The Safe and Sexy Project:
The sexual-health needs and knowledge of homeless and street-involved youth living in Hamilton, Ontario

by

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AUTHOR'S DECLARATION

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners. I understand that my thesis may be made electronically available to the public.

ABSTRACT

BACKGROUND: Youth continue to be at high risk for STI and HIV transmission and unplanned pregnancies because of their liberal approach to sexual-health and their susceptibility toward engaging in risky activities. Youth who are street involved face greater risks than their peers because they occasionally participate in behaviours that places them at increased risk; for instance injection drug use, multiples sex partners, low condom use and considerable substance use. However, while street youth are predisposed to engage in many of the situations they do, some street youth are also making decisions to limit risk.

OBJECTIVES: To 1) determine the basic level of HIV and STI knowledge of street youth; 2) to understand youth's knowledge of, access to, and use of sexual-health information; 3) to explore where and from youth would like to get accurate sexual-health information and appropriate care; 4) to determine whether peer education is a useful method of transmitting sexual-health information to youth; 5) to assess the sexual risk level of youth; and 6) to develop an understanding of the proactive sexual-health behaviours and decisions youth have established for themselves.

METHODS: Street-involved and homeless youth living in Hamilton, Ontario (n=97) who were between the ages of 14 and 24 were interviewed using a 112 questions interview tool. Topics covered in the interview included demographics, personal safety, health behaviour, accessing sexual-health information, accessing sexual-health services, HIV/AIDS knowledge and services use and peer education. Descriptive, bivariate, and multivariate analyses were conducted using SAS.

RESULTS: Youth had high rates of STI and HIV testing and good HIV knowledge when compared to the general youth population. However, the sample also had increased rates of unplanned pregnancies and young women were not well-informed about what gets tested for in pap smears. Some youth are also not accessing sexual-health services at all.

CONCLUSIONS: Youth are making attempts to protect themselves, however there are areas for improvement; specifically increased condom-use, knowledge of HIV and pap smears. Youth who were found to have increased risk were youth who were under the age of 19, and youth who had experienced unstable housing before the age of 15. The findings suggest that sexual-health harm reduction needs to start at a younger age and the basics of sexual-health should not be overlooked.

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Thank you to the street youth in Hamilton who let me have a glimpse of their brave lives. My hope is that this is a true representation of the information you afforded us and that we will continue to use this information to better support you.

This thesis is dedicated to my good friend Laurie at Community Living, who reminds me every day that I am a lucky person to do what I do and that I should never complain about the good fortune I have to go to school.

I regret the length of this thesis and I would encourage individuals to download its content instead of printing it off. I would have preferred to use a layout that requires less paper; however the University of Waterloo is unsympathetic to individuality between theses. Their requirements necessitate that a lot of paper is wasted.

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CHAPTER ONE: INTRODUCTION

Despite major advances in prevention and treatment, the Human Immunodeficiency Virus (HIV) and Acquired Immune Deficiency Syndrome (AIDS) continue to be one of the leading causes of death worldwide. Globally, over 40 million people are living with HIV, 10 million of them youth aged 15-24 years old. Half of all new HIV cases are contracted by youth (UNAIDS, 2008).

Currently, the prevalence of HIV cases among Canadian youth is low; however, continually high rates of sexually transmitted infections (STIs) indicate the potential for increased HIV incidence exists. In Canada, as of December 2006, youth aged 15-19 accounted for 1.5% and youth 20-29 accounted for 25.3% of all positive HIV test reports (Public Health Agency of Canada, 2008). Among all females testing positive for HIV in Canada, the prevalence is highest among teens and young adults; most of whom are becoming infected through heterosexual sexual intercourse (PHAC, 2006a).

The increased STI rates and climbing HIV rates for youth can be largely attributed to the behaviour they are engaging in. The transition from youth to adulthood can be an exciting but complicated time, because the transition brings with it experimentation and feelings of doubt. Many youth experiment with sex and substances, and other high-risk behaviors, but because the majority of youth have familial and educational supports in place, they transition into adulthood without much trouble (Benoit et al., 2008). Street-involved and homeless youth lack the supports the general youth population have, and consequently experience more difficult and longer transitions into adulthood, with increased amounts of high-risk behaviours (Benoit et al., 2008).

Most studies investigating sexual risk behavior and youth homelessness take place in large urban centers; Halifax, Montreal, Toronto, Calgary and Vancouver. As a mid-size city, with a population of 504,599 people (2006 census) Hamilton differs in many ways when compared to large urban centers. Hamilton is largely a blue collar city, with the majority of its citizens employed by two steel mills located in the North end of the city. The poverty rate in Hamilton is the second highest in Ontario after Toronto; one in five Hamilton residents have an income below the Low Income Cut Off (LICO), food banks report more than 15,000 visits per month (or 3% of the population, the same amount as Toronto) and there are over 4,000 active applicants on the social housing waitlist (Gallimore, 2006). Of Hamilton's 69, 280 youth (individuals between the ages of 15 and 24) the

Hamilton Social Planning and Research Council counted 600 street-involved youth and they estimate this number continues to grow. There are 40 available shelter beds in Hamilton for homeless youth, (Wingard & Vengris, 2006), while in Toronto, there are an estimated 1,500 homeless youth who have access to 522 available shelter beds (National Homelessness Initiative, 2005). A study that recently took place in Hamilton called, "Addressing the Needs", identified a large gap in available supportive living environments for youth. Since our project started, Hamilton has been proactive in securing 50 transitional shelter beds specifically for youth. Transitional shelter beds (as they are referred to) support youth in transition from homelessness to independence, and have long-term programs (up t0 12 months) largely centered around the development of life skills. To stay in such locations requires an application process. During the writing of this paper, the three transitional youth housing sites in Hamilton all had wait lists.

The liberal attitude youth have towards sexual-health and their propensity toward engaging in risky activity continues to place them at high risk for HIV transmission. High-risk youth (commonly considered individuals who are street-involved and homeless) face greater risks than their non-homeless peers because they participate in behavior that places them at an increased risk for contracting HIV (Wagner et al., 2001; Rew et al., 2002; Tyler 2008; Boivin et al., 2005; Leach et al., 1997). The Enhanced Surveillance of Canadian Street Youth (E- SYS) monitors rates of sexually transmitted infections in homeless youth. Annually, the E-SYS surveys about 4000 youth about living on the street, substance use and sexual-health. In the 1999 to 2003 cycle of E-SYS, 95% of street youth (aged 15-24) surveyed reported being sexually active, with 46% the general youth population reporting sexual activity (Canadian Ministers of Education Council, 2004). Age at first intercourse is also significantly lower for street youth (14 years) than the general youth population (17 years) (PHAC, 2006b). Street-involved females reported an average of 22 lifetime sexual partners while males reported an average of 23 (PHAC, 2006b); whereas the general youth population of the same age range report between one and four lifetime sexual partners (Council of Ministers of Education of Canada, 2004). Fifty percent of street youth reported not using a condom during their last sexual encounter (PHAC, 2006b).

The increased risk of contracting STIs for street youth is seen in the results of the Enhanced Surveillance of Canadian Street Youth Survey (E-SYS). The prevalence of Chlamydia in the Canadian street-youth population is 11%, approximately ten times higher than the prevalence of

Chlamydia in the general youth population (1%) (PHAC, 2006a). Similarly, the prevalence of Gonorrhea in street youth (3.1%) is 20 to 30 times higher than the general youth population (0.09%) (PHAC, 2006b). Both Chlamydia and Gonorrhea have increased in reported cases from the 1999 to the 2003 E-SYS surveys (PHAC, 2006b).

Amidst the growing literature on street youth, few studies have focused on the safer decisions and practices youth make. Undoubtedly, a large proportion of street youth are uneducated about their health, specifically sexual-health – but there continues to be a proportion of youth who have engaged in some level of self care and are mentors to their peers and friends. In an ongoing study investigating condom use in street youth, 13.2% of youth surveyed reported always using a condom during vaginal intercourse (Haley et al., 2000).

In Hamilton, youth have limited choices for cohort-specific health services. Public health funding that targets adolescent sexual-health is largely allocated to prevention and education (Dehne & Riedner, 2001). The sexual-health needs of youth differ from those of adults. They are further compounded in street-youth because they are more timid of making first contact with a clinic, may have limited trust in service providers they are not familiar with, are afraid they will be asked questions they do not want to answer, and are concerned that their attendance at a sexual-health clinic will be shared with guardians or reported to child protection services (Dehne & Riedner, 2001). Amidst the trepidation youth have of seeking out sexual-health supports, recent research findings suggest that youth do have unanswered questions about their sexual-health and they want to talk to someone they trust to get their answers (Flicker et al., 2008). Evidence also shows that youth do already report getting much of their sexual knowledge from peers, whether it is accurate or not (Flicker et al., 2008).

Peer education has become a popular tool for adolescent health education because of the ability for youth to influence one another's attitudes and behaviors and because it allows for youth, supported by their peers, to prioritize their own health issues and work together to resolve them (Kim & Free 2008; Ito et al., 2008; Pearlman et al., 2002; Sweifach & LaPorte 2006; Binet, Noel & Trottier, 2002; Backett-Milburn & Wilson, 2000). Peer education is defined as "the teaching or sharing of information, values and behaviors by members of similar age or status group" (Kim & Free, 2008, p.89). Peer education programs have been shown to be protective for youth populations against STIs (Pearlman et al., 2002) and vulnerability to HIV/AIDS (Mitchell et al., 2007). Peer education,

guided by expert resources, gives youth the option to decide what information is significant for them and how that information is best shared (Backett-Milburn & Wilson, 2000; Pearlman et al., 2002).

One agency that has had success with the peer education model is the Hamilton AIDS Network. The AIDS Network has shaped adult HIV-related peer education into a formal program they have called the Peer Educator, Mentor and Advocates Program (PEMAP), (Alexander et al., 2007). PEMAP operates as a community-based, capacity-building program that helps volunteers of the AIDS Network interested in peer education programs and services, draw upon available resources and the experiences of their community. It is rooted in peer support ideology; to promote community awareness, reduce stigma, meaningfully engage the community, and improve the quality of life for all persons who have AIDS (PHA), and support the Greater Involvement of People with HIV/AIDS (GIPA) Principle (UNAIDS, 2000; Alexander et al., 2007). PEMAP participants are PHAs and individuals affected by HIV/AIDS living within Hamilton. By putting a human face on the disease and serving as role models, companions, educators and advocates to other PHAs and individuals affected by HIV/AIDS, peer educators challenge the stigma and discrimination associated with the disease. This program has been especially beneficial to adult, HIV-positive individuals; however, attractiveness and success-potential of such a program to Hamilton's street youth are limited.

The health concerns of homeless youth are important; however, doing research with street-involved youth can be difficult. Due to poor experiences with research in the past, specifically the limited return on information from researchers and a lack of trust between researchers and youth, this population can be hesitant to engage with researchers (Hester 2004; Sanci et al., 2004; Weithorn et al., 1982; Flicker & Guta., 2008). Methods of doing research with youth need to include them as main stakeholders. A popular way of including research participants as stakeholders is through community-based research. Having youth as main stakeholders in the research process allows them to have input on how to solve realistic problems they are experiencing and increases the likelihood that the direction of research will initiate change for members of their own community (Marcus et al., 2004) as well as create skill building opportunities (Layne et al., 2008).

Through a community-based research platform, this project aims to locate the gaps in sexual-health services available to street-involved and homeless youth and identify ways the youth are already taking positive steps to take care of themselves. The ultimate is to bridge the gaps through already

existing service providers where possible, to assist youth to build on their already established safer behaviors, especially for the highly vulnerable street-youth population. In order to better meet the sexual education, support and treatment of homeless and street-involved youth, it is necessary to respect youth's efforts to make positive decisions about their health. This will help to create dignity within a population that has continually been neglected and often dismissed as unmotivated.
This study will contribute to the limited research on Hamilton's street-involved youth population by providing an in-depth exploration of their experience with social and sexual-health service use and availability, their experiences and ideas on peer education, their level of sexual-health knowledge and their perceived sexual-health risk.

The following review of the literature discusses a summary of research that has been conducted on the variables that influence the behavioral decisions and outcomes of homeless youth's sexual-health.

CHAPTER 2: LITERATURE REVIEW

The literature on the risks of street youth is steadily expanding. The continued demand for research in this area likely lies in the heightened risks street youth are exposed to compared to their non-street involved peers. Street youth have an increased risk of violence, unsafe and unwanted sex, STI's, HIV, teen pregnancy and suicide (Mallett et al., 2003; Boivin et al., 2005; Flicker et al., 2008; Dehne & Riedner, 2001). The mortality rate in Canada's population of homeless teens is near 11 times the rate of the general population based on the same age and gender (Boivin et al., 2005).

2.1 Classifying "street youth"

Street youth are not a homogeneous group; their pathways to homelessness and housing preferences vary greatly. While it may be safe to assume that street youth live on the street, their situations are more complex. Some youth are homeless in an absolute sense while others are relatively homeless and have some place to stay, some of the time (Kelly & Caputo, 2007; Wagner et al., 2001). A large percentage of street youth are involved with Children's Aid Services and are or were placed in foster or group homes which they leave for a variety of reasons (Status of Women in Canada, 2002; Kelly & Caputo, 2007). Some youth have the opportunity to stay with parents but leave due to relationship breakdown, abuse, or financial constraints, amongst other reasons (PHAC, 2006a). Other youth 'couch surf' with friends', relatives or stay at youth shelters; still, there are youth who see no other choice but to sleep outside, under bridges and in parks, mostly for safety reasons and bad experiences at their prior residential living arrangement.

With regards to research, classifying who street youth are as a study population is complicated. In the literature the definition of street-youth varies widely. Some researchers define street youth under a broad definition of youth who are living or working on the streets (Boivin et al., 2005); while others use specific definitions, such as youth who have spent more than two consecutive nights from home either having been told to leave or without their caregivers knowledge of their whereabouts (Mallett et al., 2003). Other studies have left the definition up to youth who participate in their study to self identify as homeless (Christiani et al., 2008), and others have

categorized youth into 'newly homeless' (homeless for less than six months) or 'chronically homeless' (homeless for longer than 12 months) (Rew et al., 2008).

How to classify youth according to their age further obscures appropriately defining street youth. Statistics Canada considers youth 15-29 years old, the Public Health Agency of Canada identifies youth between the ages of 14-24, while other studies have identified youth as 14-20 (Moss et al., 2004), 12-20 years of age (Mallett et al., 2004, Solorio et al., 2006) and 13-17 years (Flicker & Guta., 2008). For the purposes of this project, "youth" will be identified as 14-24 years of age, as this accommodates the varying ages in the literature as well as the service requirements for most of the youth-serving agencies in Hamilton.

2.2 Living in poverty

Homeless individuals almost always come from a long generation of family where supports have been inconsistent or lacking; often referred to as the cycle of poverty (Power and Hunter, 2001). Over time, the root causes of poverty become complex, and create barriers that prevent individuals living in poverty from exiting the cycle; and in many cases homelessness becomes a learned behaviour. In the 2003 E-SYS, 15% of street youth reported experiencing homelessness during their childhood with their families, and 35% report that their parents have been in jail (PHAC, 2006a).

For street youth, issues surrounding poverty are exacerbated. Youth who are living in poverty have very distinct needs compared to their non-homeless peers. Instead of being concerned with attending school, maintaining supportive relationships and their health, street-involved youth are more focused on meeting their daily needs; for instance, securing food and shelter instead of attending a sexual-health information session or studying for school.

If youth are living on their own, they are responsible for securing their income. Many youth living in poverty, choose to access Ontario Works (OW) until they finish their schooling, training, find a job, or become healthy enough to take on the responsibility of work. In addition to allowing youth some independence or the choice to leave a disadvantaged and troubled childhood home, one advantage to receiving Ontario Works is the full health coverage recipients

receive. However, being a recipient of social assistance also requires fine tuned budgeting skills, which youth living on their own for the first time find difficult. They experience feelings of loneliness, self-doubt, and often lack the necessary skills required to maintain an apartment, shop for groceries, make meals and arrange utilities, not to mention abstaining from high-risk and criminal activities. A single youth living in Hamilton and receiving social assistance receives a total monthly income of $560.00 (Income Security Advocacy Centre, 2008). The low amount of assistance leaves limited choice for housing. The average cost of a bachelor apartment in Hamilton is $511.00. Often, youth opt to rent from rooming houses instead of apartments, or maintain live-in relationships where expenses can be shared.

In addition, youth face employment discrimination because of their age and work inexperience. Participants who attended *Listen Up*! – a youth forum that was held in Hamilton in 2006, shared their personal experiences about living in poverty. Youth shared that young people supported by Ontario Works continually have too little money, face penalizations for working and cannot afford to purchase bus tickets or passes in order to get to and from work and thus, feel that the criteria for youth to be supported by Ontario Works is too strict. Because of the limited funds youth receive from Ontario Works, most youth need to work to compliment the assistance they are receiving (Shultz, 2006).

Youth receiving income support are obligated to report any work they have been paid for to Ontario Works where they risk being "cut off". As a result, many youth turn to methods of work which they feel they do not need to report to Ontario Works such as labour jobs, under the table work, or illegal activities. In the 1999-2003 cycle of E-SYS, of 4334 street youth surveyed, 556 (13%) reported their primary income as illicit behaviour (sex trade, stealing or drug dealing), (PHAC, 2008).

Due to the risk of being 'cut-off' social assistance, there is little incentive for youth who are receiving social assistance to find legal work. If youth are living on their own, receive Ontario Works and report any kind of supplemental income, they will lose their income assistance in addition to their drug and dental benefits. Youth are not proud of the unconventional methods they make their income; 83.4% of males and 87.8% of females said they would prefer to find

legitimate paid employment and, 51.8% of this sample said they thought being employed in any job was better than receiving social assistance (National Homeless Initiative, 2004).

The number one reason preventing youth from getting a job is having no fixed address (45.2%), followed by lack of work experience (43.3%) and not having regular use of a telephone (44.5%) (NHI, 2004). The limited amount of assistance youth receive from OW can be harmful because it forces youth to engage in risky activities they otherwise may not if their financial needs were met. More paths to employment and increased social assistance rates may enhance youth's opportunities for work and decrease the risks youth take in working in illegal and unsafe forms of work to supplement their income.

2.2.1 History of sexual and physical abuse

Childhood sexual abuse has long been documented as an indicator for poor health effects. Within the context of this research, the adverse sexual-health effects of childhood sexual abuse include: homelessness, risky sexual behavior (specifically earlier age at first intercourse), sex trading, sexual promiscuity and inconsistent condom use (McGrath & Pistrang, 2007; Senn et al., 2008; Wilson & Widom, 2008). In the 2003 E-SYS study, the average age at first episode of unwanted sex was 8.7 years (females 8.4 and males 9.2 years), (PHAC, 2006b). In the same study, more than one half of the street youth surveyed (n=2,200) reported that their parents verbally or physically abused each other, 22.7% report leaving home because of emotional abuse, 17.3% left due to physical abuse and 255 youth (5%) left home because they experienced sexual abuse (PHAC, 2006a).

Early exposure to abuse can translate into harmful effects on teenagers, as found in a 2007 survey of Toronto youth where a number of female respondents identified sexual harassment and assault as "normal" (Layne et al., 2007). Youth who were victims of childhood sexual abuse have generally not been taught the types of skills and confidence that prevent them from participating in risky sexual activities. Long term effects of childhood sexual abuse are increased issues of poor self-esteem, fear and trust (Senn, Carey & Vanable, 2008). Often, these types of feelings lead to self-destructive behaviour, including struggling academically, substance use, running away and becoming repeat victims of sexual abuse (Senn, Carey & Vanable, 2008). For

women, the association between childhood sexual abuse and risky sexual behavior is greater (Senn et al., 2008). HIV positive women self-identified their experience with childhood sexual abuse as a factor for unhealthy adult relationships, using sex as a means of approval from a male, having limited trust in others, the use of drugs or substances as a coping mechanism and using isolation as a form of protection (Senn et al., 2008). Speaking about childhood sexual abuse can also be extremely traumatizing for youth. For the purpose of this project, history of childhood sexual abuse will not be examined for two reasons; 1) the ethical implications of reporting child abuse and neglect make it difficult to include in our study, and 2) the stress of reliving childhood sexual abuse by participants is not warranted for answering the objectives of this project. Although this project will not be asking specific questions about childhood sexual abuse, the issue may arise. Details about how this information will be handled are found in the methods section.

2.2.2 Living on the street and length of time on the street

Many researchers have found that the longer youth stay on the street, or have no stable residence, the more risky their behaviour becomes (Tyler et al., 2004). For instance, chronically homeless individuals (homeless for greater than 12 months) report lower levels of social connectedness, more sexual-risk taking behaviour and lower intent and self efficacy to use condoms than their newly homeless (homeless for less than six months) peers (Rew et al., 2008), increased personal victimization (Tyler et al., 2000), and regular to heavy substance use (Rhule-Louie et al., 2007).

Out of 4,334 street youth surveyed in the 2005 E-SYS cycle, 3,703 (85%) were not currently living with their parents, (PHAC, 2008a). Evidence shows that if youth living on the street do not receive supports that enable them to get off the street within the first week of being homeless, they are much more likely to live long term on the streets, (Health Initiatives for Youth, 2008). Young adults who have been living on the streets long term experience emotional and economic instability, use substances and have feelings of obligation and guilt which contribute to increased rates of unsafe sex (Strike et al., 2001).

2.2.2.1 Safety on the street

In most cases, a life on the street is often times even more dangerous than many of the broken homes street youth left. In 2004, 45.7% of street-youth report being attacked in the past year, compared to 6.3% of their non-homeless peers (NIH, 2004). When asked how safe youth felt where they were currently living, only 52% of street youth felt completely safe, 34% felt quite safe, 12% reporting feeling somewhat safe and 2% feeling completely unsafe (Erickson, 2008). Females experience increased risk compared to their male peers. Of 150 youth surveyed (75 males, 75 females), 27% had been physically hurt by their partner (33% males), 30% had been threatened (males 7%), and 18% had been sexually assaulted (males 1%) (Erikson, 2008).

2.2.3 Social networks

Youth living on the street have generally experienced a high degree of family breakdown, and as such have limited to no contact with their immediate family. In place of family, peers and friends who street-involved and homeless youth feel a sense of belonging with, become important because social networks can be protective to the health of youth (Berdahl, Hoyt & Whitbeck, 2005). For instance, youth who report close ties with their social network are less likely to have sex with multiple partners or participate in sex-trade acts; whereas youth lacking a social network have an increased likelihood of engaging in risky sex and drug use when compared to youth with social networks (Ennett et al., 1999). Conversely, social networks can be harmful in that they have the ability to coerce, demand and degrade youth into engaging in high-risk activity, such as selling and using drugs, gang related behavior, crime and survival sex (Tyler et al., 2008).

2.2.4 Education level

Increased educational attainment is particularly important to maintaining one's health because it forms behaviours that increase an individual's ability to be self aware and proactive in terms of their health. Individuals with higher education (have at least completed high school) detect unusual symptoms earlier, seek out information on questions they have regarding their health, have better coping strategies and adhere more closely to treatment regimens than those with less than high school education (Mechanic, 2007).

Many street-involved and homeless youth have limited interaction with the school system. In 2003, 25% of street youth aged 18 or older had completed Grade 12, 40% reported they had dropped out of school permanently and 37% reported being permanently expelled from school (PHAC, 2008). A significant proportion of youth that have 'dropped-out' and when assessed by counselors were shown to have anger management issues (25.6%), Attention Deficit Disorder (19%) and Hyperactivity (15.2%) (NHI, 2004). In Hamilton, 10% of street-involved youth have completed less than a grade eight education (Gallimore, 2006).

It is important to retain youth in school for as long as possible because in terms of sexual-health, education also has an impact. The Public Health Agency of Canada has found positive correlations with a premature departure from formal education and an increased risk for Hepatitis C (PHAC, 2006a), Chlamydia and Gonorrhea (PHAC, 2006b).

2.2.4.1 Limited access to school-based HIV prevention education

Street-involved and homeless youth infrequently receive school based sexual-health education or interventions because they often leave school prematurely (Sheilds, Wong & Mann, 2004). Sexual education is generally taught in grade nine physical education courses to students who attend formal secondary school. On occasion, high schools also welcome public health posters, display campaigns and host speakers who target youth sexual-health. Due to the nature of their transient lifestyle, street youth often miss such school or home based health education and information, further placing them at risk. By the time some street youth enter Grade nine, their level of sexual experience is already high (PHAC, 2008).

2.3 Increased risk of STI and HIV

Because the nature of their survival behaviors places them in more situations where the opportunity to contract STI's is great, there is an increased risk for street youth to transmit STIs (Christiani et al., 2008). The Community Acquired Infections Division surveillance system show that rates of Chlamydia and Gonorrhea have been increasing since 2001 and are now highest among individuals 20-24 years old (PHAC, 2009). In Canada, youth aged 14-24 account for more than two thirds of reported Chlamydia cases (Shields, Wong & Mann, 2004), and it is estimated that the prevalence for Hepatitis C Virus (HCV) infections among street youth is

about 5% (PHAC, 2009). This increased risk has been associated with being male, low education levels, and relying on illicit activities to make a living (PHAC, 2009).

Sexually transmitted infections continue to be a public health issue in Hamilton, particularly for youth. In Hamilton, youth have the highest incidence for Chlamydia and Gonorrhea, (City of Hamilton, 2007). Table 1.1 illustrates the annual number of cases of sexually transmitted infections reported to the city of Hamilton since the year 2000. Reported cases specific to Hamilton youth are currently unavailable.

Table 1.1: Annual number of reported cases of sexually transmitted infections in Hamilton

Sexually transmitted Infection	2000	2001	2002	2003	2004	2005	2006
Chlamydia	786	777	833	955	983	1068	1058
Gonorrhea	-	-	-	-	-	156	239
HIV & AIDS	23	19	27	44	30	29	26
Syphilis, Infectious	1	1	2	6	6	8	4
Syphilis, Non-infectious	10	6	13	11	9	21	20

* Cases arose or were first recognized during the year stated and are among individuals who resided within the City of Hamilton at the time of their diagnosis.

HIV cases are also still on the rise in Hamilton. Despite decreases of positive cases being reported in most Ontario cities, Hamilton and Kitchener, Ontario both have increasing cases being reported (A. Betts, personal communication, February 4, 2009). As of 2005, the dominant methods of HIV transmission were intravenous drug use followed by heterosexual contact account for more new HIV diagnoses than men who have sex with men (MSM) (PHAC, 2006b). For young people aged 20-24 years, MSM was the dominant mode of HIV exposure (51.5%), followed by heterosexual contact (20.6%) and injection drug use (11.7%) (PHAC, 2006b).

2.3.1 Gender

Many studies have shown a gender effect on sexual risk taking between homeless male and female youth (Solorio et al., 2006; Dehne & Riedner, 2001; Senn, Carey & Vanable, 2008).

Young males typically engage in more high-risk sexual and drug-use behaviour (Rew et al., 2008; Weden & Zabin, 2005) and are less likely to seek out health care (Berdahal et al., 2005). For instance, 47% of males reported not using a condom during their last sexual encounter, compared to 39% of females; and 29% of males did not use a condom during the last sex encounter where sex was traded compared to 10% of females (PHAC, 2006b). Despite the fact that female youth experience sexual abuse at an earlier age (8.4 years compared to 9.2 years for males), are more frequently and more severely abused than males (Michael, 1990), they report significantly higher rates of self-perceived overall health status, have greater sexual self-care behaviour, greater assertive communication and more consistent safer-sex behaviour than homeless male youth (Rew et al., 2008). This finding may have something to do with the fact that females are more likely to be referred to social services by school and medical personal, while males are mostly referred by courts and probation (Maschi et al., 2008).

The research on gender-specific sexual-health services is largely focused on females, (Cavallo et al., 2006; Ensign & Panke, 2002; Jemmot & Jemmot, 1992; Koniak-Griffen & Brecht, 1995) likely because of their increased perceived vulnerability by service providers. Young, homeless women need targeted services. Research has shown that if a young woman is not diverted within the first month of her involvement of the sex trade, the likelihood that she will remain in sex trade is high (Wertheimer et al., 2008). A large gap in the literature exists with regards to male sexual-health service needs and use. This may be for a variety of reasons: 1) despite their increased risk, males are less worried about their health status (Cavallo et al., 2006); 2) they have inconsistent or non-use of services (Maschi et al., 2008); 3) young male egos translate into feelings of invincibility; and 4) have fewer supports and less knowledge of services than their female peers (Ackard & Neumark-Sztainer, 2001).

2.3.1.2 Sexual orientation

Sexual minority youth, individuals who identify as gay, lesbian, bisexual, transgendered or intersex face additional barriers to sexual safety and health than their heterosexual peers. Research suggests that 1 in 5 street youth self-identify as a sexual minority, but that it is underreported because sexual minority youth are unlikely to disclose their sexual identity to service providers (Cochran, Stewart, Ginzler & Cauce, 2002).

Sexual minority youth continue to be victims of crime, many of them physically violent. In 2008, Statistics Canada reported that gay, lesbian and bisexual adults (transgendered and intersex individuals were not interviewed in this survey) were three times more likely to experience sexual assault, theft, physical assault and discrimination than heterosexual youth (Beauchamp, 2008).

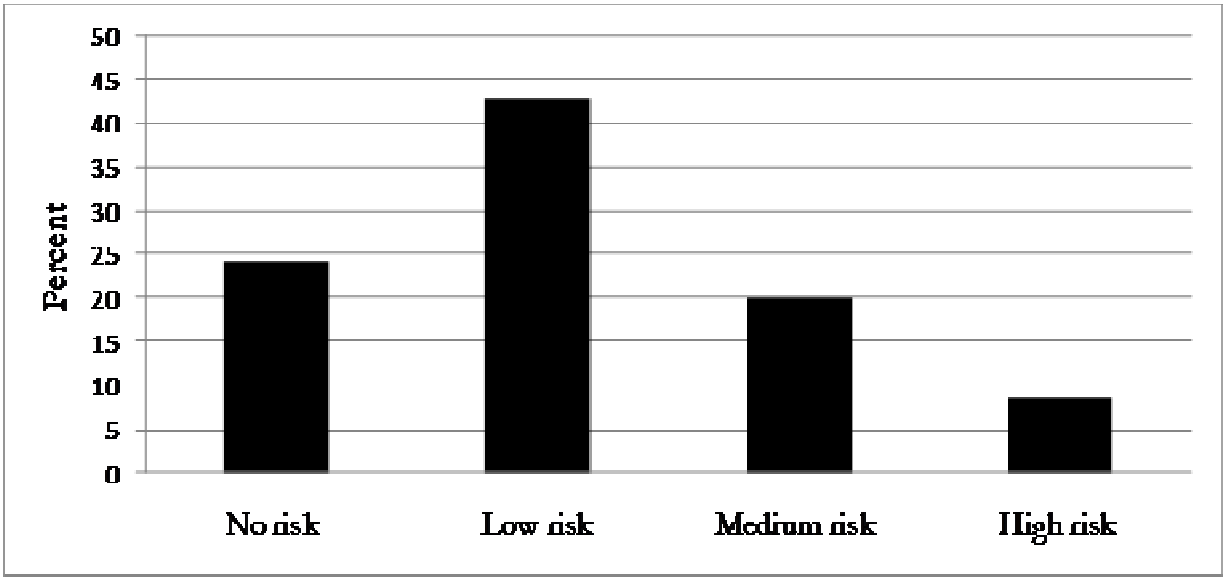
Within the same Statistics Canada survey, the findings revealed that 10% of hate crimes in Canada are motivated by a person's actual or perceived sexual orientation, and 50% of those crimes are violent in nature (Dauvergne, Scrim & Brennan, 2008).

Sexual minority youth also face amplified risks to HIV than heterosexual youth. Sexual minority youth might engage in high risk sexual behaviours (which could expose them to HIV) to reduce the stigma, sexual violence and discrimination they fear experiencing if they expose their sexual identity (Saewyc et al., 2006; UNAIDS, 2009).

2.3.2 Perceived vulnerability to sexually transmitted infections

Many teens are unaware of or deny their risk level, specifically with their sexual-health (Flicker et al., 2008). A national study found that 60% of Grade 11 students think there is an HIV vaccine available and 35% think there is a cure for HIV/AIDS, suggesting school-based sexual education is not working (CMEC, 2008). Although street youth have a greater likelihood of being exposed to sexually transmitted infections and report higher levels of high-risk sexual encounters, among the 4334 youth the E-SYS surveyed in 2005, 3767 perceived themselves as having little or no risk for contracting an STI or HIV (PHAC, 2006b). It is estimated that 20-25% of current AIDS cases are contracted during the adolescent years (PHAC, 2009), the time in an individual's life when youth are most vulnerable to adopting adverse health behaviour. Table 2 shows street youth's self-perceived risk of STIs in 2003. The majority of Canadian street youth perceive themselves as having low risk for STI.

Table 2.1: Self-perceived risk of STIs among street youth



Source: Sexually Transmitted Infections in Canadian Street Youth, E-SYS 2003. Public Health Agency of Canada

2.3.3 Condom use & condom-use skills

An ongoing study investigating street youth in Montreal found that 13.2% of participants always used a condom when having vaginal sex (PHAC, 2006b). A 2005 survey conducted by the Canadian Association for Adolescent Health with a random sample of 1,171 14-17 years olds found that 27% of respondents were sexually active; however, 24% of these respondents did not use a condom the last time they had sex and 16% reported that their partner has other sexual partners while dating them (PHAC, 2006c). The most commonly reported reasons for youth not using condoms is because they used an alternative form of contraceptive, largely the birth control pill, or they did not plan to have sexual intercourse (CMEC, 2004). In addition, youth also cited having too much alcohol or drugs, not wanting to "spoil the moment", and not having enough money to purchase condoms (CMEC, 2004).

It is well documented in the literature that youth are aware of the importance of using condoms with their vaginal and anal sex clients and casual partners; however, they neglect to use condoms with their main partners (Rotermann, M, 2008; Wagner et al., 2001; Kral et al., 1997; Leach et al., 1997), or during oral sex. This is especially risky because when approximately one in five youth report having intercourse with both main and casual sex partners (PHAC, 2008b). For North American youth, reasons why these rates differ by type of partner are under-studied. The

proposed study will identify whether similar rates of condom use with regular and casual sexual partners exist within Hamilton's street youth population, however reasons as to why will not be covered.

