chapter 2.1. Participants explained that being placed in foster care directly impacted their sexual health by increasing their risk of being unsupervised, attending school irregularly, experiencing abuse, running away, and turning to drugs and alcohol to cope with their losses. They discussed how instability during childhood followed them into their later years, impacting their ability to create healthy and meaningful relationships. Being torn away from home was described to be incredibly painful and often accompanied by unsafe living conditions, neglect, and abuse. Participants recommended that in place of removing children from their families, the traditional practices of communal child care be restored, such that children remain with extended family members who are familiar and can provide a nurtured upbringing.

Among Cedar Project participants (n=605), 65% reported they been taken away from their biological families at baseline. Childhood apprehension has been found to be independently associated with a multitude of negative sexual health outcomes for Indigenous young people who use drugs. These include: an increased likelihood of

testing positive for HIV (Clarkson et al., 2015) and HSV-2, experiencing sexual abuse (Clarkson et al., 2015), and becoming involved in survival sex work (Clarkson et al., 2015; Sikka, 2009). In addition to sexual health risks, being torn from families has been associated with homelessness, suicide, sharing injection drug equipment, overdosing (Clarkson et al., 2015), detachment from culture, experiencing immense stress, running away from home, developing mental health illness, having difficulty building and maintaining relationships, and self-medicating (Pearce, 2014). The cycles of child apprehension are devastating Indigenous children in the child welfare system. Not only are children being torn from their families, but are being subjected to gross neglect. Last year alone, over 120 Indigenous children in the care of the provincial government of BC died, and more than 750 were severely injured (Sherlock & Culbert, 2017). In order to protect Indigenous children, Indigenous leaders call for immediate action to transfer the care of at-risk Indigenous young people back into the hands of Indigenous services providers and communities (Blackstock, 2010; Christian, 2010; Christian & Spittal, 2008; Simard, 2009).

Today, on-reserve First Nations child and family service agencies have successfully assumed responsibility for child protection, and operate through Indigenous-based models that support families, and keep children connected to their communities and culture (Simard, 2009). Such agencies are challenged by underfunding, and the inability to support families who live off-reserve (Blackstock & Trocmé, 2004). The subsistence of ineffective and discriminatory policies such as the D-21 Initiative, which mandates that a child be removed from their home before any funding is channeled to support that child, only increase the vulnerabilities of already at-risk children

(Blackstock, 2010). In order to restore Indigenous families, it is essential to address the underlying causes of child apprehension, namely, poverty, substance use, and intergenerational traumas rooted in the legacies of colonization. This can be accomplished by backing community-based agencies that provide care to families through cultural interventions and collective healing. Increased funding and social capital for in-home family support, housing for vulnerable families, and preventive and educational resources are critical first steps to intervening in the cycles of familial fragmentation and its destructive consequences (Blackstock & Trocmé, 2004; Blackstock, 2010; Clarkson et al., 2015; Christian & Spittal, 2008; Frohlich et al., 2006; Tousignant & Sioui, 2009; Turpel-Lafond, 2011; Ungar, 2008).

The necessity of safe and stable housing for adults was also highlighted. Participants who had secure housing took pride in it, and were motivated to maintain sobriety in order to retain their home. Although safe housing is a significant determinant of health, many Indigenous people continue to live in dwellings that are overcrowded, in need of major repairs, unsanitary, and not in close proximity to schools and healthcare services (National Collaborating Centre for Aboriginal Health, 2010). Indigenous people are ten times more likely than non-Indigenous people to experience homelessness in Canada (Hwang, 2001). People who are homeless are at extreme risk of morbidity, negative sexual health outcomes, and death (Hwang, 2001; Marshall et al., 2008; Miller et al., 2004). In the Cedar Project, 18.5% of participants are considered to be "highly transient" (sleeping in 6 or more places in the 6 months prior to enrollment). Among young women in particular, transience shapes pathways to sexual vulnerability through increased likelihood of being involved in survival sex work and experiencing sexual

assault (Jongbloed et al., 2015). The participants' narratives build upon these findings, as they identified the origins of survival sex work to lie with unstable housing.

It is imperative to recognize that homelessness may lead to an increased propensity to engage in criminal activity as a means to survive (Miller et al., 2004). Incarceration exacerbates poverty by acting as a barrier to employment. To confront these issues, The Assembly of First Nations (2005) Housing Action Plan calls for government initiatives that address growing needs and service gaps related to housing through sustainable funding, autonomy over jurisdiction and control of housing programs, and the coordinated alignment of on- and off-reserve agencies with municipal, provincial, and federal governments (Baskin, 2011). Further, special attention must be paid to the needs of women and two-spirited young people who face increased vulnerability to homelessness due to the historical and systemic inequities that perpetuate sexism and homophobia within an already racist social system (Patrick, 2014; Ruttan et al., 2008; Smith et al., 2007; Taylor, 2008; Walters et al., 2006).

Enhancing sexual education

Canada's Indigenous population is young, with more than one-quarter under 14 years of age (Statistics Canada, 2015). Schools can therefore act as essential sources of sexual health education at critical points of development (McKay & Bissell, 2010). However, investigations of confidence in sexual health knowledge have demonstrated that Indigenous young people personally feel less informed than their non-Indigenous counterparts (Cole, 2004). In this study, only half of the interviewed participants had received formal sexual health education in school. Strong connectedness to school has been associated with a decreased likelihood of STI acquisition and teenage pregnancy,

and a later onset of sexual activity among Indigenous young people (Devries et al., 2009a; Tourand et al., 2016). However, many are not benefitting from the protective effect of schools or school-provided sexual health programs as they are less likely to regularly attend and or complete high school (Statistics Canada, 2011a; van der Woerd et al., 2005). Participants who had been constantly shifted from one foster home to another stated that unstable housing conditions and a lack of caregiver involvement caused them to attend school irregularly. Extending sexual health education programs beyond schools is therefore, critical.

The recommendations put forward in this study provide invaluable insight to the structural shortcomings of current sexual health programming and the strategies to overcome them. In Chapter 6, sex-ed was unanimously recalled as uncomfortable, awkward, ineffectively delivered, and lacking in sensitivity towards the needs of Indigenous communities. For many, the opportunity to ask realistic questions was not provided. In particular, participants who had survived sexual abuse recollected how they were left to feel traumatized, exposed, and confused during and after these sessions. Participants shared that they would have benefitted from one-on-one discussions with a point person whom they trusted. They urged that nurses, educators, and counselors be trained to recognize the sexual health needs of Indigenous young people, develop rapport with them, facilitate opportunities for submitting anonymous questions, and be accessible for follow-up counseling. It was recommended that sexual education programs offer young people real life examples by inviting young adult volunteers who have experienced teenage pregnancy or contracted HIV to speak to them.

Indigenous young people who are two-spirited spoke to the tragic isolation and confusion that accompanied their developmental years, and drew attention to the lack of resources that could have otherwise supported them. The intersection of race and sexual identity heighten the health risks of two-spirited Indigenous young people by way of homophobia, identity crises, homelessness, and mental health issues (First Nations Centre, 2012; Smith et al., 2007; Walters et al., 2006). It is critical that sexual health resources incorporate their needs into programming in order to facilitate inclusivity, recognition, and care. This is particularly important for small communities where a dearth of sexual health resources exist. Indigenous leaders stress that safe places and affirmative resources can help create positive self-concepts for two-spirited young people. This can be achieved by acknowledging their value, contributions, and histories to Indigenous communities and culture (Bodi, 2009; First Nations Centre, 2012; National Association of Friendship Centres, 2008; Walters, 1997; Walters et al., 2006).

Participants brought attention to the importance of extending sexual health education to Indigenous homes as well. They explained that many caregivers have been deprived of adequate sexual education or had suffered abuses that render the discussion of sex difficult for them. Parents' ability to openly discuss sexual safety with their children is contingent on their own knowledge, skill sets, and comfort with sexuality (Whitaker et al, 1999). Indigenous researchers agree that sex is a difficult and often unvisited topic of conversation among Indigenous families (Myers et al., 1999; Pauktuutit Inuit Women of Canada, 2006; Yee, 2010). Indigenous youth advocates have drawn attention to parents' inability to discuss sexual assault with their children (Yee, 2010). Duran & Walters (2004) suggest using 'culture as intervention' can rigourously help

overcome cycles of trauma, shame, and silence, and restore the invaluable traditions that have long safeguarded the sexual health of Indigenous communities. Yee (2010) suggests sexual health initiatives provide free, peer-run, community-based sexual educational workshops that utilize decolonized and trauma-informed approaches with focus on self-esteem building and violence prevention for both young people and adults.

