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Psychosocial Problems of Homeless Sexual Minority Youths and Their Heterosexual Counterparts

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PSYCHOSOCIAL PROBLEMS OF HOMELESS SEXUAL MINORITY YOUTHS AND THEIR HETEROSEXUAL COUNTERPARTS

by

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Abstract

The purpose of this dissertation was to better understand the psychosocial problems (mental health problems, substance use problems, and sexual risk behaviors) and the associated contextual risk factors by comparing homeless sexual minority youths with their heterosexual counterparts. This study used an ecological perspective (Bronfenbrenner, 1989) and a risk and protective factors framework (Hawkins, Catalano, & Miller, 1992) to identify contextual risk factors at the microsystem, mesosystem, and macrosystem levels that are associated with the psychosocial problems of homeless sexual minority and homeless heterosexual youths. Individuals aged 16-24 were recruited from three drop-in programs serving homeless youths in downtown Toronto (N=147). Structured interviews were conducted with each participant. Bivariate analyses indicated statistically significant differences between homeless sexual minorities (n=66) and their heterosexual counterparts (n=81) regarding mental health, substance use and sexual risk behaviors, as well as contextual factors such as peers, family communication, stigma, and discrimination with sexual minority youths faring more poorly. Results of multiple regression analyses indicated that sexual identity moderated the relationship between negative peers and three psychosocial behaviors: sexual risk behaviors, condom use and substance use. Among sexual minorities, having peers who engaged in negative behaviors was associated with increased risky behaviors, but for homeless heterosexual youths, there was no effect between negative peers and their sexual risk behaviors and substance use. Results also indicated that sexual identity did not moderate the relationship between other contextual factors (i.e., family communication, stigma, or discrimination) and psychosocial outcomes such as mental health, substance use, and sexual risk behaviors. Understanding the nature and direction of the differences between homeless sexual minority youths and their heterosexual counterparts is an important first step in reducing disparities regarding negative outcomes of this population of youths.

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CHAPTER 1: INTRODUCTION, AIMS, AND SIGNIFICANCE

Introduction

Homeless youths and sexual minority youths are vulnerable and stigmatized populations. Sexual minority youths are overrepresented among homeless youths and homeless sexual minority youths face higher risk of mental health problems, substance use and sexual risk behavior compared to their heterosexual counterparts. In the United States, a report issued by the National Gay and Lesbian Task Force (Ray, 2006) has estimated that between 20% and 40% of all homeless youths identify as gay, lesbian, bisexual or transgendered (GLBT). A Canadian study on homeless and street involved youth found that in Toronto, 29.6% of street youth identified as "non-straight" and 2.7% as transgendered (Gaetz, 2004, p. 433).

The purpose of this dissertation was to better understand the psychosocial problems (mental health problems, substance use problems, and sexual risk behaviors) and the associated contextual risk factors by comparing homeless sexual minority youths with their heterosexual counterparts. This dissertation used an ecological perspective (Bronfenbrenner, 1989) and a risk and protective factors framework (Hawkins, Catalano, & Miller, 1992) to identify contextual risk factors at the microsystem, mesosystem, and macrosystem levels of homeless sexual minority and heterosexual youths. In particular, this study was innovative by examining the role of macrosystem level risk factors such as discrimination related to sexual orientation, and stigma related to homelessness relative to the psychosocial problems of sexual minority and heterosexual homeless youths. To date, no study has examined both of these factors in this population. (Stuber, Meyer, & Link, 2008).

Evidence documenting the psychosocial problems facing sexual minority youths, housed and homeless, has increased during the past three decades (Elze, 2005). Findings indicate that sexual minority youths do not comprise a homogeneous at-risk group and some sexual minority youths are more at risk than others (Elze, 2005). For example, homeless sexual minority youths are more at risk for victimization, mental health problems, and substance abuse compared to housed sexual minority youths (Walls, Hancock, & Wisneski, 2007).

Likewise, when compared to heterosexual and cisgendered, having a gender identity that is in line with their biological sex (Vardi et al. 2008; Green, 2006) homeless youths, and specifically sexual minority youths who are homeless, face heightened risk of mental health issues, substance use issues, sexual risk behavior, and discrimination compared to their homeless heterosexual counterparts (Cochran, Stewart, Ginzler, & Cauce, 2002; Tyler, Whitbeck, Hoyt, Cauce, 2004; Milburn, Ayala, Rice, Batterham, Rotheram-Borus, 2000).