2.3.3.1 Regular and casual sexual relationships

The majority of street youth have not been witness to positive intimate or casual relationships, because they are often from single-parent homes, where violence is a common occurrence, and friends and relatives are few and unreliable (PHAC, 2008). For the most part, the sexual relationships youth have mirror those they observed growing up. Street youth commonly have both casual and regular sex partners concurrently (Leach et al., 1997; Solorio et al., 2006; Tyler et al., 2008). The 2003 E-SYS survey found that male street youth had an average of 23 partners in their sexual lifetime, and female street youth had an average of 22 partners (PHAC, 2006a). Rates of multiple casual sex partners (22 lifetime partners compared to four in the general youth population), teenage pregnancy (59% of homeless females have been pregnant compared to 8% of general youth) and sexual and physical assault in this population are higher than in non-street youth (Boivin et al., 2005). Females living on the street report having sex with partners in exchange for money or drugs more frequently than males do, suggesting that the high proportion of casual sex partners are likely involvement in the sex trade (PHAC, 2006a).

2.3.3.2 Teen pregnancy

Canadian data on pregnancy rates in homeless youth is sparse (Boivin et al., 2005; Slesnick et al., 2003; Status of Women in Canada, 2002; Haley et al., 2004; Evaluation Design Limited, 2006). It is important to examine pregnancy rates in homeless females (whether the mother carries the pregnancy to term or not), because women who become pregnant are not using condoms and therefore face increased risk for STIs and HIV. Teen mothers are more likely to live in poverty, have low levels of education, have poor relationships and work in lower-income jobs than non-parenting teens (Rogers & Dilworth, 2002). In a study examining homeless youth's approaches to safer sex, 35% of females reported being pregnant at least one time, and 16% reported multiple pregnancies, (Wagner et al., 2001), which is a rate three times higher than young women who are not homeless (Slesnick et al., 2006). The younger a female finds herself living on the street, the greater probability she has of becoming pregnant, (Hospital for Sick Children, 1998).

The sexual-health needs of women who are pregnant are more complex; they require more pre and post-natal care, require better nutrition and have a higher risk of contracting STIs and HIV (because they are not using condoms) (Status of Women in Canada, 2002; Haley et al., 2004b).

2.4 Substance use

Rates of smoking, illicit drug and alcohol use and the adverse consequences of their use are extremely high in homeless youth. On average, 80% of street youth report smoking, compared to 15% in the general youth population, although the street-youth smoking rate has decreased from 84.3% in 1999 to 78.8% in 2003 (PHAC, 2006b).

Compared to youth in the general population, Canadian street youth are 11 times more likely to die of a drug overdose (PHAC, 2006c). The 2003 E-SYS revealed that the use of any drug remains high in street-involved youth (95.3%), (PHAC, 2006c). An average of 82% report regular use of marijuana in the past twelve months, compared to 37% in the general youth population (PHAC, 2006c). Alcohol use among street youth is also moderately high; 30% of youth report drinking at least once a week and 5% reporting drinking on a daily basis (PHAC, 2006b).

Most street youth use substances as an outlet for dealing with the stress of living on the street and as a method of connecting with and being accepted by peers (Rhule-Louie et al., 2008). This is well summarized in a quote from a homeless male youth living in Hamilton. "Suffering manic depression and anorexia for at least three years, without the knowledge of any friends or family. I finally found something that helped me cope: drugs". (Wengard, 2005, page 12). Substance use is particularly harmful to youth who lack supports because its use has been shown to lengthen an in individual's time of living on the street (Thompson et al., 2005) and increases a youth's association with peers who report weekly use of drugs or alcohol (Tyler et al., 2004). Alcohol and drug use has long been assumed to be harmful to the physical, and mental health, and overall well-being of youth; for instance it leads to premature death, the presence of chronic conditions like diabetes or heart disease and suicidal tendencies (Benoit et al., 2008). The long term consequences of alcohol and drug use have not been examined in this population. Longitudinal studies looking at the effects of drug use are difficult and can be misleading

because there are usually a number of causal pathways that individuals who use substances could experience premature death from, in addition to the substance itself (e.g., violence, malnutrition, exposure).

Substance use also has implications for sexual behaviour. Fifty-eight percent of youth in the 2003 E-SYS reported having intercourse while intoxicated with alcohol, and 50% reported that their sexual partners were "high" on drugs during sex (PHAC, 2006c). Substance use can alter an individual's state to the point where they forget to use a condom, have sex more willingly when they normally would not, and increases the likelihood of risky sex practices (PHAC, 2006c). Regular alcohol use has also been associated with expulsion from school, experiencing abuse, involvement in the sex trade and having been in a corrections facility (PHAC, 2006b).

2.5 Use of the health care system

Because they face increased health concerns, homeless individuals access health care services more often than non-homeless individuals. The cost to the Canadian government of individuals living on the street is large. The average homeless person uses about $4,714 in health care expenses every year, compared to $2,633 by the average Canadian (NHI, 2004). Inconsistent use and/or lack of access to health care can allow for a manageable and treatable illness, like to common cold, to go for long periods of time without treatment, and sometimes by the time homeless individuals access health care, their health concerns have spiraled out of control to the point where they have limited treatability, (Crowe, 2007). It is also difficult for individuals living on the street to maintain a home address, telephone number and thus maintain a valid health card. In the city of Hamilton's report 'On Any Given Night", 27% of homeless participants reported not having an Ontario Health card (Gallimore, 2006).

For the most part, health care utilization among the homeless youth population is sporadic. They largely access hospitals and primary care clinics, and it is difficult to do follow-up care with street youth as they tend to be transient, have a difficult time keeping appointments and can rarely be contacted to receive reminder calls about upcoming appointments (Christiani et al., 2008). There are also difficulties with drug coverage. Youth who are recipients of Ontario Works or the Ontario Disability Support Program do have drug coverage; however, youth who

are not receiving government support or who are without employer benefit programs have a difficult time filling prescriptions due to costs. "…they give you a prescription you know you can't fill…I still have a prescription for a spider bite that is not filled" (Christiani et al., 2008, page 158).

Other youth report knowing where to go for services, but being unsure of how to get to them.

> "When I had to have surgery, I had no idea how to get where I went. I ended up taking…like two buses, the subway….then I got in a bus going the wrong direction. It's difficult because you have to use these different clinics that are in different places for different things"(Christiani et al., 2008, page 158).

Another recent trend that is affecting youth access to health care is the physician shortage. Studies of physician supply in Ontario reveal that Hamilton has far fewer general and family practitioners than the provincial average. Youth between the ages of 18 and 24 are twice as likely to be without a family physician than any other group. Almost 10% of Hamilton's youth are without a family doctor (PHAC, 2006).

2.5.1 Limited access to cohort-specific health services

In Hamilton, youth have limited choices for cohort specific service. There is one AIDS service organization (ASO), and there are two youth-specific sexual-health clinics. The ASO does not have a sexual-health clinic within it, and as of yet does not have the capacity to do HIV testing. Compared to Toronto, Hamilton's youth-specific health services are lacking. Toronto has numerous youth sexual-health clinics and over 25 ASOs, with seven specifically targeted to the needs of youth.

Public health funds targeting adolescent sexual-health are largely forwarded to prevention and education (Dehne and Riedner, 2001). For the population of youth unaffected by various sexual-health calamities, this focus of funding is proficient. However, for the population of youth already living with STIs, HIV or early pregnancy, the direction of funding would be better used in sexual-health clinics through treatment and counseling (Brindis et al., 2005). Youth specific sexual-health services would be ideal because the sexual-health needs of youth vary from those

of adults, in that they are more timid to make the first contact with a clinic, have limited trust in service providers they do not know, are afraid they will be asked questions they do not want to answer (Flicker et al., 2008), and that their attendance at a sexual-health clinic will be shared with guardians or reported to child protection services (Christiani et al., 2008).

2.5.2 Trust in health and social-service provider

Despite the importance of this connection, there has been little research investigating the relationship between homeless youth and their service providers. It is essential that youth have someone they feel they can trust because it enhances their overall well-being (Dubois et al., 2002; McGrath & Pistrang, 2007; Sale et al., 2008). Homeless youth typically have a history of living in low income families, are often exposed to abuse, neglect, drugs or alcohol in the home and endured periods where their families experienced homelessness (Senn, Carey & Vanable, 2008; Berdahl et al., 2005; Kelly & Caputo, 2007; McGrath & Pistrang, 2007). Because street youth often experienced a lack of trust from authority figures as children and in some cases felt abandoned or overlooked by individuals who may have been able to help them (e.g., teachers, foster parents, police), street youth find it difficult to trust services and potential friends for fear that they will be hurt again (Brindis et al., 2005). Thus, it is unreasonable to assume that youth coming from these types of situations will develop a connection with a service provider easily. In addition, homeless youth feel they have a sort of "street smarts", and they risk their street smarts being questioned when accessing service providers, or worse - that their confidentiality will be broken (Ulager et al., 2005; Christiani et al., 2008).

Homeless youth carefully observe service providers before they are willing to trust them and share intimate details about their life (Ulager et al., 2005). Relationships with service providers are typically built over time and through information from friends that certain providers can be trusted. The lack of initial trust homeless youth have in service providers can prevent youth, especially at risk youth, from seeking supports they need (Ulager et al., 2005; Flicker et al., 2008). As a consequence, youth make themselves invisible to service providers who may contact children's protective services or police if youth share intimate details about their lives (Kelly & Caputo, 2005). This mis-trust in 'the system' may contribute to lower rates of youth accessing health care services and being tested for STI and HIV than youth who have stable housing

(Auerswald et al., 2006). Further, street-involved youth report feeling like service providers are not trained to deal with the unique situations in which they are living, cannot speak from lived experience, and often overlook youth specific developmental needs (Christiani et al., 2008).

2.6 Peer education

In a study investigating how street youth got their HIV information, interpersonal channels (street based/friends/family/sex partners), were the most common (60%) after small media, such as pamphlets and fact sheets (77%) (Leach et al., 1997). The literature states that it is important that sexual-health knowledge be designed and delivered according to its audience, or it will have limited relevance and impact (Power & Hunter, 2001; Dubois et al., 2002). Most teens feel comfortable discussing health issues with friends and health professionals, but few conveyed similar comfort talking about health issues with educators when asked. Being mentored by a peer can be an extremely important asset during the teenage years. In their study examining youth attitudes towards barriers and facilitators to health care, Christiani and colleagues found that youth participants expressed a need to be able to access a mentor, someone they could turn to for guidance, but admit finding it difficult to ask for help (Christiani et al., 2008). As young adults, it is an appropriate time for youth to start actively contributing to their own health and gain a set of ideals they can carry with them into, and throughout adulthood. With increasing rates of STI and HIV, prevention education remains the leading method for supporting youth through their sexual-health experiences.

Peer education is defined as "the teaching or sharing of information, values and behaviors by members of similar age or status group" (Kim & Free, 2008, page 89). Peer education has become a popular tool for adolescent health education because of the ability for this population to influence one another's attitudes and behaviors and because it allows for youth, supported by their peers, to determine their own health issues and work together to resolve them (Kim & Free, 2008; Backett-Milburn & Wilson, 2000; Sweifach & LaPorte, 2003). Through peer education, youth can decide what information is significant and how that information is best shared. The Toronto Teen Survey concluded that using a youth-led approach that allowed for anonymity and confidentiality was effective in engaging youth in sexual-health education that increased participant access to relevant sexual-health information (Flicker et al., 2008). Likewise,

an evaluation of an HIV/AIDS peer education project in Fife, Scotland found that participants were talking informally to school-mates, friends and family about sexual-health information they were learning (Backett-Milburn & Wilson, 2000). One example is a young female who disagreed with her boyfriend when he said "Only gays catch AIDS" and another enlightened her grandmother to the facts about HIV transmission after the subject came up on a sitcom they were watching together (Backett-Milburn & Wilson, 2000).

The utility of peer education varies with the demographic of its students. Youth who are at greatest risk for HIV due to homelessness and street involvement can be particularly difficult to reach with peer education (Woods et al., 1999). Young males are more reluctant to participate in peer education than females, and this statistic is amplified when the topic is sexual-health (Beshers, 2008). In addition, unlike other youth-oriented programs, monetary stipends do not increase the likelihood that a young male will participate in a peer education program (Beshers, 2008). In contrast, peer led programming in the prison setting is well attended by young males (Devilly, Sorbello, Eccleston & Ward, 2005). It is to be expected that increased participation in peer education programs in a prison setting are attributed to young males having few options within prison to engage in other activities.

Peer education is more effective where mentors can assist their peers with more broad issues, for instance environmental factors that might put a youth more at risk for HIV, (homelessness, drug use, absence from school) instead of educating their peers on more specific issues, such as HIV risk, (Mitchell, Nyakake & Oling, 2007). In addition, if the peer mentors are individuals who are selected (naturally through a social hierarchy or by a vote) by the youth the mentor will be working with, they are better respected and trusted, and therefore more effective leaders (Mitchell, Nyakake & Oling, 2007). One of the flaws of peer education is that, in this model, youth who are seen as leaders by their peers, are usually individuals who are already more motivated than the average youth (Poland, Tupker, Breland, 2002; McDonald, Grove & Youth Advisory Members, 2001). Consequently, peers who are in the role of 'mentor' get more out of peer education programs than the peers they are supporting. They gain a heightened sense of friendship, skill development, fun and the pride of being a role model. And while this is an additional benefit to peer education, it is not the primary directive.

When comparing school and peer sex education, the school level education has been evaluated by students with a tone of "too little too late". The school approach to sexual education places a focus on introductory information that youth already know and is usually limited to covering topics within a specific curriculum (Sweifich and LaPorte, 2006; Woods et al., 2000). In peer-led sexual education, youth can talk and ask questions about almost anything, and rehearse scenarios that could mimic real life circumstances a youth may find themselves in (Buston & Wight, 2002). Social workers do view peer education as a successful, effective and worthwhile technique for sexual education and prevention, and also feel that individuals who take part in peer-led sex education are less likely to initiate sex and unsafe sex practices than those who do not participate (Sweifich and LaPorte, 2006).

2.7 Gaps in the literature

There are two areas overlooked in the literature that represent the main objectives of the proposed project. This project aimed to fill in more information about how street youth stay safe, the sexual-health questions they have and who they want them answered by.

2.7.1 Proactive health and safer-sex practices

Throughout the literature, the self efficacy and abilities of youth are underestimated. Youth are starting to take more responsibility for their sexual-health, but they report needing more support from their community. The Toronto Teen Survey has broken new ground in Canada with its youth-led approach to research, which had the benefits of its youth study population in mind. Including youth throughout the project design, implementation and dissemination, makes for more meaningful findings, and thus interventions.

As discussed previously, at a young age many street-youth have to take on adult responsibilities. Because of the premature transition into this role and a lack of mentoring by parents, relatives or foster families, these youth have missed out on some of the basics of caring for themselves. However, because of their early maturation, there is also a component of self-learned health behaviors youth have adopted (Haley et al., 2000). Statistics can easily be presented in ways that suggest the majority of street youth maintain destructive behaviours. There are a variety of

statistics that suggest there are youth who are trying their best to take care of their personal and sexual safety;

- After being diagnosed with an STI, 72.9% of street youth reported the use of protection during sex, up from 68% in 1999 (PHAC, 2006b).
- The main source of income for street youth after social welfare is regular work (14%), followed by part-time work (12%) (PHAC, 2006a)
- 24.2% of youth self-report being non-drinkers (abstaining from drinking entirely) (PHAC, 2006c)
- 25% of street youth have completed Grade 12, and some have continued even further with their education

The general youth population is beginning to take some initiative towards making informed decisions about their health. Globally, youth are accessing health clinics and using informal methods of information sharing, such as blogging about their sexual-health questions and experiences (UK Youth Health Initiative, 2008). This social momentum gives a great opportunity to service providers to target youth at a time when they may be more open to receiving sexual-health information.

2.7.2 Unanswered sexual-health questions

There is limited research on the types of questions youth have about their health and who street-involved youth feel comfortable asking. When youth have questions about their sexual-health, they tend to turn to people they are close to and can trust for answers; parents, siblings, friends, doctors and teachers. For many street-involved youth, such relationships are few, making it more difficult for them to get answers to their sexual-health queries. There is evidence though, that youth have questions about their sexual-health and they want to ask them. Of 289 Seattle youth interviewed, 62% wanted to know more information about AIDS prevention (Wagner et al., 2001). In the Toronto Teen Survey, the top three things youth surveyed wanted more information on were 1) how to form and maintain healthy relationships, 2) general information on HIV/AIDS and 3) how to give and receive sexual pleasure (Layne et al., 2007).

This aim of this project was to gain knowledge of the sexual-health experiences of homeless and street-involved youth in the Hamilton area; specifically their level of sexual-health knowledge, their

negation of safe sex, their use of social service agencies and their ideas and acceptance of peer sexual-health education. The proposed research will help the Hamilton AIDS Network and its partnering youth-service agencies establish a plan to be more approachable to youth and ultimately increase youth knowledge of sexual-health.

CHAPTER 3: STUDY RATIONALE

Through a community-based research platform, in partnership with the Hamilton AIDS Network, this study contributes to the limited research on Hamilton's street-involved youth population by providing an in-depth exploration of their experience with social and sexual-health service use and availability, their experiences and ideas on peer education, their level of sexual-health knowledge and their perceived sexual-health risk.

In Hamilton, youth have limited choices for cohort-specific health services as stated previously. Public health funding that targets adolescent sexual-health is largely allocated to media-oriented prevention and education campaigns. The sexual-health needs of youth vary from those of adults, in that youth are more timid making first contact with a clinic, have limited trust in service providers they are not familiar with, are afraid they will be asked questions they do not want to answer, and are concerned that their attendance at a sexual-health clinic will be shared with guardians or reported to child protection services (Benoit et al., 2008). In addition, recent research findings suggest that youth do have unanswered questions about their sexual-health and they want to talk to someone they trust about these questions (Flicker et al., 2008).

The ultimate goal of this research project was to bridge gaps in already existing service providers where possible, increase the level of sexual-health knowledge street-youth have and assist youth to build on their already established safer behaviours. In order to better meet the sexual education, support and treatment of homeless and street-involved youth, it is necessary to respect youth's efforts to make positive decisions about their health. This will help to create dignity within a population that has continually been neglected and often dismissed as unmotivated.

This thesis is part of a larger community-based project with the Hamilton AIDS Network, which has its own set of objectives. With an overall goal of improving the sexual-health services to homeless and street-involved youth in the City of Hamilton, the specific project objectives were:

1) conduct a community-based research project with the aims of understanding:
    a) the current sexual-health and STI/HIV/AIDS knowledge;
    b) the sexual-health service utilization, needs and concerns; and

c) the most acceptable approaches to further sexual-health and HIV/AIDS education for the homeless and street-involved youth population,

2) strengthen the links, and initiate ongoing idea sharing, between Hamilton's homeless and street-involved youth, social services and academic communities, and

3) plan new/modified programs to meet the gaps in sexual-health services available to the homeless and street-involved youth population of Hamilton, including the possibility of modifying the currently successful Peer Education, Mentorship and Advocates Program (PEMAP) offered by the AIDS Network, and

4) disseminate the project findings at a Youth Symposium that the AIDS Network will host to create awareness of their role in youth AIDS education and outreach, and to promote future collaboration in projects with youth and new community partners.

The project team received funding for this project from Ontario HIV Treatment Network, Community-based Capacity-Building Funds in the amount of $24, 671.00. Due to the nature of the capacity-building grant, a large percentage of the resources were spent on community personnel, mostly youth hired for the project. The associated budget for the study and the budget justification are located in Appendix A.

The larger project helped the Hamilton AIDS Network, street-involved youth and other youth-serving agencies gain experience in the practice, and use of, community-based research to forward their programming with a sound evidence base. Through their part in the coordination and dissemination of research findings, the AIDS Network can be one of the leaders in sexual education and health of street-involved youth in the Hamilton area.

CHAPTER 4: RESEARCH OBJECTIVES

This thesis was an investigation of the first objective of the larger project objectives. Within this, six more detailed objectives were examined. The objectives for the project were largely descriptive.

Objective 1. To determine the basic level of HIV and STI knowledge homeless and street-involved youth have. With the goal of:

a) describe youth's self-perceived condom use skills;
b) determining their level of HIV knowledge and HIV transmission;
c) determining their level of STI knowledge; and
d) determining females level of knowledge of routine pap smears; and
e) the multivariate correlates of low HIV knowledge.

Objective 2. To understand youth's knowledge of, access to, and use of sexual-health services.

a) determine youth's awareness and use of sexual-health services;
b) why sexual-health services are not being accessed;
c) prevalence of STI testing;
d) prevalence of HIV testing;
e) explore the multivariate correlates of non-use of sexual-health services.

Objective 3. To explore where, and from whom, youth would like to get (and would feel comfortable getting) accurate sexual-health information and appropriate care. Specifically;

a) sources of information for youth;
b) who youth feel comfortable confiding in about their sexual issues and problems; and
c) where youth are going for HIV-specific information.

Objective 4. To determine whether peer education is a useful method of transmitting sexual-health information to youth. To determine:

a) youth's experience with peer education and mentorship;
b) the ideal circumstances youth suggest for a peer education program; and
c) which types of information youth prefer from which sources (friends/peers/social services).

Objective 5. To assess the sexual-risk level of the youth. Specifically to determine:

a) Partner types;

b) consistency of condom use;

c) past year prevalence of HIV, STIs and unplanned pregnancy; and

d) multivariate correlates of inconsistent condom use.

Objective 6. To develop an understanding of youths harm reduction behaviours, specifically in terms of:

a) regular pap smears;

b) maintain and accessing a family doctor; and

c) substance use.

CHAPTER 5: METHODOLOGY

5.1 Design

A cross-sectional, face-to-face interview was used as the method for data collection. Data was collected during a single time period. Each interview took about a half hour to complete. If the research team felt it was required, following completion of the survey, peer interviewers or the project coordinator did some education with respect to areas in the interview we noticed misinformation, as well as offered referrals. In this situation, the interview did run closer to an hour. See Appendix B for the questionnaire.

Face-to-face interviews were chosen as the data instrument for a variety of reasons. The interview created for this project had complex and difficult sequences of questions to complete that were best navigated by our trained interviewers. Having a trained interviewer guide the interview limited lost data and inaccuracies (de Leeuw, Hox & Dillman, 2008). Face-to-face interviews have a higher response rate than methods that leave youth to follow through on their own (mail surveys/ telephone survey) (de Leeuw, Hox & Dillmman, 2008), and interviewers can probe for complete answers, decreasing the amount of item non-response which is especially important when working with a small sample size (n=100) (Groves et al., 2008). People trained as interviewers can give the interview setting more legitimacy, in terms of trust, and make the youth participant feel more at ease (Flicker & Guta, 2008). Face-to-face interviews also make participants feel more comfortable through their flexibility with study language in cases where the terminology is not clear to all participants. Most importantly, interviewers had the ability to provide referrals to services following the interview to increase likelihood that youth will get any help they require. Due to access to computers, and the limits on privacy if participants had to complete interviews in public locations (e.g., library, community agency), online surveys were decided against, as they could limit participation or responses (de Leeuw, Hox & Dillman, 2008).

One limitation to face-to-face interviews was the possibility of non-response or untruthful responses to sensitive questions. These limitations were somewhat decreased by using prompt cards. Prompt cards had two purposes: 1) to allow participants to respond to the sensitive questions without directly indicating their status on the issue at hand (e.g., HIV positive), and 2) serve as a visual reminder of answer sequences where there are a number of questions with the same choice of answers (e.g., always/sometimes/rarely/not at all). See Appendix B for prompt cards that were used.

A Youth Advisory Committee (YAC) was created to ensure that the questions and language used in the consent form and questionnaire were understandable and friendly to the youth we interviewed. Ten youth, a mixture of males and females who have a history of being or still are street involved, were recruited from Health Initiatives for Youth to sit on the YAC. For more information on the YAC, see section 7.1. Four peer interviewers were hired to work on the project. They were chosen due to their similar experiences to the youth we interviewed, and because they were people that were trusted and respected in the community. See section 5.3.1 for more detailed information on interviewers and their training. Interviews were completed in a couple of locations. The two main locations were The Hamilton AIDS Network and the Street Health Centre, a Public Health clinic. More information regarding these locations follows in section 5.3.2. Blocks of time when interviewers were available were set aside at both locations during varying times of the day and evening to accommodate differing youth schedules. Drop in appointments were also available.

5.2 Population and sample

The population of interest for this project was street youth living in Hamilton, Ontario. This population was chosen because they face additional barriers to service; and descriptive information in terms of Hamilton's street youths sexual-health is underreported. The Hamilton AIDS Network had a specific interest in finding out more about this population with the hopes of tailoring future programs to their needs. The findings from this study can be generalized to street youth in the Hamilton area and with vigilance to street youth in similar-sized Canadian cities. However, the findings from this project cannot be generalized to the general youth population or homeless adults because the characteristics of these populations differ from street youth.

A refined definition of the population of interest for this project was developed after consultation with youth and staff from a variety of youth-serving agencies. To be eligible for inclusion in the sample of this study, participants had to: 1) be between 14 and 24 years of age, 2) had lived in Hamilton for the past 6 months, and 3) identified as one of; a) *street-involved* – an individual who had unstable housing in the previous six months, and spends the majority of their time on the streets and bounced between home, foster or group home, youth shelter or jail; or b) *homeless* – an individual who had no place to live in the previous six months and as a result lived in abandoned buildings, squats, crowded accommodations, flop houses, outside or less than one week a month in a shelter. The major difference between homeless and street-involved youth is that street-involved youth had

an address and telephone number that they could be reached at that would allow them to receive official mail, for instance receiving social support and have a valid address on their health card.

The specific ages the literature identifies as youth varies. Statistics Canada considers youth 15-29 years old, Public Health Agency of Canada 14-24, while other studies have identified youth as 14-20 (Moss et al., 2004), 12-20 years of age (Mallett et al., 2004, Solorio et al., 2006) and 13-17 years (Flicker & Guta., 2008). For the purposes of this project, 'youth' were considered 14-24 years of age as this accommodates the varying ages in the literature as well as the service requirements for most of the youth-serving agencies in Hamilton.

5.2.1 Sample size and eligibility

The desired sample size for this project was 100 youth. The final sample size for this project was 97 youth. Although this is a relatively small sample size for a study, the estimated size of the street-involved youth population in Hamilton is approximately 600. This allowed us to have interaction with one in six Hamilton street youth (Vengris, 2007). A sample size of 100 was desired to ensure power for multivariate modeling, which allowed for a more specific analysis of the population.

5.2.2 Recruitment

As the foundation of this project was community-based, it involved youth and youth workers throughout the research and program development process. Youth involved in the project received technical training, which as a form of personal skill development, will assist them in the future to gain volunteer and employment positions. Youth hired for the project were paid for their training and work, giving most of the youth their first employment experience and opportunity to gain essential employment references. One of the positions youth were hired for in the project were peer recruiters. Peer recruiters were an asset to the project because we interviewed youth who preferred to have an 'ally', (someone who could relate with them and who they could talk to about the project). Peer recruiters spoke more accurately to the importance and need for youth's participation in the project and gave the project street credibility to enable us to recruit a more representative sample from a greater range of youth we wanted interview.

Peer recruiters went out with the research coordinator to predetermined sites as suggested by staff and the Youth Advisory Committee (YAC). Sites included youth shelters, drop-in centers, partnering

community organizations (Health Initiatives for Youth, The Well), the library and popular street hang outs (Living Rock, skate parks, waterfront). In order to be representative of the geographic region of Hamilton, recruitment occurred as far west as Dundas, east to Stoney Creek, the downtown core, north to the lake and south to Mount Hope. In addition to assisting with putting up posters, recruiters approached youth and spoke to them about the study, including general information about eligibility, the content of the survey, the purpose of the project and remuneration. If individuals were interested, they had the option to do one of two things; 1) be screened immediately by the coordinator for eligibility, or 2) take a study card about the study and phone the research coordinator later for eligibility screening. The study card was limited in which information was included, with basic study details and contact information for the project coordinator. This was to protect youth's privacy if they did not want their friends to know they were interested in the study. See appendices C, D and E for the recruitment pamphlet, recruitment card and recruitment poster.

Potential participants were screened for eligibility by the research coordinator using a five item screening instrument (see Appendix F). If the individual met all eligibility requirements, they were scheduled into an interview time. No nominal identifying data was required from the participants at the time of eligibility screening or during the interview process.

5.2.3 Remuneration

As remuneration, participants received a $15 gift card to their choice of Wal-Mart or Tim Horton's, two bus tickets and a list of youth services within Hamilton. They also had the option of taking a safer sex package including a couple condoms, lubrication and safer sex information. Consultations with the YAC led to the use of these two gift cards because they thought cash may go to support illegal activities. The option to choose a gift card from Wal-Mart or Tim Horton's was noted as important by the YAC because while some participants may need to purchase food immediately (Tim Horton's), others could use the Wal-Mart card to purchase personal hygiene items, food, clothing or get haircuts for a reasonable price. The YAC also suggested giving participants the option of receiving health information and/or supplies that come in a discrete package. The health and social services information gave details regarding a variety of Hamilton services including: general and sexual-health, emergency accommodation, income assistance, emergency food and clothing assistance, addictions and drug counseling, sexual assault and educational supports (see Appendix G and H for the information package and receipt for gift card). All of the items included

in the Safer Sex package were supplied by our partnering agencies. We purchased red neck totes to put the contents of the safer sex package into. They were widely admired by the youth.

5.3 Data collection

Data was collected using face-to-face interviews. Prior to being used in the study, the questionnaire was pilot tested on six youth, two males and four females. Youth received a $5 gift-card for their participation in piloting the questionnaire and were given the opportunity to participate in the actual project when it started. The YAC was made up of ten youth who had similar characteristics to the sample population. Pilot-testing the questionnaire was necessary in order to ensure: 1) logical flow of questions, 2) testing for word and content appropriateness of questions, and 3) the amount of time required to complete the questionnaire. After piloting the questionnaire we made a number of small changes, largely in wording and sequence of the questions. A revised copy of the questionnaire can be found in Appendix B.

5.3.1 Interviewers

Youth were recruited to work as peer interviewers, which built further research capacity in the community. Interviewers hired for the project were volunteers, clients or student staff of our partnering youth serving agencies and had similar experiences as the youth interviewed for the project. Interviewers were not required to have previous interview skills. They received three days of paid, formal interview training which included background on the study, role playing, mock interviews, ethical issues, appropriate referrals, technical training and presentations from a variety of guest speakers. Each of the four interviewers conducted about 20 interviews, and the project coordinator conducted 20 interviews for a total of 97. See Appendix J for referrals made.

5.3.2 Interview locations

Due to the personal nature of the interview questions, and the vulnerability of the youth that were interviewed, it was important that the interviews took place in locations where youth participants had established trust. Two interview locations were used, the Hamilton AIDS Network and Street Health. The AIDS Network is the only AIDS Service Organization located in Hamilton. It serves the Hamilton, Halton, Halimand, Norfolk and Brant regions. It has a wide range of client services, including support groups, referrals, food assistance programs, complimentary therapies, in-home support, prison outreach, needle-exchange, back to work/school assistance, social events and advocacy. Street Health is a street-health clinic that serves anyone, but largely individuals living or at

risk of living on the street. It is located above the largest co-ed shelter in Hamilton. It has a sexual-health clinic (supported by City of Hamilton Public Health), a variety of support groups, an addictions counselor, an Ontario Works staff member, needle exchange and foot care clinic. These locations were chosen because they are safe for both participants and interviewers to access, have flexible hours (open some evenings) which allow for flexibility of interview times, are both on the bus route, have hot meal programs and have trained counseling staff available to participants if they needed debrief after their interview. In addition, having interviews at these two locations increased the visibility to, and comfort level of youth who might want to access them.

5.3.3 Data management

Participants placed their completed interview schedules in envelopes and sealed them themselves. Between interviews, at the two interview sites, all completed interviews (in sealed envelopes), consent forms and receipts were locked in a secure filing cabinet in the program manager's office. The site program manager and the research coordinator each had a key to the cabinet. At the end of each interview session, the research coordinator collected all materials and transported them directly to the project office at the Hamilton AIDS Network, where all study materials were kept in a locked file cabinet.

1) *Data entry and short-term storage*: Data was coded and entered into SAS (SAS Institute, 2004). The research coordinator coded the questionnaires and set up computer data entry using SAS FSedit and one of the peer interviewers was hired and trained to continue working on the project performing data entry. While data was collected, and for the duration of the thesis writing, and project symposiums/presentations, the SAS dataset was stored on three separate password-protected computers; 1) on the Principle Investigator's computer at the University of Waterloo, 2) on the research coordinator's computer and, 3) on a computer at the Hamilton AIDS Network. Only investigators and trained data entry personnel of this study had access to the data. The dataset was also backed-up onto a University of Waterloo N-drive that was backed up daily. In addition, the raw data was backed up onto password-protected CDs that were stored off-site, at the residence of the principle investigator in a locked cabinet. All back-up data (including CDs) was encrypted using Genie Backup Manager Pro. 8.0. This software had the ability to encrypt files (256-bit encryption) and save them to any media including CDs and USB keys.

2) Data cleaning: The dataset was cleaned using SAS software. Completed questionnaires were cross-checked with the SAS dataset to ensure accuracy. Ranges of all question responses were checked to ensure responses did not fall outside of the possible answer category ranges; and spot checks were done on approximately 50% of entered questionnaires to ensure accuracy. Various cross-tabulations were conducted to identify responses to the questionnaire that did not follow logical order (e.g., Have you ever had sexual intercourse? – *No*. Have you ever been told you have a sexually transmitted infection? *Yes – Syphilis*.).

3) Long-term data storage: All hard copies of the data (including interview schedules, consent forms and incentive receipts) will be stored for seven years in locked cabinets in the principle investigator's office. Following seven years, all paper copies of the data will be destroyed via the University of Waterloo's confidential shredding service. All electronic data and CD's will be stored indefinitely for the purpose of future reference and comparison studies. The Hamilton AIDS Network will retain access to the non-nominal questionnaire dataset; the University of Waterloo Principal Investigator will retain access to the non-nominal questionnaire dataset and all analysis files. Access will remain password-protected at all times.

