

**IMPACT OF AN HIV/AIDS SEXUAL HEALTH EDUCATION PROGRAM FOR  
YOUTH IN SOUTHERN INUIT COMMUNITIES**

by

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## **ABSTRACT**

HIV/AIDS data in Canada indicates a steady and disproportionate increase of HIV infections among Indigenous youth. To address this health vulnerability, a community-based research project was conducted to evaluate an HIV/AIDS sexual health presentation specific to youth in Labrador. Ninety-eight students in Grades 7-12 responded to pre- and post-questionnaires to determine, on a short-term basis, their knowledge, attitudes, and programming preferences. Research results demonstrated an increase in overall knowledge and attitudes. Older and female participants gained significant positive attitudes surrounding HIV/AIDS compared to younger and male participants. Students were found to prefer HIV prevention initiatives permeated with games, activities, and demonstrations. Several misconceptions were discovered that call for further education on HIV transmission and stigma. This study provided important insights into gaps in HIV/AIDS education, as well as subgroups that require programming that meets their specific needs. These insights can be utilized to tailor sexual health education to be more reflective of, and effective for, youth in Southern Inuit communities.

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## **List of Abbreviations**

<b>ACHF</b>	Alberta Community HIV Fund
<b>AIDS</b>	Acquired Immune Deficiency Syndrome
<b>ANOVA</b>	Analysis of Variance
<b>CIHR</b>	Canadian Institutes of Health Research
<b>HIV</b>	Human Immunodeficiency Virus
<b>IDU</b>	Injection drug use
<b>IMB</b>	Information, Motivation, and Behavioural Skills
<b>HIV-KQ-18</b>	HIV Knowledge Questionnaire (18 Item Version)
<b>LFC</b>	Labrador Friendship Centre
<b>LGBTQ</b>	Lesbian, Gay, Bisexual, Transgendered or Transsexual, Two-Spirited, Questioning, and Queer
<b>MSM</b>	Men who have sex with men
<b>NSERC</b>	Natural Sciences and Engineering Research Council of Canada
<b>OCAP</b>	Ownership, Control, Access, and Possession
<b>PHAC</b>	Public Health Agency of Canada
<b>PLWHA</b>	People living with HIV/AIDS
<b>RAC</b>	Aboriginal Research Advisory Council
<b>SSHRC</b>	Social Sciences and Humanities Research Council of Canada
<b>STBBI</b>	Sexually Transmitted Blood Borne Infections
<b>STI</b>	Sexually Transmitted Infections
<b>TCPS2</b>	2 <sup>nd</sup> Edition of the Tri-Council Policy Statement



<b>TukeyHSD</b>	Tukey's Honestly Significant Difference
<b>UNAIDS</b>	Joint United Nations Programme on HIV/AIDS
<b>WHO</b>	World Health Organization

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## **Chapter 1: Introduction**

Sexuality is a fluid set of complex forces that are central to an individual throughout their life. It influences an individual's sense of identity, personal health, and wellbeing (Public Health Agency of Canada (PHAC), 2008a). Sexuality is shaped and reshaped through numerous interactions between internal and external factors, such as biological, psychological, social, political, cultural, ethical, and spiritual elements (World Health Organization (WHO), 2006). Grounded in societal norms, sexuality is often confined to male and female binaries, which may have adverse health outcomes for those who do not identify within these two narrow categories. To address this, it is essential to recognize the complexity and diversity of sexuality. For the purpose of this study, sexuality is conceptualized as a broad range of identities, those that fall both inside and outside of gender<sup>1</sup> norms. Sexuality, in all shapes and forms, is a fundamental aspect of human health that has a great influence on an individual's sexual health.

Sexual health is an essential component of personal and community health that influences individuals over their lifespan (PHAC, 2008a). Sexual health is unique to each individual throughout different stages of their life. To summarize sexual health, the WHO (2006) offers the definition:

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<sup>1</sup> Gender refers to the “socially constructed roles, behaviours, activities, and attributes that a given society considers appropriate for men and women”, while sex refers to biological and physiological characteristics (WHO, 2014).

Sexual health is a state of physical, emotional, mental and social well-being 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 (p. 5)

In recognizing the importance of sexual health for Canadians, sexual health education is recommended to be a subject in the public school curriculum. Sexual health education is the act of supplying individuals with the information, motivation, and behavioural skills necessary to enhance sexual health and reduce adverse sexual health outcomes (PHAC, 2008a). Schools continue to be the main source of sexual health education (McCall & McKay, 2004), given their ability to reach the majority of young people in Canada (PHAC, 2008a). Sexual health education is administered and managed by the school boards, administration, and/or teachers within each province, which results in significant inconsistency and variation (Smylie, Maticka-Tyndale, & Boyd, 2008).

National guidelines inform sexual health education in Canada, which leaves absences in training, support, and evaluation at a local level. Evaluations are an essential component of sexual health education to determine whether the approach is effective and beneficial for Canadian youth (Nelson & Tom, 2011). The voices of youth should be incorporated in all stages of sexual health education to ensure that their needs, and the

needs of the communities supporting them, are being met (PHAC, 2008a). Although schools are held primarily responsible, parents, community, and health care professionals have a major role to play in order to provide meaningful and effective sexual health education (McCall & McKay, 2004).

Public health service providers are a valuable resource as they can assist schools in supplying education that addresses gaps in the sexual health education curriculum (Ministry of Health, 1997). A common gap in sexual health education is the lack of culturally appropriate programming for youth. The presence of this gap is alarming as some cultural groups, such as Indigenous peoples,<sup>2</sup> are considered to be vulnerable to Sexually Transmitted Infections (STI) (or referred to as Sexually Transmitted Blood Borne Infections (STBBI)) and the Human Immunodeficiency Virus (HIV) or Acquired Immune Deficiency Syndrome (AIDS). In fact, a rapid increase in HIV infections among Indigenous youth place them as one of the groups most vulnerable to the HIV/AIDS epidemic in Canada (Majumdar, Chambers, & Roberts, 2004).

Canadian surveillance data indicates that Indigenous peoples represent 12.5% of all new HIV infections, which is alarming given that Indigenous peoples only make up 3.8% of the Canadian population (PHAC, 2010). This data indicates that the incidence

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<sup>2</sup> The terminology Indigenous will be utilized throughout this thesis to encompass the numerous bands, tribes, and nations in Canada, with recognition of the distinct and diverse identities between and within them. As of December 2009, CIHR recommends the use of Indigenous rather than Aboriginal. The rationale behind this is that Indigenous “denotes a collective history among Indigenous Peoples of the world regardless of their borders, and is broader than the Constitutional and legal definitions, is consistently and purposefully used in this context in internationally Indigenous rights movements, and can better speak to the tenets of health research” (CIHR, 2013). NunatuKavut, the governing body involved in this research who represent the Southern Inuit peoples of Labrador, accepts the use of this terminology when the name of the specific group or nation is not appropriate.

rate of HIV among Indigenous peoples is 3.6 times higher compared to non-Indigenous peoples (PHAC, 2010). Furthermore, of the Indigenous peoples who are HIV-positive, 5.6% are youth under 19 years of age (PHAC, 2010). To address this distinct health need, HIV infection in Indigenous communities must be conceptualized through an intergenerational lens of colonialism (Ricci, Flicker, Jalon, Jackson, & Smillie-Adjarkwa, 2009; Devries, Free, & Saewyc, 2012; Mill et al., 2011; Prentice et al., 2011; Mehrabadi et al., 2008; Pearce et al., 2008). Colonialism is defined as, “The policy or practice of acquiring full or partial political control over another country, occupying it with settlers, and exploiting it economically” (New Oxford American Dictionary, 2014). Colonialism encompasses the lasting impacts of colonial policies and historical events (Czyzewski, 2011), which are experienced differently by each individual, community, or peoples that it has affected.

The shared experiences of marginalization and trauma, as a result of colonialism, leads to numerous socioeconomic and systemic factors that increase Indigenous people’s vulnerability to HIV transmission (Ricci et al., 2009). The population most vulnerable to infection with HIV among Indigenous peoples are young females, which is in contrast to men who have sex with men (MSM) who are most affected in the general population (Ricci et al., 2009). Given this demographic difference, HIV/AIDS programming for Indigenous peoples must be developed, implemented, and evaluated in ways that are specific to age, gender, community, and culture.

Considering this health recommendation, an Indigenous community organization, the Labrador Friendship Centre (LFC), called for an evaluation of their HIV/AIDS project for Indigenous youth in Labrador. In response, a research team was formed to evaluate

the HIV/AIDS component of their sexual health presentation, as well as to discover the sexual health educational preferences of youth in Southern Inuit communities. The research team consisted of a community partner from the LFC, an Indigenous governing authority – the NunatuKavut Community Council, and researchers from Memorial University. Indigenous research guidelines specific to the NunatuKavut Community Council were followed to ensure that the entirety of the project is culturally appropriate, meaningful, and mutually beneficial.

### **1.1 Reflexively Locating the Principal Investigator in the Research**

As this project works in collaboration with community partners, the value of incorporating a reflexive approach to research was acknowledged. Consensus driven discussions lead to reflective passages being incorporated throughout this this thesis. Reflexive passages provided an opportunity to tie in aspects of what a community partner identified as Southern Inuit ways of knowing, such as the sharing of stories. Reflexivity is “the act of becoming aware of the self as researcher, within the process of knowledge generation” (Guba, E.G., & Lincoln, Y.S. 2005: 191). It allows of the researcher to recognize their “conceptual baggage”, or preconceptions and assumptions, and how they affect the research. Incorporating reflexivity enabled the research team to remain flexible throughout the project and adjust to changes and challenges faced along the way. To write reflexively, the Principal Investigator will shift gears for the duration of this section and speak in first person.

To begin this reflexive discussion I would like to locate myself within the research experience. I am a young woman from Scarborough, Ontario. To my knowledge, my

ancestors came from Ukraine and the United Kingdom, but my family identifies as Canadian, having migrated here three generations ago. I was raised with the experience of privilege where shelter, education, sustenance, and security were stable. At a young age I was encouraged to volunteer with my community, as well as for national and international efforts that resounded with me. When I was 11-years-old, I was extremely fortunate to hear Nelson Mandela speak at the XIII International AIDS Conference, which ignited a desire within me to help those in need, and further, contribute to the fight against HIV/AIDS.

For these reasons I enrolled in an Honours Bachelor of Health Sciences at the University of Ottawa, where I was introduced to the Indigenous community there. Through meaningful relationships with students, teachers, and elders, my outlook on learning rapidly began to change and I sought an educational pathway that reflected this cognitive transformation. A piece of this transformation was the completion of a minor in Canadian Indigenous studies and volunteer work with the Indigenous health organizations Wabano Centre for Aboriginal Health and Anishnawbe Health Toronto. It was within this transformation that I became aware of, and extremely disturbed by, the health disparities that exist for Indigenous peoples in Canada, and specifically, the increasing rate of HIV infection among youth.

In seeking a Master's program that addressed this health concern I reached out to Dr. Rebecca Schiff who conducts innovative research with Indigenous communities surrounding food security. In forming a relationship, Rebecca presented me with the opportunity to connect with an Indigenous organization and explore the potential to collaborate on a research project. This organization was the Labrador Friendship Centre,



who indicated a need for an evaluation of their HIV/AIDS project. With their support I accepted admission to a Master's of Science in Community Health at Memorial University, as well as a commitment to be a partner in a community-based research project.

As a non-Indigenous woman I was hesitant to be integrally involved in an Indigenous project given Canada's history of harm towards Indigenous peoples and communities in the name of research. Tuhiwai-Smith (1999) states that research regulates and realizes the underlying code of colonialism, which are perpetuated in media, official histories, and school curricula. In order to be able to contribute to research without reinforcing colonialist ideologies, an education in decolonizing approaches to research was necessary. In learning about decolonizing methodologies, I recognized a barrier that I would experience; the inability for myself, as a non-Indigenous person, to truly do decolonized research.

In accepting this reality, I was able to let go of my preconceived idea of control over the process, and instead look to my community partners to steer the course of research. Aspects of decolonizing approaches were used to inform the research project, which compelled me, first and foremost, to situate myself in the research. My positioning in this project is as an outsider, and as such, the lens in which I view the world (one of privilege and whiteness)<sup>3</sup> may be drastically limited. In acknowledging this limitation, I began to

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<sup>3</sup> Whiteness refers to a social construct instead of a truth that has universal validity (Henry & Tator, 2006). Henry & Tator (2006) note, "Whiteness becomes transformed into social, political, economic, and cultural behaviour. White culture, norms, and values in all these areas become normative natural. They become the standard against which all other cultures, groups, and individuals are measured and usually found to be inferior" (p. 46-67).

confront it by seeking the help of my partners and mentors to shape the research from a lens that is more reflective of participants and the communities supporting them. This partnership enabled a renegotiation and transformation of the research process that was grounded in mutual respect. As Tuhiwai-Smith notes, “[t]hrough respect the place of everyone and everything in the universe is kept in balance and harmony”. Indeed, the commitment of all partners to respect throughout the research process propelled the project on a momentous journey.

## **1.2 Research Aim**

The purpose of this evaluative study was to determine students’ levels of knowledge and attitudes surrounding HIV/AIDS, as well as to evaluate the LFC’s sexual health presentation for youth in Southern Inuit communities. The use of a self-administered pre- and post-questionnaire was developed to meet the research aim of determining whether, on a short term basis, student’s knowledge levels and attitudes changed as a result of the sexual health presentation. All grade schools in four communities on the south coast of Labrador participated in the research project, from which all of the research participants were recruited.

## **1.3 Conclusion**

Research results demonstrated the effectiveness of the LFC’s sexual health presentation based on overall knowledge, attitudes, and evaluation scores. In addition to demonstrating program effectiveness, gaps in HIV/AIDS knowledge and attitudes were discovered, as well as the programming preferences of south Labradorian youth. Rich

research results provided important insights into the levels of HIV/AIDS knowledge and attitudes, and what rural Indigenous youth prefer for sexual health education. These insights were utilized to make recommendations on how HIV/AIDS prevention programming can better suit their needs. Recommendations suggested the need for sexual health education to be grounded in approaches that are engaging for youth as well as appropriate for their age group.

In implementing education that is engaging and appropriate for young people, sexual health educators play a pivotal role. Given the absence of developmental, implement, and evaluative support, sexual health educators must be provided with formal training and support mechanisms delivered in ways that are flexible and accessible. A scoping review of the impact of HIV/AIDS on Indigenous youth revealed a need for HIV/AIDS programming that is grounded in unique and specific approaches that are age-, gender-, culture-, and community-specific. The sexual health needs of Indigenous youth in Canada require a delicate balance of best practices for HIV/AIDS education and approaches that incorporate their unique needs and preferences.

## **Chapter 2: Literature Review**

This chapter explores the current body of literature pertaining to HIV/AIDS among Indigenous youth in Canada. A review of the literature was completed to discover themes in the contemporary knowledge base and uncover gaps that require further exploration. The themes discovered in this literature review include: alarming epidemiological rates of HIV infection among Indigenous youth in Canada, HIV/AIDS in Newfoundland and Labrador, environments that heighten the risk of HIV infection, requirements of meaningful HIV/AIDS prevention strategies, a lack of culture and age appropriate initiatives, and a need for HIV/AIDS program evaluations.

### **2.1 Alarming Epidemiological Rates**

The contemporary body of epidemiological evidence surrounding HIV/AIDS demonstrates higher infection rates among Indigenous peoples in Canada, specifically individuals under the age of 30. This section on alarming epidemiological rates will discuss the increasing trend of HIV infection among Indigenous peoples, the profile of the group most affected, and adverse health outcomes related to HIV among young Indigenous peoples. Examining the epidemiological data will allow for the demonstration of a health need for First Nations, Inuit, and Métis youth across Canada.

In Canada, approximately 4% of the population self-identifies as “Aboriginal” (PHAC, 2010). National surveillance data indicates that 8% of prevalent and 12.5% of incident HIV infections were among Indigenous peoples in 2008 (PHAC, 2010). Of the HIV-positive Indigenous peoples, 5.6% are youth 19 years old or younger (PHAC, 2010).

This data indicates that Indigenous people are more likely to be infected with HIV compared to the general Canadian population (Hill & Kurtz, 2008; Ricci et al., 2009; Mill et al., 2008). The 2011 estimates of HIV prevalence and incidence note that the “infection rate among Indigenous people was 3.5 times higher than among the non-Indigenous population” (PHAC, 2011, p.2). These epidemiological findings highlight that Indigenous people are overrepresented in the data, and are “among the groups most vulnerable to the spread of the AIDS epidemic” (Majumdar et al., 2004, p.70). In light of this health concern, Health Canada (2004) warns that “the HIV epidemic in the Indigenous community shows no sign of abating” (p.182).

Within the past decade, HIV infection among Indigenous peoples has increased, which is in contrast to the stabilization of HIV infection rates among the general Canadian population (Majumdar et al., 2004). The contemporary body of literature on HIV/AIDS in Indigenous populations further confirms a steady and disproportionate increase of HIV infections among Indigenous youth (Hill & Kurtz, 2008; Majumdar et al., 2004). The rapid rise in the number of HIV-positive Indigenous young people places them as one of the most vulnerable populations in Canada (Majumdar et al., 2004). Indigenous youth consequently face escalated risks “for morbidity and mortality as a result of risky behaviours” (Majumdar et al., 2004, p. 69).

Indigenous youth who become infected with HIV are more likely to be female (Mehrabadi et al., 2008; Ricci et al., 2009), and have a history of injection drug use and sexual abuse (Pearce et al., 2008; Majumdar et al., 2004; Larkin et al., 2007). Additionally, HIV infection is occurring at younger ages (PHAC, 2010; Larkin et al., 2007), with a large proportion contracting the virus between late teenage years and early

twenties (Majumdar et al., 2004). In a study conducted in 2008 on gender differences, Indigenous girls were found to be three times more likely to be infected with HIV than males (Mehrabadi et al., 2008). On a global level, females aged 15-24 are 1.6 times more likely to be infected with HIV compared to males, which highlights the disproportionate burden young Indigenous females in Canada carry (PHAC, 2010). In regard to the heightened risk of HIV, a Canadian study concluded that nearly half of the Indigenous participants had been sexually abused, in which 69% of whom were young females (Pearce et al., 2008).

The profile of HIV/AIDS amongst Indigenous peoples in Canada differs in three fundamental ways: “gender, age and exposure category: women, youth and injection drug users” (Ricci et al., 2009, p.26). In contrast, in Canada the highest exposure category in the general HIV/AIDS profile is MSM (PHAC, 2011). Given these differences, research on HIV/AIDS with Indigenous peoples must be conceptualized, conducted, and disseminated in ways that are representative of the distinct individuals, communities, and populations they serve.

HIV is proving to be a complex, serious, and progressing health concern for Indigenous peoples of all ages on local and global scales (Ricci et al., 2009). As Indigenous peoples in Canada are a unique and distinct population they experience a different history and relationship to HIV/AIDS. Indigenous individuals who are HIV-positive experience acute illness earlier, have shorter survival times, and less access to health care services (Prentice et al., 2011; Mill et al., 2011; Mill et al., 2008). Delayed and limited access to health services contributes to Indigenous peoples having later diagnosis and higher rates of morbidity and mortality (Prentice et al., 2011). Indigenous

communities additionally have less specialized services that provide health education, testing, treatment, and care. First Nations peoples with HIV/AIDS were found to utilize antiretroviral therapy less and participated in more hospital admissions than non-First Nations individuals (Prentice et al., 2011; Mill et al., 2011; Mill et al., 2008). Connecting Indigenous peoples to health services is a complex issue given their physical and social isolation and the common experience of mistrust with Western health paradigms (Prentice et al., 2011).

Epidemiological data provides researchers with information that can highlight the central health concerns experienced by Indigenous communities in Canada. The data indicates that HIV transmission is a multifactoral process that must be contextualized in the histories of trauma and social inequalities experienced by Indigenous youth (DeBruyn, Chino, Serna & Fullerton-Gleason, 2001). Young Indigenous people are engaging in inconsistent condom use and injection drug use that are placing them at high risk for the transmission of HIV (Canadian Federation of Sexual Health, 2007; Ontario Federation of Indian Friendship Centres, 2002; Calzavara et al., 1998). Further, girls are becoming infected more often than their male peers (Mehrabadi et al., 2008), therefore, the direction of research must continue in arenas of prevention and care that are specific and meaningful based on gender and age.

Indigenous communities are experiencing a rapid and continuous increase of HIV infection, especially among those under the age of 30 (Hill & Kurtz, 2008; Majumdar et al., 2004). A lack of access to crucial health services, such as experienced physicians, education, testing, treatment, and care offer explanations of why these communities are

facing HIV crises (Prentice et al., 2011). One such community that experiences a lack of health services are the peoples of Labrador (Martin et al., 2012).

## **2.2 HIV/AIDS and Labrador**

National surveillance data indicates that as of 2009, the total number of people living with HIV/AIDS (PLWHA)<sup>4</sup> in Newfoundland and Labrador was 256 (PHAC, 2009). There remains no information on the numbers attributed to Labrador alone, or among those who self-identify as Indigenous. Furthermore, PHAC (2009) warns that in estimating HIV/AIDS rates undiagnosed cases must be accounted for, in which approximately 25% of individuals living with HIV in Canada are unaware of their infection.

In Labrador there are three distinct and separate Indigenous cultures: the Southern Inuit, Innu, and Inuit nations (Tourism Labrador, 2007). This research works with Southern Inuit peoples who are represented by the NunatuKavut Community Council. NunatuKavut means ‘our ancient land’, and is a community organization that acts as a governing body for Southern Inuit/Inuit-Métis peoples (NunatuKavut, 2010, p.1). The NunatuKavut Community Council was formed to protect the unique rights of Southern Inuit peoples in south Labrador. The NunatuKavut Community Council (2013) estimates that over 6,000 peoples identified as Southern Inuit in Labrador in 2013. NunatuKavut is composed of 11 communities in southern Labrador, which range in population from 15 to 572 residents (Martin et al., 2012).

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<sup>4</sup> The acronym PLWHA will be used to refer to people living with HIV/AIDS.



Southern Inuit communities recognize Inuit peoples as their Indigenous ancestry (NunatuKavut, 2013). The Inuit people in Labrador are descendants of the Thule peoples who arrived in Labrador in approximately 1500AD (Martin et al., 2012). The beginning of the nineteenth century saw an influx of European men in Labrador, which led to procreation with Inuit women (Martin et al., 2012). European social structures of patriarchy were enforced whereby the ownership of Indigenous women was asserted – often resulting in non-consensual sexual relations (Sikka, 2009). As a result, significant changes to the Inuit culture occurred, including negative health outcomes due to sexual abuse, loss of the Inuktitut language, and the “stigmatization of Inuit and ‘half breeds’” (Martin et al., 2012, p.38). Numerous negative health outcomes have been linked to sexual abuse including “mental, sexual and drug related vulnerabilities” (Peace, et al., 2009, p. 2187). The repercussions of sexual abuse in conjunction with loss of language and stigmatization persisted and continue to be felt by Inuit and Métis peoples today.

Métis peoples in Canada have experienced a long history of exclusion based on geographical and racial classifications (Clarke & Mitchell, 2010). Only in 1949 were Métis peoples recognized through franchise by any representative government in Canada (Clarke & Mitchell, 2010). By 1980, a political organization called the Labrador Métis Association was formed due to the exclusion of the NunatuKavummiut people by non-Indigenous, as well as Inuit, political groups (Clarke & Mitchell, 2010). Following the formation of the Labrador Métis Association, numerous transformations occurred that improved the political and social standing of NunatuKavummiut peoples, such as the establishment of the Constitution of NunatuKavut in 2010.

Given the diversity of the Indigenous communities in Labrador, an understanding of HIV vulnerability must acknowledge the unique dynamics and experiences of each community. Communities in Labrador are often small and well connected, which acts as a barrier to HIV testing since those who get a test are often labeled as having HIV (Ratnam & Myers, 2000). The disclosure of sexually related afflictions, such as HIV/AIDS, could cause fear and panic in the community and the ostracization or rejection of the individual (Ratnam & Myers, 2000). Despite the distinctness of communities in Labrador, there is to date only one research project that specifically addresses HIV/AIDS, which was conducted over 10 years ago (Ratnam & Myers, 2000).