As previously emphasized, continuity of sexual health programming is essential to maintaining relationships, offering places of safety, and encouraging dialogue. Sexual health educators can extend their support beyond their immediate place of service by coordinating with various providers who can connect young people with complementary western, traditional, and holistic resources. Indigenous scholars suggest that sexual education programs can help support young people through strategies of participatory action research, peer support, and self-advocacy (Steenbeek, 2004; Yee, 2010). Researchers stress that such programs should replace Eurocentric approaches with traditional teaching and sharing circles that incorporate Indigenous wisdom, teachings, and values. These include peer mentorship, storytelling, and self-expression (Banister & Begoray, 2006; Myers et al., 1999, Pauktuutit Inuit Women of Canada, 2006). Involving community members in sexual health curricula can help form partnerships with education and healthcare professionals, facilitate cultural connectedness, and provide mentorship. As many young people shared that they turn to the Internet to acquire sexual health information, it is critical to connect them with appropriate, effective, and relevant online sources. This is particularly useful for those living in rural and remote areas and for people who prefer receiving information anonymously. The BC government's telehealth information and advice line (811) and First Nations Telehealth are currently expanding

their network through a ten-year plan to address gaps in the delivery of health services to Indigenous communities. Such programs should prioritize sexual health support for people who require accessible and confidential resources for sexual wellness.

Supporting community strengths

The legacies of the residential school and child welfare systems in Canada fractured the traditional Indigenous communal infrastructures that supported the development of healthy individuals and families. Geographic displacement and loss of lands isolated many Indigenous communities and erected multiple barriers to receiving coordinated and culturally-safe healthcare (Wilson et al., 2013). Throughout the course of their interviews, participants drew attention to the dire state of healthcare access in rural and remote areas. They spoke of the various constraints that prevent traveling to access resources, and the physical, mental, and emotional tolls that the lack of healthcare takes on the most vulnerable members of isolated communities. Steenbeek (2004) suggests that public health service providers can support local experts to identify and prioritize community needs, and develop and implement plans to address those needs. Such partnerships should first utilize the skills, capabilities, and means that are available within the community, and subsequently allocate missing resources to fill service gaps.

In this study, confidentiality issues were identified as the primary obstacle to accessing or uptaking the sexual health resources that *are* available in small communities. While involving members of the community in healthcare provision can offer a measure of cultural-safety, it may concurrently serve as a barrier to uptake if service providers are personally known to those seeking care. This is particularly the case for sensitive care needs that involve disclosing sexual activity. Young women spoke to the lack of female

practitioners in rural and remote areas and attributed irregular examinations and

screening to the difficulty of exposing the most intimate aspects of their health and body

to a male. Participants defined an efficacious local healthcare system as one that is

designed by community members, Indigenous experts and program developers, but

delivered by both local and non-local staff in order to provide patients with care provider

options.

As young people, many participants turned to youth gathering places and

community centres as ancillary resources for receiving health-related information,

referrals, and support. They identified these centres as effective distribution points of

sexual health information and counseling. Anderson (2002) suggests community-based

sexual education (e.g. workshops, presentations, youth groups) can support Indigenous

young people, answer their questions, and appropriately direct them to other necessary

resources. Indigenous young people who are not attending school regularly and/or who

live in areas with a dearth of sexual health provisions are denied key resources that would

support their ability to make informed decisions and access to care. When culturally-safe

sexual health resources are inadequate, strengthening community centres to effectively

serve young people can be an effective strategy to enhance sexual wellness (Larkin et al.,

2007).

Supporting young people's strengths by boosting self-esteem

During the course of the interviews, participants demonstrated a strong sense of

duty to safeguard their loved ones from harm: some kept silent about ongoing abuse to

protect their siblings; pregnant women found motivation to overcome substance

dependence and sought continuous healthcare to protect their unborn child; and

participants with active STIs used contraceptives to safeguard their partners from transmission. These findings speak to the remarkable ability of Indigenous young people to demonstrate positive adaptation in the face of adversity. It is crucial that young people are supported adequately, so that they are able to extend these intrinsic abilities to protect their loved ones, to themselves.

Participants highlighted that helping Indigenous young people "feel good about themselves" can nurture self-care and support sexual wellness. Throughout their narratives, they spoke of self-care, self-worth, self-image, and self-esteem interchangeably. They stressed that the ability to voice sexual preferences or seek sexual health support requires confidence. Participants who had survived childhood sexual abuse reported how the abuse had fractured their self-esteem to a degree that their innate tendency to self-protect had been lost. Among Cedar Project participants, childhood maltreatment has been found to be associated with a lack of self-esteem and inconsistent condom use (Pearce, 2014). Low self-esteem renders Indigenous young people especially susceptible to offers of care, affection, and attention from exploitative abusers (National Aboriginal Consultation Project, 2000) and has been associated with survival sex work (National Aboriginal Consultation Project, 2000; Pearce, 2014).

Researchers agree that strengthening the sexual development of at-risk young people involves supporting their strengths and qualities, rather than focusing on their challenges and weaknesses (Butts et al., 2005; Schladale, 2013; Torbet & Thomas, 2005). Sexual health programming that equips young people with tools to assert themselves are important, as sexual health knowledge alone is insufficient to control a sexual environment (Shercliffe et al., 2007; Steenbeek, 2004). Indigenous leaders call for

cultural pride and self-esteem to be reawakened by reconnecting young people with Indigenous traditions, culture, and ceremonies (Currie et al., 2013; First Nations Health Authority, 2013; Pearce, 2014). A strong cultural identity has been associated with extensive positive health outcomes among Indigenous populations (Andersson & Ledogar, 2008; Chandler & Lalonde, 1998; Dion-Stout et al., 2001; Kirmayer et al., 2003; Korhonen & Ajunniginiq, 2006; Lavallee & Clearsky, 2006; LaFromboise et al., 2006; McEvoy and Daniluk, 1995; McIntyre et al., 2001; Pearce, 2014; Torres Stone et al., 2006; Tourand et al., 2016; Wexler et al., 2014). In Chapter 5, accessing traditional cultural practices was found to mediate against HSV-2 acquisition among young Indigenous men who use drugs. For Indigenous women who have endured sexual abuse, cultural interventions have been demonstrated to act as healing medicines which effectively diminish the need to self-medicate with drugs and alcohol (Gesink et al., 2016). Becoming involved in traditional activities, learning Indigenous languages, and connecting with Elders are essential steps to instill positive cultural identities and fostering resilience among Indigenous young people who face adversity (Chandler & Lalonde, 1998; Clark et al., 2013; LaFromboise et al., 2006; McIvor et al., 2009; Pearce, 2014; Wexler et al., 2014). Such connections can reinstate the invaluable ceremonies that supported transition to adulthood and use decolonizing approaches to replace western notions of masculinity and femininity with traditional ones that support women's power and autonomy, and allow men to safely discuss their feelings and concerns. To that end, strengths-based approaches through cultural connectedness can support reinstating the respect and validation that has been damaged through the processes of colonization, maltreatment, and exploitation (National Aboriginal Consultation Project, 2000).

Participants underlined that young people in rural and remote communities lack access to resources that can help expend their youthful energies and stimulate their inquisitive minds. Indigenous researchers have explained that the loss of cultural engagements through European colonization has deprived many Indigenous young people of socializing opportunities that support their aptitudes (Jervis et al., 2003; Musharbash, 2007; Rasmus, 2008). There is an urgent need to provide young people with meaningful activities that instill a sense of purpose, direction, and belonging (Chansonneuve, 2007; Kirmayer, Brass & Tait, 2000). Participants identified arts, sports, music, and traditional activities such as hunting and fishing, as activities that offer positive and constructive explorations of fun. Further, partaking in such activities promotes resilience, boosts self-confidence, and builds upon the interpersonal skill sets of young people (Schladale, 2013). Such connections can greatly support overall and sexual wellbeing by helping strengthen young people's identities, self-esteem, and capacity to exercise self-care.