5.4 Measures

5.4.1 Demographic characteristics

Participants were asked their gender, age, which part of the city (of Hamilton) they lived in, their current living situation, where they slept the night before, if they had ever experienced unstable housing and at what age, if they were in school at present, what level of education they completed and their main source of income. See questions A1-A9 in the questionnaire for demographic questions.

5.4.2 Analysis and operationalization of dependent measures

This section reviews each of the six project objectives and how they were analyzed at the descriptive, univariate and/or bivariate levels and concludes with a discussion of how multivariate models were built and scrutinized by the research team.

Objective 1: To determine the basic level of HIV and STI knowledge homeless and street-involved youth have.

The dependent variable for this objective was condom-use skills, HIV knowledge and STI knowledge. The independent variables were demographic variables.

A) Self-perceived condom-use skills:

Originally the survey included four questions which asked youth very specific questions about the right way to use a condom: should they use a condom if it is expired, should they use water-based lubricants on a condom, can a male penetrate his partner before putting a condom on without risking HIV/STIs or pregnancy and can a condom be used twice. However due to the final length of the survey and the question our team was really trying to answer – "Do youth know how to use condoms" – we removed the above four questions and replaced it with one question (C13). We asked youth "Do you believe you know how to use a condom correctly?" with the optional responses of a) Yes, b) Yes, I think so, or c) I don't think so.

B) Level of knowledge of HIV and HIV transmission:

The measure for this objective included various questions on HIV transmission risk, which were taken from two scales; *The Healthy Oakland Teens Survey* (Ekstrand et al., 1994) and the *HIV-18 Knowledge Questionnaire* (Carey & Schroder, 2002). Each scale had questions which inquired about the knowledge of HIV, however, on their own, neither scale sufficiently covered the types of HIV knowledge we wanted to know youth had. At the same time there was were questions that did not apply to the population we were examining and therefore some questions were omitted. Because questions from both scales were omitted, the scores of this survey cannot be compared to studies that have used these scales. Questions from the two different scales were used together to measure level of HIV knowledge and transmission.

The Healthy Oakland Teens Survey was developed and pilot tested on junior high school students. The tool assesses HIV/AIDS/STI-related knowledge, attitudes and beliefs, sexual behaviour and drug and alcohol use. The instrument included 102 items at the pre-test, and 97 at follow-up. Within the *Healthy Oakland Teens Survey*, is an HIV-knowledge construct that consists of 11 true/false questions. The HIV-related knowledge score is created by adding the number of correct answers to 11 true/false questions regarding HIV transmission, general medical aspects of AIDS and knowledge of

preventative behaviors. The scale ranges from 0 to 11, and when tested on seventh grade students, the baseline mean was 7.9, Cronbach's alpha =.64 (Ekstrand et al., 1994). Seven of the eleven questions were used in the questionnaire because they overlapped with the *HIV-HQ-18 Knowledge Questionnaire* which is also used. See questions F1 to F7 in the questionnaire (Appendix B) for the HIV transmission risk questions taken from the *Healthy Oakland Teen Survey.*

The *HIV-HQ-18 Knowledge Questionnaire* is a self-administered instrument that is used to assess knowledge needed for HIV prevention, and is a condensed version of the *HIV-HQ-45 item questionnaire* (Carey & Schroder, 2002). *The HIV-HQ-45 questionnaire* is a valuable tool; however, individuals using it in the field, requested a shorter version of the questionnaire to alleviate participant burden, while maintaining a similar range in questions, with similar validity scores (Carey & Schroder, 2002). The result of the condensed version of the 45-item scale was an 18 item scale, *The HIV-HI-18*. *The HIV-HQ-18* has a strong internal consistency, Cronbach's alpha=.89, and test-retest stability across several intervals (rs=.76 - .94). It was tested on 210 low-income women with a mean level of education of 11.8 years and common risk markers (Carey & Schroder, 2002). Because some of the questions in the 18-item scale were not appropriate for use with our population, some of the 18 questions were not included in the questionnaire. The questions taken from this questionnaire can be found in questions F8-F16 in Appendix B.

C) Level of knowledge of STIs (self-perceived): There are two questions pertaining to this dependant variable. Question E1 asked participants if they knew what a sexually transmitted infection was, and question E4 asked female participants which sexually transmitted infections they think they get tested for in a routine pap smear.

D) Level of knowledge of routine pap smear : Females only were asked "in a routine pap smear, which sexually transmitted infections do you think you get tested for"? The answers were unprompted and required the youth to come up with the answer on their own.

E) Logistic regression modeling of correlates of HIV knowledge: The total HIV score was dichotomized at a cut-off point based on the univariate distribution of the data (11 out of 16 correct answers). Based on common knowledge and information youth may have received through mass media or other methods, the research team felt that youth should be able to answer about 10 of the 16 questions, and this would be considered 'good' knowledge. Youth who scored higher than 10 out of 16

questions were considered to have 'high' HIV knowledge. This was further analyzed in a bivariate manner using chi-square and followed with a logistic regression analysis.

Objective 2: To understand youth's knowledge of, access to, and use of sexual-health services.

The dependent variables for this objective were; a) awareness of sexual-health services, b) non-access of services, c) prevalence of STI testing, and d) prevalence of HIV testing. The independent variables were demographic variables.

A) *Awareness of sexual-health services and services being accessed*: There were two questions that evaluated which services youth were aware of. Questions D9 and D12 were created by the research team and asked participants if they knew where to get condoms and if they know where they could go for information about their sexual-health. The question regarding where youth went to get condoms was asked because it is also likely that the locations youth go to get free condoms also offer sexual-health information, however the youth may not be accessing the information.

There were 13 questions that examined the type of services youth were already accessing. Eleven questions were created by the research team and were grouped into three categories, 1) sexual-health services, 2) general health care, and 3) HIV/AIDS specific services. Questions D2m, D13, E2, E2B, E3, E6, E6c ask youth about which sexual-health services they are accessing (e.g., where do you go for free condoms in Hamilton, where have you gone for an HIV test?).

Question F17 asked youth if they were accessing any agency in Hamilton specifically for AIDS information, while questions E9-12 asked youth about access to, and frequency of seeing a doctor (e.g., When was the last time you saw your family doctor?).

B) *Why sexual-health services are not being accessed*: Question D12b is an open-ended question that asks youth why they are not accessed services. For our analysis, the responses to this question were categorized and summarized.

C) Prevalence of STI testing: In order to determine the prevalence of STI testing, one question asked if youth had been tested for STIs (Question E2) if they had retrieved the results of that test (E2c) and the results of those test(s) (Question E2d).

D) Prevalence of HIV testing: One question addressed HIV testing (Question E6) and two questions addressed the date of the test and the result of that test(s), (questions E6b and E6d). We also wanted to know if youth were retrieving their test results (question E6d).

E) Multivariate correlates of non-use of sexual-health services: Further, multivariate logistic regression was used to profile individuals who were not accessing sexual-health services and to highlight individuals currently falling through service gaps.

Objective 3: To explore where and from youth would like to get (and would feel comfortable getting), accurate sexual-health information and appropriate care.

A) Sources of information: Question D2 asked youth where they wanted to get sexual-health information from, and question F19 asked youth where they would like to get HIV/AIDS specific information from. Both questions were adapted from the *Toronto Teen Survey* (Flicker et al., 2008), and modified to reflect the services and resources available to youth in Hamilton.

B) Whether youth trust information they receive from friends as valid

Question D3 was created by the research team and asked whether youth considered the information they get from their friends to be reliable.

C) Ability to in confide in someone about sexual-health issues: Questions D4 – D6 were adapted from the *Healthy Oakland Teen Survey*. These questions asked youth if they felt they could talk about various sexual-health topics (e.g., safe sex, condoms, HIV) with their boyfriend/girlfriend, friends and parents or guardians. These questions were chosen because helped to decipher which youth are comfortable speaking about intimate issues, or if they are not speaking with anyone at all. In this same set of questions, we asked youth who identified as LGTBQ an additional set of questions asking them if they could talk to their friends, partner or family about their orientation and identity.

D) HIV-specific information and preferred sources for HIV-specific information: Questions F18, F19, F20 were created by the research team. They asked youth which type of individual they would prefer to get information regarding HIV.

Objective 4: To determine whether peer education is a useful method of transmitting sexual-health information to youth.

A) *Experience of peer education and peer mentorship*: Question G1 was created by the research team. It asked youth if they knew, or had heard of, peer education or peer mentorship. Indicating 'yes' to G1 was the dependent variable for this objective. Question G1a was created by the research team and asked youth if they had any previous participation in peer education and what roles they have had in it. Indicating 'yes' to G1a was also carried forward.

B) Ideal circumstances for peer education: Eight questions were created by the research team to ask youth what they felt the ideal sexual-health peer education program would involve. The following questions are asked: G2 (if they would attend a peer education program for no incentive), G4 (if they think peer education works), G5 (ideal time of day), G6 (length of program in its entirety), G7 (if they would attend for an incentive), G8 (what types of incentives would attract them to participating), G9 (what role they would like to have in a peer education program) and G10 (ideal locations for a program to be held).

C) Preferred information from peers: Question G11 was created by the research team. This question followed an explanation about what peer educators/mentors are. It asked youth who (friends/trained peer mentors/professionals) they would prefer to go to for various types of sexual-health issues.

Objective 5: To assess the sexual-risk level of youth.

A) Partner type: Information about regular and casual sexual partners was extracted from the condom use questions (C6, C6b, C9, C9b). We did not ask specifically about partner type.

B) Consistent condom use: Five questions were chosen to examine consistent condom use. Question C6b and C9b asked youth how often they used condoms with regular and casual partners. Both

questions were created by the research team. Questions C7 and C10 were taken from the *Application of the Theory of Gender and Power to Relationships and Experiences among Middle Eastern and/or Arab Canadians Study* (Schoueri, 2007). They asked youth if they could get their regular and casual sex partner(s) to use a condom. Question C11 was taken from the *Population Council's RAPIDS Evaluation of Services Survey for Youth* (Population Council, 2005). It has been used widely on surveys and asks youth if they have had sex without a condom in the past year. At the bivariate level, there were two dependent variables that were analyzed for this objective; a) the use of condoms during sexual intercourse with regular sex partners, (yes/no), and b) the use of condoms during sexual intercourse with casual sex partners (yes/no). The dependent variable carried forward for this objective was consistent condom-use, which was measured by indicating 'every time' to questions C6b and C9b, and 'no' to C8.

The time span chosen to analyze consistent condom use was the past three months (questions C6b and C9b). The three month time span was chosen for two reasons; 1) because there is a greater chance that within three months, the independent variable (e.g., accessing sexual-health services) has taken place before the dependent variable, and 2) there is better participant recall. However, in the case that youth had no sexual activity within the past three months, there were two other questions that were included, one for regular sexual partners (question C8) and one for casual sexual partners (question C11), that asked youth about their sexual activity within the past year.

C) *Past year prevalence of HIV, STI and unplanned pregnancy.* There were three questions that asked about prevalence of HIV (question E6d), STI (question E2d), and unplanned pregnancy (question E14).

D) Logistic regression of inconsistent condom use: Multivariate logistic regression was use to profile individuals who were having unsafe sex with regular partners and individuals who were having unsafe sex with casual partners. Further details about multivariate modeling of this objective are in section 5.4.3.

Objective 6: To develop an understanding of youth's harm reduction in terms of pap smears, visits to their doctor and use of substances.

A) Annual pap smears: We asked females only, two questions regarding pap smears; "Have you ever had a pap smear?" (question E3) and "If yes, how long ago was your last pap?". A question

regarding most recent pap was included because it is important to know if young women are having regular paps.

B) Visiting their family doctor: Youth were asked two questions about family doctors. They were asked if they had a family doctor (question E9) and if they did have a doctor, when was the last time the youth saw them (question E1). Walk in clinics and emergency room visits were not considered visits to family doctors.

C) Level of substance use: Questions C14-C17 asked youth about their level of tobacco, alcohol and marijuana use and the frequency of their use.

5.4.3 Multivariate modeling

Three dependent variables were modeled at the multivariate stage; HIV knowledge (from Objective one), non-access of service (from Objective 2), and non-use of condoms (from Objective 5). The steps for analyzing the dependent variables are: bivariate analysis, testing for multicollinearity, multivariate modeling, controlling for demographics and building the final logistic regression model. These steps are discussed in detail below.

Step 1: Bivariate analysis: Following univariate analysis of all objectives, bivariate analysis was conducted to explore the associations between dependent and independent variables as outlined in the objectives above. Chi-square tests were conducted where independent variables were categorical (e.g., housing status) and dependent variables are categorical (e.g., STI status) or dichotomous (e.g., use of condoms - yes/no).

Step 2: Testing for Mulitiicollinearity. Following the bivariate analysis, all models were tested to ensure there was no muliticollinearity. Muliticollinearity is when two variables are highly correlated and in turn, suggest the same information. When two variables are too closely related, it is difficult to determine each variable's individual effect, which can mislead the findings (Sonquist, 1970). One method of managing multicollinear variables is to exclude the variable that has limited theoretical significance (Sonquist, 1970). Variables significant at the $p \leq 0.25$ were assessed to determine how strongly the significant independent variables in the study were related to one another.

Step 3: Multivariate modeling procedures:

Variables significantly associated with dependent variables at the bivariate level at a p-value of ≤ 0.25 were included in a block logistic regression modeling analysis. Block modeling had to be used due to the small sample size. The rule of thumb when testing variables is one variable for every ten people. With the sample size being small (n=197), block modeling allowed us to stick to the rule of thumb by reducing the amount of variables going into the larger model. There was one block used. Backwards elimination was used within the model to remove variables that were clearly not significant (anything $p>0.20$). This allowed for the final logistic regression model to only include those variables from the block analyses that remained significant at $p \leq 0.20$.

Step 4: *Control for demographics*: At this step, we controlled for demographic variables age, sex, education, current living situation (e.g., shelter/street/foster home), and street-involved vs. homeless. Variables that were significant at the $p \leq 0.20$ level were brought forward into the final model.

Step 5: Final Logistic regression Model: Variables that remained significant at the $p \leq 0.15$ level after controlling for demographic variables were brought forward to the final logistic model, which consisted of variables from the block model. Backwards elimination was used to establish the most parsimonious logistic regression model. Backwards elimination was used again at this level to determine the most parsimonious logistic regression model; with only variables at $p \leq 0.10$ retained in the final model. Backwards elimination was used again to eliminate variables until the final model only included those variables significant at the $p \leq 0.15$ level.

5.5 Ethical Implications

5.5.1 Consent and confidentiality

All participants provided informed consent for themselves, regardless of their age. Homeless and street-involved youth present unique problems for obtaining legitimate consent for participation in research. When working with this population, interpreting ethical guidelines which require the consent from a parent or guardian is complicated because of the youth's homeless or street involved status. Street-involved and homeless youth may oppose participation if the researcher is required to contact their family or other legal guardian (foster parent/group home) for consent (Hester, 2004; Flicker & Guta, 2008). In addition, guardians may not return consent forms, demonstrating their

lack of interest in their son's/daughter's/charge's health or right to speech (Hester, 2004). The Toronto Teen Survey, similar to this project, collected surveys in a community setting (Planned Parenthood), allowed all youth already accessing the sexual/health related clinics and drop in programs at the community setting the option to consent for themselves (Flicker & Guta, 2008).
With regard to an adolescent's ability to make decisions about their sexual-health, in Ontario, a 14 year old can make the decision to terminate a pregnancy and decisions about birth control options without the involvement of parents or guardians, (Statistics Canada, 2005). Sanci et al., state that from the age of 14, and definitely at 15 years of age, adolescents have the cognitive capacity to make their own informed choices, (Sanci et al., 2004). As such, informed, verbal consent was obtained directly from all participants, through a process of information sharing in accordance to the Canadian Tri-Council policy. While discussing consent to participate, participants were also informed of their option to leave particular questions unanswered and the choice to withdraw from the survey and still receive remuneration. The interviewer signed the consent acknowledging that they have received verbal consent from the youth. Verbal consent was chosen in place of written or parental consent because it allows for more anonymity to the youth, and does not allow for the interview schedule to be linked to any identifying information, such as a signature, (Hester, 2004). Each youth was offered a copy of the consent form for their own use. See the information letter and consent form in Appendix I.

To further ensure anonymity and confidentiality, participants had the option to leave a mark rather than providing their signature on the receipt for the gift card and bus tickets. Consent forms were kept with completed questionnaires (which the participant sealed in an envelope themselves). The envelopes containing the questionnaires were not opened by the research coordinator until the start of data entry at the project office. Findings used in presentations, papers and publications summarize trends and group data, and do not have any identifying information. The size of the target sample (n=97) is large enough that it can be analyzed and reported on without identifying participants via their response patterns or personal characteristics. In the situation that there were groups where there was an $n \leq 5$, the findings were not be reported in order to protect the identity of these participants, for example sexual orientation. We have ensured that findings that could have potentially identified a participant were not reported.

5.5.1.1 Duty to report

Due to the population, we did have a duty to report concerns of abuse or neglect. This occurred if the participant disclosed information regarding past and or ongoing verbal, emotional, physical or sexual abuse or neglect that had not already been reported to child protection services (Region of Waterloo, n.d.). Because this possibility existed and as professionals it was our duty to report such activity to child protection services, potential participants were made aware of our duty to report as a part of the consent form itself (see Appendix I). Interviewers were trained by a Children's Aid Society staff to recognize when a participant was speaking about a situation that compromises or has compromised their safety, and was instructed to notify the research coordinator. The research coordinator took the lead with the interviewer and participant in managing and reporting allegations of abuse (see Appendix J for script on how to report abuse). The research coordinator, Michelle Vibert, was formally trained in crisis management with youth, had experience reporting various types of abuse and neglect and recognized both the need and the emotional distress which can be involved in the situation.

5.5.2 Risks and benefits to participants

5.5.2.1 Potential risks to participants

There was minimal risk to participating in this project. There was a small chance that an interview could have brought about psychological distress by bringing up experiences that youth did not want to recall, for instance abuse, income insecurity, and uncovering information that the youth was at risk of harm or involved in illegal activity. We did not have youth report to us that they experienced distress as a result of the interview. In the situation that a youth did experience psychological distress, professional counselors were on hand at both of the interview locations for youth to speak with directly following the interview. Further, if youth did not wish to obtain counseling directly, they also received an information package with details on youth counseling agencies if they decided to access assistance at a later time. See appendix G for the information package. There were no indirect risks to participating in this study. While there were no referrals to a counselor as a direct result of psychological distress from the study, there were 32 referrals made for various other services including food banks, shelters, addictions counseling, clothing, personal hygiene items and more (see Appendix J for the referrals).

5.5.2.2 Direct benefits to participation

Direct benefits: Participating in an interview on the topic of sexual-health allowed youth a greater understanding of their own behaviour and the opportunity for reflection. This assisted them in seeking appropriate supports, which they were offered referrals to. In addition, independently granting informed consent to participate in research also increased the youth's self-respect and decision-making ability. Participants were also offered condoms and lubrication (if they chose), in addition to remuneration in the form of a gift card that assisted with the costs of day-to-day living. Only a handful of youth chose not to take the safer sex package.

5.5.2.3 Indirect benefits: Youth who took the opportunity to discuss sexual-health services in Hamilton potentially helped facilitate the removal of barriers to service for their peers. The understanding that youth who shared their information with us were helping to develop improved sexual-health services for themselves and their peers may directly help to increase their dignity and self-esteem. Youth gave a voice to their peers who were able to participate but have likely shared similar experiences to youth who completed an interview. Results and directions for further study were fed back to the community via a youth forum which was held in October. All street involved youth were invited to attend the fair. We had over 100 youth attend. As a result of the information we received, service development may become better suited to the needs and desires of youth.

CHAPTER 6: Community-based research approach

The foundation of this project is on building community capacity, as well as doing research in an area that is underreported in Hamilton, Ontario - the sexual-health needs and behaviours of street-involved and homeless youth. Two components of this project, discussed below, ensured that the findings were presented to the community in a meaningful manner and that research projects of this nature will continue to take place in Hamilton.

6.1 Youth Advisory Committee

A Youth Advisory Committee (YAC) was established in order to have the main stakeholders of this project - youth - ensure the project was planned and carried out in a meaningful and respectful manner to their youth peers. The committee was made up of ten youth who had a history of, or were currently street involved, between the ages of 15 and 22, from the Hamilton area and frequented popular youth hang outs or services. None of the YAC members had previous involvement with the project coordinator. During the summer of 2008, the YAC assisted the project coordinator to determine what information was required in terms of educating service providers on the sexual-health needs of street-involved and homeless youth. The gaps that youth and service providers identified became the main research objectives. Youth also assisted in suggesting appropriate recruitment, remuneration, and consent procedures to the project coordinator. Members of the YAC also pilot tested the survey for appropriate use of language and comprehension of the research questions.

6.2 Dissemination of project findings

All participants were given a thank-you letter with the information about how results of the project were disseminated (see Appendix G). Results from the project have been disseminated in five ways.

When data analysis neared completion, highlights of the preliminary results of the project were shared with, and reviewed by project partners, including project investigators, public health officials, and youth. This was essential in order to obtain initial feedback and ensure that the results were interpreted in a meaningful manner.

The primary method of disseminating the research findings was a one-day event in Hamilton. In the morning, community partners were invited to attend a presentation of the project results. We also invited the Street Youth Planning Collaborative, a collaborative of agencies that support youth, to present some research they had recently completed that complimented the project results. We had about 75 individuals attend the research presentation. Youth were invited to the afternoon part of the day, for a Youth Service Fair, which we called "Fusion". Youth were given a 'passport' with a situation on it (see Appendix K) which saw 30 youth-serving agencies having booths. Findings from the project were presented by youth who were hired for the project, as well as the project coordinator and primary investigator. Research findings were printed for all symposium participants and an ongoing contact list has been created to allow further contact between individuals interested in further reports or perhaps collaboration.

Third, in addition to the symposium, the project coordinator youth hired for the project and the AIDS Network completed various community presentations. The presentations were and still continue to be available to community organizations, schools and youth groups interested in receiving them. The findings have also been presented to the City of Hamilton Sexual-health Team who have taken the results seriously and are interested in facilitating change.

Fourth, a final project report will be prepared and disseminated to each of our community partners and The Hamilton Public Library for access by the community. A link to the report will also be posted on the Hamilton AIDS Network.

The research team is working directly with the Hamilton AIDS Network to assist with modification of the PEMAP program if this approach is warranted by the research findings.

CHPATER 7: RESULTS

7.1 Survey Instrument Administration and Response:

We interviewed 97 youth using face-to-face interviews. The interviews included six sections, with a total of 112 questions. All participants who completed a questionnaire were included in the final data analysis.

7.1.1 Non-response rates:

Overall, the non-response rate in this survey was low. This can likely be contributed the face-to-face interview (de Leeuw, Hox and Dillman, 2008) and because our interviewers were peers, but not close friends with the youth we interviewed (Flicker & Guta, 2008). Due to the face-to-face nature of the interview, interviewers were able to clarify questions and sporadically remind youth throughout the interview that their answers were confidential and anonymous. Interviewers also informed youth about the option of using prompt cards, which were used for some questions which allowed the youth to answer sensitive questions without directly indicating their status or issue at hand (i.e., HIV status).

Section A: Demographics

Non-response rates for this section were very low. Eight of the twelve demographic questions (age, ethnic group, main living situation, where they slept last night, whether or not they had experienced unstable housing, how long they had been staying at their current location, educational situation and level of education completed) had a 100% response rate. Questions regarding the main intersection where a youth was staying, self-perceived homeless status, age of first unstable housing and main source of income had a non-response rate of 1%.

Section B: Personal safety

All eight questions in this section had a 100% response rate.

Section C: Health behaviour

Three questions (If your partner wanted you to have sexual intercourse without a condom - would you; Have you had sex with a hook up in the past three months; and, Have you had sex without a condom with a hook up in the past year) had a 1% non-response rate. The four questions regarding

substance use (smoking cigarettes, alcohol use, quantity of alcohol consumption and use of marijuana) all had a 100% response rate.

Section D: Accessing sexual-health information

Four questions in this section had a 1% non-response rate (Who do you get your sexual-health information from; Who would you like to get your sexual-health information from; Have you ever been in a loving relationship; and, Have you or your sexual partner ever used emergency birth control). The other nine questions in this section had a 100% response rate.

Section E: Accessing sexual-health services

Three questions in this section (Have you ever been told you had genital warts; What was the result of your last HIV test; and, Are you worried you might get pregnant) had a non-response rate of 1%. The rest of the questions in this section had a 100% response rate.

Section F: HIV/AIDS knowledge and service

Three questions (Which places would you like to get your HIV/AIDS information from; Which people would you like to go to for HIV/AIDS information; and, In the future which social services would you go to for HIV/AIDS information specifically) had a 1% non-response rate. The other questions in this section had a 100% response rate.

Section G: Peer education

In this section, there were two questions with significant non-response rates. Question G10 asked youth to indicate which locations they would definitely, probably, possibly or not at all attend a peer education program. Non-response varied between 2% (shelter) and 6% (sexual assault centre, the LGBTQ resource centre) depending on the location. Question G11, asked youth who they would prefer to go to for information on various sexual and general health issues (friends, peers or social service). The non-response rate varied between 1% and 3% for different issues.

7.2 Description of the study sample

Hamilton's street involved and homeless youth could be compared with caution to other mid-size city street-involved populations. They have similar characteristics to that of other street-involved youth. However, the social services available within Hamilton differs from those available in larger

cities (i.e., Toronto, Montreal, Vancouver), and thus, may have an effect on service access and level of knowledge.

7.2.1 Socio-demographic characteristics

Age

Youth ranged from 14 to 23 years of age (mean 19, range 14-24, SD 2.6761). The Safe n' Sexy sample was similar in age to the 2006 cycle of E-SYS which had an average age of 19.2 (PHAC, 2006a). Forty-six youth were 18 years of age or younger and 51 youth were over the age of 18 (see Table 7.1).

Gender and sexual orientation

The study sample included slightly more males (56) than females (4). The increased involvement of males in this sample is similar to other studies. The E-SYS had a ratio of 2:1 males to females (PHAC, 2006a). There were three additional response options for gender: transsexual, intersex and do not identify; however no youth indicated these options. Ninety-five percent of the sample (92 participants) identified 'straight' as their sexual orientation and the remaining 5% identified as gay, bisexual or questioning. Due to *n* values under five, sexual orientation was not included as a demographic variable in the analysis.

Ethnic background

Of the youth interviewed, the predominant ethnic background reported was Canadian (48%), Caucasian (24%), Hispanic (5%), Caribbean (5%), African (5%), and other (7%). Caucasian was not a response choice, but was written down by interviewers as an "Other: specify" option. The 2006 E-SYS cycles found somewhat similar statistics; 59% of the youth identified as Caucasian, 35% were Aboriginal and 12% reported being of African, Asian, Middle Eastern or other ethnic backgrounds (PHAC, 2006a). Due to *n* values under five, ethnic background was not included as a demographic variable in the analysis.

School enrollment

As the age range of participants was broad (14-24), it is likely that some youth had completed high school as well as other types of educational vocations, and that is why they may have indicated that they are not in school. Consequently, the sample was broken down into three levels; still in school

(46%), have graduated high school (18%), and not currently in school 36%). The mean level of education for the Safe n' Sexy sample was Grade 11. In 2003, E-SYS reported that 25% of youth had completed high school and 40% reported that they had dropped out of high school permanently (PHAC, 2006a).

Table 7.1: Socio-demographic characteristics of the sample (n=97)

	N(%)		N(%)
Gender		**Age of first unstable housing**	
Male	56	<15	26
Female	41	15 +	58
		Always stable	13
Age		**Source of income**[a]	
14-15	5	Ontario Works	31
16	10	Funding through youth programs	23
17	14	Under the table work	11
18	18	Paid work	10
19	11	Parents/friends	9
20	9	No income	7
21	8	Ontario Disability Support Program	5
22	7	Illegal activity	5
23	7		
24	9		
** Mean 19.2, SD 2.67618*			
Self perceived street involvement		**Current school enrollment**	
Homeless	35	Enrolled in school	46
Street involved	65	Not finished highs school	36
		Graduated high school	18
Ethnic origin		**Highest level of education completed**	
Canadian	48	<=Grade 8	6
Caucasian	24	Grade 9	14
Hispanic	6	Grade 10	21
Caribbean	6	Grade 11	41
African	6	Grade 12	14
Other	7	GRE	1
Don't identify	3	College Diploma	1
		Other	1
Living situation			
Couch surfing/street	15		
Relatives	24		
Rent own room/apt	35		
Shelter/foster home	26		

a Some youth identified two sources of income

Living situation

Youth reported diverse living situations, which would be expected with a street-involved population. Couch surfing (10%), with parents (28%), foster/group home (8%), shelter (38%), on the street (8%), with relatives (4%) and their own apartment/with roommates (50%) were identified as the main locations where youth were staying. For analysis we collapsed these eight categories into four which were similar in nature and allowed for a better analysis of the population. After collapsing the data, the main living situations were couch surfing/living on the street (15%), shelter/foster/group home (25%), with relatives (23%), and 34% reported having their own apartment, were living with roommates or renting a room. The 2003 cycle of ESYS revealed the top five places where street-involved youth were living was shelter/hostel (28.3%), at their own place of residence (17.6%), with a boyfriend or girlfriend (14.9%), with a parent/guardian (14.1%) and on the street (8.1%) (PHAC, 2006a). The comparison between our ample and the E-SYS sample can be seen in Figure 7.1. In terms of where in the city youth were located, 73% were located in the down town core, 19% resided on the mountain, 2% in the extreme east of the city and 2% reported having no fixed address. We had no participants identify that they were from the Dundas or Mount Hope areas.

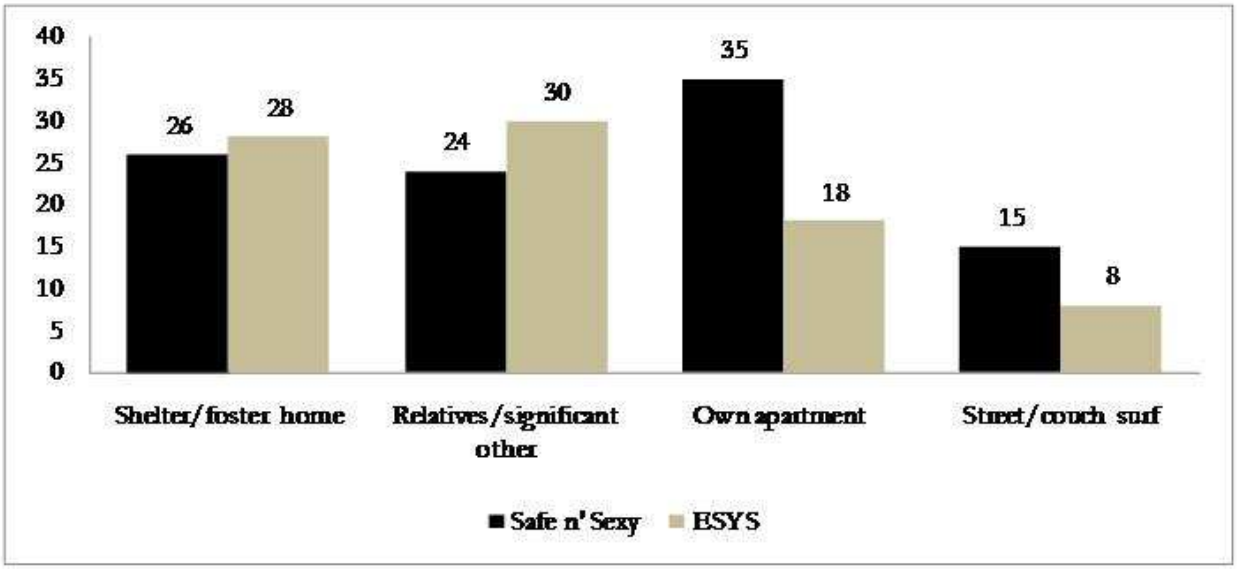


Figure 7.1: Sleeping arrangements for the night as reported by street youth

Homeless status

We asked youth if they identified as street involved or homeless. The difference between homeless and street involved was the ability to receive a piece of mail (for instance an Ontario Works cheque or a health card). Youth who identified as 'homeless' would not be able to receive such items

because they do not have a fixed address. Of the 97 youth we spoke to, 65% perceived themselves as street involved and 35% as homeless. In terms of first experience of unstable housing, 26 youth (30%) reported living in unstable housing before the age of 15, 57 (60%) had experienced unstable housing after the age of 15, and 14 (13%) youth reported they had always had some sort of stable housing. The mean age for first experience of unstable housing was 15 years of age (range 3 - 20 years). Due to the fact that youth shelters do not accept youth under the age of 16, it is likely that youth who experienced unstable housing before 15 had experienced it with their parents/caregivers. The 2003 cycle of ESYS, 15% of youth reported being homeless with their parents (PHAC, 2006a).

Source of income

Ontario Works (the provincial social support system) was the most common source of income for the youth interviewed (31%). A youth receiving Ontario Works needs to be deemed an emancipated minor, and over the age of 18 (N. Doupagne, Ontario Works Officer, personal communication, March 30, 2010). Funding from youth programs, such as the Tri-Rock program, Youth Leadership and Ambassador Program (John Howard), followed Ontario Works as the second most common source of income at 23%. These types of programs are specifically designed internship-based programs for street youth. They require youth to attend regular training sessions, work for their income doing a variety of jobs (dish washing, painting etc) and train other youth (Wingard & Vengris, 2007). Under the table work (11%), regular work (10%), parents/friends (9%), the Ontario Disability Support Program (5%) and illegal activity (5%) rounded out the list. Seven percent of youth reported having "no source of income".

When comparing the Safe n' Sexy sample to ESYS, the main types of income were very similar. Social welfare was dominant (25%), followed by regular work (14%), family (13%), under the table work (11%), youth programming (8%) and selling drugs (8%). Squeegeeing and sex work were also listed in the ESYS results; however, there were no reported 'squeegee youth' in Hamilton, and sex work was rarely reported by youth in our sample. This difference is likely the result of the ESYS study including larger metropolitan centres where squeegeeing and sex work have larger communities to draw from and may be more profitable types of income. We also realize that sex work may have been underreported due to the criminalization and stigma associated with it.