The paucity of research on HIV/AIDS in Labrador signifies an essential need for more information on what is effective for this population, specifically those who face increased risks. In addressing this health need, the question arises: *Why are rates of HIV higher in Indigenous youth?* In answering this question, evidence suggests that Indigenous youth are disproportionately exposed to environments of risk that lead to adverse outcomes through threats to health and wellbeing. The next section will explore environments of risk that contribute to escalated rates of HIV/AIDS among young Indigenous peoples.

### **2.3 Environments of Risk**

In this section environments of risk are explored to suggest why Indigenous youth experience escalated rates of HIV/AIDS. The environments of risk that are highlighted in this section include: health inequities, stigma, risk behaviours, and sexual abuse, as well as the unique experiences of LGBTQ and two-spirited youth.

Indigenous and non-Indigenous scholars demand that the conceptualization of HIV/AIDS vulnerabilities in Indigenous populations be located within the historical and contemporary experience of colonization, marginalization, and trauma (Ricci et al., 2009; Devries et al., 2012; Mill et al., 2011; Prentice et al., 2011; Mehrabadi et al., 2008; Pearce et al., 2008). Colonization has resulted in cultural genocide, racism, removal from sacred lands, disenfranchisement, violence, neglect, poverty, and the physical and social isolation of Indigenous individuals and communities (Steenbeek, Amirault, Saulnier, & Morris, 2010; Ricci et al., 2009; Devries et al., 2012; Mill et al., 2011; Mehrabadi et al., 2008). The shared experience of profound marginalization increases Indigenous people's vulnerability to HIV infection (Ricci et al., 2009). Vulnerability to HIV infection is increased through exposure to environments of risk that are plagued with "higher rates of addiction, poverty, homelessness, incarceration, sexual, and physical violence, street-involvement, infectious disease, and suboptimal utilization of health services" (Prentice et al., 2011, p.396).

HIV transmission among Indigenous youth in Canada must be understood through environments that pose risk, rather than individual-oriented risk behaviours. This requires the deconstruction of health perceptions and paradigms that place responsibility and blame for negative health outcomes on the individual (Cockerham, 2005). As Prentice et al. (2011) note, "risk environments must be understood in the context of colonization that creates structural barriers to Indigenous youth wellness" (p.409). Young Indigenous peoples may have been born into, or live in, poverty, which often results in low education attainment, exposure to sexual and physical violence, street-behaviours such as sex work and illegal drug use, and a lack of support to be able to protect themselves from HIV risks

(Larkin et al., 2007; Marshall et al., 2008; Miller et al., 2006). In conjunction with poverty is the experience of health inequity, which is discussed in the following subsection.

### ***2.3.1 Health Inequity***

Risk environments are often characterized by a lack of access to essential health services that result in adverse health outcomes, such as late diagnosis, a lack of access to experienced physicians, and appropriate care for Indigenous youth who are HIV-positive (Prentice et al., 2011). The unequal access to health services perpetuates the cyclical nature of vulnerability to HIV in Indigenous communities. Reserves, settlements, and remote locations, in which half of the Indigenous population reside, experience an absence of some health and social services (Prentice et al., 2011). Without adequate health services, communities do not receive education and awareness messages that aim to prevent HIV-transmission, encourage testing, and provide treatment, counseling, and care. In internationally recognized systems of healthcare, health services should be accessible to all citizens, but this is not always the case for Indigenous peoples (Reading & Wien, 2009). Further, the services that are available are delivered in ways that do not address the determinants of health through culture and language specific pathways (Reading & Wien, 2009).

The ignorance of cultural relevancy leads to the experience of “stigma, discrimination and racism, cultural discomfort, and historical mistrust of health care providers” that act as major barriers in utilizing health services (Prentice et al., 2011, p.398). Health care places and spaces have been found to have an impact on the use of

services by Indigenous women. Health institutions and instruments have been reported to cause feelings of isolation by Indigenous women that act to perpetuate health crises within communities. Places and spaces within health “are instruments of the political: they are embedded with power and unwritten laws informing women whether they belong or they don’t” (Fredericks, 2009, p. 41). Fredericks (2009) indicates a health issue in Indigenous women’s experience with health places and spaces:

Indigenous women do not see themselves as ‘neutral’ or ‘non-racialised’ citizens who enter and ‘use’ a supposedly neutral health service. Instead, Aboriginal women demonstrate they are active recognisers of places that would identify them within the particular health place (p.29).

Negative experiences with health care cause hesitancy and mistrust that delay the early diagnosis and treatment of HIV-positive Indigenous peoples (Hill & Kurtz, 2008). The exclusion of Indigenous peoples within the Canadian system of health further stigmatizes communities, which often results in adverse health outcomes.

### ***2.3.2 Stigma***

Indigenous peoples have unique experiences with stigma that stem from shared histories of colonialism. Pearce et al. (2008) explain that “the relationship between the cumulative effects of historical trauma and current trauma, including sexual abuse, are directly related to the HIV epidemic among Indigenous peoples” (p.2191). The social and physical isolation of Indigenous peoples in Canada permits the construction of xenophobic relationships by non-Indigenous peoples. The situating of Indigenous peoples

within hegemonic discourses of “othering” leads to their marginalization and stigmatization (Hill & Kurtz, 2008). Stigmatization is an integral component of the experience of Indigenous people with HIV/AIDS (Hill & Kurtz, 2008). HIV stigma is a “type of discrimination that causes social and emotional problems for persons with HIV and their associates” (Hill & Kurtz, 2008, p.6). It can occur through such actions as social rejection and/or violence. Indigenous peoples who are HIV-positive are often laden with HIV stigma, where the possibility of familial and social rejection deters them from getting tested, diagnosed, and treated (Hill & Kurtz, 2008). Examining the role of stigma surrounding HIV/AIDS highlights the need for strategies that address the unique interaction of risk environments and risk behaviours that lead to HIV transmission among young Indigenous peoples.

### ***2.3.3 Risk Behaviours***

In order to deliver successful age and gender approaches, an understanding of the risk behaviours that place Indigenous youth at higher risk must be gained. The current literature suggests that inconsistent condom use and unsafe injection drug use are primarily responsible for the alarming epidemiological rates on HIV/AIDS found among Indigenous youth in Canada. Lack of condom use and other protective actions by Indigenous youth contribute to high rates of HIV infection (Mill et al., 2011; Banister & Begoray, 2006), which is similar to HIV transmission among youth in the general Canadian population. The 2006 HIV/AIDS Attitudinal Tracking Survey reported that 50% of Canadian youth (aged 16 to 24) had not used a condom at last intercourse (PHAC, 2010). Specific to Indigenous youth, those who engage in inconsistent condom use

commonly do so with casual partners where discussions of safe sex and consent are less likely (Miller et al., 2006).

In addition to inconsistent condom use, unsafe injection drug use (IDU) is a high-risk behaviour that can lead to HIV infection. IDU accounts for 17.7% of cumulative HIV cases as of December 2008 (PHAC, 2010). The relationship between unsafe IDU and HIV infection among Indigenous youth is debated in the literature. Numerous studies support the claim that IDU is a major cause of HIV infection for Indigenous youth (Mehrabadi et al., 2008; Miller et al., 2006; Mill et al., 2008). One particular study revealed that 64% of HIV-positive Indigenous youth inject drugs (Prentice, 2004). A Canadian study found that Indigenous youth who had a history of intravenous drug use were four times more likely to be infected with HIV (Miller et al., 2006). Further, Indigenous youth who tested for HIV were more likely to report a history of IDU (Mill et al., 2008).

In contrast to these findings, a study in 2008 concluded that Indigenous participants who were HIV-positive were less likely to inject drugs, suggesting that “unsafe sexual activity, sex work, and other unmeasured antecedent factors may be responsible for a significant proportion of infections” (Marshall et al., 2008, p.2). Despite contradictory claims surrounding IDU, it is nevertheless important to account for the multifactoral nature of HIV and the powerful influence of environments of risk. Engagement in high-risk activities, such as not using condoms and the unsafe injection of drugs, place Indigenous youth at a heightened risk for HIV-infection and the perpetuation of the disease in Indigenous communities. In contextualizing risk behaviours among

Indigenous peoples, a discussion of the prevalence of sexual abuse is relevant, as it may contribute to engagement in high-risk activities.

#### ***2.3.4 Sexual Abuse***

Indigenous communities in Canada experience high rates of traumatic life experiences, such as sexual abuse (Pearce et al., 2008). Sexual abuse within Indigenous communities often stem from the isolation, neglect, and physical, sexual, emotional, and social violence of young Indigenous peoples in residential schools (Mill et al., 2011). To address this, the experience of sexual abuse must be an integral component in HIV/AIDS program development for Indigenous peoples. In a 2008 study, Indigenous females were almost “six times more likely to have been sexually abused in their lifetimes, with a mean age of first abuse of approximately 7.5 years” (Mehrabadi et al., 2008, p.243). A qualitative community-based study in Labrador noted, “[r]espondents identified three themes to explain why women are at risk: sexual relations are seen as a means of “escaping” a situation; women attach meanings to sex; and women have issues of control” (Ratnam & Myers, 2000, p.8). Engaging in unprotected sex with people from outside the community is considered a way to escape the current situation of feeling trapped, impoverished or in danger (Ratnam & Myers, 2000). Sexual intercourse is also assumed to be a survival instinct for women who are in need of a place to sleep (Ratnam & Myers, 2000). Finally, women commonly experience forms of abuse and trauma, including sexual abuse, which can lead to a lack of self-esteem and control in sexual relationships (Ratnam & Myers, 2000).



As Ratnam & Myers (2000) found, “[w]omen are the victims of many acts that put them at risk of HIV infection” (p.9). Mill et al. (2011) similarly suggest that “[s]exual abuse has been associated with behaviours that place Aboriginal women at higher risk of transmission of diseases such as HIV” (p.287). Given that Indigenous females disproportionately carry the burden of sexual abuse, the link to higher rates of HIV-infection is indisputable (Mill et al., 2011; Pearce et al., 2008). The crisis of sexual abuse must be contextualized as an outcome of colonialism, whereby traditional Indigenous values surrounding the sacredness of sexuality were destroyed and harmful mechanisms were relied upon to cope with the negative or traumatic experiences (Pearce et al., 2008).

### ***2.3.5 Harmful Coping Mechanisms***

Mechanisms that allow young Indigenous people to cope with traumatic experiences are associated with “high risk behaviours such as trading sex for food, shelter or drugs, alcohol and substance abuse, inconsistent condom use, sex with multiple partners and sharing needles or other drug equipment” (Ricci et al., 2009, p.26). Risky behaviour can be explained “as an outcome of historical trauma, discrimination, violence, abuse, and neglect” situated in a historical and contemporary context that leads to “substance misuse, sexual health risk, and mental health problems” (Devries et al., 2012, p.42). Alcohol and drug consumption is a coping mechanisms used by some Indigenous women to dull the intense pain they carry due to abuse and other negative life experiences (Ship & Norton, 2001). A study with two-spirited Indigenous youth found that migrating to large urban cities is often used as a way to cope with racism, colonization, violence, and poverty, but increases the risk for HIV transmission (Teengs & Travers, 2006). Given

the relationship between adverse health outcomes and harmful coping mechanisms, approaches that are grounded in an understanding of gender specific coping mechanisms are critical to providing Indigenous youth with meaningful HIV prevention strategies. In adopting gender specific approaches it is pertinent to include the health needs of all subgroups of the population, including those who identify as LGBTQ.

### ***2.3.6 LGBTQ and Two-Spirited Youth***

Approaches that lack an understanding of the complexity of HIV vulnerability inherently exclude a subgroup of the Indigenous youth population that continue to be the most vulnerable. This subgroup is young people who identify as lesbian, bisexual, transgendered or transsexual, two-spirited, questioning, and queer (LGBTQ).<sup>5</sup> The introduction of the term two-spirited within the LGBTQ community is used “to refer to all sexual and gender variance among people of Indigenous North American descent” (Ristock, Zoccole, & Passante, 2011, p.7). The term was coined by Albert McLeod in 1990 at the *Third Annual Inter-tribal Native First Nations, Gay and Lesbian American Conference*, which evolved from the Algonquin word “niizh manitoag” meaning two spirits (Centre for Addiction and Mental Health, 2011). The utilization of two-spirited terminology allows for the reconnection with specific Indigenous traditions “related to sexual and gender identity; to move beyond Eurocentric binary categories of sex and gender; to state the fluidity and non-linear nature of identity processes; and to fight against heterosexism” (Ristock et al., 2011, p.7). In using this term it is necessary to

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<sup>5</sup> The acronym LGBTQ will be used to include Indigenous youth who self-identify as two-spirited in the lesbian, bisexual, transgendered or transsexual and queer community.

highlight that two-spirited is an umbrella term that broadly encompasses sexual, gender, and spiritual identity, and as such is not recognized by all Indigenous peoples (Âpihtawikosisân, 2012).

The Canadian literature concludes that young female or transgendered Indigenous women are more likely to be infected with HIV and are the most vulnerable to HIV transmission (Ristock et al., 2011; Monette et al., 2011). Despite our knowledge of this susceptible population, there is a lack of research on the health concerns and needs of LGBTQ youth in relation to HIV/AIDS (Ristock et al., 2011). A research project that did include LGBTQ youth in Canada indicated that experiences of hate-based violence, stigma, dislocation, and prejudice are present in the lives of LGBTQ youth, placing them at higher risk for dangerous coping mechanisms such as substance use and other factors associated with HIV (Ristock et al., 2011). LGBTQ individuals in Indigenous communities face stigma that is often expressed as hate-motivated violence and/or childhood physical and sexual abuse (Ristock et al., 2011). LGBTQ youth additionally have isolated experiences of struggling to gain acceptance “for the different parts of their identities both within First Nation communities or rural communities and within urban gay and lesbian communities” (Ristock et al., 2011, p.6).

In order to alleviate the ongoing inequity that LGBTQ youth face, Ristock et al. (2011) recommend initiatives that are culture and gender sensitive. Further, strategies must incorporate stigma as central components, with anti-stigma actions such as self-advocacy, flexible education packages, ongoing interventions, and public support (Hill & Kurtz, 2008). For these strategies to be successful they require community workers who are comfortable discussing gender and sexuality, anti-homophobia and diversity

education, and gay or transgender representation on all councils that work with individuals who identify as LGBTQ (Ristock et al., 2011). If approaches to HIV prevention do not address the unique needs and concerns of LGBTQ youth they will continue to be ineffective, and further contribute to the exclusion of this population in health conversations.

### ***2.3.7 Conclusion***

The complex interaction of risk behaviours and environments continues to be neglected when informing policy and designing prevention strategies, therefore remaining largely ineffective for Indigenous youth. HIV vulnerability experienced by Indigenous youth must be understood through the exposure to risk environments, which include health inequities, risky sexual activity, injection drug use, sexual abuse and violence, and stigma. Paradigms that place responsibility for adverse health outcomes on the individual perpetuate health crises that continue to infiltrate Indigenous communities. Understanding the vulnerability of Indigenous peoples to HIV through environments of risk call attention to gaps in health care, providing researchers with information necessary to combat the spread of HIV in Indigenous communities. To address this vulnerability, the implementation of research, policy, and programs that are meaningful and effective for young people is required.

## **2.4 Meaningful HIV Prevention Strategies**

The current body of literature highlights the necessity of information that is meaningful to young Indigenous peoples to inform HIV prevention strategies. In order to

discover meaningful and effective approaches, the creation of a dialogic space that addresses the voices of Indigenous youth in all stages of development, implementation, and evaluation must be prioritized. The literature suggests approaches that engage youth, are specific to the community, and grounded in cultural ways of knowing are effective for this distinct population. The following section will discuss the need for youth attracting, community specific, and culturally appropriate initiatives that are created for Indigenous youth, by Indigenous youth, and the communities supporting them.

#### ***2.4.1 Youth Attracting***

HIV prevention strategies for Indigenous youth in Canada must be grounded in approaches that are youth attracting. In order to achieve this, strategies that are peer-based and fun, while at the same time, are able to address the impact of colonization, are suggested. Fun approaches could include the use of arts, such as “photography, video, dance, and mural-making” (Ristock, 2011, p.13). Arts-based approaches have the ability to create meaningful prevention strategies that address cultural, gender, and age factors (Ristock, 2011). The ‘Taking Action!’ project demonstrated powerful results through the use of youth leaders across Canada to spread awareness of HIV prevention that used a hybrid of traditional and new media art (hip-hop dance, videos, etc.) (Flicker et al., 2012). Results of this initiative included: pride about art, communication, the spread of information, raised awareness, conveyed emotion, long-lasting impact, and the bridging of culture (Flicker et al., 2012).

In addition to fun approaches, the literature strongly supports the involvement of youth throughout all stages of research and program implementation (Restoule et al.,

2010; Mill et al., 2011; Majumdar et al., 2004). A peer-based approach allows youth to partake in the development of strategies that are aimed at their age group. Peer education was strongly selected by Indigenous youth, specifically those in urban settings, as a preferred HIV prevention strategy. It was also recommended by community members and service providers on a national level to be the most effective tool in the prevention of HIV transmission, yet is “among the least common approaches being used by organizations” (Prentice, 2004, p.ii). A national survey conducted by Prentice (2004) indicated that peer education is only incorporated in approximately 54% of initiatives targeting young people. Prentice (2004) suggests that the lack of peer education use is due to the difficulty in successfully recruiting and retaining youth.

Despite challenges surrounding peer-based approaches, it is enthusiastically encouraged given the rewards (Prentice, 2004). Programs that have incorporated peers as integral members demonstrate success in “changing community norms, connecting youth to resources, distributing HIV prevention resources, and increasing knowledge and the use of condoms” (Mill et al., 2011, p.291). Prentice (2004) indicates, “[p]eers listen to peers” and that “[y]outh teaching youth provides an environment of understanding” (p.7). Youth who are involved in HIV prevention and education have been found to experience an increase in self-confidence and self-esteem, as well as positive attitudes surrounding HIV/AIDS (Majumdar et al., 2004). The use of peer-based strategies requires the representation of youth from all dimensions of Indigenous communities (for example, males, females, and individuals belonging to the LGBTQ community, as well as those living in reserves, rural, and urban settings).

Understanding of the unique experiences of youth is essential in developing programs that are successful for diverse populations (Larkin et al., 2007). In working with Indigenous youth to develop HIV programming, it is important to recognize their higher awareness of the disease, in some cases, due to the disproportionately high rates in Indigenous communities and the subsequent infiltration of research (Larkin et al., 2007). For HIV-related strategies to be effective for Indigenous youth they must be contextualized in their unique cultural, social, and economic circumstances (Prentice et al., 2011) Enlisting Indigenous youth in the development, implementation, and dissemination phases of research and programs allows for the creation of material that is relevant to their age and gender, as well as flexible to their specific cultural identity.

#### ***2.4.2 Culturally Appropriate***

HIV/AIDS messages for Indigenous peoples should be tailored to First Nations, Métis, and Inuit peoples, and further, for communities in ways that represent their unique culture. The immediate implementation of research, programs, and policy that are culturally appropriate is required to reduce the spread of HIV within Indigenous communities across Canada (Ristock et al., 2011; Miller et al., 2006; Marshall et al., 2008). Indigenous research principles of OCAP (Ownership, Control, Access, and Possession) call for the formulation of an Aboriginal Research Advisory Committee (RAC) throughout the “research design, data analysis, and interpretation and dissemination of the findings” (Mill et al., 2011, p.281). The RAC should be representative of the target population (Miller et al., 2006), to include youth who are male, female, and belonging to the LGBTQ community, and inhabit urban, rural, and

reserve locations. Research grounded in OCAP principles has potential to provide support for the health needs of Indigenous peoples that can inform program development and policy.

Initiatives that work with Indigenous peoples must be grounded in the “beliefs, attitudes and behavioural norms of the culture” (Miller et al., 2006, p.5). Further, “cultural safety” must be a core component to ensure the benefit of all participants, which requires information to be contextualized through an intergenerational lens of colonialism (Miller et al., 2006). The historical and contemporary legacy of colonialism must be recognized that includes the “forced removal from traditional lands, economic deprivation, cultural genocide, and, in particular, the histories of the residential school and child welfare systems” (Mehrabadi et al., 2008, p.237). HIV prevention programs that address colonialism may help to reduce the stigma and self-blame that cause Indigenous youth to be more vulnerable to HIV-transmission (Larkin et al., 2007).

The effectiveness of culturally appropriate HIV/AIDS prevention messages relies on support from health care workers who are sensitive, experienced, and knowledgeable of the unique factors that Indigenous peoples face. This can be accomplished through long-term and thoughtful engagement with specific communities. Indigenous youth identify community support and connectedness as an important deterrent for risky behaviours that can lead to HIV-infection (Larkin et al., 2007). Engagement strategies that are specific to the cultural identity of youth and grounded in community principles have the capability to spark discussion surrounding HIV/AIDS.



### ***2.4.3 Community Specific***

Indigenous youth must be included in initiatives aimed at them, specifically because of their diversity but, also their *shared* experiences of political, economic, social, and cultural oppression. The diversity of Indigenous populations calls for HIV/AIDS strategies to be culturally appropriate through community-specific approaches (Restoule, Campbell McGee, Flicker, Larkin, & Smillie-Adjarkwa, 2010). Community-specific approaches are “captivating, innovative and flexible to adapt to the diverse and distinct characteristics of each community” (Restoule et al., 2010, p.5). It requires community leaders, elders, and youth to be integral members throughout the process to ensure that the initiatives are appropriate, representative, and meaningful for the target audience.

HIV prevention programs that are grounded in community-specific approaches stress the difference between rural and urban populations. For example, youth in urban settings prefer peer-based education with ‘first person accounts’ of the experience of HIV testing, treatment, and care (Restoule et al., 2010). In contrast, rural youth prefer strategies that are fun and involve the whole community (Restoule et al., 2010). The use of youth attracting, culturally appropriate, and community specific initiatives in combination have the ability to address the paucity of HIV/AIDS programming that is specific to culture and age.

## **2.5 A Lack of Culture and Age Appropriate Initiatives**

Despite current literature that suggests culture and age appropriate HIV/AIDS initiatives are effective for Indigenous youth, there continues to be a lack of services and programs that incorporate these approaches. This section will explore the need for

research, policy, and programs that address the specific needs and concerns of Indigenous groups by recognizing the importance of culture and age.

The multifactorial nature of HIV transmission that makes Indigenous youth more vulnerable is not well-understood, creating a need for research that aims to discover effective and meaningful HIV/AIDS efforts. Much of the HIV/AIDS research and interventions that are available to Indigenous peoples in Canada fail to include culturally appropriate material and methods, which are required by most national and international ethical guidelines (Canadian Institutes for Health Research (CIHR), 2010; Prentice, 2004). In comparison to research with non-Indigenous peoples, there is a lack of research specifically with Indigenous peoples, which implies “the need for more extensive data on HIV/AIDS epidemiology in Canada’s population” (Prentice, 2004, p.4). The distinct position of Indigenous peoples in the Canadian population, as well as in the numerous bands, tribes, and nations, calls for the development of strategies that incorporate culturally relevant materials, messages, and ways of knowing.

The Indigenous HIV/AIDS strategies that do exist lack a focus on young people. Instead, methods utilized for adult populations are projected to youth despite the fact that these messages are often not well-understood or meaningful to younger people (Prentice, 2004). Youth interact, respond, and remember messages in ways that are different from adults, and thus, HIV strategies must adapt to the needs of the population they are targeting (Prentice, 2004). The literature notes that “Aboriginal youth under the age of fifteen and injecting drug users are the groups most in need of HIV prevention messages but they are among the least likely to be receiving them” (Prentice, 2004, p.ii). In response to the exclusion of youth, Marshall et al. (2008) demand the implementation of a

national strategy on HIV prevention that specifically addresses First Nations, Métis, and Inuit youth within their distinct communities.