Limitations and conclusions

To conclude the discussions put forth in this chapter, certain limitations within the study must be acknowledged. Invitations to interview could only be extended to participants who had returned to complete routine follow-up questionnaires and partaken in the quantitative component of this study. Given that the participants who are lost to follow-up may be the most marginalized members of the research cohort, valuable information may be missing. Although the interviewer has been involved with the Cedar Project for nine years, has received cultural-safety training, and is knowledgeable of qualitative research methodologies, any observed differences in the interviewer's

socioeconomic status, gender, cultural or ethnic background may have led participants to withhold sensitive or personal information. The interviewer aimed to overcome any such tendencies by having Cedar Project staff, who have a deep rapport with the project's participants, introduce her to potential participants for the study. The interviewer dressed casually, offered participants the choice to have a staff member with whom they were comfortable co-facilitate the interview, and aimed to create and maintain an atmosphere of safety and comfort throughout the course of the discussions. In sum, the interviewer strove to enable casual, open, friendly conversations by mirroring traditional storytelling practices, sharing information, and emphasizing the value of the participants' contributions to the study's advocacy goals.

The powerful voices of Indigenous young people who demonstrate strength and resistance in the face of lifetime adversities are among the most effective, but underutilized, resources that program developers and policy makers have at their disposal. Interventions, services, and programs are best informed by the people they aim to serve. Involving young people at every stage of development and decision-making can help programs be designed more meaningfully (Kirmayer et al., 2003). Participants' perspectives of fostering sexual wellness conveyed the necessity of laying solid foundations that are built upon the pillars of culture, resilience, and the restoration of Indigenous models of care. Their recommendations provide leaders, educators, and service providers with instrumental insight that can be used for advocacy, planning, and prioritizing needs. Sexual health is a key component of overall health, and without the immediate rectification of the major social, political, and structural shortcomings

highlighted through the narratives, Indigenous young people who use drugs will continue

to be denied their fundamental right to equitably pursue sexual wellbeing.

Chapter 8: Conclusions and recommendations

8.1 Summary of findings

The sexual health of Indigenous young people who use illicit drugs in Canada can only be investigated by locating present-day challenges within a research framework that accounts for the legacies of colonization and ongoing racial and social marginalization (Red Road HIV/AIDS Network, 2006; Wesley-Esquimaux & Smolewski, 2004). Burdens of unresolved trauma stemming from these legacies and their consequential psychological and emotional sequelae contribute to the disproportionately high rates of negative sexual health outcomes that Indigenous young people experience (Farmer et al., 1996; Vernon, 2001; Walters & Simoni, 2002). The framework that the Cedar Project operates within provides a valuable opportunity to identify the origins of sexual vulnerability, as well as the sources of support that enable Indigenous young people to exercise strength, resistance, and resilience.

This dissertation extended routine HIV and HCV screening among Cedar Project participants to include testing for HSV-2 and syphilis. The goal of this study was to identify the factors that can explain heightened sexual vulnerability within a cohort of Indigenous young people grappling with social and historical barriers to wellbeing. To complement these epidemiological findings, in-depth interviews were conducted with 28 Cedar Project participants. The goal of the qualitative examination was to inform the quantitative inquiry and help understand the specific mechanisms through which sexual education, decision-making, experiences, and health outcomes are influenced. This investigation helped unravel the multifaceted and complex aspects of sexual wellbeing for at-risk Indigenous young people throughout their life course. The findings from

chapters 4-7 of this study validate what Indigenous leaders and scholars have long contended: Indigenous young people who use drugs are coping with unresolved trauma stemming from historical, social, and structural barriers to wellbeing that are cumulatively increasing their vulnerability to negative sexual health outcomes (Barlow, 2003; Vernon, 2001; Walters & Simoni, 2002).

In Chapter 4, the prevalence and correlates of HSV-2 seropositivity were examined. In the 250-person cohort that participated in this study, the prevalence of HSV-2 was 61% [95% CI: 55%-67%]. The odds of testing seropositive among women was 6.52 [95% CI: 3.74-1.53] times that of men. As HSV-2 is a non-reportable disease, and is often asymptomatic, its prevalence in Canada's general population is unknown. One national study estimated 13.6% of Canadians were infected with HSV-2 (Statistics Canada, 2011b). The high prevalence in this cohort and the low number of participants who were aware of their serostatus prior to testing is extremely concerning for the many individuals who remain at risk of experiencing the morbidities associated with HSV-2.

In this study, women who had been taken away from their biological parents were 3.25 [95% CI: 1.34-7.88] times more likely to test HSV-2 seropositive compared to women who had not been apprehended as children. This finding speaks to the continued impact of the legacies of the residential school and child welfare systems on the health of Indigenous young women. As mentioned, it is important to differentiate between cause and effect when interpreting such findings. While foster care in and of itself does not cause HSV-2 infectivity, the accumulation of risk-factors that are born of instability, displacement, detachment, and the traumas associated with being taken from one's family, places apprehended children in situations of vulnerability to negative health

outcomes. Such experiences were described in detail in the qualitative examination of sexual vulnerability in Chapter 6. This finding validates the call of Indigenous leaders who stress that, in place of removing children from their families and communities, the underlying causes of child apprehension must be addressed. These include poverty, substance dependence, and intergenerational traumas rooted in colonization. To that end, it is critical to dismantle destructive policies that prioritize child apprehension, and rather, invest in family reunification and healing. This can be accomplished by boosting financial and social capital allocated to community-based agencies that support struggling families through Indigenous models of care (Blackstock & Trocmé, 2004; Canadian Aboriginal AIDS Network, 2010; Christian, 2010; Frohlich et al., 2006; Tousignant & Sioui, 2009; Ungar, 2008).

In this study, the diminished association between smoking crack and HSV-2 positivity was noteworthy. Smoking crack was not included in multivariate analysis as it was correlated to survival sex work, having been in foster care, and injecting drugs, and only had a marginally significant association with HSV-2 positivity in bivariate analysis. Studies from the United States have demonstrated that people who use crack are significantly more likely to test seropositive for both syphilis (Ross et al., 2006) and HSV-2 (Des Jarlais et al., 2010; Hwang et al., 2000; Ross et al., 1999). Young Indigenous women involved in survival sex work are particularly vulnerable to such harms, as they have been found two to three times more likely to use crack (Chettier et al., 2010; Mehrabadi et al., 2008a). We maintain that crack smoking is still an important risk factor for STI vulnerability, but believe that its reduced significance may be due to its correlation with other risk factors of HSV-2 positivity.

Indigenous women who use drugs and who engage in survival sex work often report high rates of condom use with clients (Chavoshi et al., 2012, Chavoshi et al., 2013; Hogg et al., 2005). Despite verifying such reports in both the quantitative and qualitative inquiries, survival sex work was still independently predictive of HSV-2 positivity (AOR: 3.15 [95% CI: 1.13-8.79]). In this study, survival sex work was correlated with smoking crack, injecting drugs, and living on the streets. These findings suggest that the risk of contracting STIs among women involved in survival sex work is heightened through the exchange of unsafe sex for money, drugs, or shelter while under the influence of drugs and alcohol or while experiencing drug withdrawal. Social desirability and recall bias may be influencing self-reported condom use, especially for women who were using drugs during survival sex work. These interpretations were corroborated in the in-depth interviews by women who were *formerly* involved in survival sex work.

We were very pleased to demonstrate that young Indigenous men who reported having culture play an important role in their development were less likely to test positive for HSV-2 (AOR: 0.41 [95% CI: 0.19-1.00]). This finding adds to the body of evidence that establishes the protective effects of Indigenous cultures on the health of Indigenous young people across North America (Andersson & Ledogar, 2008; Chandler & Lalonde, 1998; Devries et al., 2009a; Dion-Stout et al., 2001; Gesink et al., 2016; Kirmayer et al., 2003; Korhonen & Ajunniginiq, 2006; Lavallee & Clearsky, 2006; Torres Stone et al., 2006; Tourand et al., 2016; Wexler et al., 2014). This study's findings reinforced what Indigenous scholars have always known: Indigenous belief systems, ceremonies, traditions, and wellness frameworks promote resilience and support the wellbeing of Indigenous young people who face adversity (Walters & Simoni, 2002). In Chapters 6

and 7, participants reiterated this message by identifying cultural connectivity and traditional practices as tools that improved their general and sexual health by instilling invaluable lessons of self-care. In this study, both the preventative and therapeutic benefits of Indigenous culture were demonstrated. Sexual health programs that use cultural interventions to reinstate traditional values and foster strengthened identities can greatly mitigate sexual health risks among vulnerable Indigenous young people.