7.3 Personal Safety

Youth were asked eight questions about their personal safety. They included questions about whether or not they felt safe by themselves, with friends and when the police are around as well as if they feel safe where they are living right now. See figure 7.2 for reported feelings of safety in the previously mentioned situation. Youth were also asked if they had a safe place they went to when their safety was compromised. Seventy-four percent of youth had a place they went to feel safe, including home (23%), a friend's place (47%) and relatives (14%) as the main locations. Seven percent of the youth reported that they went to a secret place that only they know about. We also asked if youth had ever been physically attacked by someone they know or a stranger. Forty eight percent of youth had been attacked by a stranger and 69% had been attacked by someone they know.

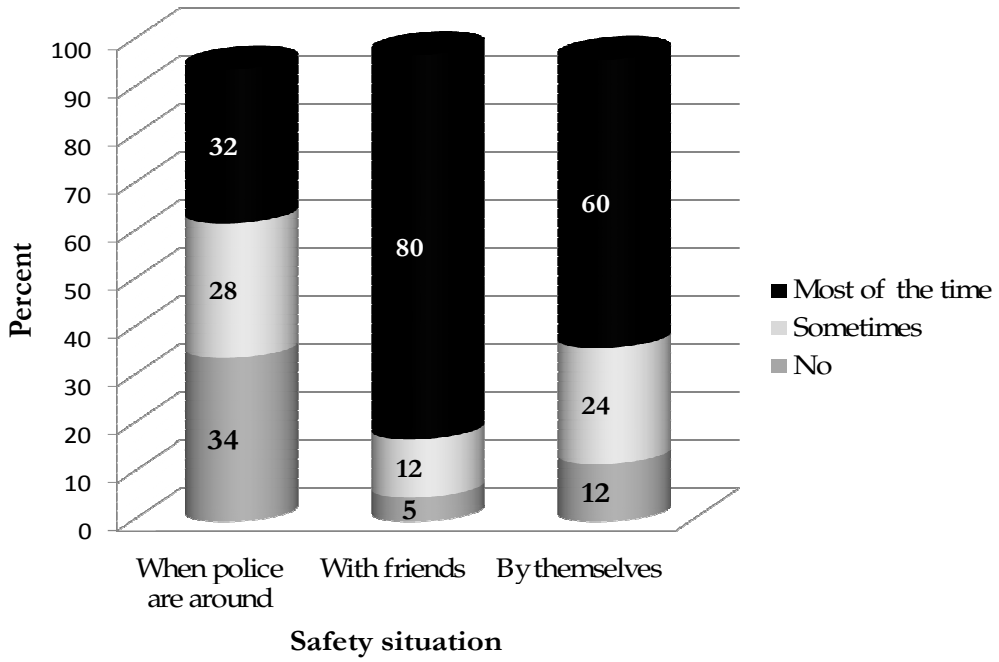


Figure 7.2: Personal safety as reported by Safe n□Sexy sample

7.4 Objective 1: To determine the basic level of HIV and STI knowledge homeless and street-involved youth have.

A) *Self-perceived condom use skills:*

We asked youth "Do you believe you know how to use a condom correctly?" with the optional responses of a) Yes, b) Yes, I think so, or c) I don't think so. (see question C13 in appendix B)
Ninety-four percent of participants reported "Yes" they know how to use condoms, 2% reported "Yes, I think so" and 4% said "I don't think so", although, participants were not required to demonstrate their skills. Overall, self-perceived condom-use skills were high and did not vary significantly by age, gender, homeless status, age of first homelessness, educational progress or location in the city (see table 7.2). One group who reported a trend towards less confidence in their condom-use skills were individuals who were couch surfing or living on the street (*df* 6, x^2 12.8730, p = 0.0451).

Table 7.2: Participants perceived knowledge of correct condom use techniques (N=96)

	Percent	Chi-square	p value
Age (years)			
<=18	97.83	2.7606	0.2515
19+	90.20		
Gender			
Male	92.86	1.5752	0.4549
Female	95.12		
Homeless Status			
Homeless	91.17	3.9222	0.1407
Street-involved	95.24		
Living Situation			
Couch surf/street	80.00	12.8730	0.0451
Relatives	95.65		
Shelter/foster home	100.0		
Own apartment/room	94.12		
Age of first homelessness			
Always stable	100.00	1.2188	0.8750
Unstable before 15	92.31		
Unstable after 15	94.75		
School enrollment			
Graduated high school	94.12	5.1913	0.2682
Still in school	97.78		
Not in school	88.57		
Location in Hamilton			
Downtown	91.55	2.342	0.3100
Mountain/other	100.00		

B) Level of knowledge of HIV and HIV transmission:

The final scale used to assess HIV knowledge was based on a 16-item scale. The 16 questions with the corresponding percent of youth who answered each question correctly can be found in table 8.3. The number of correct items were totaled and the score was dichotomized at the mean. The average score on the HIV knowledge-scale was 75% correct (12/16). The low score on the HIV scale was 5 and the high score was 16 (n=97, Mean 12.88, SD 1.88).

Table 7.3: HIV knowledge questions and percent of youth who answered correctly

HIV knowledge question	% of youth who answered correctly
A person can get HIV through tattooing if the needles are not disinfected.	96
You can get HIV by having unsafe sex with someone who has shared needles for using drugs.	96
You can HIV even if they have sex with another person only one time.	95
Sex with more than one partner increases the chance of being infected with HIV.	94
Only people who have sex with gay people get HIV.	94
A person can HIV even if they have unprotected sex with another person only one time.	93
You can usually tell if someone has HIV by looking at them.	93
Birth control pills protect a woman from getting HIV.	93
Pulling out the penis before the man climaxes keeps his partner from getting HIV during sex.	88
Condoms reduce the risk of getting HIV.	85
There is a cure for HIV.	74
A person can get HIV from oral sex.	73
You can get HIV from kissing someone who has HIV.	61
There is a vaccine available to keep a person from getting HIV.	57
Taking a test one week after having sex will tell a person if she or he has HIV.	52
If a person tests positive for HIV, then the test sit will have to tell his or her parents, or the adults they live with.	43

Table 7.4 Dichotomy of HIV knowledge score (n=97)

Variable	Knowledge Score <=11	Knowledge Score >=12	P value
	Percent (%)	Percent (%)	
Gender			0.3952
Male	21.4	78.6	
Female	14.6	85.4	
Age of first homelessness			0.3515
Always stable	15.4	84.6	
<15 years old	27.0	73.1	
>15 years old	14.0	86.0	
Age (years)			0.0700
<=18	26.1	73.9	
+19	11.8	88.2	
Homeless status			0.7054
Homeless	20.6	79.4	
Street involved	17.5	83.5	
Living situation			0.4468
Couch surf/street	26.7	73.3	
Relatives	26.1	73.9	
Apart/room rent	11.8	88.2	
Shelter/foster	16.0	84.0	
Education			0.3238
Still in school	22.2	77.8	
Graduated school	5.8	94.1	
Did not graduate	20.0	80.0	

There were six questions where HIV knowledge was lower than the other questions. These questions became the focus of the information we shared with service providers and youth at the Youth Service Fair and are an area of focus for future educational campaigns for the AIDS Network. In general, areas where youth did not excel in terms of HIV knowledge were relatively new information, for instance the HIV vaccine and rapid HIV testing or areas that HIV educators assume everyone already knows about (e.g., kissing and oral sex). The six questions where youth need to improve on are discussed in more detail below (see table 7.5).

Table 7.5: Questions with lowest scores on HIV Knowledge Scale

Variable	Tester will tell youth's parents	HIV test results one week post unsafe sex	HIV vaccine is available	Can get HIV from kissing	Can get HIV from oral sex	There is a cure for HIV
	p value	*p* value	*p* value	*p* value	*p* value	*p* value
Age	0.6361	0.1898	**0.0626**	0.4262	0.7103	0.4327
Living situation	0.4447	0.8518	0.8333	0.2021	0.1796	**0.0851**
Age of first unstable housing	0.6893	0.1296	0.5615	0.9010	0.1813	0.4024
Education	0.2222	0.2159	0.6094	0.7247	0.7511	0.5587
Gender	0.2432	0.6022	0.9489	0.2950	0.3588	0.3521
Location resides in city	**0.0439**	0.1259	0.8407	0.1804	**0.0468**	0.1242

Questions with lowest scores on HIV Knowledge Scale:

People who test positive for HIV have to tell their parents (F13): Forty-three percent of youth we interviewed knew that an individual's parents/guardians would not be contacted if they tested positive for HIV. Location where the youth lived was significantly associated with this question. Youth who live downtown (50%) were more likely to know that testers will not advise parents/guardians of a positive test result compared to their peers who live on the mountain/east end (23%).

Taking an HIV test one week after sex will have result (F10): Fifty-two percent of youth knew that there is a latency period after unprotected sex before HIV can be tested for. There was no difference in percent answering correctly across demographic characteristics. During the study, Rapid HIV testing was being piloted in a handful of the Hamilton Sexual-health clinics. Rapid testing does not require the one to two week turnaround to obtain results that the regular HIV test demanded, and has almost the same detection rate. However, the 12-week latency period after unprotected sex is required before taking the rapid test (S. Newmark, Public Health Nurse, personal communication,

February 25, 2010). In addition, it is not always the case that HIV can be detected at first test; it can take a couple of tests to detect HIV.

There is an HIV vaccine (F8): This question was answered correctly by 58% of youth. Age was significantly associated with this question. Youth who were 18 or younger were more likely to think that there was a vaccine for HIV (28%) than youth who were 19 or older (63%). Twenty-three youth reported "I don't know" to this question.

HIV from kissing (F5): While it may be common knowledge to many individuals that HIV cannot be contracted from kissing someone who has HIV, 38% of the youth we interviewed still thought it was possible. There were no differences by sociodemographic characteristics.

A person can get HIV from oral sex (F9): Seventy-three percent of youth got this question right. Age, living situation, gender, education and first experience of unstable housing were not statistically significant in determining who got this question right. The location the youth resides in the city did have a significant association with this question. Youth who lived on the mountain or in the east end were less likely to know that HIV can be transmitted via oral sex (65%) than youth who lived downtown (76%). Nine percent of youth who lived downtown answered "I don't know" to this question.

There is a cure for HIV (F1): Seventy-four percent of youth knew there is no cure for HIV. In the Canadian Youth, Sexual-health and HIV/AIDS Study, 56% of the sample got this question right (Council of Minister of Education, 2003). The type of housing youth were living in had a significant relationship with this question. Youth who were couch surfing or staying on the street were more likely to think there is a cure for HIV (40%) compared to youth who had their own apartment/lived with roommates (15%), in shelter (20%) or with relatives (22%).

When comparing the knowledge of street-involved youth with the general population, their level of knowledge is comparable and better in some areas than the general population. Five questions that were used in both the Safe n' Sexy survey and the Canadian Youth Sexual-health Survey are compared below. The Canadian Youth study was national study, completed with Grade 7, 9 and 11 students from all provinces and territories. For almost every question, youth interviewed for the

Safe n' Sexy project scored the same or higher than the general youth population on knowledge of HIV transmission, protection and treatment.

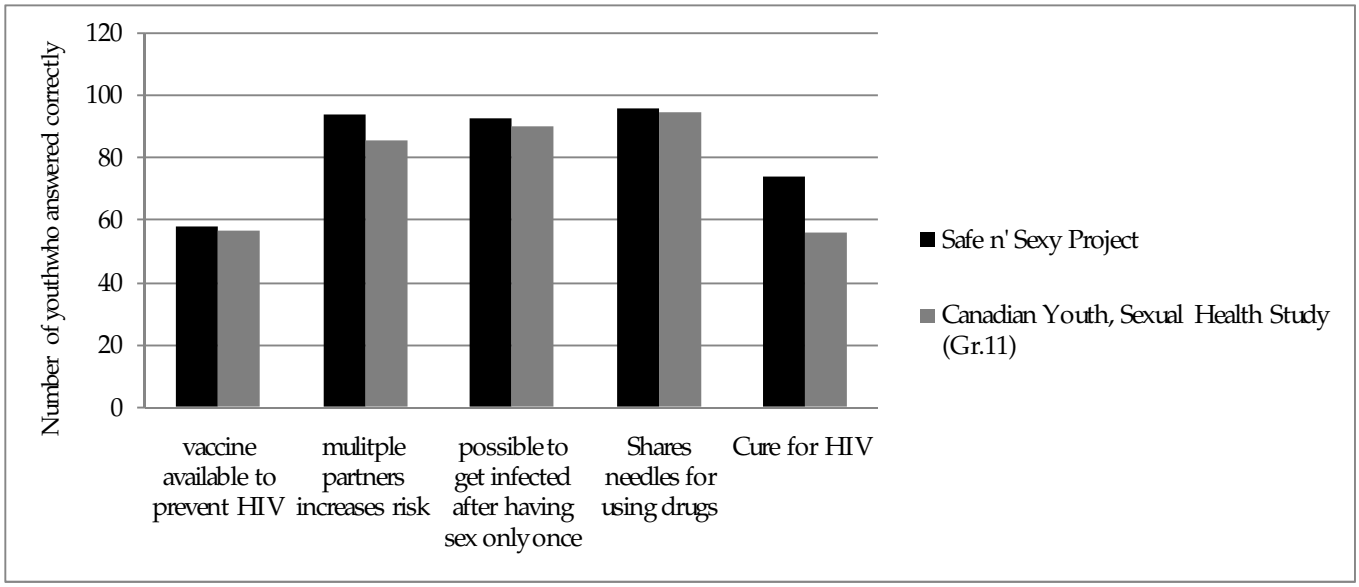


Figure 7.3: HIV knowledge: Safe n' Sexy Project compared to general youth population

The sample was not large enough to compare HIV knowledge and HIV diagnosis. However, our research team was prompted to ask the question, "Is HIV knowledge related to HIV testing?" Thirteen percent of youth who scored less than or equal to 11 correct questions had an HIV test; where as 87% of those who scored 12 or higher had been tested, however this was not a statistically significant difference (DF 2, x^2 3.912, p=0.1414).

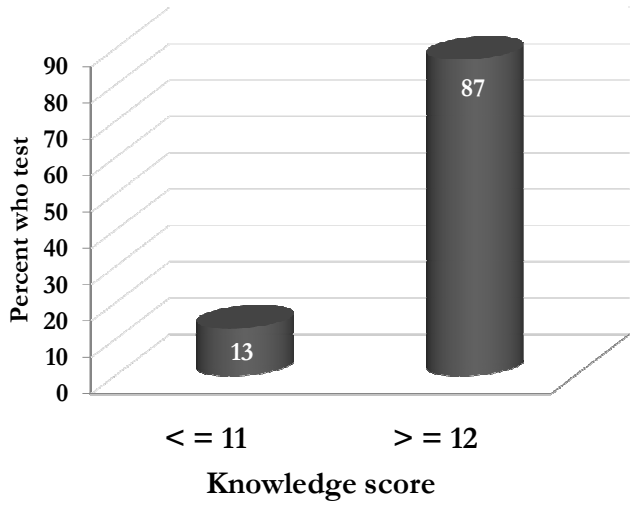


Figure 7.4: HIV knowledge versus HIV testing

***C) Level of knowledge of STI (self-perceived)*:**

All participants were asked whether or not they knew what a STI was. Their knowledge was self-perceived, it was not formally tested. Of the youth we interviewed, 95% indicated they knew what an STI was, with the remaining participants indicating they "think they know" or "do not know" what an STI is. Of youth who knew what an STI was (n=92), 81% reported never having an STI.

D) Level of knowledge of routine pap smear

We asked female participants, "In a routine Pap smear, which sexually transmitted infections do you think you get tested for?" The results were surprising, and overall, they had little idea of what they were being tested for. Over half, (54%) of the young women interviewed did not know that the main reason for a pap smear was to test for the Human Papillomavirus (HPV) (see table 7.6). Homeless status (p=0.4895), living situation (p=0.6103), educational progress (p=0.7557), age of first homelessness (p=0.5118) or location youth lived in the city (p=0.2777) were not statistically significant in determining if a females knew that HPV was tested for in a pap smear. One group who reported less confidence in knowing whether or not HPV was tested for in a routine pap were females under the age of 18 (24%) compared to young women 19 and over (72%) (*df* 2, x^2 10.6737, $p = 0.0048$).

Table 7.6 Knowledge of what pap smears test for, and other tests that can run concurrently

Test	Think get tested in Pap (%)	Is tested for by pap or with pap
HPV	46%	By pap
Gonorrhea	54%	With pap*
Chlamydia	53%	With pap*
Syphilis	41%	No
Herpes	38%	No
Pregnancy	12%	No
HIV	3%	No

*In the Hamilton public sexual-health clinics, both Gonorrhea and Chlamydia are tested for in addition to HPV.

E) Logistic regression modeling of correlates of low HIV knowledge

A logistic regression was conducted to determine multivariate correlates of low HIV knowledge. All hypothesized correlates of HIV knowledge with a p-value of 0.25 or lower in bivariate analyses were modeled according to the methods outlined in methods section 5.4.3. The small study sample size limited the power available to detect a significant finding; therefore, variables with a p value of 0.10 were retained in the final model, which is shown in Table 8.7. Youth who were 18 years old or

younger were more than three times as likely to have low HIV knowledge those who were older. Individuals who had experienced unstable housing before the age of 15 were almost three times more likely to have low HIV knowledge than youth who did not. Youth who lived on the mountain or in the east end were almost three and a half times more likely to have low HIV knowledge than those who lived living downtown. Finally, youth who had previously taken an HIV test had better HIV knowledge than youth who did not. The final model achieved a good measure of fit according to both measures examined; both c and the Hosmer Lemeshow p-value are close to 1.

Hypothesized variables that were not associated with low HIV knowledge at the bivariate level (at p<=0.25) and thus did not enter the regression modeling process were: living situations (staying with relatives, on a couch, in a shelter or in their own apartment were all used as individuals dummy variables), weekly binge drinking, not worrying about STIs, being somewhat worried about STIs, not worrying about HIV and being somewhat worried about HIV. Other variables that were eliminated from the model via backwards elimination included gender, education, STI testing, unplanned pregnancy, use of marijuana, and whether sexual-health information was obtained from sexual-health professionals or teachers. In particular, gender was not significant either individually or when tested in a number of interactions (gender by age, unplanned pregnancy, where the youth lived, and regular marijuana use). It was not necessary to stratify the analysis by gender or to retain gender in the final model. See table 7.7 for the final logistic regression model.

Table 7.7: Multivariate correlates of low HIV knowledge: Final logistic regression model (n=97)

	OR	(95% CL)	p-value
Variable			
Age			
18 or younger	3.251	(0.95 – 10.842)	0.0550
19 and over *(ref)*	1.00		
First experience of unstable housing			
Unstable housing before age 15	2.976	(0.875 – 10.123)	0.0808
No unstable housing before age 15 *(ref)*	1.00		
Location in the city youth is living			
Mountain or east end	3.444	(0.980 – 12. 106)	0.0538
Downtown *(ref)*	1.00		
HIV test taken			
Yes	0.301	(0.089 – 1.024)	0.0545
No *(ref)*	1.00		
Model Fit			
c=0.724			
Hosmer & Lemeshow Goodness of Fit p=0.6852			

7.5 Objective 2: To understand youth's knowledge of, access to, and use of sexual-health services.

A) Awareness of sexual-health services and services being accessed

Youth were asked various questions in regards to where they went for free condoms (questions D10, D11 and D12), HIV specific information (question F20) and STI/HIV testing (questions E2b, E6c). The responses for these questions were unprompted, requiring youth to know where they could go and advise the interviewer. Youth had a fairly good idea of where they could go for specific services. Details about where youth went for each service are further discussed below.

Free condoms

Seventy percent of youth accessed free condoms in the past year. Age (p=0.5059), gender (p=0.6884), homeless status (p=0.2707), educational progress (p=0.7638) and location youth lived in the city (p=0.8840) were not statistically significant in determining whether or not a youth had accessed free condoms. Youth who reported always having stable housing showed a trend towards increased likelihood of getting free condoms (92%), compared to 71% of youth who reported being homeless after 15 and 57% of youth who reported homelessness before the age of 15. Of this group 92% had accessed free condoms in the past year (DF 2, x^2 4.7781, p=0.0917). For the most part, youth accessed condoms where they lived. Figure 7.5 shows where youth went for condoms.

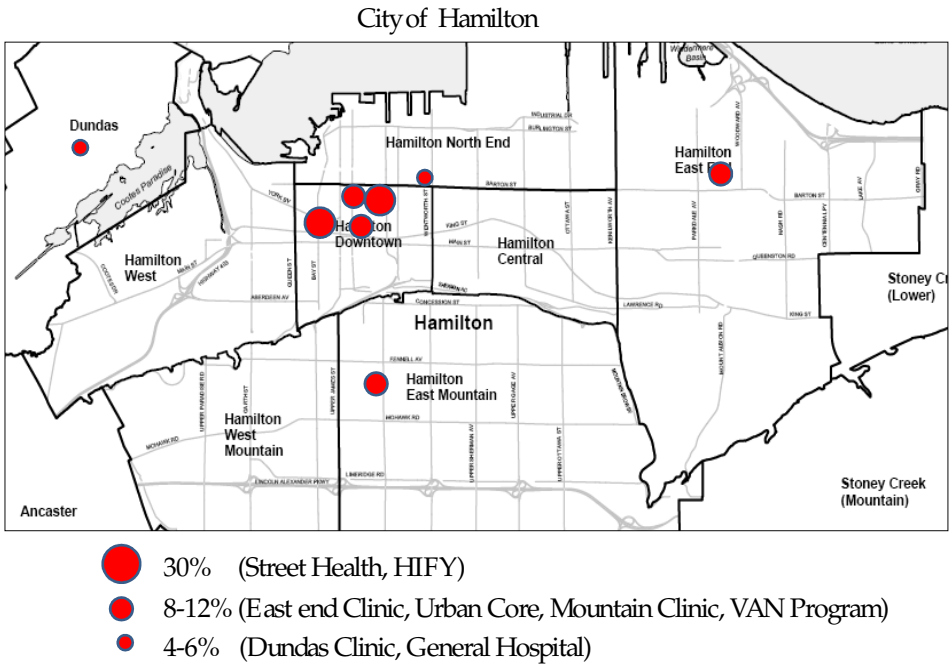


Figure 7.5: Locations youth are accessing free condoms

Sexual-health information and care

Collectively, Hamilton's Public Health sexual-health clinics[1] were the main service youth accessed for sexual-health information (52%), followed by Hamilton's only youth-specific sexual-health clinic, Health Initiatives for Youth (HIFY) (26%), the anonymous sexual-health phone line (9%), the VAN Outreach Program and/or AIDS Network (8%) and shelters (5%). Of the 97 youth interviewed, 68% of them had not accessed a social service for sexual-health issues in the past year. Males (46%) did access the Street Health Centre for sexual-health services more frequently than their female peers (17%). (DF 2, x^2 3.9375, p=0.0472). The Toronto Teen Survey found the most accessed services for youth they interviewed were family physicians (16%) and sexual-health clinics (6%), and 13% had accessed multiple sites (Flicker et al., 2009).

STI test access

Seventy-five percent of youth had tested for an STI in their lifetime. Family doctors were the main source youth accessed for STI testing, followed by Public Health sexual-health clinics and Health Initiatives for Youth (see Table 8.8). Eight percent of youth tested for an STI in jail. Insight from youth suggests that testing in jail is done out of opportunity to have a break from the ward, and represents a test done that would likely not have happened as the result of personal initiative outside of prison. Age (p=0.3034), first experience of unstable housing (p=0.2304), living situation (p=0.1925), educational level (p=0.2261), location youth lived in the city (p=0.7160) were not significantly associated in determining where youth had been tested. Females (57%) were more likely than their male peers (32%) to access a family doctor for an STI test (*df* 10, x2 = 17.6025, p=0.0621).

Table 7.8: Location where youth go for STI testing (N=73)

Location	N (%)[a]
Family Doctor	32 (44)
Public health clinics	10 (14)
Health Initiatives for Youth	9 (12)
Jail/Prison	6 (8)
Walk in Clinics	6 (8)
Maternity Centre	4 (5)
Hospital	2 (3)
Aboriginal Health Centre	1 (1)
Not in Hamilton	1 (1)

[1]Public Health sexual-health clinics included in the questionnaire were Street Health, the Mountain Clinic, East End Clinic and Dundas Sexual-health Clinic (four in total). * Percents were rounded and may not add to 100.

HIV test access

Sixty-three percent of youth reported testing for HIV in their lifetime with 84% of youth reporting HIV testing in the past year (since July 2008). Youth tested for HIV in similar locations to where they tested for STIs. Family doctors were most frequently accessed (36%), followed by the city's Public Health Sexual-health Clinics (15%) and prison (9%). Demographic variables were not significant in determining where youth went to be tested for HIV. To see the full list of where youth are testing for HIV, see table 8.9.

Table 7.9: Services accessed for HIV testing (N=61)

Location	N (%)[a]
Family Doctor	22 (36)
Sexual-health Clinics	9 (15)
Jail/Prison	6 (10)
Health Initiatives for Youth	6 (10)
Hospital / Medical Lab	6 (10)
Walk In Clinic	4 (7)
Not in Hamilton	3 (5)
Aboriginal Health Centre	1 (1)
Do not remember	3 (5)

[a] Percents were rounded and may not add to 100%.

Emergency contraception access

Youth who had indicated that they had used emergency contraception were asked where they obtained it. Emergency contraception is widely available in Hamilton and individuals who find themselves in need of it can get it from commercial locations (e.g., Shoppers Drug Mart) in addition to social service and health agencies. Of the 11 individuals who could remember where they got emergency contraception from, five went to a pharmacy, four accessed one of the sexual-health clinics; two received it from Health Initiatives for Youth, and two from locations outside of Hamilton.

HIV/AIDS specific service access

Twenty-four youth (25%) had accessed a social service agency for HIV-specific information. Sexual-health clinics were the main location reported (38%), followed by Health Initiatives for Youth (16%), the Hamilton General STI Clinic (16%) and the AIDS Network (8%). Other sources youth sought out were family doctors (12%), hospitals (8%), walk-in clinics (4%) and school (4%).

Youth who had accessed an agency for HIV-specific information were more likely to access free condoms (96%) than youth who had not accessed HIV-specific information (61%) (*df* 1, x^2= 9.9126, p=0.0016). All of the youth who did not access HIV-specific information also did not have a STI test (100%), compared to 33% of youth who reported having an STI test and accessed HIV-specific information (*df* 2, x^2 =10.4845, p=0.0053).

B) Why sexual-health services are not being accessed

Youth who reported accessing no sexual-health services were asked, "Can you tell me why you haven't accessed any sexual-health services?" Responses were open-ended. The main reasons youth identified for not accessing services are in table 7.10. Age (p=0.4582), gender (p=0.6926), age of first unstable housing (p=0.7316), and educational progress (p=0.5140) were not significantly associated with service access. However, in terms of living situation, youth who were couch surfing were significantly less likely to access sexual-health services (13%), than youth who rented their own apartment/room (21%), lived with relatives (43%) or in shelter (48%), (*df* 3, x^2 8.7765; p=0.0324).

Individuals who accessed sexual-health services were more likely to have accessed free condoms in the past year (p=0.0074), marginally more likely to have used emergency contraception (p=0.0604), and have gone for an STI test (p=0.0307).

Table 7.10: Reasons provided by youth for not accessing sexual-health services (N=66)

Reason	N (%)
I have no need/know enough already	41 (62)
I go to my family doctor	6 (9)
I do not care, not concerned	4 (6)
Newer to the area and not familiar with services (but	4 (6)
Not familiar with services	3 (5)
Have the information already	3 (5)
Other	5 (8)

C) Prevalence of STI testing

Sexually transmitted infection testing rates were relatively high, with 75% of the youth having been tested, and 97% of youth retrieving their test results. Comparisons could not be made to ESYS, as that study does not measure STI and HIV testing rates because youth who are surveyed undergo these tests as part of the study procedure and not on their own initiative per say.

Individuals 19 or older (86%) are more likely to have an STI test than youth 18 and under (63%) (p=0.0249); individuals who experienced homelessness after the age of 15 (64%) were less likely to have an STI test than youth who experienced homelessness before 15 (88%) and youth who were always stable (92%) (p=0.0206); and individuals who live down town (69%) are less likely to report having an STI test than youth who live on the mountain or east end (92%) (p=0.0238); see table 8.9. Living situation (p=.1333), educational progress (p=0.7064) and gender (p=0.1078) were not significantly associated with likelihood of having an STI test. No demographic variables were significant in determining which youth retrieved their test results.

D) Prevalence of HIV testing

Sixty-three percent of youth report having an HIV test. We did not ask specifically if youth had retrieved their HIV test results, but we did inquire as to whether or not youth knew the results of their last HIV test. Ninety-one percent of youth who had tested reported the results of their HIV test to us. Demographic variables were not significantly associated with determining which youth tested for HIV (see table 7.11). Sixty youth (62%) tested for both STIs and HIV.

After removing youth who had been tested in prison and youth who reported a pregnancy, the testing rate was still high at 50%. Insight from youth suggests that youth who get tested in prison may get tested out of convenience or for something to do, and represent tests that may not have happened if the youth were no incarcerated. Similarly, individuals who become pregnant are often tested for all STIs and HIV as part of preliminary screening, and also represent tests that may not have happened the women were not pregnant.

Table 7.11: Characteristics of STI and HIV testing

Demographic Variable	Percent who test for STI (n=73)	P-value	Percent who test for HIV (n=61)	P-value
Age		0.0249		0.4619
Under 18	63		57	
19 and over	86		68	
Gender		0.1078		0.2421
Male	68		57	
Female	85		70	
Education		0.7064		0.9380
Still in school	71		60	
Graduated high school	88		65	
Did not finish high school	74		66	
First unstable housing		0.0206		0.1622
Unstable before 15	88		73	
Unstable after 15	65		54	
Always stable	92		85	
Living Situation		0.1333		0.2113
Couch surfing/living on street	80		66	
Relatives	83		61	
Rent own room/apartment	70		56	
Location youth lives in the city		0.0238		0.1226
Downtown	69		58	
Upper/Other	92		77	

E) Multivariate correlates of non-use of sexual-health services

A logistic regression was conducted to determine multivariate correlates of non-use of sexual-health services. All hypothesized correlates of non-use of sexual-health service with a p-value of 0.25 or lower in bivariate analyses were modeled according to the methods outlined in methods section 5.4.3. The small study sample size (=97) limited the power available to detect a significant finding; therefore, variables with a p value of 0.10 were retained in the final model, which is shown in Table 7.12. Youth who were under the age of 19, were currently living on someone's couch, and who did not have a valid health card were less likely to use sexual-health services offered in Hamilton. Further, youth who had experienced an unplanned pregnancy were about 60% less likely to not use a sexual-health service. Or, more clearly, those who had experienced an unplanned pregnancy were using services; however, it is possible that they began using the services when the pregnancy occurred, rather than before conception; the current analysis is unable to distinguish between the

two. Goodness-of-fit tests are split on this model; while c indicates a strong fit, the Hosmer Lemeshow test indicates an adequate but not strong fit ($p>0.05$ but not approaching 1).

Hypothesized variables that were not associated with non-use of services at the bivariate level (at $p<=0.25$) and thus did not enter the regression modeling process were: being homeless, being street involved, not worrying about HIV, having some worry about HIV, being in a loving relationship, receiving sexual-health information from a teacher, receiving sexual-health information from parents and receiving sexual-health information from the internet. Other variables were eliminated from the model via backwards elimination, they included: gender, education, experiencing unstable housing before 15, the location youth live in, having a valid health card, receiving sexual-health information from friends, peers or siblings and daily tobacco use. Similar to objective one, gender was not significant on its own or when tested in interactions (gender by age and unplanned pregnancy). As these were the only variables that demonstrated potential gender confounding or moderation, it was not necessary to stratify the analysis by gender. There was no reason to retain gender in the final model.

Table 7.12: Logistic regression model for non-use of sexual-health services

Variable	OR	(95% CL)	P value
Age			
18 years or younger	2.933	(0.954 – 9.018)	0.0604
19 years or older *(ref)*	1.00		
Where youth are staying			
In shelter	0.171	(0.044 – 0.663)	0.0106
With relatives	0.156	(0.038 – 0.645)	0.0103
On couch	2.981	(0.428 – 20.764)	0.2701
Own apartment *(ref)*	1.00		
Experience of an unplanned Pregnancy			
Yes	0.389	(0.144 – 1.047)	0.0616
No *(ref)*	1.00		
Had a valid health card			
No	4.580	(1.109 – 18.912)	0.0355
Yes *(ref)*	1.00		
Model Fit			
c=0.770			
Hosmer & Lemeshow Goodness of Fit test p=0.1215			

7.6 Objective Three: To explore where and from youth would like to get (and would feel comfortable getting), accurate sexual-health information and appropriate care.

A) Sources of information

Youth were asked who they get their sexual-health information from, and who would they like to get their sexual-health information from. We asked youth two questions: "Who do you get your sexual-health information from?", followed by "Who would you like to get your sexual-health information from?". In general youth were getting information from the people they wanted to get it from. Figure 7.6 identifies the main sources youth went to and would prefer to get their sexual-health information from. Siblings (38%), teachers (38%) and social workers (33%) were less preferred sources for youth to get information.