Messages aimed at young people have been found to be important as youth are: “more open than adults to discussing taboo subjects”, “less set in their values and behaviour”, and more likely to carry safe practices into their adulthood (Prentice, 2004, p.2). When provided messages in safe and supportive environments, youth willingly engage in discussions surrounding taboo subjects, such as sexual activity or social perceptions of HIV/AIDS (Prentice, 2004). Youth may be more open than adults, given that they are more flexible in their beliefs and the behaviour they exhibit changes with age. Moreover, individuals who adopt “safer behaviours, perspectives and expectations while young, are likely to carry these into their adulthood and are more likely to keep themselves and others free from HIV” (Prentice, 2004, p.2). Effective strategies for Indigenous youth include the use of peer-education and art-based approaches, yet they continue to be grossly underutilized. As Indigenous youth face complex environments of risk that cause them to be more vulnerable to HIV infection, tailored messages that are specific to their histories and experiences are urgently required. Considering our knowledge of the complex interplay of risk environments and behaviours there is a need for further investigation.

Gaps discovered in the body of literature on Indigenous youth and HIV/AIDS highlight an absence of research, programs, and policy that are culturally-, age-, and gender-specific. Messages that do exist often take on a “pan-Aboriginal” approach that continues to be ineffective given the numerous and distinct bands, tribes, and nations within Canada (Prentice, 2004). Age-specific messages that do exist are overwhelmingly

directed at those over the age of fifteen, which ignores the most vulnerable age bracket of youth who are becoming sexually active (Prentice, 2004). Sexual abuse survivors and LGBTQ youth are subgroups that are often left out of HIV initiatives, and therefore, in moving forward, must be incorporated as integral members. As integral members of research and program design, youth may begin to help lead the development of HIV programming that is meaningful and effective through youth attracting, community specific, and culturally relevant strategies. The creation of programs that meet the specific needs of the Indigenous youth must be considered a priority for national and international HIV/AIDS organizations. Once specific programs are designed and implemented, an additional priority must be addressed, which is the evaluation of the program.

## **2.6 Need for Program Evaluations**

Program evaluations are defined by UNAIDS (2007) as, “rigorous, scientifically-based collection of information about programme activities, characteristics, and outcomes that determine the merit or worth of a specific programme” (p.9). Programs that lack regular evaluations limit their ability to assess whether the objectives are being met and the program elements are effective. The *Canadian Guidelines for Sexual Health Education* assert that evaluations should be conducted, “not only to account for resources and improve the programmes, but also to show whether the interventions are having the intended effect, and to make appropriate changes based on the results” (PHAC, 2008a, p.10).

Annual evaluations are recommended in the literature to monitor changes that may occur and to assess whether these changes are successful. PHAC (2008a) summarizes the importance of consistent program evaluation:

Careful program evaluation ensures that learning outcomes are clearly defined from the outset and are being met over time, which in turn can guide program delivery and modification (p.32).

It is recommended that sexual health education programs conduct evaluations on an annual basis (Nelson & Tom, 2011). Evaluations should go beyond measuring a program's objectives by including mechanisms that capture unintended outcomes and feedback from the target population. For programs that target Indigenous youth, this means that they are provided opportunities to evaluate the program based on how well, or not, it met their needs (PHAC, 2008a).

Meeting the needs of communities that support youth must also be considered when examining the effectiveness of programs in Indigenous communities. As Martin et al. (2012) note, "every individual constantly influences, and is influenced by, the collective. Supports and services to address the mental health of individuals must also account for this collective perspective" (p.131). The collective here refers to the health and well being of the individual, community, and natural world as one entity, rather than as separate and isolated entities. Although Martin et al. (2012) focus here on mental health, the same concept can be used to address sexual health. The inclusion of the community is further represented as a crucial element in the *Canadian Guidelines for Sexual Health Education*:

Research on program evaluation illustrates how sexual health education programs that are culturally appropriate and sensitive to community needs are more likely to be effective (PHAC, 2008a, p.44).

In addition to community, cultural identity must be incorporated in program evaluations as it can guide surrounding “sensitive questions, culturally appropriate wording, social norms, and socially acceptable behaviours” (Gesink, Rink, Montgomery-Anderson, Mulvad, & Anders, 2010, p.28).

## **2.7 Conclusion**

Chapter 2 presented a review of the literature by examining alarming epidemiological rates, HIV/AIDS in Labrador, environments of risk that place Indigenous youth at risk for HIV transmission, the requirements of meaningful HIV prevention strategies, a lack of culture and age appropriate initiatives, and a need for HIV/AIDS program evaluations. An understanding of the literature is crucial given that Indigenous youth in Canada are disproportionately affected by HIV/AIDS, with young females at the most risk for HIV transmission. To combat this health inequity, programs that incorporate gender based, youth attracting, community specific, and cultural appropriate strategies must be implemented and evaluated on local and national levels. The LFC is an example of a community organization that is committed to providing accessible sexual health programming to youth throughout Labrador. To understand whether their HIV/AIDS project is effective, a research project was initiated to conduct a program evaluation based on specific research objectives.

### ***2.7.1 Research Objectives***

The objectives of this research project were to:

1. Identify the current knowledge levels and attitudes surrounding HIV/AIDS among youth in Southern Inuit communities.
2. Evaluate whether the LFC's sexual health presentation, specifically the HIV/AIDS component, is effective for youth in Southern Inuit communities.

To address these objectives a bricolage of theoretical frameworks was used to inform the development, implementation, and dissemination of a research project that is mutually beneficial for the research team, partners, participants, and communities.

### **Chapter 3: Theoretical Frameworks**

Chapter 3 presents the theoretical frameworks used to inform the development, implementation, and dissemination of this research project. A mixture of critical theory and behavioural models were adopted to formulate a bricolage of theoretical stances. Aspects of decolonizing theoretical approaches were used to inform the research through an Indigenous lens. The Information, Motivation, and Behavioural Skills (IMB) Model was used to address theory on behavioral modification. The inclusion of two schools of thought stemmed from the inability of one theory or model to address the complexity of the issue and a responsibility to represent the diversity of individuals involved in this project. Each theoretical stance speaks to a significant aspect of the research and offers a unique approach to addressing the health issue. Theory on decolonizing approaches to research and the behavioral model will be discussed in detail throughout this chapter.

#### **3.1 Decolonizing Approaches to Research with Indigenous Communities**

A critical theoretical approach to research with Indigenous communities grounded this research project in an aim to recognize Indigenous ways of knowing. Indigenous ways of knowing refer to the ways of acquiring knowledge that are unique to an Indigenous community. Knowledge can be acquired from two spheres, “via an axis from above, that is, from the spirit world, and from the earth below” (Risku & Harding, 2013). Indigenous ways of knowing stem from observations and experiences in daily life and “the interpretive messages received from spirits in ceremonies, visions, and dreams” (Deloria, 1999, 64). Knowledge is woven together over generations (Deloria, 1999). Given this



unique relationship to knowledge, research with Indigenous communities must recognize Indigenous ways of knowing, such as through the use of decolonizing approaches.

Theory surrounding decolonizing approaches to research was employed to represent the position of Indigenous peoples in a unique and culturally relevant paradigm of thought. This theoretical framework calls for the recognition of Indigenous agency and sovereignty in contemporary research with Indigenous communities. It confronts the denial of basic human rights as a result of colonialism by offering a vehicle to disrupt the foundations of knowledge. Decolonizing approaches stipulate the implementation of “methodologies and approaches to research that is privileged in indigenous knowledges, voices and experiences” (Tuhiwai Smith, 2005, p.87). It utilizes distinct ways of relating to Indigenous peoples to address immediate concerns marked by Indigenous communities themselves.

Decolonizing approaches to research adopts Indigenous perspectives, processes, and ways of knowing as a means of producing meaningful and beneficial research with Indigenous peoples (Bartlett, Iwasaki, Gottlieb, Hall, & Mannell, 2007; Pitama et al, 2003; Tuhiwai Smith, 2000). The term decolonizing can be described as an “anti-colonial struggle that grows out of grassroots space” (Zavala, 2013, p.57). Decolonizing approaches confirm the need for Indigenous perspectives to be recognized, valorized, and used as valuable sources of knowledge within research (Bartlett et al., 2007). Decolonizing approaches employ iterative and action-oriented strategies that are based in

Indigenous cultures, with reciprocal capacity building<sup>6</sup> mechanisms at the core (Bartlett et al., 2007).

In order to understand some Indigenous ways of conceptualizing decolonizing approaches, it is necessary to examine colonialism. Leading theorist, Tuhiwai Smith (1999) explains that Indigenous peoples, “share experiences as peoples who have been subjected to the colonization of their lands and cultures, and the denial of their sovereignty, by a colonizing society that has come to dominate and determine the shape and quality of their lives” (p.7). The impact of colonialism reaches every dimension of the contemporary world, including its role in shaping research. Ortley (1999) notes that research began within Imperialism and was written in the language of colonialism where it remains illegible to Indigenous peoples.

This project adopted aspects of decolonizing approaches to produce research that is legible to Indigenous peoples through its development, implementation, and dissemination by Indigenous peoples as research partners. It plays a role in the grounding of this research based on the call to empower Indigenous communities as active participants in research. This project stemmed from a need of an Indigenous community organization, the LFC, to evaluate the HIV/AIDS component of their school-based sexual health program for Southern Inuit communities in Labrador. It was developed through a decolonizing lens based on this community need and an aim to recognize of the agency of NunatuKavut and the LFC to have control over the course of research.

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<sup>6</sup> Reciprocal capacity building is the bi-directional sharing of knowledge between researchers and community partners (Bartlett et al., 2007, p.2379).

Southern Inuit (formerly the Labrador Métis) peoples have a long history of exclusion in Newfoundland and Labrador that has resulted in a lack of representation in systems of governance (Hanrahan, 2003). The most alarming example of exclusion is the 1949 Terms of Union between Newfoundland and Canada that inherently ignores the presence of Aboriginal peoples in the province (Hanrahan, 2003). This omission resulted, and continues to result, in extensive marginalization and a lack of access to programs and services that other Aboriginal peoples of Canada enjoy (Hanrahan, 2003). Theory on decolonizing approaches to research is utilized to acknowledge the historical and contemporary experience of exclusion by making Southern Inuit cultural needs, aims, and values a focal point of this project.

Decolonizing approaches are grounded in the understanding that reality is relational, whereby, “knowledge is seen as belonging to the cosmos of which we are a part and where researchers are only the interpreters of this knowledge” (Wilson, 2008, p.38). This conceptualization of reality shifts the locus of control from the researcher to the universe, which contradicts scientific rights surrounding research ownership and control. If knowledge belongs to the cosmos, the researcher’s right to ownership is diminished. Reality as relational further denotes that all things are related, and therefore “you are answerable to all your relations when doing research” (Wilson, 2001, p.177). As a researcher you are responsible for the lasting impact that the research will have, not only on the participants and the communities supporting them, but to all those, human and non human, that came before you and all those that will come after you.

Individualized colonial methodologies dominate contemporary research, and evidentially, research subjects. In opposition, decolonizing approaches recognize Indigenous thought, “as the most rational approach to Indigenous research” (Bartlett et al., 2007, p.2376). It calls for the reconstruction of the relationship between Indigenous peoples and research, given that research is seen as a negative and harmful action by many Indigenous communities. This outcome stems from the immense focus of research on negative aspects of Indigenous life and health (Wilson, 2008, p.16). Research “is believed to mean, quite literally, the continued constructions of indigenous peoples as the problem”, which positions Indigenous communities “as powerless and research as disempowering” (Tuhiwai Smith, 1999, p.118).

In response to this detrimental relationship to research, decolonizing approaches offers a framework to divest colonial power (Tuhiwai Smith, 1999). The divesting of colonial power can be ignited in research through an epistemological shift that provides alternatives to scientific methodologies and returns voice to Indigenous peoples (Tuhiwai Smith, 1999). Research using decolonizing approaches has the potential to valorize Indigenous ways of knowing through the inclusion of Indigenous world-views that yield culturally relevant and beneficial outcomes (Bartlett et al., 2007). It is of paramount importance in utilizing a decolonizing theoretical lens to identify the “centrality of voice and representation in research”, as a mode to present Indigenous research by Indigenous peoples (Kovach, 2009, p. 81).

Decolonizing approaches were influential in shaping this research as it explicitly addresses the school system and how curriculum has worked to marginalize and further

propagate colonial systems of knowledge. Young Indigenous peoples were disciplined through colonial systems of school that “reproduced domesticated versions of knowledge for uncritical consumption” (Tuhiwai Smith, 1999, p. 65). Methods for disciplining were additionally embedded into the curriculum, “with normative tests designed around the language and cultural capital of the white middle classes” (Tuhiwai Smith, 1999, p.68). Curriculum shaped and reproduced through colonial systems devalues Indigenous language and methodologies of teaching and learning, which inherently marginalizes Indigenous children in formal systems of school. In the context of learning about sexual health, colonial frameworks for teaching and learning may impede Indigenous youth, as it is not taught in ways that relate to their histories, cultures, or ideologies surrounding sexual health and sexuality.

This research utilizes aspects of a decolonized approach to address colonialism still being reproduced in school by providing recommendations that are informed by Indigenous youth. In listening to the voices of Indigenous youth, HIV/AIDS programming can be shaped to provide the tools to make informed and healthy decisions surrounding sexual health that are unique to their life experiences. Decolonizing approaches “shape shifts” to fit unique aspects of the research and community, one with “parallel ways of knowing and methodologies that place different values on process and product” (Kovach, 2005, p.33). The ideology of parallel ways of knowing speaks to the core of this research as it carefully balances the strengths of Indigenous and scientific knowledge.

A critical theoretical approach to research with Indigenous communities through

decolonizing approaches informed components of this research by providing a knowledge paradigm that encourages Indigenous participation through collaborative methods of research. It led to the evaluation of a program that aims to improve sexual health education based on the voices of Indigenous youth. The intergenerational experience of colonialism is recognized through alliance with Indigenous communities by applying community-based solutions to address areas of concern identified by the community. Aspects of decolonizing approaches to research informed this project broadly by recognizing the importance of working meaningfully with Indigenous communities. To inform this research specifically, a behavioural model was employed that addresses the impact of HIV/AIDS among Indigenous youth.

### **3.2 Information, Motivation, and Behavioural Skills (IMB) Model**

The IMB Model was used in conjunction with components of decolonizing approaches to provide a theoretical framework that addresses behaviour change among Indigenous youth. It was employed given its empirical evidence<sup>7</sup> as an effective model, extensive use in evaluating sexual health programs, and guidelines on mechanisms that have the potential to influence positive behavior change in a school setting. It provides theory-informed strategies to influence safe sexual behaviours and beliefs among young students.

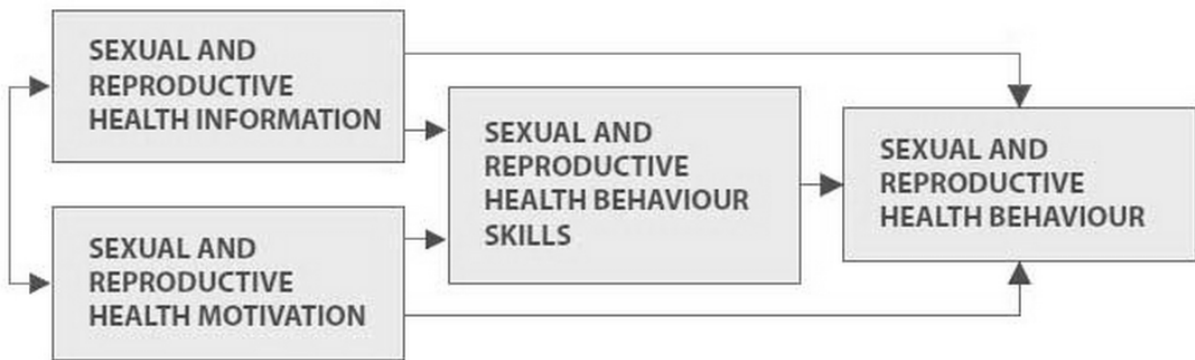
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<sup>7</sup> Empirical evidence of the IMB model's effectiveness has been demonstrated in numerous populations, such as minority youth, low-income women, young men, and within high school settings (PHAC, 2008b).

The IMB Model was designed to address a lack of theory on behavior change surrounding the reduction of HIV/AIDS transmission. It states that there are three integral determinants of HIV risk reduction: information, motivation, and behavioral skills (PHAC, 2008b). The IMB Model is empirically validated and supported by evidence that demonstrate the model's success in a multitude of populations, including high school students belonging to a minority group (PHAC, 2008a). The IMB Model is regarded as a “highly generalizable” model to most populations, with specific examples demonstrating the importance of adapting the model to include content that is relevant to the specific population(s) involved (Fisher & Fisher, 1992). Three instructions are presented for successfully implementing the IMB Model, which are: to conduct research in order to discover the target population's information and motivation levels, to implement population-based approaches, and to evaluate the intervention (Fisher & Fisher). The IMB Model is illustrated in Figure 1.<sup>8</sup>

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<sup>8</sup> Reuse permission for the IMB Model can be found in Appendix A.



*Reprinted with permission from Taylor & Francis. Fisher & Fisher. Understanding and promoting sexual and reproductive health behaviour: theory and method. Journal of Sex Research, 1998.*

**Figure 1: Information, Motivation, and Behavioural Skills Model**

Fisher, Fisher, Bryan, & Misovich (2002) argue that for HIV/AIDS prevention programs to be effective, they must consist of mechanisms that influence the information, motivation, and behavioural skills of participants. Information for HIV prevention should be evidence-based and provide details on HIV/AIDS transmission and prevention in ways that are relevant and understandable to the population. They must be “easy to translate into behaviours that can help individual’s enhance sexual health and avoid negative sexual health outcomes” (PHAC, 2008b, para. 38). Strategies that only address HIV/AIDS information are frequently implemented, but research has shown that information alone is not sufficient in reducing HIV transmission (Fisher & Fisher, 1992). Information laden with behaviourally irrelevant information, such as biological terms and mechanisms (i.e., T cells), threatens the ability for learners to use the information to elicit



behaviour change in real-life settings (Fisher & Fisher, 1992). Stemming from this knowledge, motivational factors and behavioural skills were introduced as complementary mechanisms to effectively prevent the transmission of HIV.

The motivation criterion describes an individual's personal and social motivation to engage in safe sexual behavior (Fisher et al., 2002), which, in turn, determines whether individuals will use the HIV/AIDS information they possess (PHAC, 2008a). Motivation also examines the ability for an individual to change their sexual health behaviours if they are engaging in activities that are considered to be moderate or high risk (Fisher & Fisher, 1992). Personal motivation is, "[a]n individual's attitudes and beliefs in relation to a specific sexual and reproductive health behavior" (PHAC, 2008a, p.39). Social motivation describes, "[a]n individual's beliefs regarding social norms, or their perceptions of social support" (PHAC, 2008a, p.39). Behavioural skills refer to the ability of an individual to perform actions that reduce risk. They determine whether individuals who possess HIV/AIDS information and motivational factors will be capable of performing effective HIV prevention behaviors. (Fisher et al., 2002).

The IMB Model was utilized to inform several components of this research project. These components surround the use of pre- and post-questionnaires and the evaluation of the sexual health presentation. The use of pre and post tools is in line with the IMB Model as it includes components that assess participant's levels of information (HIV/AIDS knowledge section), motivation (attitudinal beliefs about HIV/AIDS and individuals who are HIV-positive), and behavioural skills (information on the effective use of condoms, and whether participants believed the condom demonstration was

effective). Adding to the rationalization of employing this model, the *Canadian Guidelines for Sexual Health Education* stress the use of the IMB Model given “significant empirical evidence which demonstrates the model’s effectiveness” (PHAC, 2008a, p.36), especially in the area of HIV/AIDS risk reduction.

The IMB model informed the research from a community-based standpoint in its ability to adapt to diverse populations. As the sexual health educator and majority of participants self-identified as Indigenous, the information, motivation, and behavioural skills components were created to be culturally appropriate. When adapting the IMB model to reflect Indigenous youth as participants, strengths of Western scientific knowledge were utilized to inform basic facts on HIV/AIDS, while Indigenous ways of knowing became pillars for promoting holistic sexual health. At the same time, the Western origin of the IMB model allowed for the representation of respondents who identified as an ancestry other than Indigenous.<sup>9</sup>

The IMB model was an important tool in guiding this research project, as it was adaptable to represent Indigenous youth. However, it is important to note that the IMB Model may not be successful for other research surrounding Indigenous health that lack a partnership with an Indigenous community. Collaboration with the Indigenous partners provided the support and methods to adjust the model to be culturally safe and mutually beneficial. The use of the IMB Model strengthened the research by providing guidelines

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<sup>9</sup> The ancestries represented in the research project included Southern-Inuit/Inuit Metis, First Nations other than Innu, Caucasian, and Other. The sample population can be described as mixed ethnicity, consisting of both Indigenous and non-Indigenous youth.

for the development and evaluation of programs that influence positive behavior change surrounding HIV transmission, as well as to represent the presence of participants who did not identify as Indigenous.

### **3.3 Conclusion**

Two distinct theories were used in this research with an explicit goal of representing the complexity of the health problem and to represent the distinctiveness of individuals involved in this research project. The use of decolonizing approaches to research in conjunction with the IMB Model offers a parallel approach that recognizes the strengths of both Indigenous ways of knowing and Western knowledge. Although these theories are very different, it is in their cumulative effect that presents a just and effective solution to improving sexual health education, and hopefully, the prevention of unhealthy sexual activities among youth in Southern Inuit communities in Labrador.

## **Chapter 4: Methods**

Chapter 4 describes the methods used to develop and implement this research project. Ethical requirements are first examined with a description of how they follow Indigenous research guidelines. Secondly, the process of designing the study is outlined. Thirdly, the data collection process is described, which consists of the research setting, study population, sample selection, questionnaire design, informed consent procedure, a description of the sexual health presentation, and questionnaire administration. Lastly, an explanation of the data analysis is presented that includes data entry, outcome calculations, and thematic coding.

### **4.1 Ethics**

This research project was developed to meet ethics and research guidelines presented by the Tri-Council Policy Statement (TCPS2), NunatuKavut Community Council, and Indigenous principles of OCAP (Ownership, Control, Access, and Possession). Prior to the collection of data in southern Labrador high schools, three stages of research approval were required. The first approval was ethics approval, which was granted by the Health Research Ethics Authority (HREA) of Newfoundland and Labrador (Reference #13.146 – 2013). HREA supervises all health research involving human subjects conducted in Newfoundland and Labrador. Approval from HREA was contingent on obtaining approval from the Indigenous community involved (the NunatuKavut Community Council) and the school board (the Newfoundland and Labrador English School District). The second approval was a community research approval provided by the NunatuKavut

Community Council, which governs research conducted with NunatuKavut peoples or land. The third approval was a research approval from the Newfoundland and Labrador English School District, which regulates research conducted in schools in Newfoundland and Labrador. Research approval from the Newfoundland and Labrador English School District relied on support from the authority figures (principles or vice principles) at each participating school.

As this project works with an Indigenous community organization, and the majority of participants self-identified as Indigenous (specifically, Southern Inuit), guidelines on ethical principles for research with Indigenous peoples were followed to ensure that the research is relevant, meaningful, and mutually beneficial for the partnering communities. Ethical frameworks, such as the TCPS2, are in place to ensure that research is “premised on respectful relationships” with Indigenous communities through collaborative engagement between researchers, communities, and participants (CIHR, Natural Sciences and Engineering Research Council of Canada (NSERC), & Social Sciences and Humanities Research Council of Canada (SSHRC), 2010, p.5). Respect is accorded by recognizing the knowledge systems and worldviews of the distinct Indigenous group involved throughout all stages of the research project (CIHR, NSERC & SSHRC, 2010).

NunatuKavut community research guidelines require research to be “conducted in a manner that is appropriate to the spiritual, cultural, social, and environmental context of the NunatuKavut people”, and in accordance with the expectations and values of NunatuKavut and OCAP (NunatuKavut Community Council Research Advisory Committee, 2013, p.3). OCAP principles enable Indigenous communities to practice self-

determination over research that is conducted with their peoples or lands (First Nations Information Governance Centre, 2013). It presents a way for Indigenous communities to make decisions about “what research will be done, for what purposes information or data will be used, where the information will be physically stored, and who will have access” (NunatuKavut Community Council Research Advisory Committee, 2013, p.3).

The ethical principles that have grounded this research project are: engagement with Indigenous communities and governing authorities, mutual benefits, strengthening research capacity, recognition of the diverse interests of subgroups within the community, interpretation and dissemination of research results, engagement of an Aboriginal Research Advisory Committee (RAC), and the use of an oral research agreement. A discussion of how these ethical principles informed the research is presented below in detail.