In Chapter 5, having a history of syphilis infection was examined among the 250 participants who returned for routine Cedar Project interviews (in either Follow-ups 16 or 17). Clinical testing revealed that 8% [95% CI: 5%-11%] of participants had acquired syphilis infection in their young lives. In BC, from 2004-2013, Indigenous women comprised 43% of syphilis cases among Indigenous people (BCCDC, 2013). In this study, 95% of cases occurred among women. The overrepresentation of women with a history of syphilis infection confirmed the vulnerability of Indigenous women who use drugs to poor sexual health outcomes. All participants who tested positive were living in Vancouver. Ninety-five percent of participants who tested positive for syphilis, tested positive for HSV-2 as well. It was promising to find that no participants in Chase or Prince George had ever become infected with syphilis. In order to intervene in a potential syphilis outbreak, it is necessary to evaluate how differences in sexual networks between Vancouver, Prince George, and Chase are impacting STI risks.

Despite having received treatment for syphilis infection, only 9 of the 20 young women who tested positive self-reported ever having syphilis. This finding may be due to recall bias. Upon further examination, it was found that not all the young women had received treatment for syphilis in the DTES. In the in-depth interviews, participants spoke

to the inadequacies of sexual health resources in providing culturally-safe, trauma-informed care options outside of the DTES. Young women described that racism and discrimination often reduced the quality of care that they had received. Participants explained that such experiences attach shame and stigma to STI testing and treatment. As such, the underreporting of self-reported syphilis may be attributed to stigma surrounding STI diagnoses among Indigenous women who received discriminatory and ineffective STI counseling during syphilis treatment (Rusch et al., 2008a).

In chapter 6, participants eloquently described sexual health as a product of multiple moving parts and identified five major factors that affected their sexual wellbeing from childhood to the present day. These included: 1) the role of intergenerational trauma through sexual abuse and foster care; 2) the impact of sexual abuse during childhood and as an adult; 3) sexual education at school, at home, through culture/traditions/spirituality, prison, and through peers, media, and self-learning; 4) the "intangible" components of sex, which included attitudes around condoms, pregnancy, trust/fidelity, and experiences with STIs; and 5) the role of substance use, such as the impact of using drugs and alcohol during sex, the experience of violence in relationships among people who use drugs, and methods to self-protect when using drugs during sex.

Participants' narratives were well supported from research that identify the consequences of intergenerational trauma as continual barriers to equitable health and wellbeing among Indigenous people who use drugs (Clarkson et al., 2015; Craib et al., 2009; For the Cedar Project Partnership et al., 2008; Moniruzzaman et al., 2008). Participants described the damaging effects of the residential school and child welfare systems on healthy sexual outlooks and experiences in detail. Those who had been raised

in their communities were keenly aware of the sequential connections between present day adversities and the legacies of colonization. This was not demonstrated by participants who had been raised outside of their communities or with non-Indigenous foster parents. It is critical to connect young people who are displaced from their communities and families with culturally-safe, trauma-informed care that will allow them to unravel the historical contexts in which their own vulnerabilities lie within. This will allow them to deal with any feelings of confusion, self-blame, or shame that may be attached to their personal circumstances and move towards healing (Larkin et al., 2007; Natives Women's Association, 2010; Pearce, 2014).

Participants shared the devastating consequences of sexual abuse and explained how it impacted sexual experiences, outlooks, and health outcomes throughout their lives. Their accounts shed light on findings from Indigenous researchers who have demonstrated the association between multiple negative health outcomes and experiencing sexual abuse (Devries, et al., 2009b; First Nations Information Governance Committee, 2012; Gesink et al., 2016; Tourand et al., 2016)

Chapter 6 also supported Indigenous researchers who have discussed the protective role of cultural and familial connectedness in producing positive sexual health perceptions and outcomes (Devries et al., 2009b, Larkin et al., 2007). Participants shared how involvement in traditional practices fostered resilience, strengthened their identity, supported the pursuit of drug recovery, and helped restore self-esteem - all of which positively impacted their sexual wellbeing. Participants who described positive relationships with their parents articulated healthy understandings of sex, relationships, and safety. Each spoke of their gaurdians highly, and of someone who had nurtured their

sense of self-worth. All had been raised in their home communities by their parents and/or extended kin. Pregnancy was identified as a positive sexual health outcome as it motivated women to abstain from substance use and regularly access healthcare, and increased their psychological and emotional wellbeing. The resilience that women demonstrated to overcome the barriers associated with sexual healthcare and drug recovery was a true testament to their strength *and* the protective effects of family.

Chapter 7 built upon the messages of Indigenous leaders and scholars who stress the need to involve Indigenous young people in the design and development of health programs that are meant to serve them (Andersson et al., 2008; Brant Castellano, 2000; Clark & Hunt, 2011; National Aboriginal Consultation Project, 2000; Oliver et al., 2015; Steenbeek, 2004). Still, very few sexual health and harm reduction programs have been informed by the voices of Indigenous young people who use drugs. To address this gap in knowledge, recommendations were sought from Cedar Project participants about how to improve sexual health resources tailored to young people who face vulnerabilities similar to their own. Therein, participants were asked to identify barriers to accessing and utilizing services/resources as well as sources of strength and protective factors that help overcome them.

Participants identified six key interdependent approaches that can best support the sexual wellbeing of Indigenous young people who use drugs. These included: 1) providing safe housing and intervening in the cycles of child apprehension; 2) enhancing sexual education for both adults and young people; 3) supporting community strengths; 4) delivering culturally-safe and trauma-informed care; 5) strengthening mental health services; 6) and boosting self-esteem. Those who had been raised outside of Vancouver

consistently brought attention to the inadequacies of sexual health resources in their communities, and offered recommendations on how such shortcomings can be improved. Participants' messages reiterated the call to support the self-help capabilities of communities to dispense culturally-safe, trauma-informed sexual health resources. Their messages reinforced the necessity of developing treatment, education, and preventative measures that use decolonizing approaches built upon Indigenous models of care.

8.2 Strengths and unique contributions

This study was developed in response to the critical gap in literature that was identified by the Cedar Project Partnership. The Partners were concerned about the lack of historically-informed research-based evidence pertaining to the sexual health of young Indigenous people who use drugs. The Partnership prioritized the need for a cohort-driven study situated within a multidisciplinary exploration of sexual wellbeing that centred the voices of Indigenous young people within a historical trauma and cultural resiliency framework.

As mentioned, no epidemiological study has ever examined the prevalence and correlates of HSV-2 or syphilis positivity among Indigenous young people who use drugs in Canada. There is also very little understanding of the historical and lifetime mechanisms that shape sexual experiences, attitudes, understandings and health among this population. The few studies that are available (Anderson, 2002; Devries & Free, 2010; Devries et al., 2009a; Devries et al., 2009b; Devries, 2011; Larkin et al., 2007; McIntyre et al., 2001; Tourand et al., 2016) have not investigated the impacts of the legacies of the residential school and child welfare systems on present-day sexual health outcomes. The majority of these studies' findings were based on survey data from

participants who were in school, missing potentially valuable information from some of the most marginalized young people in society (Thomas, 2016).

The processes in how sexual health determinants operate for Indigenous young people *who use drugs* had not been investigated either. As self-medication is a known coping mechanism for Indigenous people who face adversity (Walters & Simoni, 2002), it was critical to understand the association between historical factors, substance dependence, and sexual wellbeing. Further, no known study had ever asked Indigenous young people who use drugs how to improve current sexual health programs/services or how sexual wellbeing can be best supported. Indigenous scholars emphasize that research involving Indigenous peoples requires decolonizing approaches that focus on the strengths and wisdom of the Indigenous men and women who are impacted by the results (Brown & Strega, 2005; Kovach, 2010). This study's contribution is therefore unique as it addresses these gaps in literature within frameworks that are determined both necessary and appropriate by the body of Indigenous leaders, experts, knowledge holders, and service providers who govern the Cedar Project.

The Cedar Project is a unique study composed entirely of Indigenous participants who use drugs, and allows inferences to be made for at-risk Indigenous young people that are free from confounding due to ethnicity. The Cedar Project is globally, the only study of its kind. The Project's multidisciplinary ethical standards allows the research team to meet our commitment of integrating Indigenous knowledge and voices into research activities, and to adhere to the principles of Ownership, Control, Access, Possession (OCAP). The theoretical framework helps address gaps in research and accounts for the legacies of colonization while recognizing the strengths and cultural resilience of

Indigenous people and communities when investigating their sexual health.