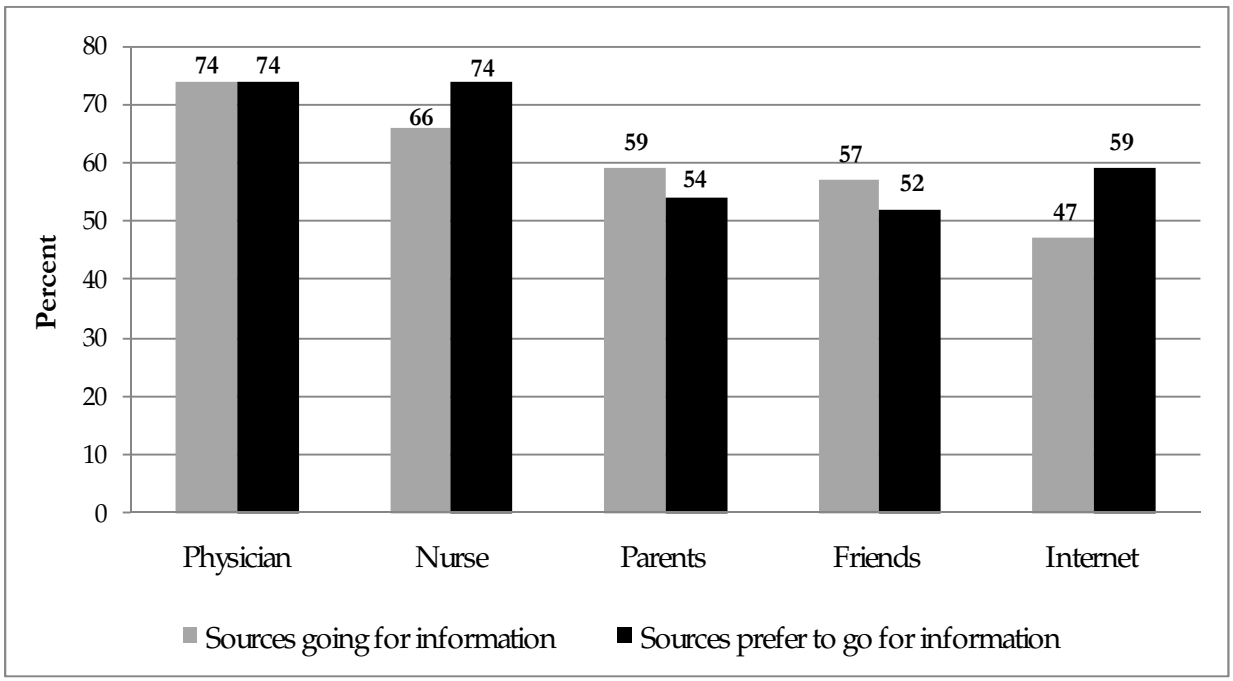


Figure 7.6: Current and preferred sources of sexual-health information reported by youth

B) Whether youth trust information they receive from friends as accurate

Fifty-five youth (57%) reported getting sexual-health information from their friends. The majority of youth we spoke with (59%) did not think that the sexual-health information they received from friends was a reliable source of information; while 26% thought their friends' information was 'somewhat' reliable and 15% answered "Yes" – information from friends is reliable. Age (p=0.8554), gender (p-0.4974), living situation (p=0.3991), educational progress (p=0.8323) and age of first unstable housing (p=0.4115) and location youth lived in the city (p=0.4947) were not significant in

determining which youth thought information from their friends was reliable. However, youth who thought information from their friends was reliable were less likely to have had an HIV test (18%) than those youth who did not (54%) (*df* 4, x^2 =9.2866, *p*=0.0543).

C) Ability to confide in someone about sexual-health issues

Overall, most youth reported they were able to speak with friends, partners (girlfriends/boyfriends) and parents or adults they live with about various sexual-health topics. Table 8.12 shows the frequencies of who youth felt they could talk with about various topics. On average, youth felt most comfortable talking with their partners, followed by friends and were least comfortable talking about sexual-health issues with parents and guardians.

Females (100%) were more likely than males (93%) to talk to their peers about sex (*df*=1, x^2=3.0545, p=0.0805); more likely to talk about STIs (93%) than males (73%) (*df* 2, x^2 6.1924, p=0.0452) and more likely to talk about HIV (95%) than males (70%) (*df* 2, x^2=9.9859, p=0.0068). Demographic variables were not significant in determining whether or not youth could talk with their partners, partners or adults they live with about sexual-health topics.

Table 7.13: Individuals youth feel comfortable talking with about sexual-health topics*

Item	Friends (%)	Boyfriend/Girlfriend (%)	Parents/Adults (%)
Sex	96	97	61
STIs	81	94	62
HIV	80	93	63
Condoms	*	96	64
Pregnancy	*	95	70

* We did not ask youth if they could talk about condom use or pregnancy with their friends.
* Response rates varied between 95 and 97 for these questions.

D) HIV-specific information and preferred sources for HIV-specific information

The main places youth preferred to go for HIV-specific information were the Street Health Centre (31%), followed by Health Initiatives for Youth (21%), the AIDS Network/Van program (19%), the East End Sexual-health Clinic (15%) and the Sexual-health Phone Line (14%).

We asked youth "In the future, which social service agencies would you go to for HIV/AIDS information specifically?". The preferred locations youth identified were the Street Health Centre

(31%), Health Initiatives for Youth (21%), the AIDS Network / VAN Program (19%), the East End Sexual-health Clinic (15%) and the Sexual-health Phone Line (14%). Males (38%) were less likely than their females peers (63%) to prefer the AIDS Network as a source for HIV specific information (*df* 1, x^2=3.2645, p=0.0708). Youth who were less than 18 years of age (0%) were less likely than youth 19 and older (100%) to prefer HIV specific information from the VAN Program (*df* 1, x^2=3.8675, p=0.0492). This finding is not surprising as the VAN Program traditionally does outreach to individuals living in the adult shelter system, who are using injection drugs, as well as individuals involved in sex work. The youth shelters in Hamilton are managed by faith-based organizations who do not support harm reduction programs such as the Van in their centers, limiting the access of the VAN program to youth who need it. The average age of a van client in 2009 was 35 years (S. Newmark, RN, personal communication, January 13, 2010).

7.7 Objective Four: To determine whether peer education is a useful method of transmitting sexual-health information to youth.

A) Experience with peer education and peer mentorship

Peer education was well received by the youth we spoke with. We read a short explanation of what peer education was ('Peer education is a form of education, where young people from a similar age group, background, culture and/or social status educate and inform each other about a wide variety of issues, for example safer sex') and then asked youth, "Have you ever heard of peer education or mentorship before?"

Ninety-two percent of the youth thought peer education was a good method for teaching young people about sexual-health. Youth who experienced their first unstable housing experience after the age of 15 (87%) were less likely than youth who have never experienced unstable housing (100%) and youth who experienced unstable housing before the age of 15 (100%) to think that peer education was a good method for teaching young people about sexual-health (*df*=2, x^2=5.0969, p=0.0782). Males were also less likely (88%) than females (98%) to think that peer education is a good method of teaching sexual-health to youth (*df*=1, x^2=2.8118, p=0.0936).

Over half of the youth (51%) had heard of peer mentorship and 37% had previous participation in some form of peer education/mentorship. Age (p=0.3110), gender (p=0.9760), age of first unstable

housing (p=0.9399), educational progress (p=0.1829) and living situation (p=0.3116) were not statistically significant in determining which youth had heard of peer education.

The demographic variables age (p=0.3612), living situation (0.7354), educational progress (p=0.2147), age of first unstable housing (p=0.7550) and location in the city the youth lives (p=0.8887) were not significantly associated with previous participation in peer education.

When comparing previous participation in peer education with measures of personal risk, individuals who had participated in peer education programs in the past were less likely (32%) to have a knowledge score of 12 or higher than those who had not (68%) (*df* 1, x^2=2.7530, p=0.0971). Youth who were "very worried" about getting an STI (0%) were less likely to have participated in peer education than youth who were 'somewhat' (59%) or 'not at all' (33%) worried about getting an STI (*df* 2, x^2=7.7171, p=0.0211). Youth who had participated in a peer education program were less likely to report an STI (0%) than youth who did participate in a peer education program (100%) (*df* 1, x^2=0.0794, p=0.0794). Among youth we interviewed, no youth who had previously participated in a peer education program had been told that they had a sexually transmitted infection. Variables not significantly associated with previous participation in peer education programs were being worried about getting pregnant (p=0.7229), have been pregnant (p=0.3582) and are worried about getting HIV (p=0.1171).

B) Ideal circumstances for peer education

Program lengths for sexual-health peer education programs vary. Programs can be as short as three weeks (Stephenson et al., 2004), to five months (Brieger et al., 2001) and as lengthy as 18 months (Speizer et al., 2001). On average, peer education programs meet at a minimum on a weekly basis for two hours or less and give out incentives; (Aarons et al., 2002; Agha & Van Rossern, 2004; Stephenson et al., 2004, Borgia et al., 2001). We wanted to get an idea of how long youth would be willing to participate in a sexual-health peer education program.

Individual session length

Youth were asked, "If you were going to participate in a peer education workshop, how many hours would you be willing to go if you did not get anything / got something for participating?" Without receiving an incentive, 23% of youth said they would not attend at all. A plurality of youth (40%)

indicated they would attend for 2 hours or less, 9% said they would attend for 4 hours or less, 12% would attend for half a day, and 16% indicated they would attend for a full day if they did not receive an incentive.

When an incentive was included in the option of attending a peer education program, only 4% said they would not attend at all. Twenty-two percent would attend for 2 hours or less, 23% of youth would prefer to attend 4 hours or less, 15% indicated they would attend for a half day, and most youth would attend for at least one day (35%). See table 7.14.

A MacNemar x^2 showed that incentives are significantly associated with how long youth are willing to attend a peer education program. Youth were willing to participate for longer sessions if an incentive was offered (Test of symmetry=53.33, SK=0.2593, ASE=0.0577, CI_{95} 0.1463-0.3724).

Table 7.14: Hours youth are willing to attend for peer education program (n=95)

Hours for each session	No incentive (%)	With incentive (%)
Would not participate	23	4
2 hours or less	40	22
4 hours or less	9	23
Half day	12	15
One day (weekend)	16	35

Program length in its entirety

Similar to the question above, youth were asked how many weeks they would attend a peer education program, without an incentive and then with an incentive. Sixteen youth (5%) said that that they would not go to a peer education program at all if there were no incentive. Without receiving an incentive, nine youth said they attend a peer education program for less than four weeks; 32 would attend for four weeks, seven youth preferred six weeks, five youth would attend for eight weeks and ten youth would go for ten weeks.

Youth were more willing to attend for longer if an incentive was provided. When an incentive was an option, no youth said they would not attend and the majority of youth (34%) said they would attend for twelve weeks. The second most popular choice was four weeks (27%), with 17% of youth choosing six weeks (17%), and (9%) opting for eight weeks. Four youth also identified that they

would attend a peer education program for "as long as they want me to" if there was an incentive involved (refer to table 7.15).

A MacNemar x^2 showed that incentives were also important for determining how many weeks' youth are willing to go. When an incentive is involved, youth were willing to attend for more weeks (Test of symmetry=41.83, SK 0.3879, ASE=0.0600, CI_{95} 0.2702 – 0.5055).

Table 7.15: Number of weeks youth are willing to participate in peer education (n=86)

Number of weeks	No incentive (%)	With incentive (%)
Would not attend	18	0
4 weeks	37	27
6 weeks	8	17
8 weeks	6	9
12 weeks	12	34
As long as they want me to	0	5

Time of Day

About one third of youth (36%) identified 'after school' as the ideal time for a peer education session to be held, with 29% suggesting during the day, 19% suggesting evenings, and 9% wanting weekend peer education groups. Youth who preferred that a peer education program took place after school lived on the mountain (58%) compared to youth who lived downtown (28%) (*df* 4, x^2=8.3211, p=0.0805). Youth who were still in school (54%) preferred after school peer-education programs compared to youth who were not in school (25%) and individuals who had graduated from high school (13%) (*df* 8, x2=16.8011, p=0.0322). Females (48%) were also more likely to prefer after school peer education programs than males (27%) (*df* 4, x^2=10.5631, p=0.0319).

Incentives

Incentives appear to be an important aspect in encouraging youth to attend a peer education program. We created a list of possible incentives and asked youth which incentive was *appealing* enough to encourage them to attend. The least popular forms of incentives were to fulfill a Children's Aid Society request (33%), to fulfill a probation requirement (52%) and 'gives me a place

to go and something to do' (54%). Bus tickets and food were the most popular choice for an incentive (78%), followed by receiving a high school credit (77%), getting paid for participation (74%) and learning new skills was enough of an incentive for 72% of youth.

Youth who have always had stable housing (46%) were less likely than their peers who experienced unstable housing before the age of 15 (80%) and youth who experienced unstable housing after the age of 15 (77%) to suggest getting paid as an incentive (*df* 4, x^2=7.9479, p=0.0935). Males (76%) were more likely than females (70%) to indicate that fulfilling a probation order was an appealing incentive (*df* 2, x^2=5.5602, p=0.0620). Males (62%) are also more likely than females (44%) to suggest that a peer education program would 'give them somewhere to go and something to do' (*df* 2, x^2=5.3767, p=0.0608). Age, living situation and educational progress were not significantly correlated in determining which incentives were preferred. See figure 7.7.

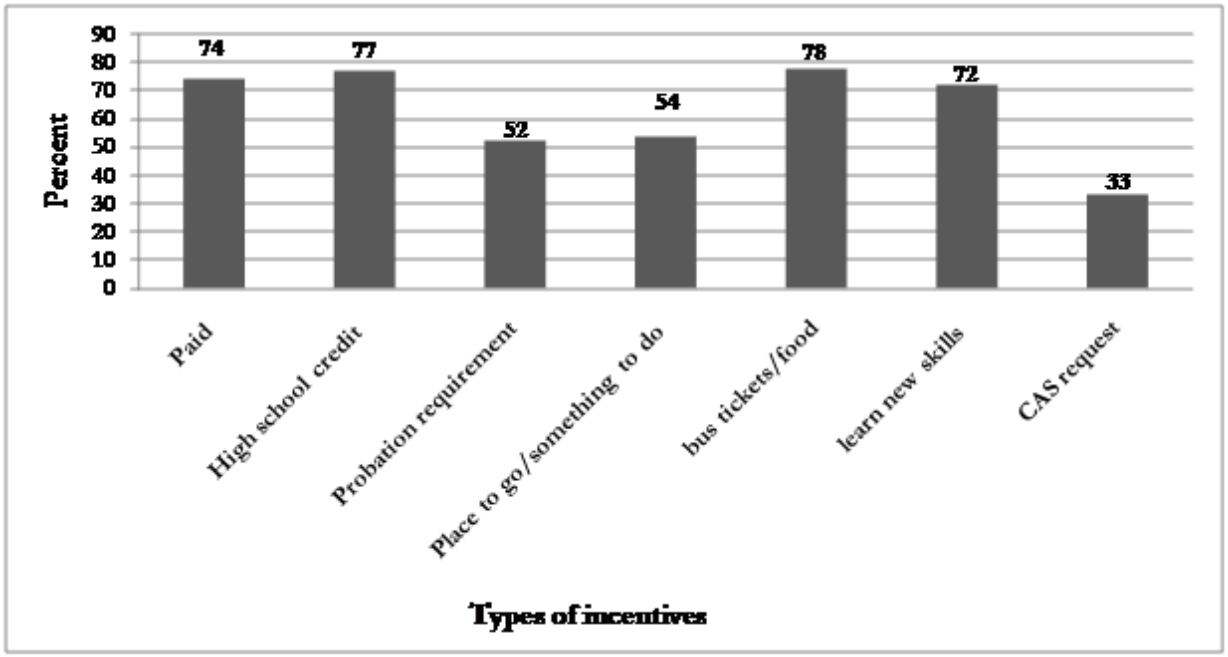


Figure 7.7: Types of incentives for participation in peer education (n=96)

Table 7.16: Preferred locations for a peer education program (n=92)

Location	Definitely (%)	Probably (%)	Possibly (%)	Not at all (%)
School	23	27	16	34
Elizabeth Fry	26	13	26	36
John Howard	26	30	15	28
Shelter	18	22	25	35
AIDS Network	18	17	20	45
HIFY	23	12	23	42
SACHA	17	7	24	47
Aboriginal Health Centre	11	8	19	63
The Well	7	2	16	75

C) Preferred information from peers

Youth were asked if they would prefer to go to friends, peer mentors or social services for information on various sexual-health topics. The preferred source of information for all topics we asked about was social services. This finding is consistent with the Toronto Teen Survey which found that for the most part, when youth had sexual-health questions, they wanted them answered by professionals instead of friends (48% of males and 36% of males) (Flicker et al., 2009). The main topics youth wanted information about from social services were HIV treatment (82%), pregnancy testing (82%), STI Treatment information (81%), health insurance (79%), pap smears (77%), coping with an HIV positive partner (76%) and anonymous HIV testing (73%). Getting information on the topic of healthy relationships was more evenly split between friends (36%), peers (36%) and social services (54%) (see Table 7.17).

There was a gender difference in determining who went to their peers for information. Males were more likely than females to go to their peers for pregnancy options (p=0.0082), HIV treatment information (p=0.0561), coping with an HIV positive partner (p=0.0979) and safer-sex work information (p=0.0511).

Of youth who preferred to access their friends for some types of information, individuals who were 19 and over were more likely than youth under the age of 18 to go to friends for information on health insurance (p=0.0605) and safer sex information (p=0.0538). Individuals who completed high school were less likely to access friends for information on coping with an HIV positive partner than individuals who were still in school or not in school (p=0.0445), and less likely to access friends for

safer sex information (p=0.0445). Youth who experienced unstable housing after the age of 15 were less likely to access friends for information about counseling than youth who were homeless before the age of 15 (p=0.0918).

Table 7.17: Preferred sources of information for sexual-health information

Topic	Source (%)		
	Social	Peer	Friend
HIV Treatment	82	19	5
Pregnancy testing	82	18	2
STI treatment	82	23	2
Health insurance	79	25	8
Pap smears	77	15	6
Coping with an HIV positive partner	76	24	17
Anonymous HIV testing	73	16	11
Healthy relationships	54	36	36

Services and information youth want:

We asked youth an open-ended question; "What kinds of programs would you like to see targeting youth about sexual-health?" Youth supplied our interviewers with many suggestions. Comments were separated into topic categories to determine common topics youth wanted more information on. Common themes brought up by youth were:

Information on Sexually Transmitted Infections:

Comments received from youth suggested they wanted more information on what sexually transmitted infections are, symptoms of STIs, how to protect themselves from STIs, how STIs are tested and treated, and what gets tested for in pap smears. Youth know they should be going to get tested, and most of the youth interviewed have been tested (75%), however they are less confident in their understanding of the symptoms and treatment of STIs.

Sex education early on in the school system:

There were numerous comments from youth suggesting that sex education should be taught in the school system at an earlier age, and then continuously throughout high school. One youth commented "The last time I had sex ed was Grade 7 – I need more updates". Another youth said "Sex ed is currently in school is out of date". Components of sexual-health are taught in school, however the topic is uncomfortable for some teachers to go over with students and they may not

have the experience or knowledge of how to discuss high level sexual-health questions with youth who have questions.

Youth specific and female specific services:

Youth expressed an interest in accessing youth only programs, clinics and receiving youth specific education. Currently, there is one youth specific sexual-health clinic in Hamilton, (Health Initiatives for Youth); however, due to recent funding cuts, its services are centered around clinic specific services and no longer able to support groups, counseling and non-clinical support, such as advice on healthy relationships. One individual offered the comment, "[We need] a girls group that discusses anything and everything". Youth also expressed a need for staff working in youth serving organizations to be "people we can relate to and feel comfortable talking to".

Condom use and access:

Youth also discussed stressing the importance of condom use, better information about where to get free condoms and wider distribution of free condoms. For the most part, youth we spoke with had gotten free condoms in Hamilton in the past year (70%). Free condoms are available in many locations across Hamilton, however limited youth-specific locations, in particular residential facilities that are faith-based.

7.8 Objective Five: To assess the sexual risk level of youth.

A) Sexual partner type

Regular sex partner

Regular sex partners were defined as someone a youth had sex with more than once who they may or may not be in a relationship with. Of the youth we interviewed, 63 reported having sexual intercourse with a regular sex partner in the past three months. Age ($p=0.8537$), educational progress ($p=0.1629$), gender ($p=0.4300$) and location the youth lived in the city (0.6847) were not significantly associated with sexual intercourse with a regular sex partner in the past three months. Youth who were living in shelter or foster homes were marginally less likely than youth living in other types of housing to have sex with a regular sex partner, however the difference was not significant ($p=0.0248$). Youth who had their first experience of unstable housing after 15 years of

age were more likely to have sex with a regular sex partner in the past three months (75%) than youth who experienced unstable housing before 15 years of age (52%), and youth who had never experienced unstable housing (69%), (p=0.0551).

Casual partner (hook up)

Youth were asked if they had sex with a hook up (casual partner), which was defined as someone who youth had sex with once. Thirty-four (37%) youth reported having sex with a hook up in the past three months. Again, demographic variables were not significantly associated with sex with a hook up in the past three months; age (p=0.4462), gender (p=0.0103), living situation (p-0.5254), first unstable housing (p=0.2036), educational progress (p=0.8802), location youth lives in the city (p=0.1505).

B) Consistency of condom use

Confidence in regular sex partner using condoms

Youth were asked if they thought they could get a regular sex partner to use a condom. Most youth were confident that they could get a regular sex partner to use a condom (86%, n=78); 9% said they did not think they could get a regular sex partner to use a condom, and 5% were not sure. Age, living situation, first experience of unstable housing, education and gender were not significant in determining which youth thought they could get a regular sex partner to use a condom.

Condom use with regular sex partners in past three months

The location where youth lived in the city was significantly associated with consistency of condom use with a regular sex partner. Youth who do not live downtown are less likely to use a condom with a regular sex partner (63% report never/rarely using a condom) (p=0.0779). Age (p=0.1239), living situation (p=0.1080), educational progress (p=0.2950), first experience of unstable housing (0.3220) and gender (p=0.1220) were not significantly associated. Youth who have not gotten free condoms in the past year were less likely to have used condoms with regular sex partners (p=0.0042).

Condom use with regular sex partners in the past year

Youth were asked about their condom use with regular sex partners within the past year to capture those youth who did not have a recent regular sex partner but were involved with a regular partner in the past year. Seventy-one youth reported having sex without a condom with a regular sex partner

in the past year. Living situation (p=0.2918), first experience of unstable housing (p=0.3512), gender (p=0.7700) and location where youth live in the city (p=0.3367) were not significantly associated with sex without a condom with a regular sex partner in the previous twelve months.

Being 19 years or older (92%) was significantly associated with having sex without a condom with a regular sex partner compared to 62% of youth 18 and under (p=0.0006). Youth who had not graduated high school (94%) were more likely to have sex without a condom with a regular sex partner in the past year than youth who were still enrolled in school (67%) or had graduated high school (76%) (p=0.0275).

Condom use with hook up in the past three months

Thirty-four youth (35%) reported having sex with a hook up in the past three months. Of those youth, 56% used a condom every time, 29% used a condom some of the time and 15% used a condom rarely or never. Demographic variables were not significantly associated in determining which youth were more / less likely to use a condom with a hook up in the past three months (see table 7.18).

Youth who were able to talk with a boyfriend/girlfriend about condoms (100%) were more likely to use a condom every time with a hook up in the past three months than youth who were not confident that they could talk with a sexual partner about using condoms (0%) (p=0.0504).

Condom use with hook up in the past year

Twenty-one youth (23%) reported having sex without a condom with a hook up in the past year. Age, living situation, education, first experience of unstable housing, gender and location youth live in the city were not significantly associated with determining which youth were more/less likely to use a condom with a hook up in the past year (see Table 8.17).

Table 7.18: Condom use past three months and past year with regular & casual sex partners

Variable	Regular sex partner past 3 months	Regular sex partner past year (n=91)	Hook up past three months (n=34)	Hook up in past year (n=21)
Age	0.1239	0.0006	0.3242	0.7780
Gender	0.1220	0.7700	0.6415	0.3808
Education	0.2950	0.0275	0.5912	0.8303
First experience of unstable housing	0.3220	0.3512	0.4963	0.3828
Location where living in city	0.0779	0.3367	0.7509	0.5333
Living Situation	0.1080	0.2918	0.1859	0.1677

Reasons for not using condoms

If youth reported that they had not used a condom with either a regular or casual partner, they were asked why they did not use a condom. The two main reasons youth identified for not using a condom (being in a committed relationship and not having a condom) were very different and demonstrate the varied types of relationships youth engage in. The top ten reasons youth identified for not using a condom are found in figure 7.8.

Males (78%) were more likely than females 55% to report not having a condom (*df* 1, x^2=3.8590, p=0.0495). Youth who live downtown (48%) were more likely to report being drunk/high as a reason for not using a condom than their peers who live on the mountain (22%) (*df* 1, x^2=3.1364, p=0.0766).

Similarly, youth who experienced unstable housing before the age of 15 (58%) were more likely to report being drunk/high as a reason for not using a condom than youth who experienced homelessness after 15 years of age (31%) and youth who report always having stable housing (18%) (*df* 2, x^2=5.9140, p=0.0520). Youth who experienced unstable housing before the age of 15 were also more likely to report "condoms don't feel good" (79%) as a reason for not using a condom than youth who have always had stable housing (55%) or experienced unstable housing after the age of 15 (28%) (*df* 2, x^2=13.5786, p=0.0011).

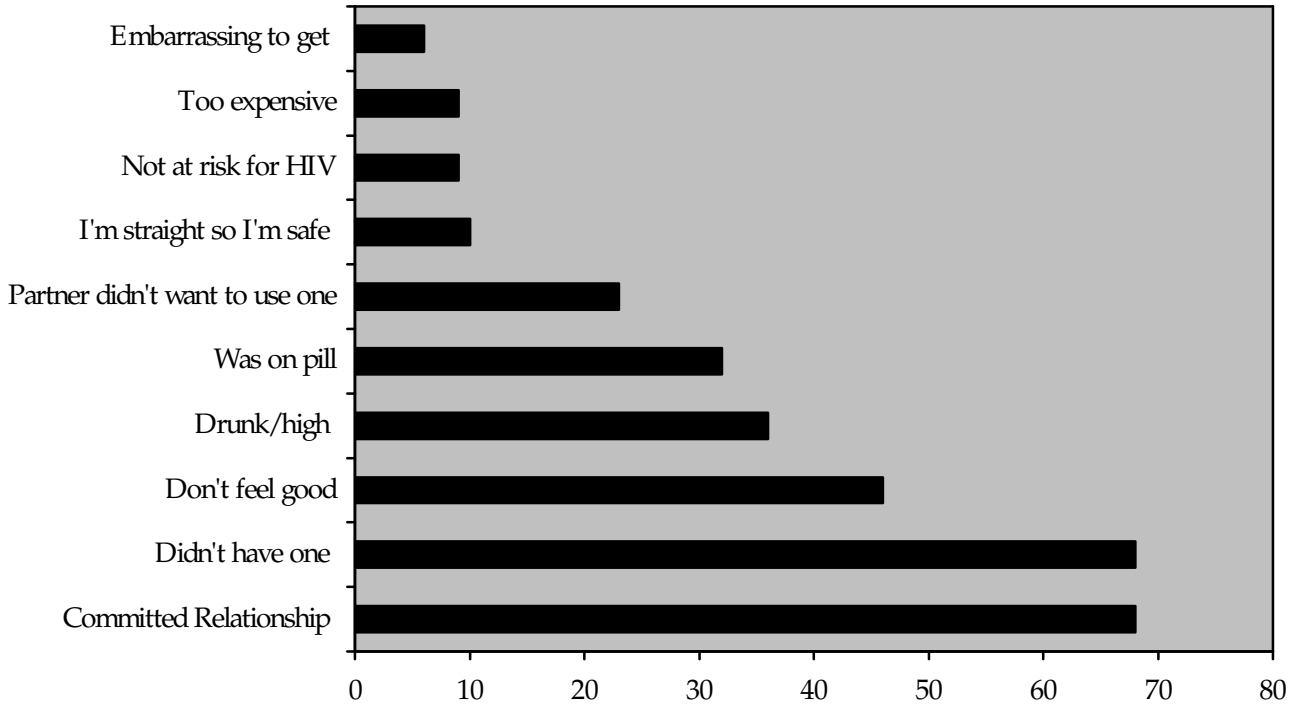


Figure 7.8: Reasons youth identify for not using condoms (%) n=69

In the Canadian Youth Sexual-health and HIV/AIDS Study, the most popular reasons Grade 11 students reported for not using a condom were 1) using another method of birth control (37%), 2) did not expect to have sex (24%), 3) they were in a committed relationship (16%) (CMEC, 2004).

C) Past year prevalence of HIV, STI and unplanned pregnancy

Prevalence of HIV

Youth were asked if they knew their HIV status. There were youth who reported positive HIV status, but the frequency was under five participants which was too low to include in any further statistical analysis. Youth were also asked about their 'self-perceived' HIV status regardless if they had reported having an HIV test. Seven youth said they do not know if they were HIV+ or HIV-, 87 (90%) youth thought they were HIV- and one youth thought they were HIV+. The number of youth who do not know their HIV status is congruent with the statistic that 26% of HIV+ individuals in Canada do not know their HIV status (PHAC, 2009).

Prevalence of STI

Youth were asked to self report their history of lifetime STI. Of the 73 youth who reported having an STI test, 16 STIs were reported across 14 youth (19%). Chlamydia was the most diagnosed STI with 14% of youth reporting a positive Chlamydia test; followed by Gonorrhea (3%), Genital warts/HPV (3%) and Herpes (1%). No youth reported that they had Syphilis and youth were not asked about Hepatitis diagnosis. These frequency of STIs reported in the Safe n' Sexy project are likely an underestimate of the actual prevalence rates because there were youth that had not been tested for STIs and did not know their status.

Youth 19 years and older (27%) were significantly more likely than youth 18 and under (6%) to report being diagnosed with an STI. The remaining demographic variables were not significantly associated with being diagnosed with an STI (gender p=0.6264; living situation p=0.2754; age of first unstable housing p=0.6573; educational progress p=0.1309; location in the city p=0.5131).

Youth who reported being able to talk to their partner about condoms were less likely to have an STI than youth who report not being able to talk with a partner about condoms (*df* 2; x^2=4.8339, p=0.0892). Similarly, youth who were able to talk with their partner about STIs were less likely to report an STI (*df* 2, x^2=5.0516, p=0.0800). Comparisons of STIs between the Safe n' Sexy youth, the 2003 ESYS and the general youth population can be referred to in figure 7.9.

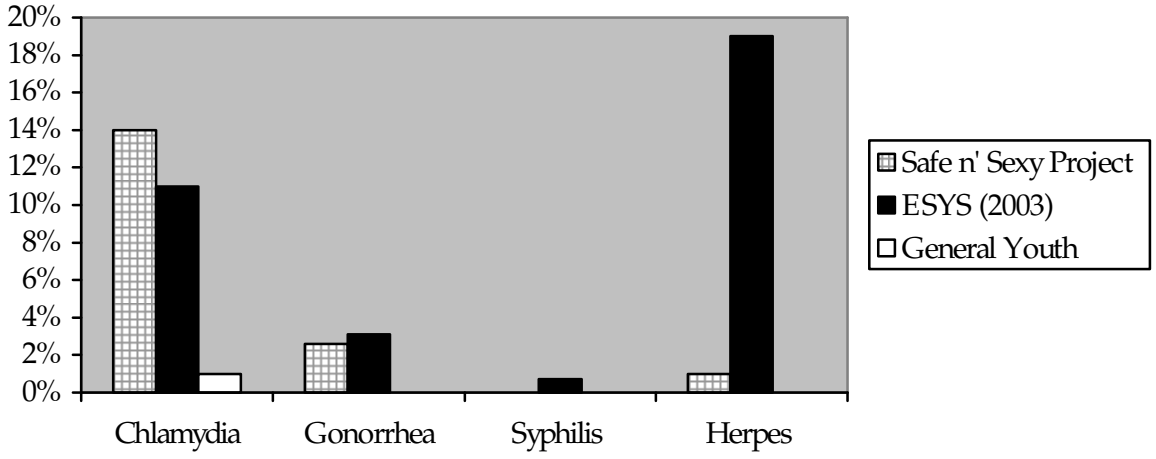


Figure 7.9: Prevalence of sexually transmitted infections: Safe n Sexy sample compared to ESYS and general population

Unplanned pregnancy

Youth were asked if they (or a partner) had ever been pregnant. Fifty eight youth (60%) reported getting someone or being pregnant. We also asked youth if their pregnancy was planned. Seventy-eight percent reported having an unplanned pregnancy. Demographic variables were not significantly associated with having an unplanned pregnancy (age p=0.1654; gender p=0.5494; living situation p=0.4086; age of first unstable housing p=0.9772; educational progress p=0.1239; location youth lives in the city p=0.1000).

Youth were also asked if they were worried about getting pregnant. Sixty-four percent were not worried about getting pregnant, while 32% were. Youth who reported being able to talk with a girlfriend/boyfriend about pregnancy were more likely to have an unplanned pregnancy (p=0.0634) than youth who could not talk with a partner (0%). In the Canadian Youth, Sexual-health and HIV/AIDS Study, 12% of males and 14% of females report having been or gotten someone pregnant, which is considerably lower than the street youth we interviewed (CMEC, 2004).

Da) Logistic regression of unsafe sex with regular sex partners

A logistic regression was conducted to determine multivariate correlates of unsafe sex with a regular sex partner. All hypothesized correlates of unsafe sex with a p-value of 0.25 or lower in bivariate analyses were modeled according to the methods outlined in methods section 5.4.3. Variables with a p value of 0.10 were retained in the final model, which is shown in Table 7.19. The outcome variable for this multivariate analysis is participation in unsafe sex with a regular sex partner, which is defined as having sexual intercourse with a regular partner without the use of a condom. Youth who were under the age of 19 were 13 times more likely to have unsafe sex that older youth. Those with a high school education (OR=8.09) and who lived in unstable housing before the age of 15 were also more likely to have unsafe sex (OR=3.49). Youth who had taken an HIV test (OR=0.182) and those who did not feel safe where they were living (OR=0.209) were less likely to practice unsafe sex. The final model achieved a good measure of fit according to both measures examined; both c and the Hosmer Lemeshow p-value are close to 1.

Hypothesized variables that were not associated with unsafe sex with a regular partner at the bivariate level (at p<=0.25) and thus did not enter the regression modeling process were: being homeless, being street involved, tobacco use, weekly binge drinking, weekly marijuana use, belief

that a regular partner would use a condom if they asked them to, being able to talk to a partner about HIV, and being in a loving relationship. The following other variables were eliminated from the model via backwards elimination, these include: gender, living in a shelter, staying with relatives, staying on a couch, having an STI test, having an unplanned pregnancy, not being worried about HIV, having some worry about HIV, trying to talk to a partner into using a condom and going along with a partner when the partner suggests not using a condom. Gender was not retained in the final model as it was not significant on its own or as an interaction. The final logistic regression model for unsafe sex with a regular partner is in table 7.19.