#### ***4.1.1 Engagement with Indigenous Communities and Governing Authorities***

This research project is grounded in community engagement strategies through partnership with an Indigenous community organization, the LFC, as well as support from the Indigenous governing body, the NunatuKavut Community Council. Community engagement was initiated before the commencement of this project through extensive collaboration with the LFC’s Sexual Health Coordinator, Scosha Diamond, who is a young Southern Inuit woman and community leader, and continued throughout the entirety of the project. Ms. Diamond’s involvement in this project began at the call for an evaluation of the LFC’s HIV/AIDS project. Discussions through telephone and email acted as the mode of communication for the entirety of the planning stages. This form of

communication was selected given Ms. Diamond's location in Happy Valley – Goose Bay, Labrador, and the Principal Investigator's location in St. John's, Newfoundland. Reciprocal knowledge translation occurred to plan the research project as well as to embed cultural and community values. Ms. Diamond provided important input on various applications involved in the project, such as input into the design of the budget and ethics application. Following ethics and research approval, Ms. Diamond acted as a gatekeeper to the communities of interest through first contact with school authority figures.

The research tool, pre- and post-questionnaires, were tested for age, culture, and community appropriateness by a few Southern Inuit youth who were located outside of the participating communities. Ms. Diamond spearheaded the testing and provided input on the quality of the questionnaires. Ms. Diamond led the scheduling of the sexual health presentations and the organization of all travel and accommodation arrangements. Once the data was analyzed, Ms. Diamond was given the preliminary results in the form of a summary. She was provided with ample time to be able to review and provide feedback based on her independent interpretation. Similarly, she contributed to formulating conclusions by offering insights on, and explanations of, the research findings. The final step in this project is the implementation of a broad dissemination plan. Ms. Diamond will assist in circulating the research to the broader Indigenous community in Labrador through a user-friendly handout that is accessible and understandable. Further, she will play an integral role in the continuity of this project through a sustainable evaluation procedure, where she has the knowledge and instruments required to implement evaluations. These tools arm her with the capability to evaluate her own programs in the future.

In conjunction with Ms. Diamond, the NunatuKavut Community Council partnered in this research through formal research approval as well as informal support. The NunatuKavut Community Council approved the research project based on their specific research requirements surrounding research with NunatuKavut peoples and land. In this way they acted as a gatekeeper to provide access to the participating NunatuKavut communities. Respect and recognition of the agency of NunatuKavut has been represented through their contribution to research planning, interpretation of the data analysis, report terminology, and the dissemination strategy. NunatuKavut's Membership, Culture and Research Manager, Darlene Wall, has acted as the consulting contact for the totality of this project. She provided cultural, community, and geographic advice throughout the planning phases, as well as providing advice on the cultural language (for example, the use of Indigenous rather than Aboriginal) to be used in this thesis and summary reports. Similar to Ms. Diamond's involvement, NunatuKavut played a key role in the interpretation of results and formulation of implications through review and the feedback. NunatuKavut will play an integral role in the design and implementation of a broad dissemination plan by circulating it throughout NunatuKavut communities, and to stakeholders, to ensure that all those who could benefit have access to an understandable summary report.

#### ***4.1.2 Mutual Benefits***

The research project is mutually beneficial to the LFC, a variety of community and government stakeholders in NunatuKavut, the researchers, as well as for the broader community of academia and policymakers in public health and education. As this



research project was initiated by an Indigenous community organization, the LFC, it was developed to address their specific needs. The research findings will allow the LFC, as well as schools, parents, and health agencies in Newfoundland and Labrador, to understand what their young people know and believe about HIV/AIDS and what methods of health promotion are understood and meaningful for them. Recommendations gathered from the comparative data analysis will have the potential to inform HIV/AIDS program design, to prompt tailoring of existing HIV/AIDS programs, and to highlight specific groups that may be in more need for support and/or programming. This project was also beneficial as it helped to build local capacity through reciprocal translation of knowledge between the community partners and the researchers. The findings from this research will contribute to the existing body of literature surrounding the sexual health education preferences of Indigenous youth in Labrador, given the paucity of research with this population. It will benefit the Principal Investigator by receiving a Master's degree, presentation of the research through conferences and publication, as well as an indisputable personal and spiritual growth.

#### ***4.1.3 Strengthening Research Capacity***

This project strengthened research capacity through the reciprocal translation of knowledge between the research team and community partner. Knowledge translation activities included the transfer of research information to the community partner, Ms. Diamond. These activities surrounded planning, ethics, implementation, interpretation of the data analysis, and dissemination of research findings. The transfer of knowledge also occurred from the community partners to the research team. The research team gained

valuable cultural and community knowledge through collaborative discussions, such as stories from Ms. Diamond surrounding her experiences as a sexual health educator, community leader, and young Southern Inuit woman. The translation of Southern Inuit ways of knowing contributed to the grounding of the project in decolonizing approaches to research.

#### ***4.1.4 Recognition of the Diverse Interests of Subgroups within the Community***

Often in research specific subgroups of the population are left ignored and are excluded in the representation of their unique needs. LGBTQ individuals are one such population who share a long history of marginalization in research. This is alarming as some subgroups of the LGBTQ community, such as MSM, are at a heightened risk for HIV transmission (PHAC, 2010). To reflect this, the research tool was tailored to be representative of individuals who may identify as an LGBTQ category.

Female and minority youth are other subgroups that experience exclusion in research. To represent these excluded populations, a gender- and culture-based analysis was conducted to uncover differences in the ways that males, females, and LGBTQ youth, and those who identify with minority ancestries, understand HIV/AIDS information and which methods of prevention are most effective for them. A sub-analysis was conducted for individuals who identified as an LGBTQ category to ensure that their experiences were highlighted. The recognition of LGBTQ, female, and minority youth allowed for an understanding of their knowledge and attitudes to be able to make inclusive recommendations.

#### ***4.1.5 Community Inclusion in the Interpretation and Dissemination of Research***

##### ***Results***

Community inclusion in the interpretation and dissemination of the research was represented by the community partners (NuntuKavut and the LFC), with all participants, participant's parents, school and community leaders, and other stakeholders provided with the opportunity to be involved. NuntatuKavut and the LFC played a key role in the interpretation of the research results through feedback reports and consensus driven discussions. The research was enhanced by the involvement of NuntuKavut and the LFC through their unique perspective of the research findings that were grounded in local ways of knowing. To highlight NuntuKavut and the LFC's involvement, their contributions are identified and discussed throughout this thesis. A summary of the research results and main discussion points were provided to the community partners in written and oral formats through consensus driven discussions. These discussions occurred before publication or presentation to ensure that the communities' interpretation was expressed and represented. The oral research agreement raised strategies to address conflicts, namely fluid and flexible negotiation, but was not used, as conflicts did not arise during the planning, interpretation, and dissemination of the research.

NuntatuKavut, the LFC, and the participating schools are integral to the dissemination strategy, which is to provide a multi-faceted approach that disseminates the information to all organizations and participants involved, and the communities supporting them. The dissemination strategy was developed through consensus driven discussions with NuntatuKavut and the LFC throughout numerous stages of the research project, with the invitation for all other interested persons to be included. The broad

dissemination plan was grounded in a vision to make available a lay summary of the research, in conjunction with a formal research report, to ensure that the information is accessible and understandable to a variety of audiences. NuntuKavut, the LFC, and participating schools expressed their commitment to disseminating the research widely within their communities and throughout their networks. The formal research report will be prepared by the Principal Investigator and extensively revised by the community partners through written and oral feedback. The lay summary will be created in partnership with Darlene Wall of NuntuKavut, as it stemmed from her idea of a user-friendly one-page handout that is youth attracting, easy to read and understand, and to be distributed widely. NuntuKavut, the LFC, and the participating schools will be key players in distributing the user-friendly handout to ensure that it reaches all those who could benefit from the information.

#### ***4.1.6 Aboriginal Research Advisory Committee***

An Aboriginal Research Advisory Committee (RAC), or culturally informed advisory group, provided feedback on the development of this research project. The existing steering committee for the HIV/AIDS Project at the LFC was contacted to populate the RAC for this research project and they agreed. The RAC consists of nine individuals who were elders, community leaders, and health professionals. The role of the RAC was to provide consultation and input through email communications and feedback reports.

#### ***4.1.7 Research Agreement***

An informal oral research agreement was formulated between the Principal Investigator and community partner. The nature of the informal oral research agreement was decided through a consensus driven process. It commenced before the research project began and is still underway today. This form of a research agreement speaks to the nature of Southern Inuit ways of knowing, as it is fluid and flexible, and accounts for change, reciprocity, and mutual respect. Research agreement discussions included details of the research, mutual responsibilities, ethical protections, commitment to consensus driven decision-making, strategies for conflict resolution, and co-ownership of research results.

#### ***4.1.8 Conclusion***

The accumulation of ethical principles met in this research project enabled the development of a study design that is community-based, as it is supported through partnership with the NunatuKavut Community Council and the LFC.

### **4.2 Study Design**

In August 2012 the Principal Investigator was connected to an Indigenous organization to begin discussion around a research partnership through the relationship that her Co-Supervisor had with this organization. This organization was the LFC, who indicated a need for an evaluation of this HIV/AIDS project. The LFC's Sexual Health Coordinator, Ms. Diamond, began working with the Principal Investigator as the community partner. The LFC's steering committee was approached to provide support for

this research project, in which they provided feedback through email communication. To begin the ethical process, the NunutuKavut Community Council was contacted to seek ethical approval specific to their community, as well as to support the project through consultation. Formal ethical approval was granted by all necessary governing bodies by September 2013, which allowed the team to begin planning the collection of data.

Pre and post questionnaires were selected as the research tool to balance feasibility and population representation. A need voiced by the LFC was to represent the reality of sexual health in Labrador, and therefore, students of all ages, genders, ancestries, and communities. Yet, the feasibility of accomplishing this was limited due to time and funding constraints. The participating schools supplied the research team with a limited time frame (in the case of one school only 60 minutes was allocated) in a set environment (school classroom). To ensure that both requirements were met, a questionnaire was employed. Pre- and post-questionnaires were able to best represent the youth in Southern Inuit within the time and funding limitations. Young Southern Inuit volunteers outside of the proposed communities tested the questionnaires to assess their appropriateness for the age group and communities.

To begin the research process, the principles (or vice principles in the principles absence) were contacted at six all-grade<sup>10</sup> schools in the south coast of Labrador. Over the course of numerous telephone and email conversations, questions, comments and concerns were addressed, and in summation, approval was granted. Through this

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<sup>10</sup> An all-grade school is one that provides kindergarten level education through to high school education.

relationship the teachers of Grades 7 – 12 were provided with letters that introduced the research project, asked for their assistance in it's facilitation, provided all of the necessary research details, and were encouraged to make contact with the research team. Parental consent forms (see Appendix B) were mailed to the participating schools two weeks prior to the sexual health presentation dates.

Approximately a week in advance, the schools were contacted to confirm the scheduling of events and to address any unanswered questions or comments. Unfortunately, at this time Ms. Diamond had to cancel the presentation at Basque Memorial due to scheduling conflicts. This outcome was unfortunate, as Basque Memorial had voiced a desire for their students to be provided with external sexual health education. This decision stemmed from a lack of time and resources. The participating communities are located in rural Labrador and are challenging to access, making it difficult to obtain necessary health services. A day in advance of the presentation, details were confirmed with the authorities at each participating school. Finally, on the day of the scheduled presentation the data collection component of the research was initiated.

#### **4.3 Data Collection**

This section on data collection will describe the research setting, study population, sample selection, questionnaire design, informed consent procedure, a description of the sexual health education presentation, and questionnaire administration.

#### ***4.3.1 Research Setting***

The setting of this research project was the south coast of Labrador, in particular, the predominately Southern Inuit communities of: Cartwright, Port Hope Simpson, St. Lewis/Fox Harbour, and L'Anse Au Loup. A map of southern Labrador can be found in Appendix C.<sup>11</sup> Labrador has a population of approximately 25,222 and is part of the province of Newfoundland and Labrador (Newfoundland & Labrador Statistics Agency, 2014). Indigenous peoples make up 7.1% of the population in Newfoundland and Labrador (Statistics Canada, 2011), and 39.1% of the population in Labrador alone (Newfoundland & Labrador Statistics Agency, 2014). Of the Indigenous population in Labrador, 15% identify as Métis (Newfoundland & Labrador Statistics Agency, 2014).

The Métis peoples are those of mixed Inuit and European decent who are located in the territory of NunatuKavut (Martin et al., 2012). The Indigenous population in Nuntukavut is 2,005 – representing 77% of the population (Government of Newfoundland and Labrador, 2006). The populations of the four communities involved in this research project are: 631 in L'Anse Au Loup, 628 in Cartwright, 575 in Port Hope Simpson, and 300 in St. Lewis (Labrador Coastal Drive, 2013). Research was conducted in the schools of Henry Gordon Academy (Cartwright), Bayside Academy (Port Hope Simpson), St. Lewis Academy (St. Lewis), and Labrador Straits Academy (L'Anse Au Loup).

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<sup>11</sup> Reuse permission for the map of Labrador can be found in Appendix D.



#### ***4.3.2 Study Population***

The study population included all students in Grades 7 – 12 in the communities of Cartwright, Port Hope Simpson, St. Lewis, and L'Anse Au Loup, who were present on the day of the LFC's sexual health presentation. The communities were included based on the school authorities approval as well as the LFC's schedule. All schools that received the LFC's sexual health presentation were included in the study. Given the remoteness of the communities in southern Labrador, the LFC's scheduling capacity was limited by time and funding constraints.

#### ***4.3.3 Sample Selection***

A non-probability sampling technique was employed given that the eligibility criteria was limited to students who received the LFC's sexual health presentation. To be eligible to participate in the study, students must have signed and returned a parental consent form by the date of the study, been present for an informed consent discussion, and completed the pre- and post-questionnaires. Excluded from the study were youth in the participating communities who do not attend public school.

#### ***4.3.4 Questionnaire Design***

Data was collected through the use of self-administered questionnaires<sup>12</sup> given to participants prior to and following a sexual health presentation given by the LFC's Sexual Health Coordinator. Students' knowledge levels and attitudes surrounding HIV/AIDS

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<sup>12</sup> Self-administered questionnaires refer to questionnaires that are independently completed by each participant.

were assessed in the pre- and post-questionnaires. The questionnaires were formulated by combining two tools used frequently in the literature – *Assessment Instruments for Measuring Student Outcomes: Grades 7 – 12* (Popham et al., 1992) and *HIV Knowledge Questionnaire (HIV-KQ-18)* (Carey, Morrison-Beedy, & Johnson, 1997).

The instrument “Your Beliefs” from *Assessment Instruments for Measuring Student Outcomes: Grades 7 – 12* was selected given its appropriateness to the age group and relevancy to the material taught in the LFC sexual health presentation. The *HIV-KQ-18* was selected due to its relevancy to the material taught and the acknowledgment that it is a validated tool with internal consistency, which is appropriate for use with populations that have low literacy (Johnston et al., 2012). Minor modifications were made to the *HIV-KQ-18* instrument to ensure that it was appropriate for the age group of the study population. For example, the use of the word “woman” was replaced with “female” to reflect wording that captures younger women.

The pre-questionnaire was composed of a demographic, knowledge, and attitudes section (see Appendix E). It was administered as a testing package to the participants before the LFC’s sexual health presentation. The demographic section in the pre-questionnaire was designed by the research team to capture identities that are specific to the participating communities. This section asked respondents to identify their age, gender, and ancestry. The gender question asked respondents to select the category with which they identified from a list that included: “Female”, “Male”, “Transgendered”, “Two-spirited”, “Queer”, “Questioning” and “Other”. The option of identifying as more than one category was available to respondents as the question stated, “Please check all

that apply”. The ancestry question asked respondents to select the ancestry with which they identified from a list that included: “Southern Inuit/Inuit- Métis”, “Inuit”, “Innu”, “Other First Nations”, “Caucasian” and “Other”. The “Innu” category was separated from “Other First Nations”, although they are a First Nations group in Canada, to represent the many individuals who identify as Innu in Labrador. Therefore, the “Other First Nations” category includes the many distinct and diverse bands, tribes and nations in Canada, other than Innu peoples.

Following the sexual health presentation, the mixture of instruments, plus an evaluation section, was administered as the post-questionnaire (see Appendix F). The post-questionnaire was composed of a knowledge, attitudes, and evaluation section. The evaluation section asked questions on whether respondent’s enjoyed the LFC’s sexual health presentation and their preferences for sexual health education. This section included 20 questions. Given the distinctness of the LFC’s sexual health presentation, evaluative questions were created by the research team to represent the distinct material taught during the presentation.

Knowledge and attitudes sections were located, identically, in the pre and post questionnaire. The content of this section was derived from the *HIV-KQ-18* tool. The knowledge section asked basic questions on HIV/AIDS facts and included a total of 18 questions. The attitudes section asked questions on whether respondents would feel comfortable engaging with an individual they believed to be HIV positive and included 10 questions. The *Assessment Instruments for Measuring Student Outcomes: Grades 7 – 12* tool supplied the questions related to HIV/AIDS attitudes. In advance of providing the

pre- and post-questionnaires, an informed consent discussion was held with all potential participants.

#### ***4.3.5 Informed Consent Procedure***

The informed consent procedure was carefully developed to ensure the research was abiding by the ethical requirements of research with Indigenous youth. The procedure began with the community partner introducing herself and the Principal Investigator to the high school students. The Principal Investigator then introduced herself and asked if the students recalled the parental consent form given to them two weeks beforehand. To the students who did not return a signed consent form, it was explained that the research required parental and student signatures, and they were asked to follow the community partner outside. While outside the classroom, the students played an icebreaker game with the community partner. The icebreaker game did not include content in the sexual health presentation to ensure that students participating in the research did not miss any material.

Meanwhile, inside the classroom the Principal Investigator discussed informed consent with potential participants following TCPS2 guidelines. The informed consent discussion was presented in a nonthreatening manner using language that was clear and understandable to students in grades 7 – 12. It was explained that filling out the questionnaires would act as an agreement to be a part of the research, and that those who do not wish to take part did not have to complete the questionnaires. In this way assent was obtained through the completion of the questionnaires, in addition to signature of the consent form.

During the research component (informed consent discussion, filling out the questionnaires, and a question period) teachers and principles were asked to leave the classroom. This was done to ensure that the participants did not feel pressure to participate, or not, and to create an environment that was separate from their schooling. It was explained to students that the research would not affect their schoolwork or marks. Information was presented in a relaxed manner and allowed participants to ask questions or make comments at any time, as long as it did not disturb other participants. The encouragement of students to ask questions and comment on the research allowed students to be themselves, have fun, and speak openly about their experience with the project. The research component at each school was concluded with a debriefing session led by the Principal Investigator. The debriefing consisted of distributing contact information to each participant, verbally explaining where and when they can expect to receive research findings, and thanking them for their time and participation. The informed consent and debriefing sessions were presented prior to, then following, the LFC's sexual health presentation.

#### ***4.3.6 Description of the Sexual Health Presentation***

The LFC's sexual health presentation was developed by their Sexual Health Coordinator, Ms. Diamond. The presentation ranged from an hour in length to three hours, depending on the time availability of the school. The duration of the presentation was proposed by the research team to be an hour and a half. This would allow for an hour of education, and a half an hour for the research component. The education component included a power point presentation, facts, games, demonstrations, and discussions.

The LFC's sexual health presentation began with two icebreaker activities. In the first, students were asked to stand and form a large circle. Starting with Ms. Diamond, everyone was asked to introduce themselves and share an interesting fact. Next, an icebreaker game called "The Clap" was played. In "The Clap" students passed a clapping motion from one student to the next. After a few minutes of playing, students were asked to return to their seats. Ms. Diamond then began a power point presentation that she prepared (see Appendix G), which included topics of sexuality, sexual orientation, sexual health, and STI/STBBI information (with a large HIV/AIDS section). These topics were presented in an active discussion format, whereby the audience is asked questions relating to the topic material and are encouraged to engage with the presenter. This format was grounded in Southern Inuit ways of knowing, which revolved around the use of stories, personal insights, role-play, and symbols. For example, to discuss sexual orientation, Ms. Diamond shared her experience of identifying as a two-spirited individual. Additionally, a holistic mind-body-spirit framework was used to discuss sexual health.

Following the power point presentation a condom demonstration game was played. Students split up into three teams and raced to put a condom on a wooden penis while wearing oven mitts. This game was used to demonstrate that substance use can impair the application of sexual protection. The presentation was concluded by inviting students to browse, and keep, pamphlets, pins, bracelets, and other educational material about sexual health. The response of the students to the LFC's sexual health presentation in most of the schools was energetic and engaged. Students asked questions and made comments in relation to the presentation, as well as the pre- and post-questionnaires, without inhibition.

#### ***4.3.7 Questionnaire Administration***

The pre-questionnaire was administered as a one testing package to the participants before the LFC's sexual health presentation. Questionnaires were coded with an anonymous identification number so that each participant's pre- and post-questionnaire could be matched for the data analysis. To ensure that the pre- and post-questionnaires matched, instructions were provided that asked participants to stay in the same seat and memorize their unique identification number. Coded questionnaires were passed to each participant and instructions were presented. Participants were given as much time as they needed to complete it. The participants completed the pre-questionnaire in approximately 5 – 10 minutes. Once all participants were finished, the questionnaire was collected by the Principal Investigator and placed in an envelope. Following the sexual health presentation, the post-questionnaire was administered to the participants. The participants completed the post-questionnaire in approximately 10 – 15 minutes. Once all participants were finished, the questionnaire was collected by the Principal Investigator and placed in the envelope and sealed. The questionnaires were kept sealed in an envelope for the entirety of the data collection process, with the seal only being broken to analyze the data.

#### **4.4 Data Analysis**

The final section of Chapter 4 will describe the data analysis, which includes data entry, outcome calculations, statistical analysis, and thematic coding.

#### ***4.4.1 Data Entry***

Data from the pre- and post-questionnaires were entered into a secure electronic database called EpiData from the original paper copies. As the pre- and post-questionnaires were completed anonymously, demographic information could be collected. Only members of the research team who had signed a confidentiality agreement had access to the data. The names of the high schools were randomly assigned an alphabetical code (A to D) to ensure the anonymity of the respondents. A multi-faceted approach (anonymity, confidentiality agreement, password protection, and coding) to data security was adopted to make sure participants and communities were protected from the possibility of adverse outcomes stemming from this research project.

In a secure environment the pre- and post-questionnaires were coded from original paper copies to organize participant responses. Responses that were answered correctly were coded 1, responses that were answered incorrectly were coded 2. Responses that were selected as “Don’t Know” were labeled as incorrect and coded 2, and responses that were blank were coded 0 to signify a missing response. Once all the responses had been coded, EpiData Manager (version 1.4.3.3 r747) was utilized to create an electronic template of the pre- and post-questionnaires. The electronic templates for the pre- and post-questionnaires were then transferred to EpiData EntryClient (version 1.4.3.2), which allowed for the entry of individual questionnaire responses. Ninety-eight pre- and post-questionnaires were entered into the EpiData EntryClient templates by the Principal Investigator and sorted by their matching identification numbers.



#### ***4.4.2 Outcome Calculations***

Following the entry of all questionnaire responses, the pre- and post-datasets were labeled and exported into R Project (version 3.0.2 GUI 1.62). R Project is “an integrated suite of software facilities for data manipulation, calculation and graphical display” using the language R (Institute for Statistics and Mathematics, 2013). Once the pre- and post-datasets were imported into R Project, proportions were estimated on the demographic identifiers (age, gender, ancestry, and school) to determine the number of participants that identified as each subcategory.<sup>13</sup> Proportions were estimated for each question to calculate the number correct and incorrect answers.

In order to analyze if there were differences in the responses from pre- to post-questionnaire, a total score for knowledge and attitudes were calculated. For each question in the pre- and post-questionnaire, a correct score was assigned by labeling correct answers as “True” and incorrect answers as “False”. If the respondent selected “Don’t Know” it was assumed that they did not know the correct answer, and were coded as incorrect. The “Don’t Know” option was categorized as incorrect to follow the conventional practice of pooling “Don’t Know” responses with wrong answers (Luskin & Bullock, 2011). This approach to categorizing “Don’t Know” responses enabled the creation of a more conservative measure whereby any significant results observed were more likely to be significant. Scores for each section were calculated by assigning one point for questions answered correctly, and no points for questions answered incorrectly.