The Cedar Project is governed by a coalition of Indigenous Elders, leaders, health experts, and service providers. The governing body oversees the entire research process and guides all knowledge transfer activities to ensure that they are meaningful and useful to Indigenous communities. The researcher received mentorship from Indigenous experts throughout the research training and data collection/analysis process, which added invaluable insight and richness to the interpretation and presentation of results. The ultimate goal was to provide Indigenous community members and leaders with relevant evidence-based research to support advocacy, action, and the pursuit of positive change. To our knowledge, the Cedar Project is the only Indigenous-led research study to explore the determinants of sexual health among Indigenous people who use drugs in Canada.

Chapters 4 and 5 are the first known studies to put forth new epidemiologic evidence on the prevalence of and risk factors associated with HSV-2 and syphilis positivity among Indigenous people who use drugs. These studies were unique because they not only examined the drug use patterns and sexual activities associated with either STI, but took sociodemographic, historical trauma, lifetime risk, cultural, and safety factors into account. The use of a gendered framework that accounted for the biological characteristics and sociocultural circumstances that impact the vulnerability of men and women differently was another distinct characteristic of both studies.

Chapter 5 is the first known study to empirically demonstrate an association between STI positivity and the residential school and child welfare systems, as well as the buffering effect of traditional culture on STI vulnerability. The analyses helped identify the most at-risk individuals within an already vulnerable cohort of young people

whose lifetime experiences and historical sufferings continue to hinder sexual wellbeing. Additionally, the findings were contextualized within the ongoing impacts of colonization on Indigenous people's health and the protective quality of Indigenous culture on health outcomes.

One of the key contributions of this work was bringing together qualitative and quantitative methods to address how historical trauma, self-medication, and ongoing systemic discrimination shape the sexual health of Indigenous young people who use drugs. Chapter 6 was thus novel in its qualitative exploration of sexual wellbeing, as it was the first study to use in-depth interviews as a means of examining the multifaceted factors that impact sexual experiences, behaviours, and health among Indigenous young people who use drugs. As epidemiologists increasingly recognize the need to utilize multiple approaches to understand health disparities (Golafshani, 2003; Singer, 2009), these qualitative methods greatly informed the epidemiological endeavours undertaken in Chapters 4 and 5. The findings verified the need to couple sexual health, substance treatment, and harm reduction resources with mental health services. Such efforts will help ensure the complex interaction between historical atrocities and present day disparities are addressed at the individual, family, and community levels (Aboriginal Peoples Collection, 1997; First Nations Health Authority, 2013; Fournier & Crey, 1997; Ross, 2006).

It is critical to stress that interrupting the ulcerative STI/HIV pathway necessitates the prioritization of *prevention*, as treatment has not been found to reduce HIV seroconversion (Celum et al., 2008; Watson-Jones et al., 2008). As such, sexual health services must centre their efforts on keeping at-risk individuals seronegative for

ulcerative STIs (Chesson, 1999). Yet, service providers seldom incorporate the voices of

Indigenous young people into the design and delivery of resources meant for them.

Chapter 7 was unique in its approach, as it sought Cedar Project participants' views on

how to develop and strengthen sexual health resources tailored to Indigenous young

people who face adversities similar to their own. This was accomplished by asking

participants to identify barriers to accessing resources and how to best address the

shortcomings of preventative, treatment, and educational resources. Participants

enthusiastically shared their knowledge, and reflected upon their own experiences, and

that of their loved ones when offering their recommendations. Chapter 7 consequently

makes a novel contribution to Indigenous health studies by engaging in decolonizing

research methods that centres powerful and compassionate Indigenous voices on the tools

they identify as necessary for sexual wellbeing, how to best design services, and support

preventative efforts.

Chapters 4-7 collectively contribute to the ongoing efforts of Indigenous leaders

and experts who actively work to intervene in the pathways of risk by addressing the root

causes of health disparities through sources of strength and resilience. The findings can

meaningfully inform programming and policies that support sexual wellness for

Indigenous people from a very young age through to adulthood.

8.3 Community relevance

The results of this dissertation were presented to the Cedar Project's Indigenous

partners, study participants, and youth advocates during knowledge translation activities.

Their feedback and invaluable insight formed the basis of four central recommendations

that they identified as most relevant to communities. These recommendations highly

resonated with those garnered in Chapter 7, which speaks to the profound awareness that Indigenous young people have for their own sexual health needs. These recommendations aim to be both *holistic* and *decolonizing* in nature. All four endeavours necessitate the **incorporation of Indigenous wellbeing frameworks** to address the root causes of sexual vulnerability among Indigenous young people who use drugs.

The four central recommendations are to: 1) address ongoing trauma and the origins of sexual vulnerability, including child apprehension, survival sex work, self-medication, and homelessness through Indigenous-directed intervention strategies; 2) incorporate culturally-safe, trauma-informed care into drug treatment, mental, and sexual health resources; 3) conduct community-wide scans of current sexual health resources available to young people to identify and respond to gaps in programming; 4) use culture as intervention to build upon the inherent strengths of Indigenous young people and restore cultural identity and self-esteem.

1) Supporting Indigenous-directed intervention strategies that address ongoing trauma, self-medication, and the root causes of sexual vulnerability

In this investigation of sexual vulnerability, the continued impacts of the residential school and child welfare systems on present-day sexual wellbeing was strikingly evident. In the interviews, participants stressed that for communities grappling with collective distress, culturally-safe, trauma-informed services are vital to collective healing and overcoming the devastating cycles of intergenerational trauma. It must be emphasized that to mitigate against sexual vulnerability, government, crown attorneys, law enforcement, and service providers need to support Indigenous chiefs, councils, leaders, and community representatives to **address the root causes of ongoing distress,**

pain, and social marginalization among Indigenous people. This suffering stems from colonization, and is sustained by unresolved trauma, economic hardship, marginalization, and systemic racism (First Nations Health Authority, 2016a; Kirmayer et al., 2014; Ross, 2006). It is critical that program developers and policy makers align economic and political forces with the needs and values of communities through partnerships and collaborations that will reinstate their self-determination and allow them to control their pathways to wellbeing (Kirmayer et al., 2014).

Addressing the colonizing processes that are responsible for the current overrepresentation of Indigenous children in the child welfare system is the foremost step to improve sexual health. Among Cedar Project participants, childhood apprehension is independently associated with a multitude of negative sexual health outcomes, including self-medication, HIV positivity, experiencing sexual abuse, homelessness, and being involved in survival sex work (Clarkson et al., 2015). In addition, being torn from families has been associated with suicide attempts, sharing injection drug equipment, overdosing (Clarkson et al., 2015), detaching from culture, having difficulty establishing trust and building and maintaining relationships, experiencing immense stress, being diagnosed with mental health illness, and suffering from identity crises (Pearce, 2014). In this study, being in foster care was independently associated with HSV-2 positivity. In the in-depth interviews, the immense pain of being torn from one's family was described and reported to impact sexual health, directly and indirectly, by increasing the risk of being disconnected from culture, running away, self-medicating, missing school, becoming subjected to abuse, and becoming dependent on potentially exploitative

partners to survive. Conversely, not having been apprehended and being raised among kin was demonstrated to support positive sexual outlooks and experiences.

Indigenous children who are in the welfare system are immensely suffering. Last year, over 120 Indigenous children in the care of or receiving services from the provincial government of BC died, and more than 750 were severely injured. The alarming number of suicides, overdoses, self-harming attempts, and physical and sexual abuses sustained by Indigenous young people in the "care" of the child welfare system is a true national crisis (Sherlock & Culbert, 2017). Such distressing findings call for immediate action to transfer the care of at-risk Indigenous young people to Indigenous services providers and communities (Blackstock, 2010; Christian & Spittal, 2008; Simard, 2009). Leaders repeatedly urge that **instead of removing children from their homes, an increased focus on the underlying causes of child apprehension is needed**. These include (but are not limited to) poverty, substance dependence, and intergenerational trauma. Young adults who were previous wards of state should be reconnected with Indigenous families and communities to rebuild their cultural foundations, rekindle their sense of belonging, gain access to traditional resources, and form relationships with strong members of their communities. This can be accomplished by strengthening community-based agencies that provide care to struggling families through cultural interventions and collective healing (Blackstock & Trocmé, 2004; Blackstock, 2010; Clarkson et al., 2015; Christian & Spittal, 2008; Frohlich et al., 2006; Tousignant & Sioui, 2009; Turpel-Lafond, 2011; Ungar, 2008). Participants echoed these messages, and emphasized the necessity of obstructing intergenerational trauma from childhood to interrupt the pathways to vulnerability.