Table 7.19 Final logistic regression model to predict unsafe sex with regular partner (n=91)

Variable	OR	(95% CL)	P values
Age			
18 years old or younger	13.622	(2.131 – 87.059)	0.0058
19 years old and older *(ref)*	1.00		
Education			
Still in school	2.391	(0.389 – 14.701)	0.3468
Graduated high school	8.097	(0.921 – 71.151)	0.0593
Not in school *(ref)*	1.00		
First experience of unstable housing			
Unstable housing before age 15	3.490	(0.813 – 14.976)	0.0926
No unstable housing before age 15 *(ref)*	1.00		
HIV test taken			
Yes	0.182	(0.048 – 0.697)	0.0129
No *(ref)*	1.00		
Feeling safe where currently living			
No	0.209	(0.041 – 1.076)	0.0611
Yes *(ref)*	1.00		
Model Fit			
c = 0.8537			
Hosmer and Lemeshow Goodness of Fit Test p=0.8537			

Db) Logistic regression of unsafe sex with casual sex partners

The outcome variable for this multivariate analysis is participation in unsafe sex with a casual partner, which is defined as having sexual intercourse with a casual partner without the use of a condom. Youth living in shelter were less likely than youth living in their own apartment to have unsafe sex. Youth who reported that they would not try to talk a partner into using condoms were 17 times more likely to participate in unsafe sex. Finally, youth who used marijuana were less likely

to report unsafe sex with a casual partner. The final model achieved a good measure of fit according to both measures examined; both c and the Hosmer Lemeshow p-value are close to 1.

Hypothesized variables that were not associated with unsafe sex with a casual partner at the bivariate level (at p<=0.25) and thus did not enter the regression modeling process were: being homeless, being street involved, having an HIV test, having no worry about HIV, having some worry about HIV, having an unplanned pregnancy, regular tobacco use, weekly binge drinking, feeling safe where they are living, going along with a partner who suggests not using a condom, belief that a hook up would use a condom if the youth suggested it, getting free condoms and being in a loving relationship. Other variables that were eliminated from the model via backwards elimination include: gender, experiencing unstable housing after the age of 15, education, age, having an STI test, and trying to talk to a partner about HIV. The two interaction terms that were tested were male and getting free condoms, and male and an unplanned pregnancy. Gender was not retained in the final model as it was not significant on its own or as an interaction. The final logistic regression model is found in table 7.20.

Table 7.20: Final logistic regression model to predict unsafe sex with casual partner (n=91)

Variable	OR	(95% CL)	P value
Where youth are staying			
In shelter	0.189	(0.045 – 0.793)	0.0228
With relatives	0.465	(0.104 – 2.085)	0.3175
On couch	0.495	(0.090 – 2.725)	0.4193
Own apartment *(ref)*	1.00		
Negotiation of condom use			
Would not try to negotiate with a partner	17.842	(0.929 – 342.679)	0.0560
Would try to negotiate with a partner *(ref)*	1.00		
Weekly Marijuana Use			
Yes	0.250	(0.062 – 1.009)	0.0515
No *(ref)*	1.00		
Model Fit			
c=0.7874			
Hosmer & Lemeshow Goodness of Fit Test p=0.718			

7.9 Objective Six: To develop an understanding of youth's health through annual pap smears, visits to their family doctors and use of substances.

A) Annual pap smear (previous twelve months)

It is recommended that once females become sexually active, they should have a pap smear annually. Of the females in the Safe n' Sexy sample, 90% reported having a pap smear (lifetime) and 94% of those females had their most recent pap within the past twelve months. Age was significantly associated with having a pap smear in the past year with 100% of females 19 and over reporting having a pap smear and 80% of youth 18 and under reporting pap smear in the past year (*df* 1, x^2=4.2343, p=0.0.0396). The remaining demographic variables were not significantly associated with determining which youth had pap smears annually; living situation (p=0.6126), first experience of unstable housing (p=0.4951), educational situation (p=0.5124) and location youth lived in the city (p=0.4287).

B) Visiting the doctor

Most youth in the sample (81%) had visited their doctor in the past year, and 85% of youth had a valid health card. Demographic variables were not significantly associated in determining which you accessed their family doctor: age (p=0.2841), living situation (p=0.6152), first experience of unstable housing (p=0.2233), education (p=0.2897), location youth lives in the city (p=0.2631).

C) Level of substance use

Tobacco use

Fewer youth in the Safe n' Sexy sample smoked on a daily basis than youth in the E-SYS sample (see Figure 7.10 below); however rates of occasional smokers was higher in the Safe n' Sexy sample (13.5%) than the Canadian street-involved youth sample (9.2%) (PHAC, 2006c). The Canadian Tobacco Use Monitoring Survey found that 18% of mainstream teens aged 15–19, and 26% of youth aged 20–24 were current (daily or occasional) smokers (Health Canada, 2005). Gender and first experience of unstable housing was significantly associated with tobacco use. Females (45%) were more likely than their male peers (14%) to not use tobacco at all (*df* 2, x^2=12.8370, p=0.0016). Youth who experienced unstable housing before the age of 15 (72%) were more likely than youth who experienced unstable housing after the age of 15 (60%) and youth who have always had stable

housing (31%) to smoke on a daily basis (*df* 4, x^2=11.4042, p=0.0224). Age (p=0.9319), living situation (p=0.3309) and education (p=0.2023) were not significant in determining daily tobacco use.

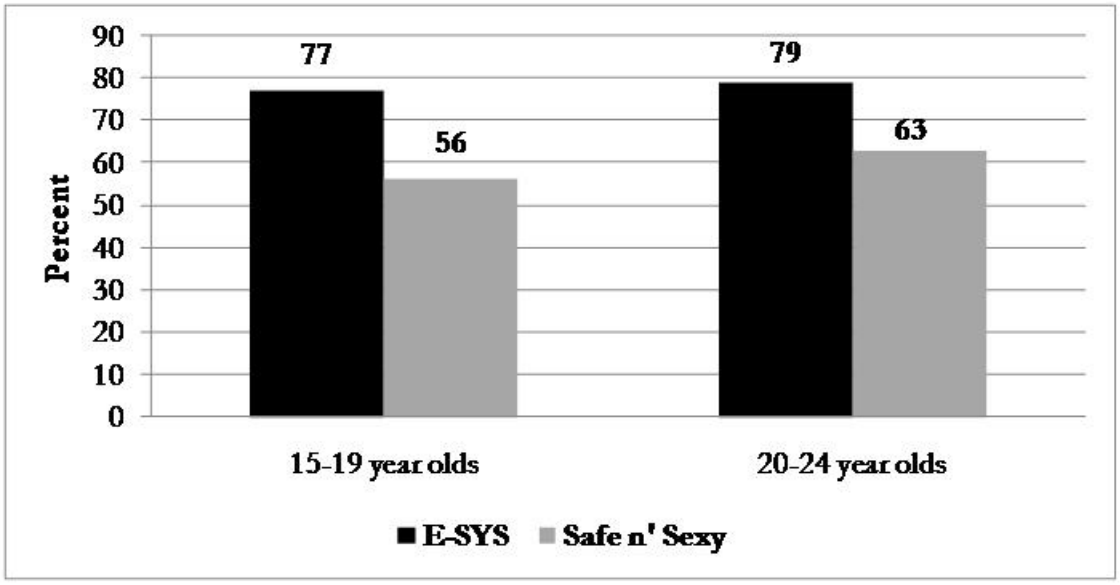


Figure 7.10: Daily smoking rates in E-SYS and Safe n Sexy by age group

Alcohol consumption

Overall, the Safe n' Sexy sample had significantly more alcohol consumption than the 2003 E SYS. However, there youth in the Safe n' Sexy sample were more likely to have never drank alcohol than the E SYS sample (see table 8.18). A recent survey of Canadian youth aged 15–24 showed that close to half (46%) of youth drank heavily at least once a month, and 14% did so at least once a week (Adalf & Paglia-Boak, 2005). The most common pattern of alcohol use reported by youth (39%) was "light-infrequent" (considered drinking less than once a week) (Flight, 2008). Age (p=0.4292), living situation (p=0.1394), education (p=0.6179), location youth lived in the city (p=0.6160) and gender (p=0.2933) were not significantly associated in determining which youth were more inclined to consume alcohol. The mean number of drinks consumed in one sitting for the Safe n' Sexy sample was 8.138 (range 0-26, *sd* 7, *n*=94).

Table 7.21: Level of alcohol consumption

Level of Alcohol Consumption	E-SYS	Safe n Sexy	Difference from E-SYS
Daily			
15-19 year olds	4%	4%	No difference
20-24 year olds	6%	10%	+4%
Once or more/week			
15-19 year olds	27%	39%	+22%
20-24 year olds	25%	43%	+18%
Less than once/week			
15-19 year olds	43%	35%	- 8%
20-24 year olds	40%	40%	No difference
Never			
15-19 year olds	22%	19%	- 3%
20-24 year olds	25%	8%	-17%

Marijuana use

There was no major difference between the Safe n' Sexy sample and the E-SYS study. The 2003 cycle of E-SYS found that 78% of youth reported use of marijuana in the past three months (PHAC, 2006c); compared to 80% of youth who had used in the Safe n' Sexy sample. Surveys show that about 3%–5% of Canadian mainstream youth use cannabis daily (Flight, 2008).

Age of first unstable housing was significantly associated with marijuana use. Youth who reported always having stable housing (46%) were more likely to report never using marijuana, than youth who became homeless after the age of 15 (14%) and youth who experienced unstable housing before the age of 15 (15%) (*df* 2, x^2=7.4333, *p*=0.0243). Females (37%) were more likely to report never using marijuana compared to their male peers (7%) (*df* 1, x^2-13.0270, *p*=0.0003). Location youth lived in the city was also significantly associated with use of marijuana. Youth who reported living on the mountain or east end (38%) were more likely to report never using marijuana compared to youth who lived downtown (12%) (*df* 1, x^2=8.0325, *p*=0.0046). Age (p=0.9958), living situation (p=0.8245) and educational situation (p=0.3133) were not significantly associated in determining which youth had used marijuana.

CHAPTER 8: STRENGTHS AND LIMITATIONS

***Study strengths*:**

1) Community-based: This project was based on building community-capacity, both in research, partnerships and programming.

2) Comprehensiveness of study: The Safe n' Sexy Project was very comprehensive. We tried to include as many factors that street youth experience to create a data base for use by many service providers and future researchers, but also to create a good picture of the current situation for Hamilton's street youth.

3) Low non response rates: We had few youth who chose to refuse to answer interview questions which allowed for more accurate data analysis. Youth also offered many suggestions and additional information beyond the questions included on the questionnaire. I believe this is a testament to well-trained and relatable peer interviewers and trusting interview settings.

4) Filling a gap: There has been a reasonable level of research on street youth in Hamilton, however research on sexual-health service use, access and behaviours is missing. This project provides the Hamilton community with recent, thorough information that was missing.

***Study limitations*:**

1) Small sample size: The small sample size in terms of statistical power (n=97) limited the ability of multivariate modelling that was possible. In addition, some relationships may not have reached significance due to low power, and thus were missed. In addition, because of the small sample size it is possible that a small number of responses signifying risk behaviours may have biased the results of the study.

2) Hepatitis C: We did not include Hepatitis C testing questions in our risk behaviours section. Hepatitis is on the rise in Hamilton, especially among individuals who are street involved who have a history of drug use (City of Hamilton Community Report, 2009). Rates of Hepatitis C in the street youth we interviewed would have been helpful to the community partners we were working with.

3) Comparison data: Comparisons to other street involved populations in other cities is limited due to the design of some of the questions [eg: using different timelines for recall (life time vs. three month recall)]. For the purpose of the service agencies using the data, limited comparison data is not an issue.

4) Random sample: Given the nature of research topic, youth who participated may be more inclined than their peers to talk about their sexual behaviours and/or were in more need of the incentive than their peers. In addition, we had a large response from youth allowing data collection to finish within a couple of weeks. The response can likely be attributed to word of mouth by youth and service providers who were helpful in promoting the study. Therefore, this is not a representative sample.

5) Peer interviewers: While peer interviewers were likely more of a strength than a limitation, it is important to note that because the interviewers were also youth, it is possible that participants gave answers they thought the interviewers wanted to hear. However, in terms of some of the most sensitive questions, comparisons of rates of STIs, HIV and unplanned pregnancies are very similar to other Canadian street youth populations, so this bias is likely not large.

6) Validity: STI and HIV testing and positive test rates were self-reported and rely on youth knowing what a STI and/or HIV test is. Similar rates of STI and HIV testing when compared to other street youth populations leads us to believe that the accuracy of the self-report was high in our sample.

CHAPTER 9: DISCUSSION

The aim of the current study was to increase the level of understanding by health and social service professionals of the sexual-health needs, knowledge and behaviour of street youth living in Hamilton, Ontario. The overall goal was to collect information for a community of service providers who could use the information to better equip youth with the information, skills and services where there are deficits. A broad range of data were collected in this survey, but the main emphasis for analysis consisted of HIV knowledge, sexual-health service access, sexual-health information access, peer education and sexual risk.

Summary and interpretation of key findings:

1) Level of STI and HIV knowledge

The level of HIV knowledge among the Safe n' Sexy sample was relatively high, with a mean score of 12/16 (75% correct questions) on the HIV knowledge scale. When comparing the Safe n' Sexy sample to the general youth population, their level of knowledge is comparable or better in all areas. Areas where youth did not score as well were those that would be considered new and changing information, for instance: not being able to get HIV from kissing an HIV+ person, that there is no cure for HIV and there is an HIV vaccine. A study of street youth's HIV knowledge showed that 66% of youth's self-perceived their level of HIV knowledge as "high" (Smith et al., 2001). We did not ask specifically what youth wanted to know more information about in terms of sexual-health, but feedback from youth suggests they have remaining questions or would have liked to receive information earlier on in their sexual life. This corresponds with the Toronto Teen Survey that found HIV as the second most important topic youth wanted to learn more about (Flicker et al., 2009).

Misinformation/ Misinterpretation of sexual-health information

The results of the HIV knowledge scale show that there is sexual-health misinformation, specifically in terms of HIV and pap smears. This could also be contributed to information that is being misinterpreted from media sources. For instance, when going through the HIV knowledge questions, some youth advised the interviewer that they "had received the HIV vaccine"; however,

knowing that there is no HV vaccine, it is possible to assume that these individuals may have mistaken it for the HPV vaccine. Since there is no vaccine for HIV, and the HPV has been widely discussed in the media in recent years, and young people are getting vaccinated at school and by their doctors for HPV.

Implications for misinformation/ misinterpretation of sexual-health information

Sexual-health misinformation has implications for STI and HIV testing. Individuals who test are more likely to have better HIV knowledge. Our findings show that individuals who report having an HIV test (87%) have higher HIV knowledge than youth who did not have an HIV test (13%). In regards to pap smears, if females assume that 'everything' gets tested for in a pap, it creates a false sense of security for young women who think they have been tested when they have not. In the Safe n' Sexy sample, 41% of young women think they get tested for Syphilis, 38% for Herpes, 12% for pregnancy and 3% of HIV in a routine pap smear. This finding suggests that youth are misinterpreting the information they are receiving and/or the sources youth get their sexual-health information from may not be up to date on sexual-health trends and information, including social service professionals supporting street youth. This is consistent with a study interviewing social workers on their self-perceived ability to deliver HIV education that showed respondents were willing to educate youth, but were not confident in their level of HIV knowledge (Sweifach & LaPorte, 2006).

2) Accessing sexual-health services

The level of sexual-health service use by youth was moderate. While the rates of both STI (75%) and HIV (63%) testing were high. This finding indicates that most youth are currently aware of their risk. Because the majority of youth had been tested, they also know where they can go in the future for testing and pap smears should the need arise.

A third of youth we interviewed had accessed a social service agency for sexual-health information and a quarter of youth we interviewed had accessed an agency for HIV-specific information. However, the majority of youth did not access an agency for either sexual-health or HIV-specific information. This is very similar to the Toronto Teen Survey that found 68% of Toronto youth had not accessed a sexual-health service (Flicker et al., 2009).

STI/HIV and convenience testing

There was a significant amount of youth who were tested for STIs and HIV out of convenience situations. For instance 8% of males in the Safe n' Sexy study reported having their STI and HIV tests done in prison and of females reported a pregnancy, 81% had their testing during pregnancy screening. One reason for why youth get tested out of convenience might be because youth, especially young males, are less concerned about their health status (Cavallo et al., 2006) and have inconsistent or non-use of health care services (Maschi et al., 2008). Males are also more likely to be referred to courts and probation services than their female peers who are more likely to access social and medical services (Maschi et al., 2008). Because young males are less concerned with their health, having opportunities for them to test in locations like prison and probation is important.

3) Accessing sexual-health information

Youth interviewed for the Safe n' Sexy project were aware of places they could go for sexual-health information. An important aspect of youth protecting their sexual-health is accessing services they feel safe in and where staff are approachable. When we asked youth who they preferred to go to for sexual-health information, many of them said professionals. This is similar to the Toronto Teen Survey that found that an increasing number of youth want to ask professionals their sexual-health questions (Flicker et al., 2009). This finding is also consistent with the general youth population, where health professionals, specifically doctors and nurses are the first source for sexual-health information (CMEC, 2003). For the most part youth are accessing their preferred sources of information.

Talking with friends, parents and sexual partners about sexual-health issues

Many of the youth we interviewed report talking to friends, parents and sexual partners about sexual-health issues. Youth reported being able to talk to their boyfriend/girlfriend about sex (97%), STIs (94%), HIV (93%), condoms (96%) and pregnancy (95%). It is important that youth feel they can have an open dialogue with friends and partners because it can lower the risk level of sex and drug related behaviours (Tyler, 2007). However, having a reliable parent or adult guardian in a youth's life is also a protective factor for the same risks (Tyler, 2007; Rice et al., 2007). Youth reported being less able to speak with parents about these issues; this may be because their parents are not a meaningful part of their lives, there may be limited trust in the parent-child relationship or these types of issues may be taboo to openly talk about (Haber & Toro, 2009).

Cohort-specific services

Many youth suggested the need for youth-specific services; not only sexual-health, but also place where youth could hang out, talk to a peer and ask questions without feeling judged. For instance, youth suggested "[We need] places where youth can go to hang out and learn about sex-ed there", and "[I would like] a girls only group that discusses anything and everything". Another youth offered, "[We need] something to keep youth busy after school….programming and sports". Unfortunately, during the same year of this study, funding for outreach, youth drop-in and in-house services such as laundry, peer education groups, (including a harm reduction group), an emergency food program, mental health counseling and internet access at the only youth-specific clinic, Health Initiatives for Youth (HIFY) was terminated. At present, clinic services remain available four afternoons a week. According to our survey, HIFY was a highly accessed service in the community, likely because it had both the sexual-health clinic as well as other services that youth comfortable accessing.

4) Peer education

Peer education was an important component for youth and sometimes the only method youth get any source of sexual-health information. A national study found that 60% of Grade 11 students thought there was an HIV vaccine and 35% believed there was a cure for HIV, suggesting that school-based sexual-health education is not working to the level it should (CMEC, 2008). Because youth we interviewed reported they felt sexual education in schools is outdated, and a portion of youth in our study report not currently enrolled in school (36%), other methods of delivering sexual-health messages are required for the street involved population.

Street youth may also feel less likely to speak with their parents because they may not have regular contact with their biological parents, have experienced violence or neglect from their parents, are living with relatives or in a foster or group home where they feel less comfortable bringing up such topics with those individuals (Haber & Toro, 2009; Zlotnick, 2009). In these situations peers have to fill the void, especially with young women. Females were more likely than males to talk to their peers about sex, STIs, and HIV. This finding is congruent with the nature of female relationships which tend to be more open, understanding and nurturing than male friendships (Beshers, 2008). Males (88%) were also less likely than females (98%) to think that peer education is a good method of

teaching sexual-health to youth, which is consistent with research that males are less likely to engage in peer education than their female peers (Beshers, 2009; Pearlman et al., 2002; Woods et al., 1999).

Incentives were shown to be an important aspect for youth participating in peer education. Without receiving an incentive, 23% of youth said they would not attend at all. Most youth are willing to attend a program for bus tickets and food, which are minimal costs for a program. It was encouraging to find that many youth were willing to learn about sexual-health in exchange for high school credit. In Section 23 schools (which many of the youth we interviewed were attending), it may be possible to work with teachers to institute a sexual-health curriculum. Section 23 schools allow students to work at their own pace, have rolling start times and a broader range of subjects. Males were more likely than females to indicate that they would find fulfillment of a probation order an appealing incentive for involvement in such a program. This finding is fitting with the 2003 cycle of ESYS that found that males are significantly more likely to report involvement with a probation order than females (PHAC, 2006a). Our study did not ask youth about involvement with the justice system; however we know some youth did have a history of being incarcerated as some of them reporting having STI and HIV tests there.

Many youth reported income from youth-specific programming. This is very encouraging, as it would appear that many youth are interested and willing to work or learn skills in order to earn an income. Youth with a history of living on the street have skills and want their talents used and acknowledged in a meaningful way (Poland, Tupkar & Breland, 2002). The Street-Involved Youth Harm Reduction Program offered youth cash for their involvement in their group, but found that while a cash incentive originally drew youth to the project, over time youth became more invested in the project and continued to contribute outside of paid time (Poland et al., 2002). The Safe n' Sexy Project, that this thesis is based on, had a similar experience. Most of the youth hired for the project continued to support and volunteer with the project once funding, and the official training were exhausted.

5) Sexual risk level

Condom use

Many youth (69%) reported having sex with a regular partner in the past three months and 37% reported having sex with a hook up in the past three months. Self-efficacy in terms of condom use was high, with 86% of youth believing their regular partner would use a condom if they wanted them to and 95% of youth reporting they believed they could get a hook up to use a condom if they requested it. Over 20% of youth reported refusing to have sex if their partner suggested not using a condom. The most commonly cited reason for not using a condom was because they were in a committed relationship. This is consistent with other studies on street youth that finds low condom use with long-term partners (Wagner, Carlin, Cauce & Tenner, 2001; Lew, Fouladi & Yockey, 2002).

Prevalence of STIs and HIV

Apart from Chlamydia, the Safe n' Sexy sample had lower rates of all other STIs and HIV than the 2003 E SYS. The lower rate of STIs may be due to the fact that the sample did have a high rate of condom use, testing, and more youth were able to report their STI status. However, in terms of main stream youth, the Safe n' Sexy sample had considerably higher rates of STIs. Street youth may have increased exposure to STIs which is linked to inconsistent or incorrect condom use, multiple and anonymous partners and substance use, which are widespread characteristics of street youth coping and survival techniques (Solorio et al., 2006; McKay, 2004; Dehne & Riedner, 2001) and are less abundant in main stream youth's lifestyles.

Unplanned pregnancy

Street youth have considerably higher rates of teen pregnancy than mainstream youth, and this was seen with the Safe n' Sexy sample. Of the 60% of youth who reported being or getting someone pregnant, 78% reported that the pregnancy was unplanned. Hamilton has had a long history of high provincial rates of teenage pregnancy, at one time reporting the highest in Ontario. The live birth rate for teenagers (aged 15-19 years) in Hamilton was 15.9% per year, which was higher than the provincial rate of 10.4% (City of Hamilton Community Profile, 2004). One reason for this may be the support for young parents in the Hamilton community. The majority of youth services in Hamilton are managed by, or connected to faith-based funding which significantly directs the focus and types of programming for youth. In the faith-based services, the primary messages being delivered to youth in terms of sexual-health are ones of abstinence and family planning. The

availability to information about birth control and pregnancy options and staff who are able to have conversations about such issues are not warranted in faith-based organizations. However, housing for young parents is widespread and the opportunities offered in these homes are generous, including child care, completing education, income support and employment opportunities. With the restricted of information and opportunities such as those mentioned above, young parents may choose to continue a pregnancy they may not otherwise have. At present, the Safe n' Sexy project is working with the Street-Involved Youth Network, specifically faith-based residential locations to increase availability to safer sex supplies and contacts for information about pregnancy options.

6) Youth who experienced unstable housing before the age of 15

Youth who had experienced homelessness before the age of 15, were identified in this study as the most at-risk group. Youth shelters do not house individuals under the age of 16, thus it is likely that these individuals either experienced homelessness with their families or have experienced a transient childhood, out on their own. Individuals working with youth who have experienced homelessness prior to being a teenager, should consider that these individuals may not have gained sexual-health information, seen examples of self respect or healthy relationships from parents and guardians, and that as a result, they may be missing the basics upon which they would typically build a healthy sexual life as they age.

Youth who experienced homelessness before the age of 15 were more at risk than their peers in terms of inconsistent condom use, were less likely to access a friend for sexual-health information, reported being 'drunk or high' as a reason for not using a condom, and also reported substantial use of tobacco, marijuana and alcohol. As these individuals have experienced unstable housing at a young age, likely with family members, as part of child protection services, or out on their own, they have likely experienced other traumatic situations and may be using substance as a coping strategy (Tyler, 2007; Slesnick et al., 2006).

CHAPTER 10: FUTURE DIRECTIONS

Suggestions for future directions where shaped by the recommendations that we got from youth, by the research, and via comments from local service providers as we presented the early findings at the study's youth service far "Fusion". Many of the suggested recommendations do not require further financial or other resources. For the most part, introducing harm reduction (condoms), sexual-health information and the types of information public health nurses share with youth require only organizational and policy change.

Start sex education earlier

Youth are having sex at a young age, largely without the information they need to keep themselves and their partners safe. Of the youth we spoke with, only six of them had not engaged in intercourse. Sexual-health information is not getting to youth early enough for them to use, and often only after their first experience of an unplanned pregnancy or STI. Recommendations from youth indicate a want to receive sexual-health information a younger age. For instance, one youth said "[You] need to stress the consequences of not using a condom at a young age – like Grade 7". Another youth offered "Sex ed currently in schools is out of date, especially in catholic schools".

At present, there is much effort by the City of Hamilton Public Health and youth services to support individuals *after* they have had unsafe sex. For instance, Public Health offers many accessible and confidential sexual-health clinics, free treatment of STIs, free birth control, emergency contraception and pregnancy testing. There are also many supports for new and young parents in Hamilton, largely by the faith-based community as previously mentioned. The existence and availability of reactive programming does help to support youth once they are in crisis, and therefore are very important since unplanned pregnancies and STIs will likely never be eliminated among youth in the community. However, greater emphasis on proactive sexual crisis prevention services is also required, as they can proactively deliver meaningful sexual-health information and promote better access to condoms, thus reducing the instances of unprotected sex. Feedback from youth suggests there is a need and a want for sexual-health information in more locations and earlier on during their sexual development. For instance; "[You] need to stress the consequence of having sex without a condom at a young age….like Grade 7," and "[I need] more information on sex and how to protect yourself from STI, HIV and pregnancy".

Highlight the importance of healthy relationships:

It is important to talk about healthy relationships and self respect at a young age. Of youth we interviewed, 94% reported having sexual intercourse and 53% reported that they have had sex in a loving relationship, defined as a relationship where both parties trust, care and respect one another. When we asked youth about why they did not use a condom 25% reported 'my partner did not want to use a condom'. If a youth is in a 'healthy' loving relationship, a youth has the right to know if their partner has been tested, has an STI, will use a condom if they suggest it and be supportive in decisions about contraception. Healthy relationships was the most reported issue that youth interviewed for the Toronto Teen Survey wanted more information on (Flicker et al., 2009). Of the youth interviewed for this study, 53% reported having sex in a loving relationship, meaning almost half of youth are having sex with individuals they may not or did not feel respected, cared and trusted by or for. Strong examples and education on healthy relationships should be a foundational component of sexual-health education programs.

Sexual-health should not be a silo

Sexual-health is an important aspect of everyone's overall health. Often, sexual-health is seen as a separate part of one's wellbeing and as a result it can be difficult to talk about. As with nutrition, mental health and cardiovascular health; sexual-health is closely integrated with all other areas of an individual's physical condition and has implications for wellness in adult years, based on the decisions and actions individuals make during their youth. Sexual-health should be taught and talked about a necessary part of a youth's personal health.

Increase access to condoms where youth are

Youth involved in the study were accessing various services, including school, food programs, addictions counseling, shelters, youth justice facilities. Many of them indicated that they would like to continue using services at these locations; thus there is likely already a level of trust between the service providers and the youth. Having access to free or affordable condoms in these locations is important because it opens the door to the idea that the agency is also willing and able to have a discussion about sexual-health if the youth has questions or concerns. Youth are also more likely to take condoms from locations they access on a frequent basis rather than going out of their way to locate them. In order to reach the group of youth who are not currently accessing condoms in these types of locations will increase access and use.

Back to the basics:

It is sometimes assumed that youth have basic sexual-health knowledge; however, as this study demonstrated many youth do not. Twenty-six percent of youth in the Safe n' Sexy sample thought that there was a cure for HIV/AIDS. While this was high, the Canadian Youth, Sexual-health and HIV/AIDS Study reported that an even higher proportion of their sample (44%) erroneously thought the same thing (Council of Minister of Education, 2003). What sexual-health workers and researchers thought was common knowledge (that there is no cure for HIV) was not actually common knowledge. Similarly, close to 40% of youth thought they could contract HIV from kissing someone. Given the age range of youth we interviewed (14-24), few of them were alive to receive basic HIV information that was widely circulated in the late eighties and nineties. More emphasis on this basic HIV information is necessary at this point in the epidemic, to clear up misinformation and messages that have not been prominent in more recent HIV prevention campaigns.

Some of the youth we interviewed were unaware of the long-term implications of contracting HIV. With the advent of ART, youth's perception of HIV may be inaccurate because individuals are living with HIV longer now, and it has become to be seen as a chronic condition instead of the 'death sentence' it once was. While HIV does not typically lead to a quick death at this point in time in Canada, it is a life altering diagnosis. Living with HIV, and the long-term use of treatment can be disabling and affect future relationships. Having young adults who are HIV-positive share their experience of HIV with HIV- youth might give youth insight as to the somewhat invisible long-term side effects of HIV.

Education about pap smears and testing

In a routine pap smear, unless a young woman specifically asks to have an STI test or HIV test, they do not receive one. Of the young women in the Safe n' Sexy sample 54% thought a pap smear tested for Gonorrhea, 53% for Chlamydia , 41% for Syphilis, 38% for Herpes, 12% for pregnancy and 3% for HIV. Health professionals need to educate youth more about the tests they are having, and what the results indicate in terms of infection but also sexual behaviour and risk following the tests. This may have had implications on the results of the study in terms of young women reporting STI tests that they may not have had during a routine pap.

Peer education

Peer education was well received by the youth interviewed for this project. 92% of youth thought that peer education was a good method of teaching sexual-health education, and 37% had previously participated in peer education/mentorship program. Although not all youth said they needed an incentive to participate, the MacNemar x^2 showed that youth are willing to participate for longer sessions and more weeks if there was an incentive involved. 34% of youth were willing to participate for as long as twelve weeks if there was an incentive involved. Many youth (78%) reported that they would be willing to attend a peer education program if there were bus tickets and food as the incentive, suggesting that youth might be looking for something to do with their time, and having a meal to eat and a method of getting to and from the program is a sufficient enough incentive.

Peer education programs are not new to Hamilton. There are two programs in Hamilton, the Young Leadership Ambassadors Program (a gang-exit program) and the Tri-Rock Program, which is an employment and skill building program which are 12 – 16 weeks in length and have continually high program participation rates. Both programs pay participants for participation, operate during day and after-school hours and have peer leadership components. An ideal peer education program may focus on increasing overall health, with a section of the program devoted to sexual-health amongst other things (harm reduction in terms of alcohol, tobacco and drug use, nutrition, physical education and safe housing) with a peer involvement component throughout the program.

CONCLUSIONS

Youth can, are and will take precautions to protect themselves in terms of their sexual-health. Most youth were using safer sex, had high HIV knowledge and were keeping themselves safe amidst dealing with very difficult life situations. They are on a continuum of sexual-health harm reduction that will shift depending on their living situation, family and peer relationships, income circumstances and various other factors. Circumstances such as compromised personal safety, a lack of quality mentoring, low incomes and searching for acceptance by peers can lead youth to engage in behaviours that place them at an increased risk. Health and social service providers will need to meet youth where they are in their continuum and fill in the gaps some of these youth have experienced, while respecting their need and want for curiosity, invincibility, acceptance and survival.

The Safe n' Sexy Project's slogan was "*Be safe. It's sexier*". With the information street-involved youth have provided for this study, there is sufficient information for service providers to use the findings towards better informing and supporting street youth on their quest to safer and more rewarding sexual-health.

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APPENDIX A: Study budget

Direction of Safe n' Sexy project expenses

University of Waterloo

Research Assistant Salary		$8,000
Research Assistant Benefits		$944.00
SAS Software		$100.00
Conference and Travel Fees		$750.00
Miscellaneous expenses		$350.00
	Total:	**$10,144**

Hamilton AIDS Network

AIDS Network Contract Position for PEMAP	$4,800.00
Contract Position Benefits 12%	$576.00
Interviewer Honorarium (4/20 interviews each)	$1,168.00
Interviewer Training Honorarium	$1,080.00
Data Entry Personnel Honorarium	$445.00
Peer Recruiter Honorarium (2 at 20 hours each)	$540.00
Youth Symposium	
Food and beverages	$800.00
Audio/Visual Rental	$250.00
Incidentals	$200.00
Community Presentations (5)	
Youth speaker	$250.00
Bus tickets for youth speakers	$25.90
Community Speaker	$150.00
Travel and Meals for Community Speaker	$50.00
Recruitment	
Participant Reimbursement	$1,575.00
Bus tickets – Participants	$397.75
Youth Poster Contest	$100.00
Data Collection	
Bus tickets - Interviewers	$129.50
Food and beverages	$300.00
Information Packages	$375.00
Printing Costs	$513.59
Conference and Travel Fees	$750.00
TOTAL:	**$24,475.74**

APPENDIX B: Questionnaire with prompt cards

Insert interview sticker number here

SAFE n' SEXY INTERVIEW

We are interested in learning more about your ideas, thoughts, and opinions about accessing sexual-health services and information in Hamilton and hearing more about some of the things you do to stay healthy.

Any information you give us is helpful. I just want to remind you that none of your answers you give will be available to anyone at anytime. All of the information you give us will be kept private and no one can link your answers to you.