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<sup>13</sup> Subcategories of the demographic identifiers were the categories listed in the questionnaire. For example, for the demographic identifier gender, a subcategory was female.

The attitudes section was scored with positive attitudes scoring one point, and negative attitudes scoring no points.

Once scores were assigned to each question, data was organized into knowledge, attitudes, and evaluation sections and a separate dataset was created for each section. Utilizing these datasets, the overall scores for the knowledge, attitudes, and evaluation were calculated by summing the number of correct responses for each section. Means, medians, and ranges were calculated for each overall score. In order to determine whether or not there was a change in knowledge from pre- to post-questionnaire, the total score from post-questionnaire knowledge data frame was subtracted from the total score from the pre-questionnaire knowledge. This difference was calculated for the total attitude scores from the pre- and post-questionnaires. A paired t-test was calculated to determine if there were significant differences in the total knowledge or attitude scores from the pre- to post-questionnaire. Significance was set at a p-value of 0.05 or lower.

As noted in the data collection discussion, the evaluation section was made up of two types of questions. The first type of question was specific to the LFC's sexual health presentation, for example, "I trust the information given in this presentation". The second type of question surrounded youth involvement in HIV/AIDS programming, for example, "Teenagers should be involved in helping create HIV/AIDS programs for teenagers". To account for these two types of questions, separate datasets were created that organized the questions into a presentation category and a youth involvement category. Statistical tests were then conducted on the separated datasets, in addition to tests on the combined material. The additional analyses were completed to be able to draw specific conclusions on how participants evaluated the LFC's sexual health presentation.

#### ***4.4.3 Statistical Analysis***

The next step of the data analysis was to conduct Analysis of Variance (ANOVA) tests on the categories of demographic identifiers (gender, age, ancestry, and school) and questionnaire categories (knowledge, attitudes, and evaluation). ANOVA is “a statistical method used to test differences between two or more means” (Lane, 2013a). ANOVA tests the non-specific null hypothesis. The non-specific null hypothesis is often referred to as the omnibus null hypothesis. When the omnibus null hypothesis is rejected, “the conclusion is that at least one population mean is different from at least one other mean” (Lane, 2013a). In other words, a significant relationship between one variable of interest and another was found.

For the purpose of this data analysis, ANOVA testes compared:

- gender with knowledge, attitudes, and evaluation;
- age with knowledge, attitudes, and evaluation;
- ancestry with knowledge, attitudes, and evaluation; and
- school with knowledge, attitudes, and evaluation.

ANOVA tests do not have the ability to determine if one specific mean is different from another, therefore, posthoc analysis is required when the ANOVA identifies that a significant difference is present (Lane, 2013a). Given the need to adjust for multiple comparisons, the ANOVA test was an effective tool that enabled comparisons to be

examined between gender, age, ancestry, and school. The ANOVA tests that were found to be statically significant ( $p\text{-value} > 0.05$ ), were further examined through a Tukey's Honestly Significant Difference (TukeyHSD) test. The TukeyHSD was developed by John Tukey (Lane, 2013a) to determine the location of where significant differences between subcategories occurred. Given the continuous numeric nature of age, a linear regression was conducted. A linear regression consists of “finding the best-fitting straight line through the points”, which is called a regression line (Lane, 2013b). Regression lines represent the best-fit line that minimizes the error between the observed value and the predicted value.

Residual diagnostic plots were created and examined for each analysis to determine if there were abnormal outcomes or violations in model assumptions. One identification number was observed in numerous plots to be an outlier.<sup>14</sup> The Principal Investigator re-examined the original copy of the questionnaires to decide if this outlier was caused by an error. It was determined that this participant's post-questionnaire was completed incorrectly, which may have caused a skewing of the statistical analysis, and was therefore removed from the dataset. No other outliers were found to have a potential impact on the statistical analyses. Given a very small population of participants identifying as an LGBTQ category, a separate non-quantitative analysis was conducted by the Principal Investigator to ensure that they were included in the research results and

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<sup>14</sup> An outlier is an observation that lies outside the normal pattern of a distribution (Moore & McCabe, 1999).

recommendations. The LGBTQ analysis consisted of the calculation of overall scores for knowledge, attitudes, and evaluations, as well as a descriptive examination of the results.

#### ***4.4.4 Thematic Coding***

Open-ended questions located in the evaluation section of the post-questionnaire were analyzed using thematic analysis. Thematic analysis provides a rich, detailed, and complex account of data that can be used to identify and organize patterns (Braun & Clarke, 2006). These patterns are reported and organized into themes that describe valuable information in rich detail (Braun & Clarke, 2006). The rationale behind the use of this approach was to represent the voices of south Labradorian youth who shared their preferences and recommendations surrounding HIV/AIDS education. Thematic analysis is not tied to one theoretical position, but instead can be applied to a variety of research, both grounded in theory and outside of theory (Braun & Clarke, 2006). As thematic analysis can be applied to various theoretical approaches, it was ideal for this research given the bricolage of theoretical frameworks used.

Thematic analysis began by entering the opened-ended question responses into an Excel spreadsheet from the original paper copies. In addition to the responses, the identification number, age, gender, ancestry, and school of the participants were recorded to be able to analyze responses in relation to demographic identifiers. The responses were categorized by highlighting similar words, phrases, or ideas. The data was considered saturated when no new concepts emerged. The categories were then coded into major themes based on how many times they were mentioned. Four predominant themes

emerged from the participant's responses to the first open-ended question, while three predominant themes emerged from the second open-ended question. The themes were selected based on having more than five respondents directly, or indirectly, identifying them. The use of direct quotations that summarized the variety of responses were included in the analysis to provide further information on the content of each predominant theme.

#### **4.5 Conclusion**

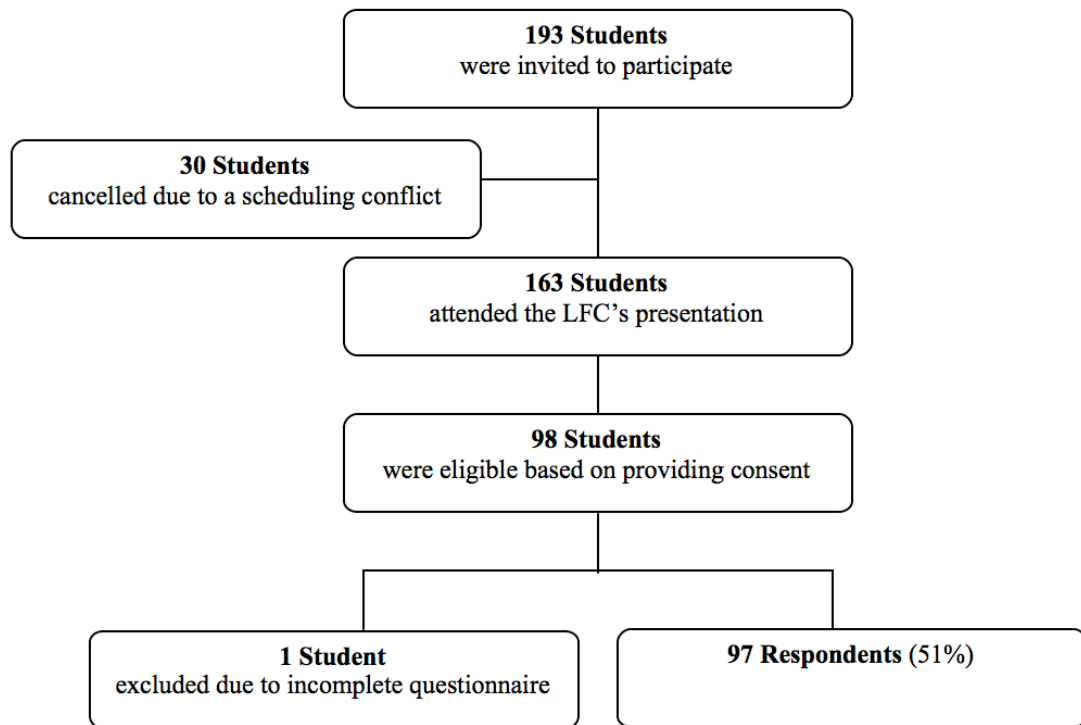
This chapter described in detail the methods of the research project. First, the ethical process was discussed by providing details on how the project met specific requirements for research with Indigenous communities. These requirements are: community engagement, mutual benefits, strengthening research capacity, recognition of subgroups in the population, community inclusion in the interpretation and dissemination of results, and finally, the presence of an RAC and research agreement. Secondly, a description of how the study was designed was presented. Next, data collection was discussed, which included the research setting, study population, sample selection, questionnaire design, informed consent discussion, a description of the sexual health presentation, and questionnaire administration. The chapter concluded with the data analysis, which discussed the use of the statistical program R Project to conduct overall scores, paired t-tests, ANOVA tests, linear regressions, and thematic analyses of open-ended questions. These methods were important pieces of the puzzle in determining the results of this research project.

## **Chapter 5: Results**

Chapter 4 presents the results of this community-based research study that aims to understand the impact of an HIV/AIDS sexual health presentation of youth in Southern Inuit communities in Labrador. The impact is measured by pre- and post-questionnaires that examined the knowledge levels and attitudes surrounding HIV/AIDS. A description of the research sample is reported, followed by the results of the quantitative data analysis, a special report on the responses of individuals who identified as an LGBTQ category, and finally, the main themes uncovered from a thematic analysis.

### **5.1 Questionnaire Response**

One hundred and ninety three students from five all grade schools in south Labrador were invited to participate in the research project. One school was unable to take part due to a scheduling conflict, therefore excluding 30 students. A total of 163 students were eligible to participate, given that they received the LFC's sexual health presentation. Of the 163 students, 98 participated given that they had obtained consent from their legal guardian. One student was excluded based on having an incomplete post questionnaire, giving a response rate of 51% (see Figure 2).



**Figure 2: Study sample and response rate**

## **5.2 Respondent Characteristics**

Details on the characteristics of respondents are summarized in Table 1. Half (50.5%) of the respondents identified as female, with a small proportion (2.1%) of respondents who identified as LGBTQ. Respondents in the sample ranged from the ages of 11 to 17 years old. The majority (68.5%) of respondents were between the ages of 13 and 15 years old. Over half (53.8%) of the respondents identified as Southern Inuit/Inuit-Métis when asked their ancestry, with over a quarter (29.7%) identifying as an ancestry not listed. The respondents attended one of four high schools on the southern coast of Labrador, with most (48.5%) of the respondents attending School C.



**Table 1: Characteristics of Grade 7-12 High School Students in the Study**

<b>Variable</b>	<b>n(%)</b>
<b>Gender</b>	
Female	48(50.5)
Male	45(47.4)
LGBTQ	2(2.1)
<b>Age (years old)</b>	
11	2(2.1)
12	14(14.7)
13	25(26.3)
14	20(21.1)
15	20(21.1)
16	6(6.3)
17	8(8.4)
<b>Ancestry</b>	
Southern Inuit/Inuit-Métis	49(53.8)
Inuit	3(3.3)
Other First Nations	2(2.2)
Caucasian	10(11.0)
Other	27(29.7)
<b>School</b>	
A	13(13.4)
B	18(18.6)
C	47(48.5)
D	19(19.6)

### 5.3 Overall Questionnaire Scores

The overall scores for knowledge, attitudes, and evaluation are shown in Table 2. The overall score for knowledge increased from a mean of 7.9 out of 18 (43.9%) on the pre-questionnaire, to 10.3 out of 18 (57.2%) on the post questionnaire. The overall score for attitudes saw a slight increase from a mean of 5.4 out of 10 (54.0%) on the pre-questionnaire, to 5.9 out of 10 (59.0%) on the post-questionnaire. The mean of the scores for the evaluation section was 12.3 out of 20 (61.5%). Baseline scores were examined to determine whether noticeable differences existed between subcategories of demographic

identifiers (age, gender, ancestry, and school). Significant differences (p-value of  $< 0.05$ ) were found between female and male attitudes surrounding HIV/AIDS with females (mean = 4.88 out of 10) having lower attitude scores on the pre-questionnaire when compared to males (mean = 5.89 out of 10). Additionally, a significant difference was found between knowledge levels and certain ancestries with other First Nations (mean = 13.00 out of 18) having the highest knowledge levels on the pre-questionnaire compared to any other ancestry. There were no other noticeable differences between other subcategories and demographic identifiers.

**Table 2: Overall Knowledge, Attitudes, and Evaluation Scores for Questionnaires Given Before and After a Sexual Health Presentation on HIV/AIDS**

<b>Variable</b>	<b>Mean Total Score</b>	<b>Range (min,max)</b>
<b>Knowledge*</b>		
Pre Questionnaire	7.9	(0,16)
Post Questionnaire	10.3	(0,17)
<b>Attitudes**</b>		
Pre Questionnaire	5.4	(0,10)
Post Questionnaire	5.9	(0,10)
<b>Evaluation***</b>		
Post Questionnaire	12.3	(1,19)

\* Knowledge score out of 18

\*\* Attitudes score out of 10

\*\*\* Evaluation score out of 20

#### **5.4 Change in Overall Scores from Pre-Questionnaire to Post-Questionnaire**

To determine whether respondents displayed a change in knowledge and attitudes from pre- to post-questionnaire, a paired t-test was conducted. Table 3 summarizes the results of the paired t-tests. The changes in scores from pre- to post-questionnaire for the

knowledge ( $p = < 0.001$ ) and attitudes ( $p = 0.043$ ) sections were found to be significant. Respondents displayed an increase in the mean knowledge score of 2.5 points, and an increase in the mean attitude score of 0.4 points. These results indicate that, overall, respondents' short-term knowledge and attitudes surrounding HIV/AIDS improved following the LFC's sexual health presentation.

**Table 3: Change in Scores from Pre- to Post-Questionnaire for Knowledge and Attitudes**

<b>Variable</b>	<b>p-value</b>	<b>Mean of Differences</b>
Knowledge	< 0.001	2.5
Attitudes	0.043	0.4

### **5.5 Common Misconceptions on HIV/AIDS Knowledge and Attitudes Demonstrated at Post-Questionnaire**

Numerous misconceptions were found within the HIV/AIDS knowledge and attitudes sections at post-questionnaire. Common misconceptions were demonstrated, whereby a significant percentage of respondents answered the questions incorrectly. In the HIV knowledge section these misconceptions surrounded HIV testing, transmission, and vaccination (see Table 4). Common misconceptions on attitudes surrounded incorrect beliefs on the transmission of HIV in relation to PLWHA (see Table 5).

**Table 4: Common Misconceptions on HIV Knowledge**

<b>Question</b>	<b>Percent of Respondents who Answered Incorrectly</b>
Taking a test for HIV one week after having sex will tell a person if she or he has HIV	58.3%
People are likely to get HIV by deep kissing, putting their tongue in their partner's mouth, if their partner has HIV	35.8%
There is a vaccine that can stop people from getting HIV	38.3%
HIV can be spread by mosquitoes	34.4%

**Table 5: Common Misconceptions surrounding HIV/AIDS Attitudes**

<b>Question</b>	<b>Percent of Respondents who Answered Incorrectly</b>
If I thought my friend had AIDS, I would be afraid to give that friend a kiss	51.0%
I wouldn't mind swimming in the same pool as someone who has AIDS	40.0%
A person who has AIDS should stay away from public places	16.7%

## **5.6 Change in Overall Scores between Pre and Post Questionnaire Accounting for Demographic Variables**

The results of the ANOVA analysis are shown in Table 6. Relationships that were found to be significant were further investigated using Tukey's HSD test. Tables 7 and 8 summarize the means of significant relationships between the overall scores and demographic identifiers. The results of the ANOVA analysis uncovered significant

differences between gender and overall attitudes ( $p = 0.031$ ), age and evaluation ( $p = 0.015$ ), ancestry and knowledge ( $p = 0.018$ ), respondent's ancestries and evaluation ( $p = 0.007$ ), and school and evaluation ( $p = 0.001$ ).

**Table 6: Relationships between Total Scores for Pre- and Post-Questionnaires and Demographic Identifiers**

<b>Demographic Identifier vs. Variable</b>	<b>p-value</b>	<b>F statistic</b>
<b>Gender</b>		
Knowledge	0.081	2.60
Attitudes	<b>0.031</b>	3.61
Evaluation	0.390	0.95
<b>Age</b>		
Knowledge	0.351	1.13
Attitudes	0.061	2.11
Evaluation	<b>0.015</b>	2.84
<b>Ancestry</b>		
Knowledge	<b>0.018</b>	3.21
Attitudes	0.158	1.70
Evaluation	<b>0.007</b>	3.82
<b>School</b>		
Knowledge	0.178	1.68
Attitudes	0.386	1.02
Evaluation	<b>0.001</b>	5.78

**Bolded values indicate statistical significance at  $p < 0.05$**

The mean of difference in attitude scores between gender categories demonstrated that females (mean = 1.00) gained more positive attitudes than males (mean = -0.14), while the score for LGBTQ individuals did not change (see Table 7).

**Table 7: Means of Significant Relationships between Demographic Identifiers and Total Knowledge and Attitude Scores using ANOVA**

<b>ANOVA</b>	<b>p-value</b>	<b>Mean of Difference</b>
<b>Gender &amp; Attitudes</b>	0.031	
Female		1.0
Male		-0.1
LGBTQ		0.0
<b>Ancestry &amp; Knowledge</b>	0.018	
Southern Inuit/Inuit-Metis		2.2
Inuit		-0.3
Other First Nations		-1.0
Caucasian		3.7
Other		3.6

The results of the Tukey's HSD test demonstrated a significant difference in the change in attitude scores between females and males ( $p = 0.025$ ). Female respondents were found to have scored an average of 1.14 points higher in their attitude scores compared to male respondents. To understand the magnitude of this finding, baseline (pre-questionnaire) scores were examined (See Table 8). Baseline means for gender demonstrated that females had lower attitude scores (4.88 out of 10), than males (5.89 out of 10), meaning that females' attitudes improved significantly compared to males.

**Table 8: Mean of Pre- and Post-Questionnaires based on ANOVA Results of Attitudes Scores**

Demographic Identifier vs. Attitudes	Pre Questionnaire		Post Questionnaire	
	p-value	Mean	p-value	Mean
<b>Gender &amp; Attitudes</b>	0.042		0.257	
Females		4.87		6.07
Males		5.89		5.61
LGBTQ		9.00		9.00
<b>Age &amp; Attitudes</b>	0.002		<0.001	
11		0.00		0.00
12		5.28		3.23
13		5.70		5.09
14		5.75		6.48
15		6.00		7.20
16		8.25		6.67
17				8.62
<b>Ancestry &amp; Attitudes</b>	0.078		<0.001	
Southern Inuit		6.20		7.09
Inuit		4.67		3.00
Other First Nations		6.00		7.50
Caucasian		4.80		5.80
Other		4.37		4.50
<b>School &amp; Attitudes</b>	0.005		0.049	
A		6.85		7.54
B		6.72		6.75
C		4.48		5.18
D		5.21		5.63

Age was significantly associated with evaluation scores ( $p = 0.015$ ) (see Table 9).

The mean of the evaluation scores ranged from a high of 13.8 out of 20 (69.0%) by 16-year-olds, to a low of 7.5 out of 20 (37.5%) by 11-year-olds. The results of the

TukeyHSD test demonstrated no significant differences between age subgroups. When a linear regression was conducted on the evaluation questions of the LFC's sexual health presentation only (excluding youth involvement questions), a significant difference was

demonstrated ( $p = 0.007$ ) between younger and older age groups. As students aged, they tended to evaluate the sexual health presentation higher. A linear regression conducted on the youth involvement questions only (excluding evaluation questions of the presentation) concluded no significant differences between younger and older age groups.

**Table 9: Means of Significant Relationships between Demographic Identifiers and Total Evaluation Score using ANOVA**

<b>ANOVA</b>	<b>p-value</b>	<b>Mean</b>
<b>Age/Evaluation</b>	0.015	
11		7.5
12		10.9
13		10.5
14		13.7
15		12.6
16		13.8
17		13.5
<b>Ancestry/Evaluation</b>	0.007	
Southern Inuit/Inuit-Metis		13.5
Inuit		8.3
Other First Nations		12.5
Caucasian		10.1
Other		11.2
<b>School/Evaluation</b>	0.001	
A		15.7
B		12.5
C		11.5
D		11.4

There were significant differences between ancestry and knowledge scores ( $p = 0.018$ ).

The mean of difference for the ancestry and knowledge shows that Caucasian respondents (3.7) gained the most knowledge at post-questionnaire, while other First Nations (-1) and Inuit (-0.3) respondents exhibited a lower knowledge score at post-questionnaire. An



examination of baseline means demonstrated that individuals who identified as other First Nations had the highest knowledge levels with a mean score of 13.0 out of 18 (72.2%) (See Table 10).

**Table 10: Mean of Pre- and Post-Questionnaires based on ANOVA Results of Knowledge Scores**

Demographic Identifier vs. Variable	Pre Questionnaire		Post Questionnaire	
	p-value	Mean	p-value	Mean
<b>Gender &amp; Knowledge</b>	0.056		0.087	
Females		7.53		11.25
Males		7.82		9.48
LGBTQ		15.00		15.00
<b>Age &amp; Knowledge</b>	<0.001		<0.001	
11		1.50		0.00
12		3.85		7.80
13		6.80		8.71
14		7.79		10.12
15		10.00		13.21
16		12.20		13.25
17		11.25		12.87
<b>Ancestry &amp; Knowledge</b>	0.003		0.106	
Southern Inuit		9.33		11.37
Inuit		6.67		6.33
Other First Nations		13.00		12.00
Caucasian		7.00		12.00
Other		5.80		9.57
<b>School &amp; Knowledge</b>	<0.001		0.022	
A		12.58		13.55
B		10.19		10.80
C		6.32		9.92
D		6.53		8.61

Although individuals who identified as other First Nations demonstrated the largest decrease in knowledge, they still had the highest level of knowledge following the LFC's

sexual health presentation with a mean score of 12.0 out of 18 (66.7%). A Tukey's HSD concluded no significant differences between ancestry subgroups.

Significant differences were also observed between respondent ancestries and how they evaluated the LFC's sexual health presentation ( $p = 0.007$ ). The mean of the evaluation score ranged from a high of 13.5 out of 20 (67.5%), by Southern Inuit/Inuit-Métis respondents, to a low of 8.3 out of 20 (41.5%) by Inuit respondents. The results of a TukeyHSD test indicate that the differences between ancestry subgroups are not significant. Finally, the ANOVA analysis demonstrated a significant difference between school and evaluation ( $p = 0.001$ ). The mean evaluation score was highest for School A (15.7 out of 20) and lowest for School C (11.5 out of 20) and D (11.4 out of 20). TukeyHSD test identified significant differences between School A and School C ( $p = 0.008$ ), as well as School A and School D ( $p = 0.003$ ). School A evaluated the presentation 4.18 points higher than School C, and 4.28 points higher than School D.

## **5.7 Examining the Relationship between Knowledge, Attitudes, and Evaluation and Age**

To examine the effect of age on change in knowledge, change in attitudes, and evaluation of the program, linear regression was conducted (see Table 11). There was a significant relationship between age and difference in attitude score between older and younger students ( $p = 0.027$ ). As the students aged they displayed a positive change in their attitudes. For every year increase in age, respondents attitude score increased by 0.32 points. Additionally, the relationship between age and evaluation demonstrated a significant difference in how older and younger students evaluated the program ( $p =$

0.003). As students aged they evaluated the program higher, indicating that the program was more effective for older age groups. For every year increase in age, respondents evaluated the program higher by 0.75 points.