Today, on-reserve First Nations child and family service agencies have successfully assumed responsibility for child protection by employing Indigenous-based models that support families, and keep children connected to their communities and cultures (Simard, 2009). However, these agencies face challenges of underfunding and an inability to assist families who live off-reserve (Blackstock & Trocmé, 2004). The perpetuation of ineffective and discriminatory policies such as the D-21 Initiative that mandate children be removed from their homes before any funding is channeled to them only intensify the vulnerabilities of already at-risk children (Blackstock, 2010). Increased funding and social capital for in-home family support, the provision of housing for vulnerable families, and preventive harm reduction resources can intervene in the cycles of familial fragmentation and its destructive consequences.

The interviewed participants drew attention to the immense sexual vulnerabilities faced by people in need of safe housing. Secure housing is a significant determinant of health, yet many Indigenous people continue to live in dwellings that are overcrowded, in need of major repairs, unsanitary, and not near schools and healthcare services (National Collaborating Centre for Aboriginal Health, 2010). Indigenous people in Canada are ten times more likely to experience homelessness than non-Indigenous people (Hwang, 2001). People who are homeless face extreme risk for morbidity, mortality, and negative sexual health outcomes (Hwang, 2001; Marshall et al., 2008; Miller et al., 2004). In the Cedar Project, unstable housing has been associated with experiencing sexual abuse, injecting drugs, and involvement in survival sex work (Jongbloed et al., 2015). The root causes of homelessness and its consequential harms also remain largely unaddressed (Baskin, 2007). To confront such disparities, government initiatives are needed to address

service gaps through sustainable funding, autonomy over the jurisdiction and control of housing programs, and the coordination and alignment of on- and off-reserve agencies with municipal, provincial, and federal governments (The Assembly of First Nations, 2005; First Nations Health Authority, 2013; Patrick, 2014).

The examination of risk factors for HSV-2 and syphilis positivity demonstrated the immense vulnerability of Indigenous women who use drugs to infectious diseases, which adds to the body of evidence that speaks to the reduced health status they continually experience (BC Centre for Disease Control, 2013; Grebley et al., 2007; Public Health Agency of Canada, 2015; Spittal et al., 2012). Such disparities can be addressed by recognizing, intervening in, and responding to the socio-historical roots of sexual violence. Implementing cultural interventions can help support victims of sexual abuse pursue healing. Increased networks of safe spaces are required, as is access to culturally-safe services. Indigenous women who use drugs should be engaged in the design of all policies, research, and programs pertaining to their health, and oversee the distribution of funds allocated to support them. Delivering up-to-date, accurate and accessible information pertinent to their health and involvement in the training of service providers would allow them to exercise autonomy over decision-making around health and reproductive rights. The development of economic strategies aimed to support self-sufficiency and child-rearing are essential to independence, safe housing, income, and food security, especially for women who have been in prison or involved in survival sex work (Canadian Aboriginal AIDS Network 2010; Gesink et al., 2016; Stout, Kipling & Stout, 2001; Yee, Apale & Deleary, 2011).

Lastly, the association between self-medication and negative sexual health

outcomes was repeatedly demonstrated throughout this dissertation. Participants emphasized the need for ongoing and open dialogue that foregrounds the historical injustices responsible for the present-day challenges faced by Indigenous people who use drugs. The health risks associated with drug use can be reduced by coupling accessible drug and alcohol recovery programs with mental and sexual health services. Treatment uptake continues to be impeded by systemic racism, stigma against Indigenous people who use drugs, a lack of gender specific programs, and failure to address the complex interaction between trauma, substance abuse, and health (Clark et al., 2013; First Nations Health Authority, 2013; Goldenberg et al., 2008; Rusch et al., 2008b; Tang & Brown, 2008). If harm reduction programs collaborate with mental and sexual health providers who serve Indigenous people, they can expand their services to provide accessible, realistic, and relevant treatment options. Without addressing the underlying causes of self-medication, the cycles of pain will only continue.

2) Integrating culturally-safe, trauma-informed care into current harm reduction, mental health, and sexual health resources

Any attempt to increase positive sexual health outcomes among Indigenous young people who use drugs must address the adverse life events that impact their decision-making capabilities during sex. As STIs are often viewed as a product of personal decision-making, the social and historical factors that increase STI vulnerability for any particular group often remain overlooked. Such bias can impact both the provision of quality care, and its frequency of uptake (Wynne & Currie, 2011). To overcome barriers to accessing and utilizing care, **it is critical that sexual health resources are designed to serve Indigenous people through culturally-safe and trauma-informed**

therapeutic approaches to care. The majority of Canadian health service curricula fail to adequately prepare service providers to work with Indigenous communities (Shah & Reeves, 2013). In order to deliver efficacious health services to various Indigenous populations, cultural safety must be prioritized as a central educational component of healthcare training programs at all levels of service. One example of implementing this recommendation is to mandate that all providers be accredited with Indigenous cultural safety training programs through the Provincial Health Services Authority (San'yas, 2017). It is important to consider participants' recommendations to staff sexual health services in small communities with both Indigenous and non-Indigenous, local and non-local providers. This would ensure that the values of communities are upheld, while threats to confidentiality are mitigated.

The concept of "cultural-safety" encompasses a care model that recognizes the necessity of incorporating decolonization and self-determination within a framework that extends beyond cultural sensitivity and competence alone (Health Council of Canada, 2012; Shah & Reeves, 2015). Cultural safety entails understanding the impacts of colonization and cultural differences; acknowledging clients' self-awareness; building relationships of trust, respect, and empathy; setting appropriate and achievable health goals; and allowing clients to share the responsibility for their care. Service providers centre this perspective of care within a framework of social justice that takes social power imbalances into account and aims to counter these imbalances through advocacy and building upon the clients' strengths (Aboriginal Nurses Association of Canada, 2009; Brascoupé & Waters, 2009; Health Council of Canada, 2012; Indigenous Physicians Association of Canada, 2008; National Aboriginal Health Organization, 2006; Shah &

Reeves, 2015). The importance of cultural humility while engaging in this process must be emphasized. Cultural humility allows service providers to create a space of safety and respect. It is defined as "a life-long process of self-reflection and self-critique to understand personal biases & to develop and maintain mutually respectful partnerships based on mutual trust" (First Nations Health Authority, 2016b). Indigenous leaders maintain that only through cultural humility can cultural-safety be truly achieved.

During in-depth interviews, participants spoke to the anxiety and fear that accompanies STI testing, sexual health counseling, and physical examinations. They stressed that the decision to uptake sexual healthcare can be unnerving, as it requires them to expose the most intimate aspects of their lives, often to complete strangers. They identified that effective sexual healthcare providers must display the following characteristics: the exhibition of good bedside manner; a comprehension of challenges associated with substance dependence; respect for patient autonomy; empathy; and being cognizant of Indigenous peoples' needs, values, cultures, and histories. They emphasized that the absence of such qualities can impact sexual health by reducing the likelihood of seeking care, adhering to treatment, or returning for follow-up. Participants underlined the importance of addressing the unresolved traumas which afflict many at-risk young people. Those who had survived sexual abuse were reluctant to seek out sexual healthcare as it resurfaced their trauma. They found difficulty in discussing sex and being able to trust doctors, and were unwilling to undress or be examined by someone they were unfamiliar and/or uncomfortable with. Participants explained that reliving traumatic experiences during the course of care could lead to self-medication. It is clear that for Indigenous young people who have unresolved trauma, sexual resources have to be *safe*.

Healthcare providers have the responsibility to establish environments of safety

with their clients by building relationships of trust, respect, and mutual understanding

across a continuum of care by **incorporating trauma-informed approaches into**

treatment interventions (Amaro et al., 2007; Messina et al., 2014; Strehlau et al., 2012).

Trauma-informed care is merely a western term used to describe the type of care that has

always been traditionally practiced by Indigenous knowledge keepers (Henderson, 2008).

This form of care is best achieved by supporting empathy-based conversations that

address spiritual and emotional responses to lived experiences (Pearce, 2014). Service

providers can work towards recognizing and responding to trauma by understanding its

impacts, prevalence, and healing processes. At the same time, providers should take care

to establish trust, not re-victimize the individual or have them relive pain, and advocate

for their care needs (Schladale, 2013). In sum, service recipients require respect,

autonomy, authenticity, empathy, and warmth (Brown et al., 2013; Schladale, 2013).

Service providers should strive to create genuine relationships that involve

communicating hope for change and setting goals to achieve it (Duncan et al., 2009).