Please tell me if you need to take a break as we go through the interview. If you would like to skip a question or not answer it, that is fine, just let me know. Do you have any questions before we get started?

PART A: DEMOGRAPHICS

For this part of the questionnaire, I'm going to ask you some questions about you. It will help us to get a better idea about who the youth are that we are talking to.

A1) What is your age?

_____ years ❑ 9

REFUSE

A2) With which ethnic or cultural group do you most closely identify?
(DO NOT READ OUT LOUD)

- ☐ 1. African
- ☐ 2. American
- ☐ 3. Canadian
- ☐ 4. Chinese
- ☐ 5. Eastern European
- ☐ 6. First Nation/Aboriginal
- ☐ 7. Hispanic
- ☐ 8. Indian
- ☐ 9. Japanese
- ☐ 10 South Asian
- ☐ 11. Vietnamese
- ☐ 12. Other SPECIFY _____
- ☐ 66. Don't identify with an ethnic group
- ☐ 77. DON'T KNOW
- ☐ 99. REFUSED

A3) What are the closest main streets to where you are staying?
(AN EXAMPLE IS JAMES AND CANNON STREETS)

_____ / _____

A4) What would you currently think of as your main living situation?

☐ 1. Couch surfing
☐ 2. Living with parents
☐ 3. Foster or group home
☐ 4. Shelter
☐ 5. Relatives who are not my parents
☐ 6. Street
☐ 7. Squat or abandoned building
☐ 8. Own apartment or with roommates
☐ 9. Other: _____
☐ 77. DON'T KNOW
☐ 99. REFUSED

A4c) Where did you sleep last night? _____

A4b) How long have you been living at this location?

_____ _____ _____

Days OR Months OR Years

A5) Do you consider yourself…

❑ 2 ❑ 1 ❑ 0 ❑ 9

Street involved Homeless Don't know REFUSE

The next few questions are about living in unstable housing. Unstable housing means anytime you have lived for two weeks or more away from home. By home I mean living in your parents' home, immediate relatives, foster parents, in a group home, or your own apartment.

A6) Have you ever experienced unstable housing?

❑ 1 ❑ 0 ❑ 9

Yes No REFUSE

GO TO A7

A6 b) At what age did you first experience unstable housing?

_____ years of age ❑ 2 ❑ 9

Don't Know REFUSE

A7) Are you in school right now? This includes part-time school, apprenticeships, and Section 21 schools, like Notre Dame School or Wilma's Place.

❑ 1 ❑ 0 ❑ 9

Yes No REFUSE

A8) What is the highest level of education you have completed?
DO NOT READ OUT LOUD

☐ 1. Grade 8 or lower
☐ 2. Grade 9
☐ 3. Grade 10
☐ 4. Grade 11
☐ 5. Grade 12
☐ 6. GRE (Graduate Equivalent)
☐ 7. Trades certificate/diploma from apprenticeship
☐ 8. Certificate or diploma from a community college
☐ 9. University certificate
☐ 11. Other: _____
☐ 77. DON'T KNOW
☐ 99. REFUSED

A9) What is your main source of income? How do you pay for stuff?

Paid work (that is not "under the table")..... ❑ 7

"Under the table" employment (odd jobs)……..... ❑ 6

Ontario Works …… ❑ 5

Ontario Disability Support Program..... ❑ 4

Sex work…….. ❑ 3

Other illegal activity (selling drugs, stealing etc)..... ❑ 2

Other: _____..... ❑ 1

REFUSE: ……..... ❑ 9

PART B: PERSONAL SAFETY

Now I'm going to ask you about your personal safety while you have been street-involved or homeless. For these questions being safe means being free from physical harm.

B1) Do you feel safe when you are *by yourself* on the street?	☐ 2. Most of the time ☐ 1. Sometimes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED
B2) Do you feel safe when you are *with your friends* on the street? HAMILTON SRPC	☐ 2. Most of the time ☐ 1. Sometimes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED
B3) Have you been physically attacked by a stranger?	☐ 2. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED
B4) Have you been physically attacked by someone you know?	☐ 2. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED
B5) Do you feel safe when the police are around?	☐ 2. Most of the time ☐ 1. Sometimes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED
B6) Do you feel safe where you are living right now?	☐ 2. Most of the time ☐ 1. Sometimes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED
B7) When you do not feel safe, are there places you go to make you feel more safe?	☐ 2. Most of the time ☐ 1. Sometimes ☐ 0. No **GO TO PART C** ☐ 8. DON'T KNOW ☐ 9. REFUSED **GO TO PART C**

B8) Can you tell me some of the places you go to feel safe?

DO NOT READ OUT LOUD. CHECK ALL THAT APPLY.

☐ 1. Health Initiatives for Youth (HIFY)
☐ 1. Living Rock
☐ 1. Jackson Square
☐ 1. Limeridge Mall
☐ 1. Home, meaning with parents, foster parents or relatives
☐ 1. To a friend's place
☐ 1. The Well
☐ 1. Police station
☐ 1. Hospital
☐ 1. Gore park
☐ 1. Tim Horton's
☐ 1. A secret place only I know about
☐ 1. School
☐ 1. Norte Dame shelter
☐ 1. The AIDS Network
☐ 1. The library
☐ 1. Other:

_____

_____

☐ 8. DON'T KNOW
☐ 9. REFUSED

PART C: HEALTH BEHAVIOUR:

C1) What gender do you identify as? **READ OUT LOUD**. **CHECK ALL THAT APPLY**.

❑ 1	❑ 2	❑ 3	❑ 4	❑ 5	❑ 6	❑ 9
Male	Female	Transsexual	Intersex/ Middlesex	Do not identify	Other: _____	REFUSE

Sexual orientation is different than sex. Sexual orientation is a reflection of your sexual and emotional attraction toward people of the same or opposite sex.

C1b) What is your sexual orientation? UNIQUE
DO NOT READ OUT LOUD

- ☐ 1. Straight (heterosexual)
- ☐ 2. Lesbian (homosexual female)
- ☐ 3. Gay (homosexual male)
- ☐ 3. Bisexual
- ☐ 4. Two spirit
- ☐ 5. Queer
- ☐ 6. Questioning/unsure/don't know
- ☐ 7. Don't identify my orientation
- ☐ 8. None of the above
- ☐ 9. REFUSED

The next few questions are about sexual intercourse, meaning inserting a penis into a vagina *or* an anus.

C2) If your partner wanted you to have sexual intercourse without a condom, would you… OAKLAND

❑ 2		❑ 1	❑ 0	❑ 8	❑ 9
Refuse to have Sex,	Try to talk them into having sex with a condom, or	Go along with it?	Don't know	REFUSE	

C3) If your partner suggested using a condom, would you go along with it?

❑ 2	❑ 1	❑ 0	❑ 8	❑ 9
Always	Sometimes	Never	Don't know	REFUSE

C4) Would you use a condom even if you were drunk or high?

❑ 2 Always ❑ 1 Sometimes ❑ 0 Never ❑ 8 Don't know ❑ 9 REFUSE

Now I'm going to ask you some questions about your sexual behavior.

C5) Have you ever had sexual intercourse? RAPIDS

❑ 1 Yes ❑ 0 No ❑ 8 Don't know ❑ 9 REFUSE

→ **GO TO C12, PAGE 12**

C5b) A loving relationship is where both you and your partner can trust one another, feel respected and loved. When you've had sex, was it in a loving relationship?

❑ 3 Yes ❑ 2 Sometimes ❑ 1 No ❑ 9 REFUSE

C5c) When you had sex for the first time, was it because…

		Most of reason	Part of the reason	Not a reason	Don't know	Refuse
A	you were in love	☐ 2	☐ 1	☐ 0	☐ 8	☐ 9
B	you were curious	☐ 2	☐ 1	☐ 0	☐ 8	☐ 9
C	you were afraid you would lose your partner if you didn't	☐ 2	☐ 1	☐ 0	☐ 8	☐ 9
D	you or your partner wanted to get pregnant	☐ 2	☐ 1	☐ 0	☐ 8	☐ 9
E	you wanted to be loved	☐ 2	☐ 1	☐ 0	☐ 8	☐ 9
F	for money	☐ 2	☐ 1	☐ 0	☐ 8	☐ 9
G	you were horny	☐ 2	☐ 1	☐ 0	☐ 8	☐ 9
H	it wasn't your choice	☐ 2	☐ 1	☐ 0	☐ 8	☐ 9
I	you thought you wanted it	☐ 2	☐ 1	☐ 0	☐ 8	☐ 9
J	you felt you had to	☐ 2	☐ 1	☐ 0	☐ 8	☐ 9
K	you wanted to show love to your partner	☐ 2	☐ 1	☐ 0	☐ 8	☐ 9

L	your friends were doing it	☐ 2	☐ 1	☐ 0	☐8	☐9
M	for somewhere to stay	☐ 2	☐ 1	☐ 0	☐8	☐9
N	you wanted to feel good	☐ 2	☐ 1	☐ 0	☐8	☐9
O	you felt ready	☐ 2	☐ 1	☐ 0	☐8	☐9
OTHER	Specify:					

C5d) Why did you have sex most recently? Was it because…

		Most of reason	Part of the reason	Not a reason	Don't know	Refuse
A	you were in love	☐ 2	☐ 1	☐ 0	☐ 8	☐ 9
B	you were curious	☐ 2	☐ 1	☐ 0	☐ 8	☐ 9
C	you were afraid you would lose your partner if you didn't	☐ 2	☐ 1	☐ 0	☐ 8	☐ 9
D	you or your partner wanted to get pregnant	☐ 2	☐ 1	☐ 0	☐ 8	☐ 9
E	you wanted to be loved	☐ 2	☐ 1	☐ 0	☐ 8	☐ 9
F	for money	☐ 2	☐ 1	☐ 0	☐ 8	☐ 9
G	you were horny	☐ 2	☐ 1	☐ 0	☐ 8	☐ 9
H	it wasn't your choice	☐ 2	☐ 1	☐ 0	☐ 8	☐ 9
I	you thought you wanted it	☐ 2	☐ 1	☐ 0	☐ 8	☐ 9
J	you felt you had to	☐ 2	☐ 1	☐ 0	☐ 8	☐ 9
K	you wanted to show love to your	☐ 2	☐ 1	☐ 0	☐ 8	☐ 9
L	your friends were doing it	☐ 2	☐ 1	☐ 0	☐ 8	☐ 9
M	for somewhere to stay	☐ 2	☐ 1	☐ 0	☐ 8	☐ 9
N	you wanted to feel good	☐ 2	☐ 1	☐ 0	☐ 8	☐ 9
O	you felt ready	☐ 2	☐ 1	☐ 0	☐ 8	☐ 9
OTHER	Specify:					
	Didn't have sex more than one time		☐ 1			

In this section we will be talking about sex with a regular partner. By regular partner I mean someone you've had sex with more than once, and who you may or may not be in an emotional relationship with, for example a boyfriend, girlfriend or other ongoing sex partner, like a 'friend with benefits'.

C6) Have you had sexual intercourse with a *regular* sex partner in the past three months?

RAPIDS

❑ 1 ❑ 0 ❑ 8 ❑ 9

Yes No Don't know REFUSE

GO TO C7

C6b) ***IF YES ASK***: How often have you used condoms when having sex with a *regular* sex partner in the past three months?

- ☐ 4. Every Time
- ☐ 3. Often (most of the time)
- ☐ 2. Sometimes
- ☐ 1. Rarely
- ☐ 0. Never
- ☐ 8. Don't Know
- ☐ 9. REFUSED

C7) Do you believe that you could get a regular sex partner to use a condom? SCHOUERI

❑ 1 Yes ❑ 0 No ❑ 8 Don't know ❑ 9 REFUSE

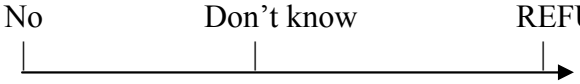
C8) Have you had sex *without* a condom with a regular sex partner in the past year?

❑ 1 Yes ❑ 0 No ❑ 8 Don't know ❑ 9 REFUSE

The next questions are about sex with a casual partner. A casual sex partner is often referred to as a "hook-up" or "one nighter".

C9) Have you had a *hook up* where you had sex in the past 3 months?

❑ 1 Yes ❑ 0 No ❑ 8 Don't know ❑ 9 REFUSE



C9b) **IF YES ASK**: How often have you used condoms when having sex with a *hook up* in the past three months?

- ☐ 4. Every Time
- ☐ 3. Often (most of the time)
- ☐ 2. Sometimes
- ☐ 1. Rarely
- ☐ 0. Never
- ☐ 8. Don't Know
- ☐ 9. REFUSED

C10) Do you believe that you could get a hook up to use a condom? SCHOUERI

1	0	8	9
Yes	No	Don't know	REFUSE

C11) Have you had sex without a condom with a hook up in the past year?
RAPIDS

1	0	7	9
Yes	No	No sexual partner in last year	REFUSE

GO TO C12
PAGE 12

C11b) **IF YES to C8 or C11, ASK**: If you have had sex without a condom in the past year, were any of the following, reasons that you did not use one? **GIVE BLUE PROMPT CARD. CHECK ALL THAT APPLY.**

a) I didn't have one with me..... ❒ 1

b) People like me don't get sexually transmitted infections. ❒ 1

c) Condoms are too expensive..... ❒ 1

d) Getting condoms is embarrassing ..... ❒ 1

e) I was afraid to talk to my partner about condoms..... ❒ 1

f) I'm not at risk for HIV……. ..... ❒ 1

g) I (or my partnerwe) wanted to get pregnant ..... ❒ 1

h) Condoms do not feel good…… ..... ❒ 1

i) I'm straight so I'm safe ……..……..... ❒ 1

j) My partner did not want to …..... ❒ 1

k) People like me don't get HIV …..... ❒ 1

l) I don't care if I get a sexually transmitted infection..... ❒ 1

m) I don't care if I get HIV..... ❒ 1

n) I'm not sure how to use condoms ..... ❒ 1

o) I, or my partner, was on the Pill ……..... ❒ 1

p) I was drunk, stoned, high and didn't think about it ..... ❒ 1

q) Other: Please specify_____ ❒ 1

REFUSE ……..…..…. ❒ 9

C12) Do you think you can always have condoms with you in any sexual situation? SCHOUERI

❑ 1 Yes ❑ 0 No ❑ 8 Don't Know ❑ 9 REFUSE

C13) Do you know how to use a condom correctly?

❑ 1 Yes ❑ 0 I think so (maybe) ❑ 2 I don't think so ❑ 9 REFUSE

SUBSTANCE USE:

I am going to ask you some questions about your use of cigarettes, alcohol and marijuana. I want to remind you that everything you tell me is confidential; nothing you report to me will be shared with anyone else.

C14) Do you CURRENTLY smoke cigarettes..... SCHOUERI

❑ 2 Daily, ❑ 1 Occasionally, or ❑ 0 Not at all? ❑ 9 REFUSE

C15) How often did you drink alcoholic beverages (beer/wine/hard liquor) during the past three months? Would you say...? ABOUT LAST NIGHT

☐ 6. About every day
☐ 5. 2-3 times a week
☐ 4. Once a week
☐ 3. 2-3 times a month
☐ 2. Once a month
☐ 1. Once or twice
☐ 0. Never
☐ 7. Other: _____
☐ 8. Don't know
☐ 9. REFUSE

C16) For this question, when I ask the number of drinks I'm asking about standard sized drinks. A standard drink is 1 bottle of beer (12 oz) *or* a glass of wine (5 oz) *or* 1 shot of liquor (1.5oz), for example rum, vodka, gin etc. In the past three months, on the days when you did drink, how many drinks did you usually have?

_____ drinks

C17) In the past three months, have you tried or used pot ("weed") for recreational purposes?

❑ 1 Yes ❑ 0 No ❑ 9 REFUSE

| | → **GO TO PART D PAGE 14**

C17b) How often have you used pot ('weed") during the past 3 months?

- ☐ 6. About every day
- ☐ 5. 2-3 times a week
- ☐ 4. Once a week
- ☐ 3. 2-3 times a month
- ☐ 2. Once a month
- ☐ 1. Once or twice
- ☐ 0. Never
- ☐ 7. Other: _____
- ☐ 8. Don't know
- ☐ 9. REFUSE

PART D: ACCESSING SEXUAL-HEALTH INFORMATION

In this section I am going to ask you some questions about where you get your sexual-health information from. If you don't want to answer that is okay, it will still be helpful to us. **CHECK ALL THAT APPLY.**

D1) Who *do you* get your sexual health information from? Do you get it from…		D2) Who *would you like* to get your sexual-health information from? TORONTO TEEN	
a) Internet	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED	a) Internet	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED
b) Close friends	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED	b) Close friends	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED
c) Peers who are not your close friends	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED	c) Peers who are not your close friends	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED
d) Parents or adults you live with	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED	d) Parents or adults you live with	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED
e) brothers/sisters/ other youth who live in your fosters home or other close relatives	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED	e) brothers/sisters/ other youth who live in your fosters home or other close relatives	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED
f)Doctor	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED	f)Doctor	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED
g) Teacher	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED	g) Teacher	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED
h) Health Nurse at a clinic CONTINUE D1 ON NEXT PAGE	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED	h) Health Nurse at a clinic CONTINUE D2 ON NEXT PAGE	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED

i) Social Worker	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED	i) Social Worker	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED
j) Other: _____ _____ _____ _____	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED	j) Other: _____ _____ _____ _____	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED
k) Social Service Agency	☐ 1. Yes **GO TO D1m** ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED	k) Social Service Agency	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED

D1m) Can you tell me some of the places where you go to get sexual-health information from in Hamilton? **CHECK ALL THAT APPLY.**

☐ 1. Health Initiatives for Youth (HIFY)
☐ 1. The VAN Needle Exchange Program
☐ 1. The Well
☐ 1. Street Health (2nd floor of Wesley Centre)
☐ 1. Sexual-health clinic in Dundas
☐ 1. Sexual-health Information Phone line
☐ 1. Aboriginal Health Centre
☐ 1. Sexual-health clinic on Barton Street (East end)
☐ 1. The Hamilton AIDS Network
☐ 1. Shelter
☐ 1. Urban Core
☐ 1. Other: Specify _____
☐ 8. DON'T KNOW
☐ 9. REFUSED

D3) Have you gone to any social services in Hamilton in the past year for information about sexual-health?

☐ 1. Yes ⇨ **GO TO D4**
☐ 0. No ⇨ **GO TO D3b**
☐ 8. DON'T KNOW ⇨ **GO TO D4**
☐ 9. REFUSED

D3b) Can you tell me why you haven't accessed any sexual-health services?

_____

_____

D4) Do you consider sexual-health information you get from your close friends and peers to be one of the most reliable (trustworthy, truthful, accurate) sources you get your information from? UNIQUE

❑ 2	❑ 1	❑ 0	❑ 8	❑ 9
Yes	Somewhat	No	Don't know	REFUSE

Now I'm going to ask you some questions about talking to people you know. You may not have actually talked about these things, but we would like you to tell us **how confident you are that you think you could do them**.

D5) Could you talk to at least one of your friends about.....

	Yes	No	Not applicable	DON'T KNOW	REFUSE
a) Sex	❑ 1	❑ 0	❑ 7	❑ 8	❑ 9
b) STIs	❑ 1	❑ 0	❑ 7	❑ 8	❑ 9
c) HIV or AIDS	❑ 1	❑ 0	❑ 7	❑ 8	❑ 9
d) your identity *** ASK ONLY IF INDIVIDUAL IDENTIFIES AS <u>NOT</u> STRAIGHT MALE OR FEMALE**	❑ 1	❑ 0	❑ 7	❑ 8	❑ 9

D6) Could you talk with your boyfriend/girlfriend/sexual partner about...

	Yes	No	Not applicable	DON'T KNOW	REFUSE
a) sex	❑ 1	❑ 0	❑ 7	❑ 8	❑ 9
b) using condoms	❑ 1	❑ 0	❑ 7	❑ 8	❑ 9
c) pregnancy	❑ 1	❑ 0	❑ 7	❑ 8	❑ 9
d) STIs	❑ 1	❑ 0	❑ 7	❑ 8	❑ 9
e) HIV or AIDS	❑ 1	❑ 0	❑ 7	❑ 8	❑ 9
f) your identity *** ASK ONLY IF INDIVIDUAL IDENTIFIES AS <u>NOT</u> STRAIGHT MALE OR FEMALE**	❑ 1	❑ 0	❑ 7	❑ 8	❑ 9

D7) Could you talk with your parents or the adults you live with about...

	Yes	No	Not applicable	DON'T KNOW	REFUSE
a) sex	❑ 1	❑ 0	❑ 7	❑ 8	❑ 9
b) using condoms	❑ 1	❑ 0	❑ 7	❑ 8	❑ 9
c) pregnancy	❑ 1	❑ 0	❑ 7	❑ 8	❑ 9
d) STIs	❑ 1	❑ 0	❑ 7	❑ 8	❑ 9
e) HIV or AIDS	❑ 1	❑ 0	❑ 7	❑ 8	❑ 9
f) your identity *** ASK ONLY IF INDIVIDUAL IDENTIFIES AS NOT STRAIGHT MALE OR FEMALE**	❑ 1	❑ 0	❑ 7	❑ 8	❑ 9

D8) A loving relationship is one in which partners love, trust and respect each other. Have you ever been in a relationship like this?	☐ 1. Yes ☐ 0. No ☐ 6. Not sure ☐ 8. DON'T KNOW ☐ 9. REFUSED
D9) Have you or your sexual partner ever used emergency birth control – meaning "Plan B" or "the Morning After Pill"? D9b) **IF YES**: Where did you get it from? _____ _____ _____	☐ 1. Yes **GO TO D9b** ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED
D10) Do you know of any places where you can get free condoms in Hamilton?	☐ 1. Yes ☐ 0. No ⇨ **GO TO D13** ☐ 8. DON'T KNOW ☐ 9. REFUSED ⇨ **GO TO D13**
D11) Have you ever gotten free condoms from anywhere in Hamilton in the past year? UNIQUE	☐ 1. Yes ☐ 0. No ⇨ **GO TO D13** ☐ 8. DON'T KNOW ☐ 9. REFUSED

D12) Can you tell me some of the places where can you get free condoms from in Hamilton?
CHECK ALL THAT APPLY

- ☐ 1. Health Initiatives for Youth (HIFY)
- ☐ 1. The VAN Needle Exchange Program
- ☐ 1. Street Health (2nd floor of Wesley Centre)
- ☐ 1. Sexual-health clinic in Dundas
- ☐ 1. The Well
- ☐ 1. Sexual-health clinic on Barton Street (East end)
- ☐ 1. The Hamilton AIDS Network
- ☐ 1. Family Doctor
- ☐ 1. Other: Specify _____
- ☐ 8. DON'T KNOW
- ☐ 9. REFUSED

D13) Do you think that any of your friends are using sexual-health services in Hamilton? UNIQUE

❑ 1	❑ 0	❑ 7	❑ 8	❑ 9
Yes	No	Not applicable	Don't Know	REFUSE

PART E: ACCESSING SEXUAL-HEALTH SERVICES:

In this section I'm going to ask you some questions about sexual-health services you use or have used. It includes questions about getting tested for sexually transmitted infections, pregnancy and going to a doctor. Remember that everything you tell me is confidential. Please try to answer as honestly as possible.

E1) Do you know what a sexually transmitted infection is?

❑ 2 Yes ❑ 1 Yes, I think so ❑ 0 No ❑ 9 REFUSE

E2) Do you think you have ever been tested for any sexually transmitted infections, not including HIV?

❑ 1 Yes ❑ 0 No ❑ 2 Don't know ❑ 9 REFUSE

→ **GO TO E2d**

E2b) Where did you have your last sexually transmitted infection test?
DO NOT READ OUT LOUD.

☐ 1. Health Initiatives for Youth (HIFY)
☐ 2. The VAN Needle Exchange Program
☐ 3. Street Health (2nd floor of Wesley Centre)
☐ 4. Sexual-health clinic in Dundas
☐ 5. Sexual-health clinic on Barton Street (East end)
☐ 6. Aboriginal Health Centre
☐ 7. Family Doctor
☐ 8. Jail / prison
☐ 9. Urban Core
☐ 10. Other: Specify _____
☐ 88. Can't remember
☐ 99. REFUSED

E2c) Have you retrieved your results for the sexually transmitted infection tests you have had?

❑ 2 Yes, always ❑ 1 Yes, some of the time ❑ 0 No ❑ 9 REFUSE

→ **GO TO E3**
PAGE 21

E2d) **IF YES, ASK**: Have you ever been told that you had the following sexually transmitted infections?

a) Herpes	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED	d) Gonorrhea	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED
b) Chlamydia	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED	e) Genital Warts (HPV)	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED
c) Syphilis	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED	f) Other	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED

MALES GO TO E5

E3) Have you ever had a Pap smear? UNIQUE

❑ 2 Yes ❑ 1 I'm not sure ❑ 0 No ❑ 9 REFUSE

GO TO E4

E3b) **IF YES**: How long ago was your last pap? _____ Months ago OR _____ years ago

E4) In a routine Pap smear, which sexually transmitted infections do you think you get tested for?
DO NOT READ THIS LIST OUT LOUD. CHECK ALL THAT APPLY

☐ 1. Herpes
☐ 2. Chlamydia
☐ 3. Syphilis
☐ 4. Genital Warts (Human Papilloma Virus – HPV)
☐ 5. Gonorrhea
☐ 6. Pregnancy
☐ 7. Other: Specify _____
☐ 8. Can't remember / Don't know
☐ 9. REFUSED

E5) How worried are you that you might get a sexually transmitted infection? UNIQUE

❒ 0 ❒ 1 ❒ 2 ❒ 8 ❒ 9

Not at all Worried	Somewhat worried	Very worried	Don't know	REFUSE

The next few questions are about the Human Immunodeficiency Virus, and the Acquired Immune Deficiency Syndrome, commonly referred to as HIV and AIDS.

E6) Have you ever gone for an HIV test? HIV EDMONTON

❒ 1 ❒ 0 ❒ 8 ❒ 9

Yes	No	Don't know	REFUSE

GO TO E7, PAGE 22

E6b) **IF YES ASK**: When was your last HIV test? _____/_____
month year

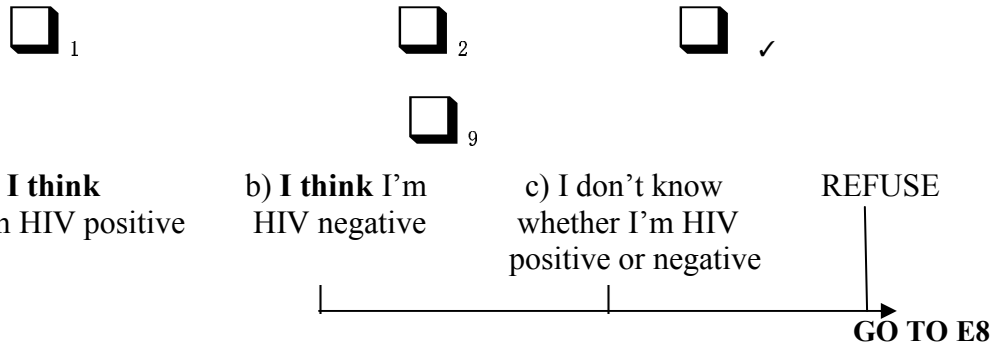
E6c) Where did you have your last HIV test done?

☐ 1. Health Initiatives for Youth (HIFY)
☐ 2. The VAN Needle Exchange Program
☐ 3. Street Health (2nd floor of Wesley Centre)
☐ 4. Sexual-health clinic in Dundas
☐ 5. Sexual-health clinic on Barton Street (East end)
☐ 6. Family Doctor
☐ 7. Jail / prison
☐ 7. Urban Core
☐ 9. Aboriginal Health Centre
☐ 10. Other: Specify _____
☐ 88. Can't remember
☐ 99. REFUSED

E6d) What was the result of your last HIV test? **GIVE <u>GREEN</u> PROMPT CARD.**

A. ☐ 1. HIV positive ⇨ **GO TO E8, PAGE 22**
B. ☐ 2. HIV negative
C. ☐ 3. Don't know, didn't retrieve results
☐ 9. REFUSE

E7) What do you think your HIV status is today? DUAL RISK
GIVE <u>ORANGE</u> PROMPT CARD.



E7b) **IF PARTICIPANT THINKS THEY ARE HIV POSITIVE:** Why do you think you are positive?

_____

_____

_____ **GO TO E9**

E8) How worried are you that you might get HIV? SCHOUERI

E9) Now I'm going to ask about your use of general health services.

Do you currently have a family doctor or general practitioner, also known as a GP? This does not include doctors that you have seen at a walk-in clinic. UNIQUE

E10) When was the last time you saw a family doctor? UNIQUE

WRITE ✎ THE MONTH/YEAR IN THE SPACE BELOW. IF THE PARTICIPANT CAN ONLY REMEMBER THE YEAR, PLEASE JUST WRITE THE YEAR.

_____ / _____ was the last time I saw my family doctor.
MONTH YEAR

☐ 7. I have never seen or had a family doctor
☐ 8. I don't know
☐ 9. REFUSE

E11) During the past twelve months, was there ever a time you felt that you needed health care but you did not receive it? This includes times when you did not try to access health care, but felt that you should have. We're not referring to excessive wait times. SCHOUERI

❑ 1 Yes ❑ 0 No ❑ 8 Don't Know ❑ 9 REFUSE

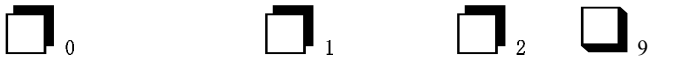
E12) Do you have a valid health card? A valid health card is not expired and has the address you are currently living at. UNIQUE

❑ 1 Yes ❑ 0 No ❑ 8 Don't Know ❑ 9 REFUSE

E13) **IF FEMALE**: Are you worried you might get pregnant?
IF MALE: Are you worried you might get your partner pregnant?
IF TRANSGENDER/TRANSEXUAL: Are you worried you or a partner might become pregnant?

❑ 0 No ❑ 1 Yes ❑ 9 REFUSE

E14) **IF FEMALE**: Have you ever been pregnant?
IF MALE: Have you ever gotten someone pregnant?
IF TRANSGENDER/TRANSEXUAL: Have you or a partner ever become pregnant?



No Yes Don't know REFUSE

E14b) Was it planned?

Yes No Refuse

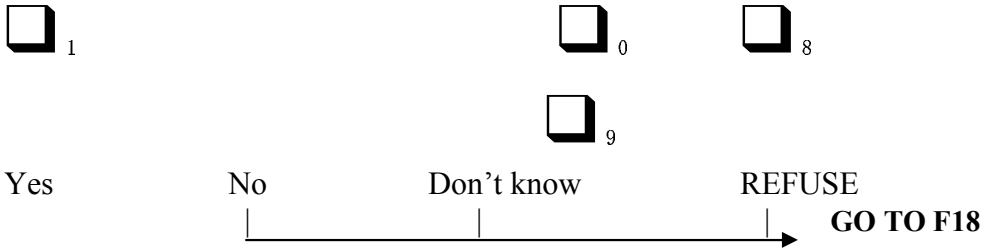
PART F: HIV/AIDS KNOWLEDGE AND SERVICE USE

I will now read a number of statements, some could be true, others false. Please tell me if you think each statement is true or false as I read them out loud.

F1) There is a cure for HIV. OAKLAND	☐ 1. True ☐ 0. False ☐ 8. DON'T KNOW ☐ 9. REFUSED
F2) Condoms reduce the risk of getting HIV. OAKLAND	☐ 1. True ☐ 0. False ☐ 8. DON'T KNOW ☐ 9. REFUSED
F3) A person can get HIV even if he or she has sex (putting a penis in a vagina or anus) just one time without a condom. OAKLAND	☐ 1. True ☐ 0. False ☐ 8. DON'T KNOW ☐ 9. REFUSED
F4) Only people who have sex with gay or homosexual people get HIV. OAKLAND	☐ 1. True ☐ 0. False ☐ 8. DON'T KNOW ☐ 9. REFUSED
F5) You can get HIV from kissing someone who has HIV. OAKLAND	☐ 1. True ☐ 0. False ☐ 8. DON'T KNOW ☐ 9. REFUSED
F6) You can get HIV by having unsafe sex with someone who has shared needles for using drugs.	☐ 1. True ☐ 0. False ☐ 8. DON'T KNOW ☐ 9. REFUSED
F7) Birth control pills protect a woman from getting HIV. OAKLAND	☐ 1. True ☐ 0. False ☐ 8. DON'T KNOW ☐ 9. REFUSED
F8) There is a vaccine available to keep a person from getting HIV. CAREY	☐ 1. True ☐ 0. False ☐ 8. DON'T KNOW ☐ 9. REFUSED
F9) A person can get HIV from oral sex, like a blow job or eating a girl out.	☐ 1. True ☐ 0. False ☐ 8. DON'T KNOW ☐ 9. REFUSED

F10) Taking a test for HIV one week after having sex will tell a person if she or he has HIV. CAREY	☐ 1. True ☐ 0. False ☐ 8. DON'T KNOW ☐ 9. REFUSED
F11) Having sex with more than one partner can increase a person's chance of being infected with HIV. CAREY	☐ 1. True ☐ 0. False ☐ 8. DON'T KNOW ☐ 9. REFUSED
F12) A person can get HIV through tattooing if the needles are not disinfected.	☐ 1. True ☐ 0. False ☐ 8. DON'T KNOW ☐ 9. REFUSED
F13) If a person tests positive for HIV, then the test site will have to tell his or her parents, or the adults they live with. CAREY	☐ 1. True ☐ 0. False ☐ 8. DON'T KNOW ☐ 9. REFUSED
F14) A person can get HIV even if she or he has sex with another person only one time? CAREY	☐ 1. True ☐ 0. False ☐ 8. DON'T KNOW ☐ 9. REFUSED
F15) You can usually tell if someone has HIV by looking at them. CAREY	☐ 1. True ☐ 0. False ☐ 8. DON'T KNOW ☐ 9. REFUSED
F16) Pulling out the penis before a man climaxes or cums keeps his partner from getting HIV during sex. CAREY	☐ 1. True ☐ 0. False ☐ 8. DON'T KNOW ☐ 9. REFUSED

F17) Have you ever accessed a sexual-health clinic or another community agency for information *specifically about HIV or AIDS?* UNIQUE



F17b) **IF YES ASK:** Which organization or clinic did you go to?
DO NOT READ OUT LOUD. CHECK ALL THAT APPLY.