**Table 11: Linear Regression on the Significant Relationships between Age and Variables**

Variable	Estimate	Standard Error	t statistic	p-value
<b>Knowledge</b>				0.027*
Intercept	5.01	2.93	1.71	0.091
Age	-0.18	0.21	-0.86	0.394
<b>Attitudes</b>				0.394*
Intercept	-4.07	2.02	-2.02	0.046
Age	0.32	0.14	2.25	0.027
<b>Evaluation</b>				0.003*
Intercept	1.60	3.47	0.46	0.646
Age	0.75	0.24	3.08	0.003

\*Overall model p-value based on F-statistic

## 5.8 Analysis of Respondents who Identified as LGBTQ

A separate analysis was conducted for individuals who identified as LGBTQ to ensure that they were included in the research results. Table 12 summarizes the overall knowledge, attitudes, and evaluation scores for individuals who identified as LGBTQ. The mean score of knowledge on the pre-questionnaire was 15.0 out of 18 (83.3%), and the mean score of knowledge on the post-questionnaire was 16.0 out of 18 (88.9%), indicating an increase in knowledge of 1 point. The mean score of attitudes for LGBTQ

respondents was 9.0 out of 10 (90.0%) on both the pre- and post-questionnaire. The mean score of the evaluation section was 15.0 out of 20 (75%).

**Table 12: Overall Scores of Knowledge, Attitudes and Evaluation for Individuals who Identified as an LGBTQ Category**

<b>Variable</b>	<b>Mean</b>
<b>Knowledge*</b>	
Pre Questionnaire	15
Post Questionnaire	16
<b>Attitudes**</b>	
Pre Questionnaire	9
Post Questionnaire	9
<b>Evaluation***</b>	
Post Questionnaire	15

\* Knowledge score out of 18

\*\* Attitudes score out of 10

\*\*\* Evaluation score out of 20

## 5.9 Analysis of Open-Ended Questions Using Thematic Coding

Two open-ended questions were included in the post-questionnaire to allow respondents to express the most memorable part of the LFC’s sexual health presentation and provide recommendations on what would make it more enjoyable. The responses were coded into major themes based on having the highest number of respondents mentioning them (See Table 13). A total of 75 respondents replied to the first open-ended question, “The one thing I know I will remember from this presentation is”, constituting a response rate of 76.5%. Three predominant themes emerged from the participant’s responses, which included condoms, to be safe/protect yourself, HIV/AIDS information, and STBBI/STI information (See Appendix H). A total of 68 respondents answered the

second open-ended question, “I would enjoy HIV/AIDS programs more if they included”, constituting a response rate of 69.4%. Three major themes uncovered included games, activities, and demonstrations; nothing; and more information (See Appendix I).

**Table 13: Major Themes Uncovered in the Open-ended Questions**

<b>Variable</b>	<b>n(%)</b>
<b>The one thing I know I will remember from this presentation is</b>	
Information on condoms	21(28.0)
To be safe/Protect oneself	20(26.7)
HIV/AIDS Information	8(10.7)
STBBI/STI Information	7(9.3)
<b>I would enjoy HIV/AIDS programs more if they included</b>	
Games/Activities/Demonstrations	28(41.2)
Nothing	11(16.2)
More information	6(0.9)

### **5.9.1 Condoms**

Over a quarter (28%) of the respondents who replied to the first open-ended question indicated that the one thing they would remember from the LFC’s sexual health presentation was information about condoms. The majority of the respondents who answered with condom-related information were, on average, 12 or 14-years-old and identified as Southern Inuit/Inuit-Métis. Most students responded that learning how to use, or put on, a condom was the most memorable aspect of the presentation. Responses ranged from “Use a condom”, through “How to put on a condom”, to “How to properly use a condom due to the activity”. Other responses related to condoms included, “Use protection when having sex”, “To throw condoms in the trash not in the toilet”, and a few referred to the condom demonstration game (for example, “The condom game”).

### ***5.9.2 Be Safe/Protect Oneself***

Of the 75 respondents who provided an answer for the first open-ended question a quarter (26.6%) mentioned that the one thing they would remember was to be safe or protect oneself. Respondents who replied with this theme were typically 14-years-old, female, Southern Inuit/Inuit-Métis, and from School C. The responses that mentioned being safe included, “Be safe”, and “To always be safe and take precautions”. Responses that noted to protect oneself included, “To protect yourself”, “Respect and protect yourself”, and “That I should always protect myself when it comes to HIV/AIDS”. Additional comments were made when referring to safety and protection, such as “How important it is to practice safe sex”, and “Don’t have unprotected sex”.

### ***5.9.3 HIV/AIDS Information***

Another dominant theme that emerged from the first open-ended question was information on HIV/AIDS. A total of 10.7% of respondents replied that information on HIV/AIDS was the most memorable component. Half of the respondents who replied with HIV/AIDS information were from School C. The responses in this theme included general comments, “Knowing the importance of AIDS”, to more specific comments, such as “That mosquitoes can't spread HIV”. A subtheme emerged from the HIV/AIDS related responses, which was that HIV/AIDS is scary. Many respondents responded with statements like, “HIV & AIDS is dangerous”, “HIV/AIDS is more common than I realized”, and “HIV, AIDS, etc. is not something to joke about”.

#### ***5.9.4 STBBI/STI Information***

A less predominant theme emerged from the first open-ended question, which was information surrounding other STBBI/STI. A total of 9.3% respondents replied with answers related to this theme. The majority of respondent's who answered this way were 14-years-old, male, Southern Inuit/Inuit-Métis and from School C. Responses that identified STBBI/STI as the thing they would remember most about the presentation included; "How you contract different STI", "How serious STD are", "The different types of STI", and "About crabs and scabbies".

#### ***5.9.5 Games/Activities/Demonstrations***

Nearly half (48.2%) of the respondents who replied to the second open-ended question indicated that they would enjoy HIV/AIDS programs more if they included games, activities, and demonstrations. The majority of students who answered this way were 15-years-old, female, Southern Inuit/Inuit-Métis and from School C. Responses included, "More games and demonstrations", "Games about the topic", and "More hands on demonstrations". Unfortunately, no examples of what types of games, activities, and demonstrations would make HIV/AIDS programs more enjoyable were mentioned.

#### ***5.9.6 Nothing***

Of the 68 respondents who answered the second open-ended question, 16.2% indicated that nothing more was needed in response to the question "I would enjoy HIV/AIDS programs more if they included". A typical respondent who replied with nothing was 14-years-old, Southern Inuit/Inuit-Métis and from School D. Some responses

to this question simply noted “Nothing”, while others explicitly stated their enjoyment of the LFC’s sexual health presentation, for example, “It’s perfect” and “Nothing, I thought it was wonderful”.

#### ***5.9.7 More Information***

An additional theme was uncovered that a total of 6 respondents (0.9%) identified. This theme was more information, signifying that respondents wanted more information pertaining to sexual health education. Respondents who answered with this theme were 14 or 17-years-old, female, Southern Inuit/Inuit-Métis and from School C. Most of these responses simply noted, “More information”, while one called for “More information about the long term effects”.

#### **5.10 Conclusion**

Chapter 5 presented the response rate, characteristics of the sample population, results of the data analysis, unique responses of individuals who identified a LGBTQ category, and the main themes discovered through thematic analysis. The results of this research project provide important insights into the knowledge levels, attitudes and programming preferences of participants that can be utilized to draw conclusions and form recommendations to improve the effectiveness of HIV/AIDS sexual health education for youth in Southern Inuit communities in Labrador.



## **Chapter 6: Discussion**

Chapter 6 presents a discussion of the results from this quantitative study to determine HIV/AIDS knowledge and attitudes of southern Labradorian youth, as well as an evaluation of the HIV/AIDS component of the LFC's sexual health presentation. This chapter presents the research findings in the context of the existing literature, recommendations, limitations, and a reflective piece that describes the research experience and obstacles faced throughout the project.

### **6.1 Discussion of the Research Findings**

This research project provided important insights into the knowledge levels and attitudes surrounding HIV/AIDS among youth in Labrador in grades 7 – 11, as well as how effective the LFC's sexual health presentation was as determined by participants. The study findings indicate that: overall knowledge and attitudes scores increased, females gained more positive attitudes compared to males, and respondents who identified as First Nations had the highest pre-questionnaire knowledge levels yet demonstrated a lower knowledge score at post-questionnaire. An independent analysis was conducted for the respondents who identified as LGBTQ to ensure they were represented in the findings. This analysis demonstrated that LGBTQ respondents scored the highest on all three components (knowledge, attitudes, and evaluation) compared to respondents who did not identify as LGBTQ.

Finally, the sexual health presentation was most effective for older students who identified as Southern Inuit/Inuit-Métis who attended School A. Students from School A

may have evaluated the sexual health presentation higher given that it was comprised of older students, with the majority aged 14-17 years old. As demonstrated in chapter 5, older students were found to evaluate the sexual health presentation the highest. Thematic coding of the open-ended questions uncovered that condoms and to be safe/protect yourself were the most memorable aspect of the sexual health presentation. Participants would have enjoyed the presentation more if it included more games, activities, and demonstrations.

As described in the literature review at the beginning of this thesis, the population most at risk for HIV infection among Indigenous peoples are young females. Therefore, the finding that the LFC's presentation was effective in improving the attitudes of the young female respondents is hopeful. The strategies used in LFC's presentation may be transferrable to other remote communities in Canada and work towards providing effective HIV prevention strategies for young Indigenous females and therefore improving health equity.

Improving health equity is one example of the environments of risk addressed by the LFC's sexual health program. Other examples include: risky sexual activity and the unique needs of LGBTQ youth. Risky sexual activity was addressed through the use of a condom demonstration that was in the form of a game. A substantial amount of responses mentioned the condom game as the aspect that was most memorable, which speaks to the effectiveness of this youth attracting approach. Additionally, the unique needs of LGBTQ youth were recognized through LGBTQ centered discussions, in which the sexual health educator identified as two-spirited. The high evaluation scores provided by LGBTQ participants demonstrates the success of this approach. These findings highlight the

importance of incorporating gender-based and culturally appropriate strategies in sexual health education in order for it to be effective for Indigenous youth.

The findings of the research are discussed in more detail in the subsections of this chapter. The subsections include: HIV knowledge levels, attitudes surrounding HIV/AIDS, females gained more positive attitudes, older respondents evaluated the sexual health presentation the highest, other First Nations and Inuit respondents demonstrated lower knowledge scores at post-questionnaire, older respondents had more positive attitudes, an independent analysis for LGBTQ respondents, and the results of thematic coding surrounding condoms and games.

#### ***6.1.1 HIV Knowledge Levels***

Overall knowledge and positive attitude scores increased as a result of the LFC's sexual health presentation. Overall knowledge increased from a mean score of 7.9 out of 18 (44%) at baseline to a mean score of 10.3 out of 18 (57%) at post-questionnaire. This is consistent with studies that found an improvement in HIV/AIDS knowledge as a result of a school-based sexual health intervention that used pre- and post-questionnaires to evaluate program efficiency (Chhabra, Springer, Leu, Ghosh, Sharma, & Rapkin, 2010; Fawole, Asuzu, Oduntan, & Brieger, 1999; Majumdar et al., 2004; Cunningham, Scostak, Merl, Dye, Contello, & Weiner, 1997; Fisher, Fisher, Bryan, & Misovich, 2002).

The average knowledge level in this study at post-questionnaire was 57.2%, which is considered to be a low knowledge level (Choy, Huo, Lee, Sabapathy, Jing, & Jutti, 2013; Paul et al., 2013). Despite an overall improvement, knowledge levels are low compared to other populations that used the HIV-KQ instrument, such as Malaysian high

school students whose mean score was 64.7% (Choy et al., 2013), and internet-using MSM in the United States and South Africa with a mean score of 89% (Wagenaar, Sullivan, & Stephenson, 2012, p.e32915). Additionally, the 2006 Aboriginal HIV/AIDS Attitudinal Survey found that knowledge levels among Métis people was fairly high, which differs from the findings of the current study (EKOS Research Associates, 2006). Study populations that demonstrated similar lower knowledge levels include: Indigenous youth in the Alberta Community HIV Fund (ACHF) project (ACHF, 2008), urban drug-using youth in Vancouver (Johnston et al., 2011), and urban university students in Ethiopia who used the *HIV-KQ-18* (Paul, Majumdar, Akhtar-Danesh, Boblin, & Sherifali, 2013).

Common misconceptions on basic HIV/AIDS information surfaced within the knowledge component of this study. Participants were asked to select ‘True’, ‘False’, or ‘Don’t Know’ to “Taking a test for HIV one week after having sex will tell a person if she or he has HIV”. Approximately 58% of participants selected ‘True’ in the post-questionnaire. This response is false because early HIV tests, such as rapid or point-of-care tests, cannot detect infection until approximately 20 days after exposure (Gilbert & Krajden, 2010). This finding draws attention to a need for further information surrounding HIV testing that highlights the importance of testing at six weeks and three months following possible exposure to HIV (Gilbert & Krajden, 2010). The question “People are likely to get HIV by deep kissing, putting their tongue in their partner’s mouth, if their partner has HIV”, was marked with 35.8% of respondents answering ‘True’. This is incorrect because kissing carries low to no risk for HIV transmission (Canadian AIDS Society, 2004). This finding is consistent with the 2006 Aboriginal

HIV/AIDS Attitudinal Survey that found a third of the Aboriginal participants believed that HIV can be transmitted through kissing (EKOS Research Associates, 2009). This outcome is worth addressing as this mistaken belief could enhance stigma surrounding PLWHA.

Thirty-eight percent of participants selected ‘True’ in response to the question, “There is a vaccine that can stop people from getting HIV”. This answer is false since a vaccine has not yet been developed in Canada (Canadian AIDS Society, 2004). This finding is consistent with a result from a study with high school students in Karnataka, India, that found 31% of respondents believed there is a vaccine against HIV (Shweta, Mundkur, & Chaitanya, 2011). The belief that there is a vaccine is worrying as it could undermine the importance of safe sexual activity. If respondents believe there is a vaccine, they may feel immune to contracting HIV and engage in more risky sexual behaviours (Shweta, Mundkur, & Chaitanya, 2011). This speculation was proposed in a study with minority high school students when discussing the belief of a cure for HIV/AIDS (Thippeswamy & Gorvine, 2012). Thippeswamy & Gorvine (2012) state, “such a misconception may make its proponents less vigilant in their own behavior; in other words, one might reason that there is less of a need to be careful” (p.89). A discussion that specifically addresses HIV vaccines could be advantageous in reducing this error given the substantial number of participants who believe there is a HIV vaccine available.

Finally, when asked if “HIV can be spread by mosquitoes”, 34.4% answered ‘True’, which is incorrect as “HIV does not reproduce (and does not survive) in insects”

(Centers for Disease Control and Prevention, 2014, para.15). The study by Thippeswamy & Gorvine (2012) found that a majority of students (82.5%) “erroneously reasoned that mosquitoes were also potential vectors of the disease” (p.89). The 2006 Aboriginal HIV/AIDS Attitudinal Survey additionally found that some participants believed HIV could be transmitted from mosquito bites (EKOS Research Associates, 2009). Since the young people in the current study interact frequently with mosquitoes in their home environment this mistaken belief could lead to an unwarranted fear of HIV and the perpetuation of stigma surrounding PLWHA.

These common misconceptions of HIV transmission and testing demonstrate a gap in the HIV/AIDS knowledge of youth in southern Labrador that call for follow-up education sessions that clarify and reinforce correct information. In addition to more information on HIV/AIDS knowledge, information that works to break down negative attitudes is suggested, as demonstrated by the following research finding.

### ***6.1.2 Attitudes Surrounding HIV/AIDS***

Overall positive attitudes increased from a mean score of 5.4 out of 10 (54.0%) at baseline to a mean score of 5.9 out of 10 (59.0%) following the LFC’s sexual health presentation. An increase in attitudes as a result of a school-based sexual health program is consistent with a study conducted by Chhabra et al. (2010) that used the Assessment Instruments for Measuring Student Outcomes Grades 7 – 12 with high school students in

Himachal Pradesh, India, by Fawole et al. (1999) with Indigenous high school students in Nigeria, and by ACHF with Indigenous youth living in Alberta that used focus groups.

The majority of participants in this study displayed negative attitudes surrounding a few attitudinal questions. When asked to respond ‘True’, ‘False’, or ‘Don’t Know’ to “If I thought my friend had AIDS, I would be afraid to give that friend a kiss”, 51.0% selected ‘True’. This finding signifies that participants may believe that HIV can be transmitted through kissing, which demonstrates a gap in knowledge surrounding HIV transmission. This gap in knowledge is troubling as it may cause an unwarranted fear of, or stigma towards, PLWHA. In response to the question “I wouldn’t mind swimming in the same pool as someone who has AIDS”, 40.0% responded ‘False’, signifying a lack of information surrounding HIV transmission and/or fear/stigma surrounding PLWHA.

Another surprising attitude that resulted from the current study was the belief that “A person who has AIDS should stay away from public places”. Approximately seventeen percent of respondents selected ‘True’ to this finding, which demonstrates an unsanctioned negative attitude surrounding PLWHA. This finding is similar to a result in a study with college students in Kerala, India, which reported 10.0% of participants recommending isolation of AIDS patients (Lal et al., 2000). The presence of negative attitudinal beliefs on some dimensions of HIV/AIDS demonstrates a need for further information on HIV transmission that works to break down stigma surrounding PLWHA. It may be beneficial to tailor this information to males, as females in the current study demonstrated more positive attitudes surrounding HIV/AIDS compared to male participants.

### **6.1.3 Females Gained Positive Attitudes**

Data analysis of the current project demonstrated a significant difference between gender and attitudes, concluding that female participants gained more positive attitudes following the LFC's sexual health presentation. This finding is similar to a result from the 2006 Aboriginal HIV/AIDS Attitudinal Survey with Aboriginal peoples in Canada, as well as in studies conducted by Agius, Dyson, Pitts, Mitchell, & Smith (2006) with Australian secondary students, by Chhabra et al. (2010) with high school students in Himachal Pradesh, India, and by Wong, Leng Chin, Low, & Jaafar (2008) with Malaysian youth aged 15-19 years old.

The 2006 Aboriginal HIV/AIDS Attitudinal Survey concluded that Aboriginal women scored higher than men (EKOS Research Associates, 2009). Female students in the Agius et al. (2006) study similarly demonstrated higher knowledge levels than males. In the Chhabra et al. (2010) study, female students "began the program with less knowledge and lower efficacy than the boys but showed greater gains in their mean changes" (p.S182). Additionally, a significant gender difference in the study by Wong et al. (2008) exhibited that female youth were more knowledgeable about general HIV/AIDS information. These findings are similar to the current study where female students had lower scores at baseline compared to males, and scored higher as a result of a sexual health educational program. Although, this study is in contrast to the aforementioned literature since there was no significant difference in *knowledge*, only *attitudes*.

This inconsistency expanded to other studies that found males possessed higher levels of HIV/AIDS knowledge (Fawole et al., 1999; Li et al., 2004), or where there were



no significant differences between genders (Choy et al., 2013; Paul et al., 2013). Despite the gender differences in this study being in contradiction to existing literature, this finding may be beneficial in addressing lower knowledge and attitudes among young females in other study populations. Males in the current study had more positive attitudes at baseline, but gained less positive attitudes as a result of the sexual health presentation. An explanation as to why females gained more positive attitudes may be because the sexual health coordinator was a young female. This presence of an authority figure that young people could identify with may have acted as a positive role model (Gilbert, 1985).

Role models have the potential to create an open and safe environment where social information is exchanged rather than only providing facts, which can enhance the ability of youth to relate to educators and apply the information being taught (Klepp, Halper, & Perry, 1986). The sexual health educator's identity may have caused young females to relate to her and value her messages, therefore retaining more positive attitudes. In incorporating a decolonizing approach to the interpretation of the research findings, an explanation as to why females gained more positive attitudes was presented by Ms. Diamond of the LFC based on her experience as a community service provider. She noted that sexual health services are often tailored to females, which could increase their exposure to more information or create a learning environment that is more suited to females. In addition to females gaining more positive attitudes, the results demonstrate that older students enjoyed the LFC's sexual health presentation more, as discussed in the subsequent section.

#### ***6.1.4 The Impact of Age on Students' Attitudes and Evaluation Scores***

Statistical tests conclude that older respondents held more positive attitudes compared to younger respondents following the sexual health presentation. As respondents aged they displayed a positive change in their attitudes in regards to PLWHA. This finding is surprising because it was not coupled with an increase in knowledge. A lack of significant difference in age and knowledge contrasts to studies with at-risk youth that found an association between older students and higher knowledge of HIV/AIDS (Bachanas et al., 2002; Dematteo et al., 1999; Hillier, Warr, & Haste, 1998; Johnston et al., 2012). It is hypothesized that this finding may stem from higher exposure levels to media that portray positive attitudes surrounding HIV/AIDS and PLWHA.

National surveys conducted in the United States found that “72% of Americans identify television, radio and newspapers as their primary source of information about HIV/AIDS” (UNAIDS, 2004, p.8). UNAIDS recognizes the influence of the media and it’s ability to increase education and awareness of HIV/AIDS (2004). As the infiltration of personal technology increases (such as personal computers or hand-held devices), young people have more access to media and social networking in their daily life (Chou, Hunt, Beckjord, Moser, & Hesse, 2009). This exposure generally increases with age (Chou et al., 2009), which may explain why older participants have more positive attitudes, but not knowledge surrounding HIV/AIDS.

Another significant result of the statistical testing is that older participants evaluated the sexual health presentation the highest. When the evaluation component of the questionnaire was separated into evaluation questions and youth involvement questions it was discovered that there was no difference in student’s willingness to be

involved in HIV initiatives based on age. Interestingly, there was a difference in how students evaluated the LFC's sexual health presentation. Older participants evaluated the presentation higher than younger participants. Low evaluation scores by younger respondents, in conjunction with lower attitudes, indicate that the sexual health presentation may not be appropriate for younger age groups. This may be because the presentation was their first exposure to comprehensive sexual health education. The topic of sex may have caused younger students to feel uncomfortable, leading to low evaluation scores (Pokharel, Kulczycki, & Shakya, 2006).

The finding that there is no difference between younger and older student's willingness to be involved may be useful for program developers who are looking to engage youth in HIV/AIDS prevention strategies. To make further conclusions, a larger sample size of younger students is suggested given the small sample of students in the youngest age groups in the current study. In conjunction with age, the ancestry of the participants affected their overall knowledge levels, which will be explored in the following section.

#### ***6.1.5 First Nations and Inuit Respondents Exhibited a Lower Knowledge Score at Post-Questionnaire***

Caucasian students were found to have gained the most knowledge following the sexual health presentation compared to any other ancestry represented in the research sample. Yet, a small sample of First Nations respondents had the highest knowledge levels, but exhibited a lower knowledge score at post-questionnaire. A small sample of Inuit respondents additionally exhibited lower knowledge scores from pre- to post-

questionnaire. In examining these findings it is necessary to acknowledge the small population of respondents who identified as First Nations (2 participants) and Inuit (3 participants). Given the small representation in the study sample, conclusions are unable to be drawn, yet it is important include them in the discussion.

There is no clear explanation as to why the post-questionnaire knowledge scores were lower for these students. The nature of the LFC's sexual health presentation may have had an impact on First Nations and Inuit respondent's knowledge level, but it is unclear as to what dynamic of the presentation, in combination with their learning styles, caused lower knowledge scores at post-questionnaire. To investigate this further, a larger sample size, or a follow-up study that uses qualitative interviews or focus groups with First Nations and Inuit students is recommended.

The finding that First Nations participants scored the highest is consistent with a conclusion by Larkin et al. (2007) that speculates, "[g]iven the disproportionately high rates of HIV in Aboriginal populations, Aboriginal youth may be more aware of HIV/AIDS than other youth" (p.180). This conclusion is not applicable to Inuit students in this study as they demonstrated lower knowledge scores compared to all other ancestries represented in the sample. First Nations youth in Labrador may be exposed to HIV/AIDS information given a rise in health, government, and media reporting on HIV/AIDS that targets First Nations communities in Canada. Coupled with First Nations governing bodies, community organizations, and word-of-mouth that promotes HIV/AIDS awareness and/or education, First Nations youth may be inundated with information leading them to be more knowledgeable. Another subgroup of the population

that demonstrated very high levels of HIV knowledge were students who self-identified as LGBTQ, as discussed in the subsequent section.