Trauma-informed approaches to care can allow vulnerable Indigenous young people

unravel the historical and personal circumstances surrounding the adversities they have

faced. In turn, they can move away from any feelings of self-shame or blame, and pursue

healing (Larkin et al., 2007; Natives Women's Association, 2010; Pearce, 2014).

In order to alleviate the challenges of dispensing timely, culturally-safe, trauma-

informed care to communities, it is critical to support their self-help capabilities and

reinstate self-determination (First Nations Health Authority, 2016a; Steenbeek, 2004).

Such supports should be directed to health centres that build upon Indigenous health

frameworks that provide primary care, coordinate with secondary and tertiary care, and are actively involved in harm reduction and women's health services both on- and off-reserve (Association of Ontario Health Centres, 2016; Health Council of Canada, 2012). The British Columbia Integrated Youth Services Initiatives is currently under development, with the goal of integrating primary care centres in manners that allow primary and sexual healthcare to be coordinated in tandem, or in some cases, fully integrated with mental health and counseling services. Integrated care systems that account for the needs and values of Indigenous communities can greatly improve access to and uptake of services across the province. The expansion of confidential and anonymous avenues for receiving health information such as the BC government's telehealth information and advice line (811) and First Nations Telehealth can further close health service delivery gaps for Indigenous communities.

3) Conducting community-wide scans of current sexual health resources to identify and respond to gaps in programming

The Indigenous population of Canada is young, with more than one-quarter under 14 years of age (Statistics Canada, 2015). Schools can therefore act as essential sources of sexual health education (McKay & Bissell, 2010). Strong school connectedness and sexual education can delay the onset of sexual debut among Indigenous young people (Boonstra, 2010; Devries et al., 2009a; Tsuruda et al., 2013). However, investigations of confidence in sexual health knowledge in Canada report that Indigenous young people personally feel less informed than their non-Indigenous counterparts (Cole, 2004). Only half the participants who were interviewed in this study had received formal sexual education in school, and were frustrated with the lack of information and resources that

were available to them when they were young. While new and improved sexual health education for young people who are Indigenous, substance dependent, street involved, and have experienced sexual abuse are needed (Public Health Agency of Canada, 2008), no known programs have been put forth that exclusively cater to their needs.

The Cedar Project Partnership has called for a **scan of sexual health resources available to Indigenous young people in British Columbia**. Upon identifying gaps in services, the findings of this study can help inform approaches to **develop and enhance the design of sexual health education programs targeted to Indigenous young people**. The most vulnerable members in society are often not regularly in school, and presumably, in greatest need of sexual health services (Thomas, 2016). It is therefore critical that programs extend their delivery and accessibility to reach more young people. Community-based sexual education programs (e.g. workshops, presentations, youth groups) are suitable sources of information for Indigenous young people (Anderson, 2002). These programs can continually provide support, answer questions, and direct young people to appropriate resources. This was confirmed by the participants during the in-depth interviews. When culturally-safe sexual health resources are lacking, strengthening such community-based programs can facilitate sexual wellness for young people who are not in school and offer additional or alternate resources for Indigenous young people who are in school (Larkin et al., 2007). The accessibility and effectiveness of such programs are central to helping keep at-risk Indigenous young people seronegative for STIs and interrupt the STI/HIV pathway through prevention, rather than treatment (Celum et al., 2008; Chesson, 1999)

Participants stressed that educational sessions should allow knowledge seekers to absorb information, develop questions, and have regular access to educators and counselors in secure and comfortable environments. Western teaching methods that aim to advise and persuade are not the ideal educational tools for Indigenous people (Myers et al., 1999; Pauktuutit Inuit Women of Canada, 2006), particularly in communities whose members are coping with collective distress (Steenbeek, 2004). It is best to shift away from Western hegemonic practices where the educator identifies the problem and provides a solution, and move towards strategies that give service recipients the authority to manage communication and action (Steenbeek, 2004). Eurocentric approaches to sexual education can be more suitably replaced by traditional modes of teaching and sharing circles. These include mentorship, storytelling, and self-expression - allowing for ideas and information to be exchanged, rather than imposed (Kovach, 2010; Steenbeek, 2004).

The men and women who were interviewed identified confidentiality and safety as key characteristics of successful sexual education programs. Such programs should be designed to minimize feelings of discomfort, shame, confusion, and resurfacing pain. This can be established through trauma-informed approaches that are delivered in both group and one-on-one sessions. Continuity of sexual health programs is essential to building relationships with educators and counselors, offering places of safety, and encouraging dialogue. Educators should readily distribute information pamphlets with contact information for service providers whom young people can seek out for counseling, STI testing, and family planning at necessary junctures. Indigenous researchers urge that sexual health programming focus on equipping young people with

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tools to assert themselves, as sexual health knowledge alone is insufficient to control a sexual environment (Shercliffe et al., 2007; Steenbeek, 2004).

It is imperative that sexual health education programs incorporate Indigenous wisdom and health models pertaining to gender roles, sexual identities, and sexual relationships (Banister & Begoray, 2006; Myers et al., 1999, Pauktuutit Inuit Women of Canada, 2006). Programs should build upon the strengths of young people through the strategies of participatory action research, peer support workers, and self-advocacy (Mental Health Commission of Canada, 2013; Steenbeek, 2004; Yee, 2010). Involving caregivers and community members in sexual health curricula can facilitate cultural connectedness through mentorship of, and partnership with, educators and healthcare professionals. Yee (2010) calls for sexual education initiatives that provide free, peer-run, community-based workshops that utilize a decolonized approach to sexual education with a focus on self-esteem building and violence prevention.

Moreover, as many young people turn to the Internet to acquire health information, it is important to strengthen relevant online materials that provide information, answer questions, and direct young people to appropriate resources. These sites must be carefully branded, vetted, and advertised, particularly to residents of rural and remote communities who would benefit from the anonymity offered online. Telehealth programs should consider prioritizing sexual health support for communities that require accessible and confidential sexual health resources.

Indigenous young people who are two-spirited spoke to the tragic isolation and confusion that accompanied their developmental years, and drew attention to the lack of resources that could have otherwise supported them. Researchers have highlighted that

Indigenous young people who are two-spirited face heightened health vulnerabilities

stemming from homophobia, identity crises, homelessness, and mental health issues

(First Nations Centre, 2012; Smith et al., 2007; Walters et al., 2006). It is critical that

sexual health resources incorporate their needs into programming and facilitate

inclusivity, recognition, and care, particularly in small communities where a dearth of

sexual health resources exist. Indigenous leaders stress that safe places and affirmative

resources can help create positive self-concepts for two-spirited young people. This can

be achieved by acknowledging their value, contributions, and histories to Indigenous

communities and culture, and by involving them in every aspect of society (Bodi, 2009;

First Nations Centre, 2012; National Association of Friendship Centres, 2008; Walters,

1997; Walters et al., 2006).

In the interviews, young people identified parents as primary educators for sexual

health, but recognized that many Indigenous adults may not have received adequate

sexual education themselves. Parents' ability to openly discuss sexual safety with their

children is contingent on their knowledge, skill sets, and comfort with sex (Whitaker et

al, 1999). Sex and sexual violence are a difficult and often unvisited topic of conversation

among Indigenous families due to the legacies of the residential schools and the ensuing

intergenerational traumas (Myers et al., 1999; Pauktuutit Inuit Women of Canada, 2006;

Yee, 2010). Familial fragmentation interrupted the transmission of traditional values,

health information, and coming-of-age ceremonies that were meant to uphold sexual

wellbeing (Kleist, 2008; Oliver et al., 2015; Wilson et al., 2013). Such experiences were

detailed by participants whose parents had been residential school survivors, and helped

us understand the association that was observed in Chapter 5 between HSV-2 positivity

and having a mother who attended residential school. Extending sexual health education to Indigenous adults and parents is therefore vital.

Connecting parents, families, and community service providers with appropriate sexual health resources can support sexual health education in homes and in the community. As such, educators should first understand the sexual health needs and values of Indigenous communities, then move to develop rapport with service recipients, facilitate opportunities for anonymous and private counseling, and be accessible for follow-up. Indigenous caregivers, adults, and parents require appropriate communication and information tools necessary to overcome any stigma, shame, and silence regarding discussions of sexual violence (Yee, 2010). Again, educators should strive to establish trust, ensure confidentiality, and allow knowledge seekers to approach on their own terms. Effective sexual health education programming can only be successfully delivered by trusted sources to a receptive audience whose past sexual experiences and attitudes do not supersede their ability to discuss sex (Willis, 2003). Using cultural interventions that incorporate Indigenous wellness frameworks can help overcome cycles of unresolved trauma and restore the instrumental teachings, ceremonies, and traditions that have long safeguarded the sexual health of Indigenous communities (Duran & Walters, 2004; Majumdar et al., 2004; Yee, 2010).