☐ 1. Health Initiatives for Youth (HIFY)
☐ 1. The Urban Core
☐ 1. The AIDS Network
☐ 1. The Well
☐ 1. The VAN Needle Exchange Program
☐ 1. Street Health on 2nd floor of the Wesley
☐ 1. Sexual-health Clinic in Dundas
☐ 1. Sexual-health Clinic on Barton Street East (in the East End)
☐ 1. Sexual-health Clinic in Hamilton General
☐ 1. Aboriginal Health Centre
☐ 1. Other: _____
☐ 8. Don't know
☐ 9. REFUSED

F18) Which *places* would you like to get your HIV/ AIDS information from? TORONTO TEEN		F19) Which *people* would you like to go to for HIV/AIDS information?	
a) Internet	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED	a) Boyfriend or girlfriend	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED
b) School	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED	b) Teacher	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED
c) Radio	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED	c) Close friends	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED
d) CAS/CCAS	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED	d) Social worker at CAS/ CCAS	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED
e) Church	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED	e) Pastor or church staff	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED
f) Doctor's office **CONTINUE F18 ON**	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW	f) My doctor **CONTINUE F19 ON**	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW

F18) Which *places* would you like to get your HIV/ AIDS information from? TORONTO TEEN		F19) Which *people* would you like to go to for HIV/AIDS information?	
NEXT PAGE	☐ 9. REFUSED	**NEXT PAGE**	☐ 9. REFUSED
g) Sexual-health clinic	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED	g) Nurse at a sexual health clinic	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED
h) Library	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED	h) Parents or adults you live with, including foster parents and relatives	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED
i) Television	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED	i) Peers who are not your close friends	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED
j) Social Service Agency	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED	j) brothers, sisters, other kids that you live with or other close relatives	☐ 1. Yes ☐ 0. No ☐ 8. DON'T KNOW ☐ 9. REFUSED
		k) Counselor at a social service agency	☐ 1. Yes ☐ 0. No **GO TO G1** ☐ 8. DON'T KNOW ☐ 9. REFUSED **GO TO G1**

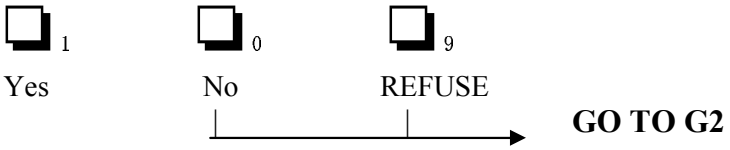
F20) In the future, which social service agencies would you go to for HIV/AIDS information *specifically?* **READ LIST OUT LOUD**. **CHECK ALL THAT APPLY**.

☐ 1. Health Initiatives for Youth (HIFY)
☐ 1. The Urban Core
☐ 1. The AIDS Network
☐ 1. The Well
☐ 1. The VAN Needle Exchange Program
☐ 1. Street Health on 2nd floor of the Wesley
☐ 1. Sexual-health Clinic in Dundas
☐ 1. Sexual-health Clinic on Barton Street East (in the East End)
☐ 1. Sexual-health Information Phone Line
☐ 1. Aboriginal Health Centre
☐ 1. Other: _____
☐ 9. REFUSED

PART G: PEER EDUCATION

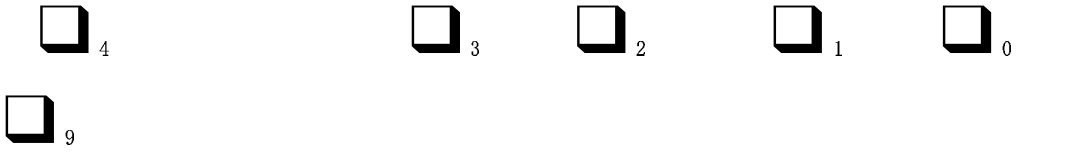
In this section I'm going to ask you about peer education. If you need clarification on any questions, please don't hesitate to ask me. Peer education is a form of education, where young people from a similar age group, background, culture and/or social status educate and inform each other about a wide variety of issues, for example safer sex. Peer mentors provide advice and support and serve as role models for younger people who might need help. Mentors can help with problems including schoolwork; social issues such as pressure to drink or smoke; family problems and tension; and other typical difficulties of growing up.

G1) Have you ever heard of peer education or peer mentorship?

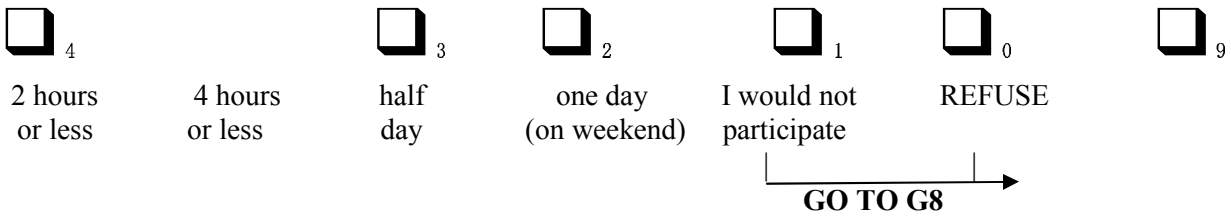


G1a) Have you ever participated in any type of peer education or peer mentorship? UNIQUE

G2) If you were going to participate in a peer education workshop, how many hours would you be willing to go if you didn't get anything for going? UNIQUE



G3) If you were going to participate in a peer education workshop, how many hours would you be willing to go if you were going to receive something for going, for example a credit for school, food vouchers or bus tickets? UNIQUE



G4) Do you think that peer education is a worthwhile way to teach other people your age about sexual-health?

GO TO G8

G5) If you were going to participate in a peer education workshop, what time of day would be ideal for you to attend? UNIQUE

❑ 5 Daytime ❑ 4 After School ❑ 3 Evenings ❑ 2 Weekends ❑ 1 Other : _____ ❑ 7 REFUSE

G6) If you were going to participate in a peer education workshop, how many weeks would you be willing to go if you didn't get anything for going?

❑ 5 4 weeks ❑ 4 6 weeks ❑ 3 8 weeks ❑ 2 12 weeks ❑ 1 Other :_____ ❑ REFUSE

G7) If you were going to participate in a peer education workshop, how many weeks would you be willing to go if you were going to receive something for going, for example a credit for school, food vouchers or bus tickets? UNIQUE

❑ 5 4 weeks ❑ 4 6 weeks ❑ 3 8 weeks ❑ 2 12 weeks ❑ 1 Other :_____ ❑ REFUSE

G8) What do you think would be fair for you to get for going participate in a peer education workshop? **CHECK ALL THAT APPLY.**

a) Paid for attendance..... ❑ 1

b) High school credit ..... ❑ 1

c) Probationary requirement (through EFRY/JHS)..... ❑ 1

d) To fulfill a CAS request..... ❑ 1

e) Gives me somewhere to go/something to do..... ❑ 1

f) Bus tickets and food…….. ..... ❑ 1

g) Learn new skills……..... ❑ 1

h) Other: _____…….. ❑ 1

G9) Would you be interested in being a peer educator, meaning that you would help to facilitate a peer mentorship program? This would likely require that you receive some training.

❑ 1 Yes ❑ 0 No ❑ 8 Don't know ❑ 9 REFUSE

G10) I'm going to read a list of a number of places where we could locate a peer education program in Hamilton. For each place can you tell me whether you would definitely probably, possibly or not at all attend a peer education program there.

a) Health Initiatives for Youth	☐ 3. Definitely ☐ 2. Probably ☐ 1. Possibly ☐ 0. Not at all ☐ 9. REFUSE	e) Elizabeth Fry Society or John Howard Society	☐ 3. Definitely ☐ 2. Probably ☐ 1. Possibly ☐ 0. Not at all ☐ 9. REFUSE
b) Hamilton AIDS Network	☐ 3. Definitely ☐ 2. Probably ☐ 1. Possibly ☐ 0. Not at all ☐ 9. REFUSE	f) Sexual Assault Centre of Hamilton (SACHA)	☐ 3. Definitely ☐ 2. Probably ☐ 1. Possibly ☐ 0. Not at all ☐ 9. REFUSE
c) The Well	☐ 3. Definitely ☐ 2. Probably ☐ 1. Possibly ☐ 0. Not at all ☐ 9. REFUSE	g) School	☐ 3. Definitely ☐ 2. Probably ☐ 1. Possibly ☐ 0. Not at all ☐ 9. REFUSE
d) Aboriginal Health Centre	☐ 3. Definitely ☐ 2. Probably ☐ 1. Possibly ☐ 0. Not at all ☐ 9. REFUSE	h) Shelter	☐ 3. Definitely ☐ 2. Probably ☐ 1. Possibly ☐ 0. Not at all ☐ 9. REFUSE
		i) Other: _____ _____	☐ 3. Definitely ☐ 2. Probably ☐ 1. Possibly ☐ 0. Not at all ☐ 9. REFUSE

G11) Now that you know what peer mentorship is, can you tell me if you would prefer to go to a friend, a trained peer mentors, or a social service agency, to get information on… **CHECK ALL THAT APPLY.**

	Friends	Peer Mentors	Social Service	Not applicable	REFUSE
a) Counseling					
b) HIV/STI risk information					
c) Anonymous HIV testing					
d) Pregnancy testing					
e) Pregnancy options					
f) Reporting rape / sexual assault					
g) Information on Pap Smear					
h) STI treatment information					
i) Skill attainment (e.g., condom use skills)					
j) HIV treatment information					
k) Safer sex kits (condoms/dental dams)					
l) LGTBQ information					
m) How to cope if you or a partner were HIV+					
n) Safer sex work knowledge					
o) Health insurance information					
p) Information and support on healthy relationships					

G12) What kinds of programs would you like to see created that would target you and your friends regarding sexually transmitted infections and/or HIV/AIDS?

_____

_____

_____

*** * THE END * ***

ASK PARTICIPANT IF THEY HAVE ANYTHING ELSE THEY WOULD LIKE TO SHARE WITH US. WRITE THEIR RESPONSES IN THE SPACE BELOW.

Prompt Card A

(was printed on blue card stock)

A	I didn't have one with me
B	I don't care if I get HIV
C	People like me don't get STIs
D	Condoms are too expensive
E	Getting condoms is embarrassing
F	I was afraid to talk to my partner about condoms
G	I'm not at risk for HIV
H	I wanted to get pregnant
I	Condoms do not feel good
J	I'm straight so I'm safe
K	My partner did not want to
L	People like me don't get HIV
M	I do not care if I get an STI
N	I don't care if I get HIV
O	I'm not sure how to use condoms
P	I or my partner were on the Pill
Q	I was drunk, stoned, high and didn't think about it
R	Other

Prompt Card B

(was printed on green card stock)

A HIV positive
B HIV negative
C I don't know, I didn't retrieve my results

Prompt Card C
(was printed on orange card stock)

A I think I'm HIV positive
B I think I'm HIV negative
C I don't know if I'm HIV positive or negative
D I would prefer not to answer

APPENDIX C: Recruitment pamphlet

Be *Safe*, It's *Sexy*.

Safe n' Sexy is a project that asks Hamilton's street- involved youth about sexual health decision making, their experience with Hamilton's sexual health services, and their experiences with and acceptance of peer education.

Safe n' Sexy Project

Michelle Vibert
Project Coordinator
Phone: (905) 528-0854
E-mail: **safensexy@aidsnetwork.ca**

Your Research Team
Dr. Sandra Bullock sbullock@uwaterloo.ca
(519) 888-4567 ext. 32378
Adrian R. Betts
Deborah Stinson
Jose Franco
Bridget Marsdin
Rebecca Skibinski

This study has been reviewed and received ethics approval through the Office of Research Ethics at the University of Waterloo. If you have any comments or concerns about participation in this study, you may contact Dr. Susan Sykes, Director of the University of Waterloo Research Ethics Board at (519)888-4567 ext. 36005.
sykes@uwaterloo.ca

University of Waterloo

Safe n' Sexy Project

Between the ages of **14 and 24**?

Homeless or **Street involved**?

Interested in doing an **interview for $15**?

Phone: (905) 528-0854

safensexy@aidsnetwork.ca

What's this project all about anyway?

Many youth make decisions that keep them safe in relationships, while living on the street and maintaining their sexual health.

Whether it's always using a condom, testing for sexually transmitted infections (STI), talking to someone about HIV or becoming a peer educator, are all great decisions youth make to keep themselves safe.

We think you have a lot of great information that would be really useful to helping other youth.

We want to ask homeless and street-involved youth some questions about their sexual health & what they do to maintain their sexual safety so we can make recommendations to the City to better serve you.

What are you going to do with the research?

In Hamilton, youth have limited choices for youth-specific sexual health services. Ultimately, information that we get from talking to youth will help us to inform current social service agencies about how to serve youth better. We can also inform the City of Hamilton about some of the services youth need but don't have. As well, cities that are similar to Hamilton might have youth facing some of the same issues and they might also benefit from our recommendations.

Will you use my name?

No. All interviews are anonymous and confidential. No one who does an interview will have to give us their name. We will ask youth their age, sex and housing situation so we know more specifically the type of youth we have talked to.
All your answers are confidential.

What's in it for me?

1. You will receive some information about services that are already available in the city.
2. You can attend a youth forum to find out about the results of the project when it's done.
3. Everyone who is eligible and who participates will receive a $15 gift card and two bus tickets.

What are you going to ask me?

We will ask you some of these types of questions. There are no right answers! All the information you give us is helpful.

Do you know where in Hamilton to get free condoms?

Do you use condoms with regular and casual sex partners?

Have you ever talked to a person you want to or have sex with about HIV?

Have you ever had an STI test before?

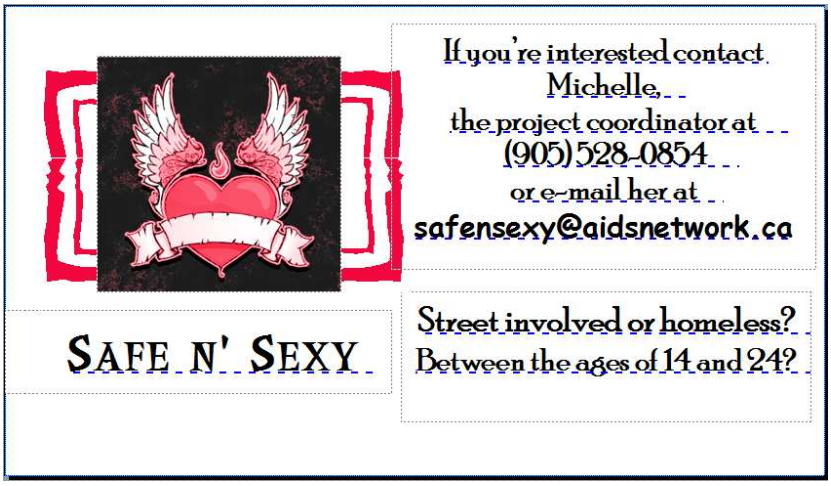
Do you know what peer education is?

I'm interested!

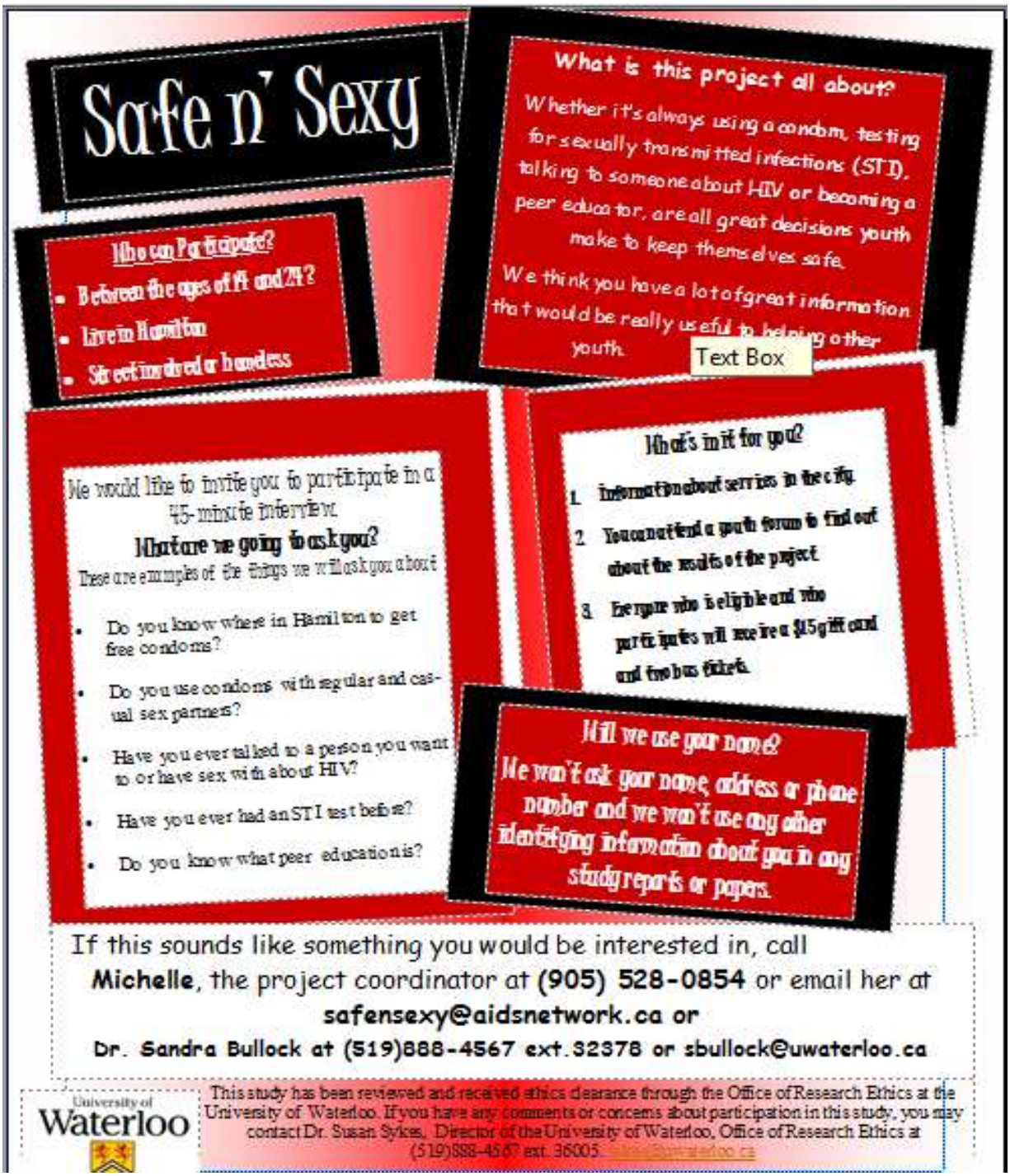
How do I do an interview?

1) Call Michelle, the project coordinator at (905) 528-0854 or email her at **safensexy@aidsnetwork.ca** to see if you are eligible.
2) She will schedule a time for you to come in and complete an interview.

APPENDIX D: Recruitment card



APPENDIX E: Recruitment poster



APPENDIX F: Screening instrument

Project Eligibility Questions

1. What is your current age?
   _____ years

2. Have you lived in the City of Hamilton for the past 6 months?

   ____ Yes

   ____ No

3. Have you stayed in an abandoned building, squat, flop house or outside in the past 6 months?

   ____ Yes (homeless group)

   ____ No

4. Have you stayed in a shelter, foster or group home or been in jail in the past 6 months?

   ____ Yes (street-involved group)

   ____ No

5. Where are you currently staying?

   _____

For office use only:
Participant is eligible for study
Participant is not eligible for study ☐

Interview time scheduled: _____

APPENDIX G: Information package

Dr. Sandra Bullock Jose Franco Adrian R. Betts Bridget Marsdin Michelle Vibert Rebecca Skibinski Deborah Stinson

University of Waterloo

The Safe n' Sexy Project

The AIDS Network
Serving Hamilton, Halton, Haldimand, Norfolk and Brant

Thank you very much for your participation in our study! Your voice is extremely important and we are happy you took the time to share your experiences and ideas with us. By participating you have also helped other youth who may have not had the chance or felt comfortable participating in this study.

This research is important for identifying possible gaps l in sexual-health services and education for youth, the level of and need for HIV and STI education and testing, the practicality of using peer education as a sexual education tool and the overall sexual-health needs of Hamilton's street-involved youth population.

I want to remind you that neither your name nor any other identifying information (like where you live or your telephone number) will be used will be used in any reports or papers that we use this research for. We will only be writing about group information and ***no one***, including the staff at the Hamilton AIDS Network or Health Initiatives for Youth will be able to identify the answers you gave on the questionnaire.

Attached to this letter is some information that we thought might be useful to you, your friends or your family. It has many numbers of different places that you can access for food, shelter, counselors, health care services, income assistance, education, addictions support and more. You are welcome to take a look over it before you leave, and if you'd like I would be happy to call any of these places with you if you feel you want me to.

Thank you again for your participation. We hope you enjoyed your experience. Remember to watch for posters announcing our youth symposium and the results of the study in the fall of 2009!

If you have any questions, or comments about any part of this project, please contact Michelle Vibert at safensexy@aidsnetwork.ca or at (905) 528-0854 or 1-866-563-0563. This number will accept collect calls. Or you can contact Dr. Sandra Bullock at sbullock@uwaterloo.ca or at (519)888-4567 Ext. 32378.

This project has been reviewed by, and received ethics clearance from the Office of Research Ethics at the University of Waterloo. If you have any comments or concerns resulting from your participation in the study, you may contact Susan Sykes at the Office of research Ethics at (519)888-4567 ext.36005. This number does not accept collect calls.

Youth Reference List for Services in the City of Hamilton

EMERGENCY NUMBERS:
POSION CONTROL – 1-800-268-9017
POLICE (NON-EMERGENCY) – (905) 546-4925
CRIME STOPPERS – 1-800-222-8477
* COAST (CRISIS OUTREACH AND SUPPORT TEAM) - (905) 972-8338

* KIDS HELP PHONE – 1-800-668-6868 http://www.kidshelpphone.ca/en/home.asp

YOUTH SERVICES:
Shelter:
*Notre Dame – 14 Cannon Street West, (905) 308-8090 (15-22 years old)
Grace Haven – (905) 522-6046 (for expectant and new teen moms)
St.Martin's Manor – (905) 575-7500 (for expectant and new teen moms)

Food Banks:
Salvation Army – 80 Bay Street North, (905) 540-1888
Good Shepherd – 135 Mary Street, (905) 528-9109
St. Matthew's House – 414 Barton Street East, (905) 523-5546
Mission Services – 50 Murray Street, (905) 528-4212
Dundas Food bank – 150 King Street West, (905)627-0572
Flamborough – 1432 Centre Road, Carlisle, (905) 690-1036
* Neighbour to Neighbour – 28 Athens Street, (905) 574-1334

Housing Assistance:
Housing Help Centre – (905) 526-8100
Housing Emergency Loan Program – (905) 527-7479 (will assist individuals with an interest free loan who have exhausted all resources to pay rent)
Dundurn Legal Clinic (Tenant Rights) – (905) 527-4572
McQueston Legal (Tenant Rights) – (905) 545-0442
Access to Housing – 499 King Street East, (905) 524-1199 (central subsidized housing Provider)

Hospitals:

*St.Joseph's – (905) 573-7797
McMaster Health Sciences – (905) 521-2100
Hamilton General – (905) 527-0271
Henderson Hospital – (905) 389-4411

Breakfast Program:

*Living Rock – (905) 528-7625 (8am-10am Monday to Saturday)

Free and Affordable Clothing:

*Good Shepherd Centre – 135 Mary Street, (905) 528-9109 (can access once monthly)
Salvation Army – (905) 521-1660
Goodwill – (905) 526-8481
St. Vincent de Paul – (905) 549-3902
Value Village – (905) 318-0409

Employment Services:

Youth Employment Centre – 77 Victoria Avenue South, (905) 522-4902
Living Rock – 30 Wilson Street, (905) 528-7625
Career Worx – 23 Main Street East, (905) 540-9679

Health Services:

*Health Initiatives for Youth – Basement of 151 York Road, (905) 528-3009
Sexual-health Clinic – 50 Murray Street, (905) 522-7778
*Salvation Army Booth Centre – 94 York Blvd, (905) 527 – 1444
Hamilton Urban Core Community Health Centre – 71 Rebecca Street, (905) 522-3233
*Mental Health Liaison Nurse – 14 Cannon Street West, (905) 308-8090
The Van Needle Exchange – (905) 317-9966 – Monday to Friday: 8pm – midnight
(no call display, mobile van)

Other:

*Youth Outreach Worker – (905) 546-3597
Ontario Works Main Office (Welfare) – (905) 546-2424
Ontario Disability Support Program – (905)521-7280

Alcohol, Drugs and Gambling:

*ADGS – 21 Hunter Street East, 3rd Floor, (905) 546-3606, adgs@ hamilton.ca
Drop In – 9:00-12:00 & 1:30- 4:30 (Monday to Friday)

Free Condoms:

Dundas Clinic **905-628-3000** (answered only during clinic hours)	2 King St. West, 2nd floor Dundas	Tuesday: 12:30 - 4 pm
East End (Stoney Creek) Clinic **905-546-3750** (answered only during clinic hours)	2255 Barton St. East, Unit # 8 Red Hill Creek Centre (corner of Barton St. and Nash Rd. by Commisso's)	Monday: 12:30 - 4 pm Thursday: 3 - 6 pm
Hamilton General Hospital STD and Anonymous HIV Clinic **905-546-3541**	237 Barton St. East, 1st floor (Outpatient Department)	Wednesday: 4:30 - 7 pm
Mountain Clinic **905-546-3274** (answered only during clinic hours)	1447 Upper Ottawa St. - Unit # 8 Hamilton (Public Health Services)	Monday: 3 - 6 pm Wednesday: 12:30 - 4 pm
Waterdown Clinic **905-546-2424 ext. 7479**	315 Dundas St. East, 2nd floor Waterdown (between Main St. & Mill St.)	Wednesday: 3 - 6 pm
Street Health Centre, Wesley Centre **905-777-7852**	195 Ferguson Ave. North Hamilton (Ferguson Ave. and Barton St.)	Monday: 1 - 4 pm Tuesday: 7 - 11 pm Wednesday: 9 - 11:30 am Thursday: 1 - 4 pm Friday: 9 - 11:30 am 1 - 4 pm
The AIDS Network	140 King St. East, Suite 101 Hamilton (Catherine St. and King St. East, in the basement of the Effort Trust Bldg)	Monday to Friday: 9 am - 5 pm
Health Initiatives for Youth Hamilton (Planned Parenthood) **905-528-3009**	151 York Blvd., Unit F (across from Sir John A MacDonald School)	Tuesday to Friday: 2 - 5 pm

SHELTERS:

Women's Shelters: (for females over the age of 22)

*Inasmuch House – (905) 529-8149

*Interval House – (905) 387-9959

*Martha House – (905) 523-8895 * also has 24 hour crisis line
*Mary's Place – (905) 540-8000
*Native Women's Centre – (905) 664-1114
*Wesley Centre – (905)528-6540 * mixed accommodation

Men's Shelters: (for males over the age of 22)
*Good Shepherd – (905) 528-9109
*Mission Services – (905) 528-7635
*Wesley Centre – (905) 528-6540 (mixed accommodation)

Newcomer Reception Houses:
Shalom Reception Centre – (905) 529-9449
Micah House – (905) 296-4387

APPENDIX H: Receipt for gift card

The Safe n' Sexy Project

Date: _____

Reimbursement: $15 Tim Horton's _____ **OR** $15 Wal-mart _____
AND
2 HSR bus tickets _____

Participant's signature, initials or mark:
_____

Interviewer's signature for payment:
_____

APPENDIX I: Information letter and consent form

UNIVERSITY OF Waterloo

DEPARTMENT OF HEALTH STUDIES AND GERONTOLOGY, FACULTY OF APPLIED HEALTH SCIENCES
University of Waterloo, 200 University Avenue West, Waterloo, Ontario, Canada N2L 3G1
519-888-4567 | Fax: 519-746-2510

Dr. Sandra Bullock (519) 888-4567 ext. 32378

Adrian R. Betts
Michelle Vibert
Deborah Stinson
Bridget Marsdin
Rebecca Skibinski
Jose Franco

THE □SAFE □n SEXY□ PROJECT

Participant Information Sheet and Consent Form

To be read with the participant before commencement of the interview. Interviewer obtains informed consent then signs and dates two copies. One copy is offered to the participant, one copy stays with the completed interview.

Thank you for your interest in this interview.

BACKGROUND TO THE PROJECT:

You are being invited to participate in a research study intending to assess the approach to and access of sexual-health services among street involved youth in the City of Hamilton. The study is based in the Department of Health Studies and Gerontology at the University of Waterloo in partnership with The AIDS Network Hamilton. This research is especially important in attempting to identify possible gaps in sexual-health services and education for youth and its association with HIV and STI education and testing and overall sexual-health in Hamilton's street involved youth population.

STUDY PROCEDURE:

We will be asking about 100 street-involved youth across the City of Hamilton about their access to sexual-health services, history of HIV/STI testing and sexual precautions they take. Everyone who is interviewed will be asked the same questions. Some of the questions we will be asking are about who youth talk to about their sexual-health, their sexual-health practices, using condoms, the things they do to stay safe when on the street and the sexual-health services that they feel might be wanted or needed.

The interview takes about 30 minutes to complete. It is confidential and anonymous. We don't need to know your name or where you live. During the interview you may choose not to answer any question and you can choose to stop the interview at any time. You are welcome to ask the interviewer questions along the way or ask for clarification about questions you are asked. If you choose not to participate in the interview you will still be able to access the services you choose without anyone knowing your participation.

The information we collect in all the interviews will be reported on a group basis. This means that no one – including staff at The AIDS Network, The Well or any other agency will be able to link answers back to you. Completed questionnaires will be kept in a locked filing cabinet in the research coordinator's office, and only researchers involved with the project will be able to use the information from the questionnaires. We will be keeping the questionnaires for seven years, after which time they will be confidentially shredded. Seven years is the standard time that paper copies of questionnaires are kept

before they are destroyed. We will be entering the answers from the questionnaires into a confidential data set, which will remain on password-protected, encrypted CDs. The Hamilton AIDS Network and University of Waterloo researchers will be keeping this information indefinitely. The reason it is kept is to allow staff, youth and other researchers to compare the findings from this study to future studies or studies that might be done in other cities. It is important that you know that no staff from any youth serving organization will be able to see your answers to the questionnaire, now or in the future.

There are no physical risks to you participating in this interview. However, there is a chance that it may bring up experiences that you don't want to remember. If you experience any kind of psychological distress during the interview, please let me know and we will stop the interview. I have a resource sheet that I will give to you which lists contact information for youth service organizations that you, or we, can contact if you want support with any discomfort you may be feeling. I would also be happy to refer you to a counselor to talk about your experiences if that would help. The information sheet also lists other services you might wish to access. The project can also directly help you as the information will be used to provide better sexual-health services for youth. In the same way, you will also be indirectly helping other youth living in Hamilton, who may not be able to participate in this interview.

I need to make you aware of my duty to report. This means that, as a professional, if you tell me about any physical, sexual or emotional abuse or neglect you have experienced or are experiencing, I have an obligation to report it to child protection services. I also have an obligation to report if you are harming yourself or others. You have the right not to tell me about these types of information if you do not want to. There are no questions within the interview that ask you directly about any forms of abuse.

TOKEN OF OUR APPRECIATION:

We very much appreciate you taking the time to answer the questions as accurately as possible. If you agree to take part in this interview, you will receive two bus tickets, an information package and a $15.00 gift card as a token of our appreciation. If you feel that you cannot complete the interview for any reason, you will still receive a gift card, bust tickets and information package.

QUESTIONS:

Should you have any questions or concerns about your participation in this interview, please call Michelle Vibert, the Project Coordinator at (905)528-0854, or toll-free 1-866-563-0563; or Research Investigator, Dr. Sandra Bullock at the University of Waterloo at (519)888-4567 ext. 32378. Both phone numbers will accept collect calls.

ETHICS CLEARANCE:

We would like to assure you that this study has been reviewed and received ethics clearance through the Office of Research Ethics at the University of Waterloo. However, the final decision to participate is yours. If you have any concerns about your rights as a research participant, you may contact Dr. Susan Sykes, Director of the University of Waterloo, Office of Research Ethics at (519)888-4567 ext. 36005. This phone number does not accept collect calls.

CONSENT

I now need you to confirm the following:

The information and consent form have been read to you. ☐

Do you have any questions before we get started? ☐

You have had an opportunity to ask the interviewer any questions you had about the interview. ☐

Your questions have been answered to your satisfaction. ☐

You understand my duty to report self harm, harm to others, and/or emotional, physical or sexual harm you've experienced to the appropriate authorities? ☐

Have you been informed as to the focus of the interview and the questions that will be asked? ☐

You understand that you can withdraw from the interview at *any* time without penalty. ☐

You agree to take part in this interview. ☐

You do not agree to take part in this interview. ☐

You have been offered a copy of the information sheet and consent for my own use. ☐

<u>Interviewer to complete:</u>

1. Participant understands their involvement and gives informed, verbal consent to complete the interview. ☐

2. Participant understood and declined to complete interview. ☐

_____ _____

Signature of interviewer obtaining informed consent Date (dd/mm/yy)

Appendix J: Referrals made by Safe n' Sexy team

Participant Referrals /Services given	Male	Female	
Clothing	1	1	2
Personal hygiene	1	4	5
Shelter	2	2	4
Free children's recreation programming	0	1	1
HIV test post interview	3	1	4
STI test post interview	2	1	3
Referred to Health Card day at Urban Core	2	0	2
Referred to ADGS, made appt w/ counsellor	1	0	1
Referred to Public Health Nurse	2	0	2
Referred to Living Rock food bank and programs	1	3	4
Referred to Hamilton AIDS Network	1	0	1
Referred to Sleep Country Free bed program	1	0	1
Referred to STARS program	0	1	1
Pregnancy test	0	1	1
Total referrals			32