#### ***6.1.6 An Independent Analysis for LGBTQ Respondents***

An independent data analysis was conducted for respondents who identified as LGBTQ given their small representation in the total sample and an effort to include those who are often excluded in research. LGBTQ respondents in this study scored remarkably higher in knowledge (a mean score of 88.9%), attitudes (a mean score of 90.0%) and evaluation (a mean score of 75.0%) at post-questionnaire. This finding is consistent with a study with internet-using MSM in the United States and South Africa who demonstrated high HIV knowledge levels (mean score of 89%) (Wagenaar et al., 2012). However, there is a paucity of literature on how LGBTQ youth in rural and remote communities, specifically Indigenous communities, compare to non-LGBTQ youth in regards to HIV/AIDS information.

Respondents who identified as LGBTQ may have higher knowledge levels and positive attitudes given the domination of HIV prevention campaigns targeting the gay community since the rise of the AIDS epidemic in Canada (PHAC, 2007). LGBTQ youth in this study may have a higher exposure to LGBTQ-centered media that promotes HIV/AIDS awareness and education. Another explanation for these findings may be that adolescents working to understand their sexual identity seek out more health services, and through these health services are connected to HIV/AIDS information and material.

LGBTQ participants similarly evaluated the program higher than their non-LGBTQ counterparts. These students may have enjoyed the LFC's sexual health

presentation more because it created a safe environment for dialogue surrounding non-heterosexual identity and sexual activity. The sexual health educator identified as a two-spirited individual during the presentation, which may have acted as a positive reinforcement for LGBTQ respondents. This speculation is in line with implications made in a study with gay and bisexual youth in the United States, which recommends that “HIV prevention programs should be paired with opportunities for friendship and positive role models” (Remafedi, 1994, p.167). In order to understand why a small sample of respondents who identified as LGBTQ scored higher in knowledge, positive attitudes, and evaluation, a larger sample size of LGBTQ students, or a qualitative project using interviews or focus groups, may be insightful.

#### ***6.1.7 Thematic Coding: Condoms and Games***

The results of thematic coding of the open-ended questions uncovered that the most memorable aspects of the LFC’s sexual health presentation were "condoms" and to "be safe/protect yourself". The theme surrounding condoms is consistent with findings of a study by Fawole et al. (1999) with high school students in Nigeria, who selected condoms as the main lesson learned from the education program. In the current study 79.2% of participants felt that the game on how to put on a condom was helpful, which likely contributed to their knowledge surrounding the use of condoms as a form of sexual safety and protection. This hypothesis is supported by the theme of "more games, activities and demonstrations" that surfaced in response to the second open-ended question (“I would enjoy HIV/AIDS programs more if they included”). Additionally, when asked whether HIV prevention programs should be fun, 82.2% responded ‘Yes’.

This finding is consistent with a study that concluded rural youth prefer strategies that are fun (Restoule et al., 2010). It is clear from these findings that youth in southern Labrador prefer fun games and activities to teach sexual health education.

#### ***6.1.8 Conclusion***

The findings of this research project demonstrated gaps in the current knowledge levels and attitudes, as well as subgroups of the population that may be in need of more education. Gaps in the knowledge levels and attitudes include information on HIV transmission, testing, vaccination, and stigma surrounding PLWHA. Subgroups of the population that may be in need of more education, given that the sexual health presentation was not as effective for them, are: males, younger students, and those who identify as First Nations or Inuit. In response to these findings, future HIV/AIDS prevention programs should be flexible to be able to adapt to the multiple genders, age groups, and cultural identities that are represented in the target population. Although this program demonstrated to be effective for girls, older students, and Southern Inuit individuals, it did not have the same effect on other subgroups in the population. In incorporating components of decolonizing approaches to research, reflexive insights on the research experience are presented to explore these research findings.

#### **6.2 Reflexive Insights on the Research Experience**

The use of aspects of decolonizing approaches encourages research to be situated as a lived experience by the researcher(s). To continue to incorporate reflexivity in this

thesis, the following section will explore the lived experience of the research in the eyes of the Principal Investigator.

I flew to Labrador four days in advance of the research to meet with the LFC's Sexual Health Coordinator, Ms. Diamond, and to prepare for the data collection. Ms. Diamond and I departed the city of Happy Valley – Goose Bay by car on October 20, 2013 and arrived in Cartwright five and a half hours later. Overall, the data collection process was a pleasure, with energetic, polite, and inquisitive students to whom I am greatly indebted. Each school welcomed us with warmth and enthusiasm. Labrador is ruggedly beautiful with an ancient and immense power radiating from the land. I am very fortunate to have been given the opportunity to conduct a research project within such gracious and kind communities. The experience was inspiring, yet challenging, as an obstacle surfaced with lessons to learn in tow.

The obstacle that arose surrounded the reaction of authorities in one high school to the sexual health presentation. An authority figure was shocked and disturbed by the content of the sexual health presentation (specifically the material that was to be distributed). They strongly expressed their opinion that the presentation was not appropriate for students. To address this, a dialogue between the research team and the high school authority was initiated that resulted in the screening of information taught and material to be distributed to students. This informal screening was carried out in front of students and resulted in handout material not being distributed. The authority figure then concluded this interaction by addressing the students with a message to abstain.

The authority figure in this school made the decision to contact the remaining schools to communicate their disapproval with the presentation and the distributed



materials. During this time, one of the five participating schools cancelled their presentation with an explanation surrounding scheduling conflicts. The communicating to all participating schools created dialogue and an informal screening process, whereby the school authorities gained control over the information presented and the materials distributed. On the other hand, this event may have affected the student's comfort level during the sexual health presentation, their ability to access educational material and contraceptives, and have an open dialogue surrounding sexual activity.

Moving past this obstacle, the lived experience of the research prompted a great amount of self-reflection and spiritual growth. The relationship formed with Ms. Diamond is one that I hold in my heart and I am honored to have heard her stories and had an opportunity to glance at life through her deep respect for all things; living, non-living, and amongst the spirit world. This experience taught me patience, adaptability, and the ability to find comfort and resolve in uncomfortable situations. As a woman from a big city, I was extremely grateful for the opportunity to visit the communities along the south coast of Labrador. It was powerful to see the connectedness of the communities in Labrador, which caused me to acknowledge the impact that this research may have, not only on the participants, but the community supporting them. Observing life that is centered on family, community, and nature was a constant reminder to stay true to the goals of this research, as well as those in my own life.

Incorporating reflexivity impacted the research as it prompted self-reflection and adaptation of the research approach. The research team was able to adapt to the obstacle and implement an informal screening process with the remaining schools. Stemming from this experience, a research recommendation arose surrounding the need for sustained and

reciprocal communication between sexual health educators and school authorities, which is discussed in the following recommendation section of this chapter. Even though there were, metaphorically speaking, bumps in the road, the resulting outcome was the implementation of an informal screening process where the school authority figures were able to influence the sexual health presentation based on the community's needs and values.

### **6.3 Recommendations**

The findings of this research project have important implications for the tailoring of the LFC's sexual health presentation to increase its effectiveness for youth on the south coast of Labrador. Recommendations stemming from the research findings are presented in this section of the chapter, which surround suggestions for: the current HIV/AIDS prevention presentation, future programs with rural Indigenous youth, and the direction of future research with south Labradorian youth.

#### ***6.3.1 Follow-Up Education Sessions***

Although overall knowledge and attitudes increased as a result of the LFC's sexual health presentation, substantial gaps exist that may be preventing students from reaching their full potential to use HIV/AIDS information to make informed decisions for sexual activity. Gaps in knowledge and attitudes surfaced in several misconceptions that suggest youth do not yet have enough information on HIV/AIDS. To address these gaps, it is recommended that follow-up information sessions be conducted in the communities involved, as well as those in southern Labrador who did not participate. Multi-session

follow-up education should include clear and understandable information surrounding HIV transmission and testing, as well as messages that work to break down negative attitudes and stigma surrounding PLWHA. For example, discussions that address the absence of a vaccine against HIV, or that mosquitoes cannot transmit HIV, are required to correct common misconceptions identified in the data analysis.

To draw from the thematic analysis results, the content of the suggested follow-up sessions should balance factual information with fun games, demonstrations, and activities. It may be helpful for the LFC, and other service providers, to explore the Taking Action! (2012) project (or other innovative community-based initiatives) as a resource for how art-based activities can transform sexual health education to be effective for Indigenous youth (Flicker et al.). The project encourages HIV/AIDS service providers and community members to hold Taking Action! workshops in their communities where youth are linked to local artists, elders, and sexual health educators (Flicker et al., 2012). These workshops encourage youth to use their choice of an art medium (for example, hip hop, carving, or throat singing) to initiate discussions surrounding sexual health that are armed with up-to-date information, educational material, and local support.

### ***6.3.2 Sexual Health Education Tailored to Specific Age Groups***

Based on the finding that younger age groups had more negative attitudes surrounding HIV/AIDS and evaluated the program poorly, arises the recommendation that sexual health presentations should be tailored to specific age groups. All of the participating schools separated the education sessions into younger and older grades, providing an opportunity for this recommendation to be implemented with ease. For the

youngest age groups, the LFC's sexual health presentation may be the first time they are receiving sexual health education. To reflect this, the presentation for this group should include introductory information that works towards building rapport with students in a safe and open environment. The *Canadian Guidelines for Sexual Health Education* recommend a lifespan approach, which "provides information, motivational support and skill-building opportunities that are relevant to individuals at different ages, abilities and stages in their lives" (PHAC, 2008a, p.11). This recommendation may improve younger students experience with the presentation for future sexual health education with this population.

### ***6.3.3 Qualitative Research to Explore Educational Gaps***

To continue to address the gaps in knowledge and attitudes that some subgroups of the population exhibited, a qualitative research project that utilizes interviews and focus groups is recommended. The current study includes several limitations that could have been strengthened through qualitative methodologies. Questions to address in a qualitative study could explore: why females gained more positive attitudes, why younger students evaluated the program low, and, of paramount importance, why First Nations and Inuit students demonstrated lower knowledge scores at post-questionnaire.

Qualitative methodologies would be useful in exploring these questions since qualitative research has the ability "to provide explanatory concepts from detailed descriptions and analyses of actors' beliefs, perceptions and behaviours" (Mays & Pope, 1996, p.157). The

inclusion of open-ended questions in this research project allowed for important insights and recommendations to be made by youth, yet they only ‘scratched the surface’ of valuable data that could arise from qualitative research.

#### ***6.3.4 Presence of Positive Role Models in Sexual Health Education***

Drawing from the research finding that females gained more positive attitudes surrounding HIV/AIDS, it is hypothesized that the sexual health educator acted as a positive role model since she was a young Southern Inuit female. This finding, supported by some literature, lends itself to the conclusion that an educator’s identity has the potential to create positive outcomes on HIV/AIDS knowledge and attitudes. This hypothesis led to the recommendation for the presence of positive role models in HIV programming for rural Indigenous youth. It is suggested that for future research, a team of young male and female sexual health educators be responsible for teaching HIV/AIDS education. It would be beneficial to conduct a study using control and experimental groups of male and female educators to determine if identity has the capability to influence positive outcomes for HIV/AIDS education. Further, the presence of educators who openly identify as an LGTBQ category may similarly benefit youth who identify (or are beginning to identify) as LGBTQ.

### ***6.3.5 Sustained Reciprocal Communication between Sexual Health Educators and School Authorities***

Stemming from an obstacle that occurred during the research it is recommended that future sexual health presentation include sustained reciprocal communication between the sexual health educator(s) and the school authorities. As described in the reflexive discussion, an authority figure in one school did not agree with the material in the sexual health presentation given their personal stance for abstinence education. In the future, it is suggested that reciprocal communication occur. Reciprocal communication means that both parties have time and space to express their questions, comments, and concerns, and be able to influence the content presented and the material distributed in sexual health programs. This communication should be sustained over time – beginning before the school year and continuing well after the completion of the presentation. Sustained reciprocal communication may enhance the effectiveness of sexual health education by creating programs that are specific to each community, and therefore, in line with their norms and values. This approach could enhance the longevity of relationships between community authority figures and outsider health service providers, as well as student's experiences with sexual health education.

The polarizing differences expressed by the communities involved in this research (abstinence compared to comprehensive approaches), emphasizes the need for reconciliation surrounding appropriate sexual health education for youth in Southern Inuit communities in Labrador. To address this, an extension of sustained reciprocal communication is recommended. The extension is to provide information to school

authorities and educators on the benefits of comprehensive sexual health education.

Health Canada endorses comprehensive sexual health education due to the abundance of literature that demonstrates abstinence-only sexual health education to be ineffective in reducing sexual activity (McKay, 2004). Further, SEICCAN (2004) states the right of all Canadians to have the “information, motivation/personal insight, and skills necessary to prevent negative sexual health outcomes (e.g., sexually transmitted infections including HIV, unplanned pregnancy) and to enhance sexual health (e.g., maintenance of reproductive health, positive self-image)” (p. 131). Educating the educators on the benefits of a comprehensive approach may work to break down barriers that exists surrounding sexual health education for youth.

Educating the educators is an important key to providing effective sexual health education to students. Sexual health education is heavily shaped by the experiences, views, values, and knowledge of the educator, and therefore carries the potential to perpetuate biases that an educator may hold (Thornton, 2001). To address this, Morton Ninomiya (2008) recommends that pre-service and in-service training be provided to all educators responsible for sexual health education. Pre-service training should exist in the form of university courses for prospective teachers and teachers-in-training (Morton Ninomiya, 2008). In-service training should provide educators with a chance to acknowledge their personal stance on sexuality and be given the tools and information to teach effective sexual health education (Schultz & Boyd, 1984). To echo the need for community-specific strategies presented throughout this research, it is crucial that education for educators be provided as an extension of sustained reciprocal

communication, whereby the community is an integral part of the planning, implementation, and evaluation of the education.

#### ***6.3.6 Training and Support for Sexual Health Educators***

The last recommendation presented in this discussion surrounds the regulation of sexual health education in Canada that includes training and support for sexual health educators. It is suggested that a training process be in place, at an organizational level, to ensure that sexual health educators have access to evidence-based information and best practices for HIV prevention. This recommendation arose from a lack of formal training and support mechanisms in place for sexual health educators in Canada. In Newfoundland and Labrador sexual health education is expected to begin at Grade 4 and can be taught by any public school teacher (Morton Ninomiya, 2008). Yet teachers responsible for sexual health education do not receive any type of formal training or education. In fact, the province's university responsible for educating future teachers does not offer courses on sexual health education (Morton Ninomiya, 2008). Similarly, sexual health education supplied by external service providers, such as in the case of this research, lacks consistency in formal training.

In Canada, sexual health education is only formalized through guidelines presented by the PHAC. These guidelines state that:

“effective sexual health education involves institutional and administrative commitment and support. This support encourages the formal training of those individuals working in professional settings” (PHAC, 2008b, p.28),



yet these requirements are not enforced or regulated. To ensure that Canadian students are receiving sexual health information that is up-to-date and informed through evidence, a formal training process for all sexual health educators, within and outside of school systems, is recommended.

In addition to regulated sexual health training, formal mechanisms should exist that provides support for sexual health educators. Sexual health educators often do not have access to systems of support within their work environment, and are left to provide sexual health education independently. In order to maximize the quality of sexual health education for Canadian youth, educators require a support mechanism where up-to-date and valid information, best practices for HIV prevention, as well as their work concerns and needs, are discussed and addressed. The *Canadian Guidelines for Sexual Health Education* recommends the preparation and support of sexual health educators, but fail to provide the infrastructure and resources to accomplish this (PHAC, 2008a). To address these gaps, it is recommended that the regulation of sexual health education through a provincial certification program facilitated at an organizational level, may be effective in ensuring the training and support of sexual health educators in formal and informal settings.

## **6.4 Limitations**

Limitations of the current project are important to recognize when drawing from the conclusions of this research. The limitations present in this study include: selection bias, social desirability bias, and the absence of a pilot test.

Selection bias may have been introduced as the recruitment strategy employed non-probability sampling. The study population was limited to students who received the LFC's sexual health presentation and were selected using a convenience sample. The use of random sampling would have strengthened the project, but a lack of access to school records and inconsistent student attendance limited the feasibility of employing this sampling technique. Therefore, this study is limited in its ability to be generalizable to all students in Labrador, as it only included students in the communities of Cartwright, Port Hope Simpson, St. Lewis, and L'Anse Au Loup.

This research took place in a school setting, which limited the sample to students. Youth who do not attend school, or those who were not present on the day of the presentation, were excluded. The exclusion of some youth in the communities may bias the study results as they were not able to provide information on those who are not receiving formal education in a school system. These individuals may be the most in need of sexual education and may have benefited from the HIV/AIDS education program. These youth may be the most in need given the limited amount of culturally appropriate sexual health education for "youth who fall outside the school system" (Johnston et al., 2012, p.791).

As the principal or authority figures in each school acted as the gatekeepers to the community, the study may have been prone to further selection bias. One potential school

chose not to participate, making the study not representative of all students in southern Labrador. Finally, individuals who volunteered to participate may not be representative of the general population, therefore threatening the generalizability of the study (Barratt & Kirwan, 2009). The presence of selection bias may have impacted the study because the characteristics of the school that did not participate may have been different from those of the participating schools.

Social desirability bias may have been present in this research given that the questionnaire addressed sexual health, which is a sensitive topic, and is often considered a taboo subject (Prentice, 2004). This means that some respondents could have tailored their answers to be in favour of the social norms in their communities, or those represented by the sexual health educator. If students had responded in favour of social norms this may have under or overestimated the questionnaire scores given the diversity of communities who participated in the study. In communities that support sexual abstinence the scores may have been underestimated, where as in communities that are in favour of comprehensive sexual health the scores may have been overestimated. Attempts to minimize the impact of social desirability were made by assuring respondents that the questionnaires were anonymous and that their responses would be kept confidential.

Another limitation introduced in this study surrounded the terminology used in the questionnaires. The terminology may have led to confusion on specific demographic questions. In response to the ancestry with which participants identified, over a quarter (29.7%) identified as an ancestry not listed. This outcome led the research team to hypothesize that the terminology used was confusing because a number of respondents selected 'Other' as their ancestry, then wrote in 'Métis', even though Métis was listed in

the Southern-Inuit/Inuit-Métis category. Steps were taken to avoid this limitation by pretesting the questionnaire with young Southern Inuit individuals to examine whether the tool was appropriate, understandable, and in line with community norms, but evidentially was not effective for this question.

#### ***6.4.1 Conclusion***

Although measures were taken to reduce limitations present in this research project, some were unavoidable due the study design, sampling technique, and time constraints. Although these biases may not have had a large impact, they are important to recognize in order to draw conclusions from the research findings. The conclusions presented in the discussion of research results allows for the formulation of recommendations to be drawn on the effectiveness of sexual health presentations for south Labradorian youth, and how future programs can be tailored to better suit the needs and gaps demonstrated in this research project.

## **Chapter 7: Conclusion**

Indigenous youth in Canada experience a steady and disproportionate increase in HIV infections, placing them as one of the groups most vulnerable to HIV transmission (Hill & Kurtz, 2008; Majumdar et al., 2004). HIV/AIDS programming requires the voices and values of Indigenous peoples to be recognized in strategies that are contextualized through an intergenerational lens of colonialism. Indigenous peoples' shared experience of colonialism increases their vulnerability to HIV infection (Ricci et al., 2009) through exposure to environments of risk that may be permeated with violence and abuse, substance misuse, street involvement, and a lack of access to health services (Prentice et al., 2011). The contemporary literature recommends that initiatives grounded in age, culture, and community have the ability to engage young Indigenous peoples in programming that promotes informed and healthy sexual choices and, as a result, the reduction of HIV transmission in their communities.

The first research objective of this project was met as the knowledge levels and attitudes surrounding HIV/AIDS of youth in Southern Inuit communities were identified. Gaps in knowledge and attitudes were discovered, which calls attention to a need for further HIV/AIDS education for these youth. The second research objective was also met through the evaluation of the HIV/AIDS component of the LFC's sexual health presentation. This evaluation demonstrated the presentation to be effective in increasing the overall knowledge levels and positive attitudes of youth in grades 7 – 12. Yet, several misconceptions surrounding HIV transmission, testing, and negative attitudes surrounding PLWHA surfaced. The presence of these misconceptions calls for further attention to the

gaps in the knowledge levels and attitudes surrounding HIV/AIDS and PLWHA among youth in Southern Inuit communities. Conclusions drawn from the research uncovered specific subgroups of the population that are in need of programming that meets their unique needs and preferences. In response to these research findings, six recommendations were proposed.

The recommendations include:

1. Follow-up education sessions that balance factual information with games, demonstrations and activities;
2. Sexual health education tailored to specific age groups;
3. Qualitative research to explore gaps in knowledge levels and attitudes;
4. Presence of positive role models that are relatable to student's identity;
5. Sustained reciprocal communication between sexual health educators and school authorities;
6. Formal training and support for sexual health educators.

It is important to recognize the limitations of the study when drawing conclusions on the findings and recommendations presented in this thesis. To provide support for these recommendations, further research is needed. It is suggested that future research include a larger sample size that is representative of the subpopulations or a qualitative project that explores the gaps identified in this project. Additional research has the potential to support, or refute, the findings and address the limitations inherent in this study. The limitations present in this study include: non-generalizability, the presence of

social desirability bias and volunteer bias, the inability to postulate a participant's sexual behavior, and the use of inappropriate terminology.

Despite these limitations, the results of this study provide important insights into gaps in the knowledge levels and attitudes surrounding HIV/AIDS, as well as subgroups of the population that are in need of further programming. The LFC's sexual health education program demonstrated to be effective for Southern Inuit girls, who are the population most vulnerable to HIV infection, but falls short for younger students and those who identify as First Nations and Inuit. These insights can be utilized to assist the LFC, and other services providers, in developing HIV/AIDS sexual health education programs that are reflective of, and effective for, youth in Southern Inuit communities of Labrador.

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## **Appendices**

## Appendix A: Reuse Permission for the IMB Model by Taylor & Francis



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**Title:** Understanding and Promoting Sexual and Reproductive Health Behavior: Theory and Method

**Author:** William A. Fisher, Jeffery D. Fisher

**Publication:** Journal of Sex Research

**Publisher:** Taylor & Francis

**Date:** Mar 1, 1998

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## Appendix B: Consent Form

November 2011

### **We would like to invite your child to be part of a research study!**

Hello,

My name is Maddy Giles and I am doing a research study at your child's high school. We would like to invite your child to be part of this study! We hope to make sexual health education better for high school students. The next form describes the research study and all the information you and your child will need to make a decision.

If you have questions you can reach me at (709) 699 - 6597 or [mlg207@mun.ca](mailto:mlg207@mun.ca). I would love to hear from you and will do my best to answer all of your questions.

If you are O.K with your child being part of this research study, please send the signed consent form back to school with your child by **Monday October 21, 2013**.

Thank-you for your time.

Maddy Giles and the Memorial University/Labrador Friendship Centre Research Team



Aboriginal Affairs and  
Northern Development Canada

## Consent for High School Students to Take Part in Research

**This is an information letter for high school students who have been invited to take part in a research study. High school students need permission from a parent (or legal guardian) to take part in research, so we ask that both parent and high school student read this information letter.**

**TITLE:** Understanding the Effectiveness of HIV/AIDS Sexual Health Presentations among Southern Inuit High School Students in Labrador.

**RESEARCHER(S):** Maddy Giles

**FUNDER(S):** Canadian Institutes for Health Research (CIHR), Atlantic Aboriginal Health Research Program (AAHRP) and the Northern Scientific Training Program (NTSP).

**You have been invited to take part in a research study. It is up to you to decide whether to be in the study or not. You can decide not to take part in the study. If you decide to take part, you are free to leave at any time. This will not affect your school work or marks.**

**Before you decide, you need to understand what the study is for, what risks you might take and what benefits you might get. This information letter explains the study.**

**Please read this carefully. Take as much time as you like. Mark anything you do not understand, or want explained better. After you have read it, please ask questions about anything that is not clear.**

**The researchers will:**

- discuss the study with you
- answer your questions
- keep your information private
- be available during the study to deal with problems and answer questions

### 1. What is this study about?

This study hopes to make HIV/AIDS education better for high school students in Labrador. The research team works with the Labrador Friendship Centre who has asked for this research to be done. The Labrador Friendship Centre is coming to your high school in September 2013 to give a sexual health presentation. This research will be done as a part of that presentation. This research will help make sure sexual health education is good for high school students.