4) Using culture as intervention to build upon the intrinsic capabilities of Indigenous young people to strengthen cultural identity and self-esteem

Traditional interventions, support systems, and resources built upon Indigenous wellness frameworks are known to instill pride in identity, self-esteem, and foster resilience (Walters & Simoni, 2002; Wexler et al., 2014). Unfortunately, many

Indigenous young people who are disconnected from their communities and/or are living in urban areas may not be benefitting from the protective qualities of their culture (Fleming & Ledogar, 2008; Goodkind et al., 2012). The histories of colonization have severely damaged self-esteem among Indigenous people by attaching shame to their identities - a loss that was intensified through intergenerational trauma and transferred across generations (First Nations Health Authority, 2013; Law Commission of Canada, 2000; Truth and Reconciliation Commission of Canada, 2012). During the qualitative interviews, participants were clear that self-esteem was fundamental to sexual wellness. They stressed that the ability to voice sexual preferences or seek sexual health support requires self-care that is anchored by a strong sense of identity and self-confidence. Participants who had survived childhood sexual abuse spoke of how their shattered self-esteem fractured their ability to self-protect during sex. Self-esteem has been identified as a powerful element of self-efficacy in decision-making during sex (Amaro, 1995; Parillo et al., 2001; Zierler et al., 1991). Among Cedar Project participants, childhood maltreatment has been associated with reduced self-esteem and inconsistent condom use (Pearce, 2014). Low self-esteem renders Indigenous young people especially susceptible to offerings of care from exploitative abusers (National Aboriginal Consultation Project, 2000) and has been associated with survival sex work (National Aboriginal Consultation Project, 2000; Pearce, 2014). In the interviews, participants who had accessed traditional sources of healing and support shared how their restored self-esteem and awakened cultural pride helped them cope with adversity, pursue drug recovery, and practice self-care.

We recommend that public health service providers and community experts collaborate to holistically **support the development of strong identities and self-esteem by reconnecting Indigenous young people who face adversities with their culture**. Indigenous culture emerged as a shielding force against negative sexual health outcomes in both the qualitative and quantitative components of this study. This finding is not surprising, as Indigenous scholars and Elders have maintained that traditional practices, teachings, ceremonies, and spirituality are the foundations of strength and resilience amongst Indigenous people (Brant Castellano, 2008; Brass, 2009; Kirmayer, Brass, & Tait, 2000). Indigenous researchers have empirically demonstrated that cultural involvement enables young people to connect to traditional values, concepts, and beliefs that safeguard their health (Chandler & Lalonde, 1998; Devries et al., 2009a; Dion-Stout et al., 2001; Gesink et al., 2016; Kirmayer et al., 2003; Korhonen & Ajunniginiq, 2006; Lavallee & Clearsky, 2006; Torres Stone et al., 2006; Tourand et al., 2016; Wexler et al., 2014). Participation in culture and traditional ways has been found to abate the pain of self-loss that accompanies sexual violence for Indigenous women, and may reduce STI risk by acting as a "healing medicine" (Gesink et al., 2016). Cedar Project participants who have access to traditional languages have higher resiliency amongst their cohort, and those who live by traditional culture scored lower on psychological distress scales when compared to participants who did not live traditionally (Pearce, 2014). Indigenous young people in BC who speak their traditional language have been shown to engage in positive health behaviours (Clark et al., 2013; Tourand et al., 2016). Further, participation in traditional activities among Indigenous young people supports alcohol cessation and

decreases criminal activity (Andersson & Ledogar, 2008) – two factors that were both associated with STI positivity in this study.

Indigenous leadership stress the need to shift away from Western constructs of resilience that are linear and individualistic, and move towards utilizing traditional culture, languages, and spirituality as psychological buffers for trauma (Fleming & Ledogar, 2008). The preventative and therapeutic benefits of Indigenous culture can help rekindle pride, strengthen identities, and boost self-esteem. Indigenous scholars have called for innovative programming that provides Indigenous young people with access to Elders, traditional practices, ceremonies, and teachings. These relationships are especially important for Indigenous young people who face adversities, as cultural connectedness can facilitate healing, promote positive emotional and health outcomes, and support self-care capabilities (McIvor et al., 2009; Wexler et al., 2014). Using culture as intervention can help restore the damages inflicted upon the respect and validation of Indigenous people through colonial maltreatment and exploitation, and restore the wellness frameworks that have long protected their wellbeing (Duran & Walters, 2004; Fleming & Ledogar, 2008b; National Aboriginal Consultation Project, 2000).

8.4 Limitations

The limitations of this study have been described in each chapter. In sum, the first limitation was the eligibility criteria, which stipulates that participants be Indigenous, under the age of 30 at baseline, have used drugs at least one month prior to enrollment, and have lived in BC. Consequently, the research findings cannot be generalized to all Indigenous people who live in Canada. Due to the non-random recruitment methods, individuals who are socially isolated may not have been captured (Faugier & Sargeant,

1997). However, Cedar Project recruitment staff are well-connected members of the community with an extensive outreach capacity and we are thus confident that the study sample is nonbiased and representative of Indigenous young people who use drugs in BC.

Second, the recruitment methodology of this study involved extending invitations to Cedar Project participants who had returned for follow-up interviews. Consequently, missing data is selective and non-random. Participants who missed the follow-up may have faced exceptionally difficult circumstances that prevented them from returning for an interview. The limitation of loss to follow-up is common in longitudinal cohort studies with marginalized participants and must be considered when interpreting results (Maher & Page, 2015). However, despite working with an extremely mobile and transient cohort, the Cedar Project has maintained a high retention rate due to vigilance in follow-up procedures, including a tracking database, monetary incentives, outreach by study personnel, and a toll-free phone number at each site that participants can call. Of the participants recruited to date who have been eligible for a follow-up visit, 81% have returned for at least one visit from 2003 to 2014.

Third, many of the research questions and variables involve participants remembering lifetime events that are traumatic, took place during childhood, or occurred while under the influence of drugs. Therefore, the effects of memory loss and any resultant non-differential misclassification bias cannot be accounted for. Cedar Project data is largely based on self-reporting, and subject to a social desirability bias that may cause participants to withhold information that is felt to be shameful, difficult to discuss, or pertains to an illegal act. To avoid such bias, Cedar Project staff continually strive to create trusting relationships, assure confidentiality, and allow participants to choose their

interviewer(s).

Fourth, causation or temporality cannot be ascertained in the statistical models as only data were gathered from one point in time. Further, many variables that measure vulnerability are often experienced simultaneously. As such, the broad spectrum of potential determinants to sexual vulnerability can lead to a loss of significance, and requires model building that accounts for multicollinearity between such variables. Future research is needed to examine HSV-2 and syphilis positivity over time in order to explore independent risk factors for seroconversion. Due to the small proportion of individuals who tested positive for syphilis, it was not appropriate to conduct multivariate modeling given the sample size (Peduzzi et al., 1996). However, by stratifying the analysis by gender and location, two potential confounders were controlled for. This STI study now provides an opportunity to conduct longitudinal analyses in the Cedar Project cohort to examine both the risk and protective factors associated with STI positivity.

8.5 Conclusions

In conclusion, we reiterate that the sexual health of young Indigenous people who use drugs can only be understood by contextualizing present day outcomes within the legacies of colonization. Sexual health is a key component of overall health and extends far beyond personal decision-making. Yet, major historical, social, and structural barriers continue to interfere with the sexual wellbeing of Indigenous young people who use drugs. It is critical that any attempts to address their sexual health needs do so through decolonizing and Indigenous-led strategies that account for the complex factors that impact sexual wellbeing. Services, policies, and programs that are built upon Indigenous models of care and wellness frameworks are needed for ongoing efforts to regain self-

determination and support collective healing. Sexual health resources must be culturally-safe, trauma-informed, and take the unique needs of Indigenous women, men, and two-spirited young people into consideration. For such resources to be effective, their design and delivery necessitates involving the very population they aim to serve. Sexual wellbeing can be best achieved through the recognition and rectification of the historical injustices that aimed to eradicate the wisdom, strength, and spirits of the Indigenous people of this country, but greatly failed to do so.

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