**2. What is the purpose of this study?**

This study wants to find out what high school students know about HIV/AIDS and how they feel about it.

**3. What do I have to do?**

We are asking you to fill out two surveys. The surveys will not ask you to write down your name. All your answers will be kept private. The first survey will be handed out **before** the sexual health presentation, and the second survey will be handed out **after** the sexual health presentation. This way we can tell if you learned something new from the presentation.

**4. How long will it take?**

The first survey will take about 10 minutes to fill out. The second survey will take about 15 minutes to fill out. If you do not finish in 10 – 15 minutes you will be given as much time as you need to finish.

**5. Are there any risks?**

There is a risk in this study – by mistake you could write down your name or information that identifies you. This would mean that your survey is not private anymore. To make sure this doesn't happen we wrote on each survey "DO NOT put your name on this survey". We will also explain to you how to protect your privacy before we start the study.

**6. Will I feel uncomfortable?**

You may feel uncomfortable because the questions are about sex and health.

**7. Will I benefit from this study?**

We do not know if this study will benefit you. We believe you will benefit by helping create HIV/AIDS education programs that are better for you and your community.

**8. How do I agree to be in this study?**

Signing this form tells us that you agree to be in this study. It tells us that you understand the information. When you sign this form, you do not give up your legal rights. Researchers in this study still have their legal and professional responsibilities.

**9. Will it be private?**

Your privacy is very important. We will do everything we can to protect your privacy. You will not be asked to give your name. No one will be walking around the room while you complete the survey. However your privacy cannot be promised. For example: we may be required by law to give access to the research records.

If in your answer you tell us that you have plans to hurt yourself or someone else then we might have to show that answer to authorities. If you tell us that someone has hurt you then we have to show that answer to authorities.

**When you sign this consent form you allow us to:**

- Collect information from you
- Share information with the research team
- Share information with the people who protect your safety

**Use of your information**

The research team will only use information they need for this study.

**This information will include your**

- grade
- sex
- ancestry
- high school

**The information you provide will be protected by the research team in Labrador. It will not be shared with others without your agreement. Your name will not be used in any report or article written as a result of this study. The name of your school will not be used in any report or article written as a result of this study.**

**Information collected for this study will kept for five years.**

**If you change your mind about being in this study, you can leave at any time. Your information will be removed.**

**The information collected in this study will be stored in a locked office in a locked cabinet at the Labrador Institute. Dr. Rebecca Schiff is the person responsible for protecting it.**

**Access to your information**

You may ask the researcher to see the information that has been collected about you.

**10. Questions or problems:**

If you have any questions about this study you can ask the researcher who is in charge. That person is: Maddy Giles



**Researcher's Name and Phone Number**

Maddy Giles  
(709) 699 – 6597 or [mlg207@mun.ca](mailto:mlg207@mun.ca)

You can also talk to Maddy's Supervisors: Dr. Rebecca Schiff and Dr. Natalie Beausoleil.

**Research Supervisor's Name and Phone Number**

Dr. Rebecca Schiff  
(709) 896 – 2970 or [rschiff@mun.ca](mailto:rschiff@mun.ca)

Dr. Natalie Beausoleil  
(709) 777 – 8483 or [natalie.beausoleil@medmun.ca](mailto:natalie.beausoleil@medmun.ca)

**Or you can talk to someone who is not in this study. They can teach you about your rights as a research participant. This person can be reached through:**

**Ethics Office  
Health Research Ethics Authority  
709-777-6974 or by email at [info@hrea.ca](mailto:info@hrea.ca)**

**After signing this consent form please return it to your teacher by  
Monday October 21, 2013.**



***To be signed by the minor participant (high school student).***

**Study title:** Understanding the Effectiveness of HIV/AIDS Sexual Health Presentations among Southern Inuit High School Students in Labrador.

**Name of principal investigator:** Maddy Giles

**Assent of minor participant:**

**I understand the purpose of this research.**

**I understand that it is my decision to take part in this study.**

**I can stop taking part if I chose.**

**I understand that taking part in this research may not help me.**

I agree that I will take part in this study.

---

Signature of Minor Participant (High School Student) Date

---

Print Name of High School Student Age

## Appendix C: Map of southern Labrador



Reprinted with permission from Labrador Coast Drive Centre. Labrador Coastal Drive. Labrador Coast Drive Regional Map, 2005. Retrieved from <http://www.labradorcoastaldrive.com/home/47>

## Appendix D: Reuse Permission for the Map of southern Labrador by the Labrador Coast Drive



**Bonnie Goudie** <bgoudie@labradorcoastaldrive.com>

Jul 3 (3 days ago) ☆



to me ▾

Dear Madison,

You have my permission to use the Labrador Coastal Drive Regional Map in the Appendix of your thesis "Impact of an HIV/AIDS Sexual Health Education Program for Youth in Southern Inuit Communities".

Bonnie Goudie

## Appendix E: Pre-Questionnaire

No.

### HIV/AIDS Knowledge and Attitudes Questionnaire #1

Evaluation Tool

Project Title: Understanding the Effectiveness of an HIV/AIDS Sexual Health  
Presentation among Southern Inuit High School Students in Labrador.

Principal Investigator: Maddy Giles

October 2013

SECTION ONE: Please tell us a little about yourself!

1. How old are you?

- ☐ 12 years old
- ☐ 13 years old
- ☐ 14 years old
- ☐ 15 years old
- ☐ 16 years old
- ☐ 17 years old
- ☐ 18 years old
- ☐ 19 years or older

2. Are you ...?

(Please check all that apply)

- ☐ Female
- ☐ Male
- ☐ Transgendered
- ☐ Two-spirited
- ☐ Queer
- ☐ Questioning
- ☐ Other: \_\_\_\_\_

3. What is your ancestry?

- ☐ Southern Inuit/Inuit-Métis
- ☐ Inuit
- ☐ Innu
- ☐ Other First Nations
- ☐ Caucasian
- ☐ Other: \_\_\_\_\_

## SECTION TWO: HIV/AIDS Knowledge

For each statement, please circle True (T), False (F), or I Don't Know (DK). If you do not know, please do not guess; instead, please circle "DK".

	True	False	Don't Know
1. There is a cure for AIDS.	T	F	DK
2. Coughing and sneezing DO NOT spread HIV.	T	F	DK
3. A person can get HIV by sharing a glass of water with someone who has HIV.	T	F	DK
4. HIV can be spread by mosquitoes.	T	F	DK
5. Pulling out the penis before a male climaxes/cums keeps a person from getting HIV during sex.	T	F	DK
6. A person can get HIV from a toilet seat.	T	F	DK
7. Showering, or washing one's genitals/private parts, after sex keeps a person from getting HIV.	T	F	DK
8. People who have been infected with HIV quickly show serious signs of being infected.	T	F	DK
9. There is a vaccine that can stop people from getting HIV.	T	F	DK
10. All pregnant females infected with HIV will have babies born with AIDS.	T	F	DK
11. People are likely to get HIV by making out, putting their tongue in their partner's mouth, if their partner has HIV.	T	F	DK
12. A female cannot get HIV if she has sex during her period.	T	F	DK
13. There is a female condom that can help decrease a woman's chance of getting HIV.	T	F	DK



	True	False	Don't Know
14. Having sex with more than one partner can increase a person's chance of being infected with HIV.	T	F	DK
15. Taking a test for HIV one week after having sex will tell a person if she or he has HIV.	T	F	DK
16. A person can get HIV from oral sex.	T	F	DK
17. Using Vaseline or baby oil with condoms lowers the chance of getting HIV.	T	F	DK
18. It is possible to get HIV when a person gets a tattoo.	T	F	DK

### SECTION THREE: HIV/AIDS Attitudes

For each statement, please circle True (T), False (F), or I Don't Know (DK). If you do not know, please do not guess; instead, please circle "DK".

	True	False	Don't Know
1. I wouldn't mind being in the same classroom with someone who has AIDS.	T	F	DK
2. A person who has AIDS shouldn't be allowed to eat lunch in the school cafeteria.	T	F	DK
3. I would feel comfortable hugging a close friend who has AIDS.	T	F	DK
4. I wouldn't mind swimming in the same pool as someone who has AIDS.	T	F	DK
5. I wouldn't mind playing sports with someone who has AIDS.	T	F	DK
6. A person who has AIDS should stay away from public places.	T	F	DK
7. I would avoid a classmate who I heard has AIDS.	T	F	DK
8. People who have AIDS should be allowed to work in restaurants and cafeterias.	T	F	DK
9. If I thought my friend had AIDS, I would be afraid to give that friend a kiss.	T	F	DK
10. I would avoid a classmate whose family member has AIDS.	T	F	DK

Thank-you for answering this questionnaire!  
Your answers are very important!



## Appendix F: Post-Questionnaire

No.

### HIV/AIDS Knowledge and Attitudes Questionnaire #2

Evaluation Tool

Project Title: Understanding the Effectiveness of an HIV/AIDS Sexual Health  
Presentation among Southern Inuit High School Students in Labrador.

Principal Investigator: Maddy Giles

October 2013

### SECTION ONE: HIV/AIDS Knowledge

DO NOT put your name on this survey. Your responses will be kept secret. No one will know how you answered these questions. For each statement, please circle True (T), False (F), or I Don't Know (DK). If you do not know, please do not guess; instead, please circle "DK".

	True	False	Don't Know
1. There is a cure for AIDS.	T	F	DK
2. Coughing and sneezing DO NOT spread HIV.	T	F	DK
3. A person can get HIV by sharing a glass of water with someone who has HIV.	T	F	DK
4. HIV can be spread by mosquitoes.	T	F	DK
5. Pulling out the penis before a male climaxes/cums keeps a person from getting HIV during sex.	T	F	DK
6. A person can get HIV from a toilet seat.	T	F	DK
7. Showering, or washing one's genitals/private parts, after sex keeps a person from getting HIV.	T	F	DK
8. People who have been infected with HIV quickly show serious signs of being infected.	T	F	DK
9. There is a vaccine that can stop people from getting HIV.	T	F	DK
10. All pregnant females infected with HIV will have babies born with AIDS.	T	F	DK
11. People are likely to get HIV by making out, putting their tongue in their partner's mouth, if their partner has HIV.	T	F	DK

	True	False	Don't Know
12. A female cannot get HIV if she has sex during her period.	T	F	DK
13. There is a female condom that can help decrease a woman's chance of getting HIV.	T	F	DK
14. Having sex with more than one partner can increase a person's chance of being infected with HIV.	T	F	DK
15. Taking a test for HIV one week after having sex will tell a person if she or he has HIV.	T	F	DK
16. A person can get HIV from oral sex.	T	F	DK
17. Using Vaseline or baby oil with condoms lowers the chance of getting HIV.	T	F	DK
18. It is possible to get HIV when a person gets a tattoo.	T	F	DK

## SECTION TWO: HIV/AIDS Attitudes

For each statement, please circle True (T), False (F), or I Don't Know (DK). If you do not know, please do not guess; instead, please circle "DK".

	True	False	Don't Know
1. I wouldn't mind being in the same classroom with someone who has AIDS.	T	F	DK
2. A person who has AIDS shouldn't be allowed to eat lunch in the school cafeteria.	T	F	DK
3. I would feel comfortable hugging a close friend who has AIDS.	T	F	DK
4. I wouldn't mind swimming in the same pool as someone who has AIDS.	T	F	DK
5. I wouldn't mind playing sports with someone who has AIDS.	T	F	DK
6. A person who has AIDS should stay away from public places.	T	F	DK
7. I would avoid a classmate who I heard has AIDS.	T	F	DK
8. People who have AIDS should be allowed to work in restaurants and cafeterias.	T	F	DK
9. If I thought my friend had AIDS, I would be afraid to give that friend a kiss.	T	F	DK
10. I would avoid a classmate whose family member has AIDS.	T	F	DK

### SECTION THREE: Evaluation

For each statement, please circle True (T), False (F), or I Don't Know (DK). If you do not know, please do not guess; instead, please circle "DK". For questions #12 & #13 please put a check mark in ALL boxes that are correct. You can check them all, or none at all! For questions #14 & #15 please write a short answer on the dotted line.

	True	False	Don't Know
1. I enjoyed the Labrador Friendship Centre's sexual health presentation.	T	F	DK
2. I learned something from this presentation.	T	F	DK
3. I trust the information given in this presentation.	T	F	DK
4. I felt comfortable during this presentation.	T	F	DK
5. I liked the ice breaker activity.	T	F	DK
6. The slide show helped me learn the information.	T	F	DK
7. The condom demonstration was helpful.	T	F	DK
8. I liked the game we played.	T	F	DK
9. All teenagers should be given sexual health presentations.	T	F	DK
10. Teenagers should be involved in helping create HIV/AIDS program for teenagers.	T	F	DK
11. I would be interested in helping create an HIV/AIDS program for teenagers.	T	F	DK
12. The best way to involve teenagers in helping to create HIV/AIDS programs is to: (Please check all that apply)			
<input type="checkbox"/> Invite youth to be involved in HIV/AIDS programs that are already created.			
<input type="checkbox"/> Have a national HIV/AIDS youth conference.			
<input type="checkbox"/> Create HIV/AIDS planning committees in schools.			
<input type="checkbox"/> Create HIV/AIDS planning committees in community centers.			
<input type="checkbox"/> Have a national or international HIV/AIDS youth club on the internet.			
<input type="checkbox"/> Other: .....			

13. HIV/AIDS programs should be:

(Please check all that apply)

☐ Fun and involve games and activities.

☐ Serious.

☐ Specific to the geographic area.

☐ Specific to the cultural area.

☐ Other: .....

14. The one thing I know I will remember from this presentation is:

.....

15. I would enjoy HIV/AIDS programs more if they included:

.....


Thank-you for answering this questionnaire!

Your answers are very important!






**Appendix G: LFC's Sexual Health Education PowerPoint – prepared by Scosha Diamond**



**#HeartYourParts**

Presented by: Scosha Diamond  
HIV AIDS Coordinator  
Labrador Project







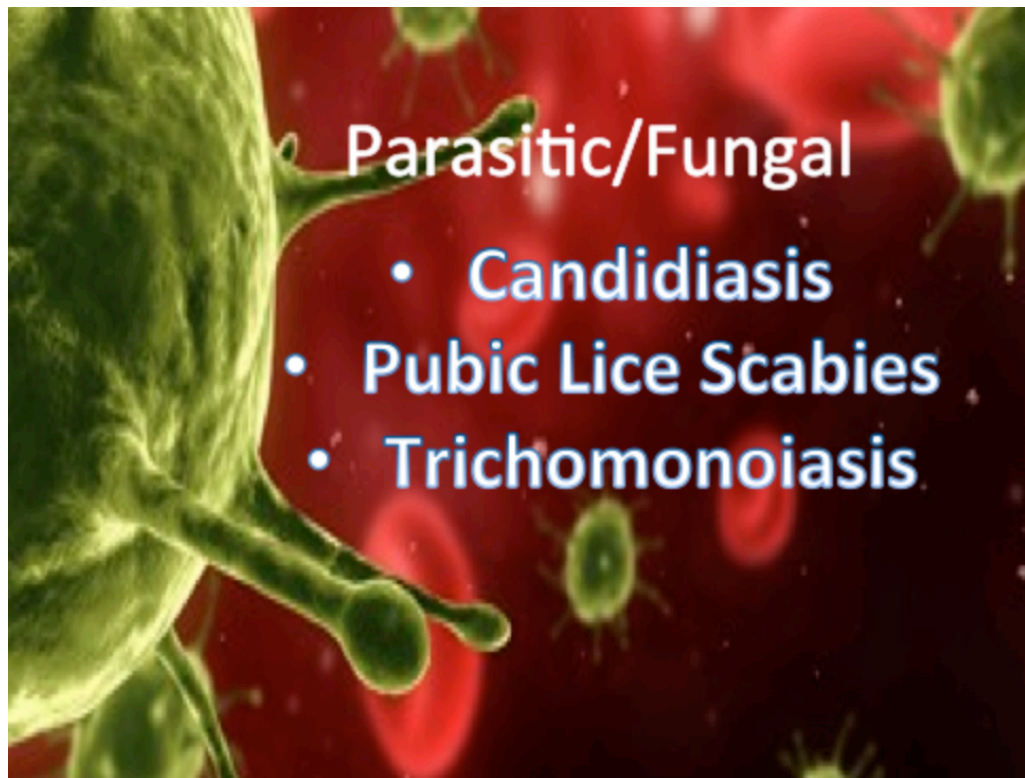
## Bacterial Infections

- Chlamydia
- Gonorrhea
- Syphilis



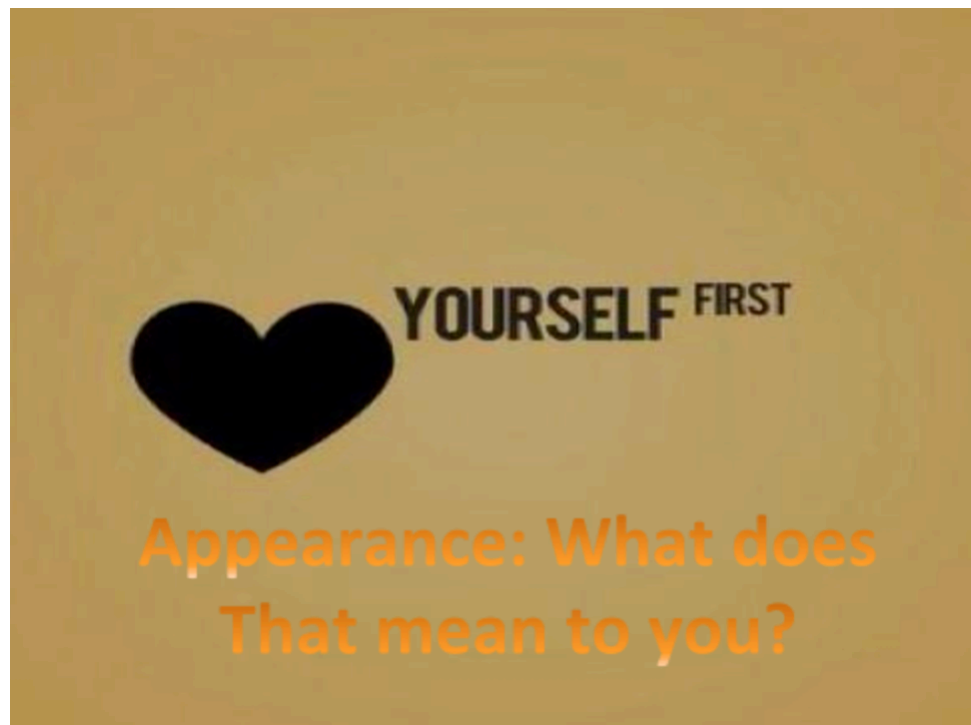
## Viral

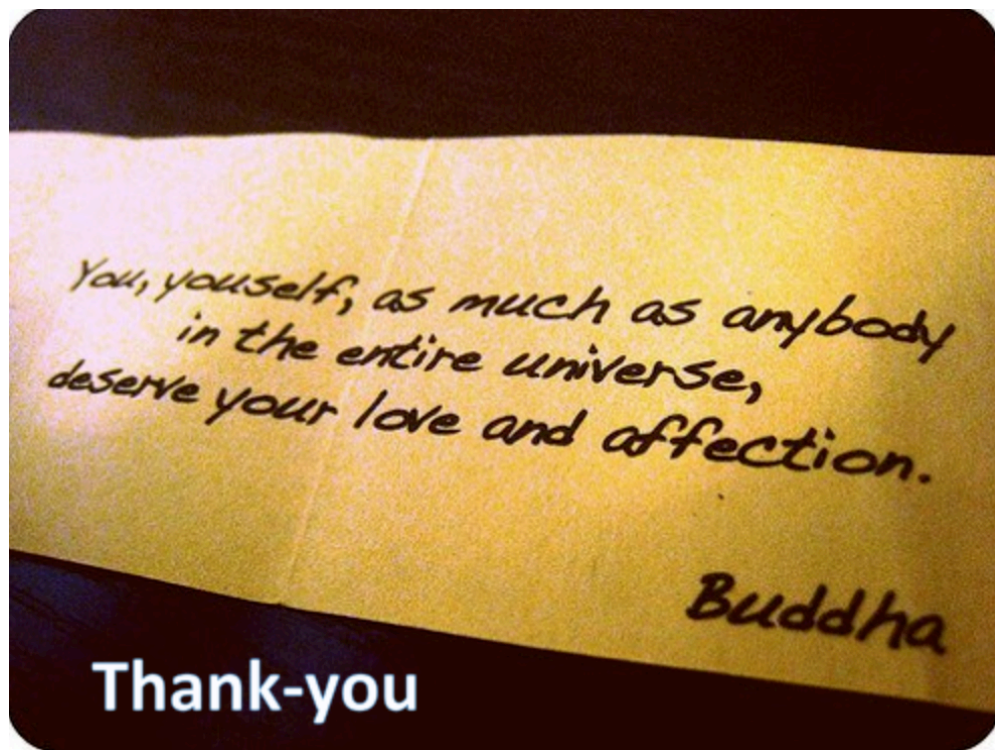
- Genital Herpes
- Hepatitis B
- HIV & AIDS
- HPV



**GET TESTED**







**Appendix H: Open-Ended Question Responses – “The one thing I know I will remember from this presentation is”**

<b>The one thing I know I will remember from this presentation is</b>	<b>Participant Response</b>
Information on condoms	“Use protection when having sex” “The condom game” “How to put a condom on” “The condom game” “Always use a condom” “Use a condom” “How to put on a condom” “To use a condom when having sexual intercourse” “How to use a condom” “How to put on a condom” “How to use a condom” “More condoms” “To throw condoms in the trash not in the toilet” “To always get tested and wear a condom” “Condoms protect against HIV” “How to put a condom on” “How to put on a condom” “How to put a condom on and to practice safe sex” “How to properly use a condom due to the activity” “Use protection” “Don’t have unprotected sex” “Is how to put on the condom”
To be safe/Protect oneself	“Is to be safe” “Safe sex” “How important it is to be safe” “To always be safe and take precautions” “To always be safe” “To be safe” “To stay protected & have lots of communication” “To be safe” “Be safe” “To protect yourself” “To protect myself” “Respect and protect yourself” “That I should always protect myself when it comes to HIV/AIDS” “To always stay safe and make sure that I can trust my partner”

	“How to be safe” “How important it is to practice safe sex” “To be safe” “To be safe while having sex” “To be safe”
HIV/AIDS Information	“HIV & AIDS is dangerous” “HIV/AIDS are more common then I realized” “HIV, AIDS, etc. is not something to joke about” “That mosquitoes can't spread HIV” “That you can get AIDS from skin-to-skin contact” “The different type of HIV/AIDS” “AIDS/HIV can't be spread through saliva” “Knowing the importance of AIDS” “How to prevent AIDS and other diseases”
STBBI/STI Information	“To always get checked for STBBIs” “How you contract different STI's” “How serious STDs are” “What STD's are” “The different type of STI's” “About crabs and scabbies” “All STBBI's and know the affects”



**Appendix I: Open-Ended Question Responses – “I would enjoy HIV/AIDS programs more if they included”**

<b>I would enjoy HIV/AIDS programs more if they included</b>	<b>Participant Response</b>
Games/Activities/Demonstrations	<p>“Games”  “More games”  “More activities”  “Fun activities”  “Games, etc.”  “More games”  “More games”  “More games”  “More demonstrations”  “Better demonstrations”  “A little bit more activities”  “More fun games”  “More games and demonstrations”  “Activities”  “Fun activity”  “More games :)”  “More activities like this one did”  “More pictures”  “More games”  “Games about the topic”  “More games”  “Games”  “More activities”  “More games”  “More activities”  “Condom demo”  “More demonstrations”  “More hands on demonstrations”  “More games and information”</p>
Nothing	<p>“I don't think they need to include anything else”  “It was good, no need to add more”  “Nothing more is needed”  “Nothing, I thought it was wonderful”  “Nothing it was pretty good”  “It's perfect”  “Nothing, it was fully enjoyable”  “Nothing else”</p>

	<p>“Nothing”</p> <p>“I like it like this”</p>
More information	<p>“More information”</p> <p>“More information about the long term effects”</p> <p>“More information”</p> <p>“More on relationships/how to communicate with partner”</p> <p>“More information”</p> <p>“More information”</p>