Previous government reports have already identified sexual minorities as a high risk group. For example, the Healthy People 2010 Companion Document for Lesbian, Gay, Bisexual, and Transgender (LGBT) Health was published to complement the public health agenda in the United States (Gay and Lesbian Medical Association and LGBT Health Experts, 2001). The heightened risks facing sexual minorities regarding mental health issues, substance use issues, and sexual risk behavior are three of the nine issues targeted by Healthy People 2010 for disparities elimination between sexual minorities and non-sexual minorities (Gay and Lesbian Medical Association and LGBT Health Experts, 2001; Sell & Becker, 2001). Likewise, the Canadian Institutes of Health

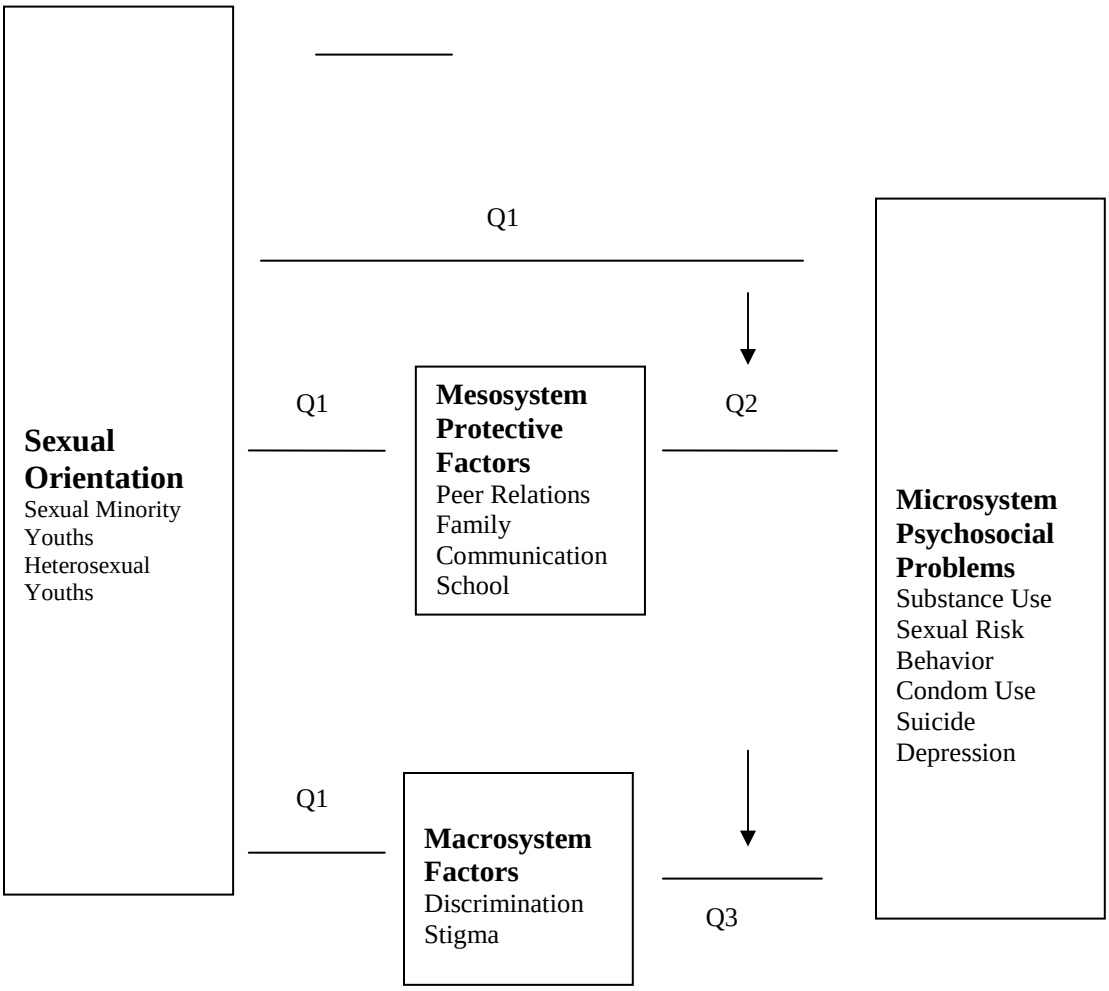
Research (CIHR), created the Reducing Health Disparities Initiative to address health disparities among vulnerable populations which includes homeless individuals and sexual minorities (Beiser & Stewart, 2005; Spitzer, 2005). The disparities listed for homeless Canadians include risk for premature death, infectious diseases, mental health issues, health disabilities and substance abuse. Disparities among sexual minorities in Canada are similar to issues related to sexual minorities in the United States, such as health problems related to a history of abuse, addiction, survival sex and victimization (Beiser & Stewart, 2005; Spitzer, 2005).

For purposes of this study, an individual was considered homeless if he/she reported living away from home without a viable or stable residence and not in the care or supervision of his/her caregiver for at least seven days within the past month prior to the day of the interview (Wasylenki & Tolomicenko, 1997). Also, a sexual minority was operationalized as anyone who self-identified as gay, lesbian, bisexual, or transgendered, WSW (woman who has sex with women), MSM (man who has sex with men), mostly-heterosexual, mostly-gay, queer, two-spirit, or intersex (Centre for Addiction and Mental Health, 2004). Heterosexual was operationalized as anyone who-self identified as heterosexual.

The purpose of this dissertation was to better understand the psychosocial problems (i.e., as they relate to mental health, substance use, sexual risk behaviors) associated with homeless sexual minority youths and through comparison with homeless heterosexual youths, to examine the contextual risk factors associated with their psychosocial problems. The following research questions were addressed in this study:

1. To what extent is sexual orientation associated with microlevel (i.e., mental health, substance use, and sexual risk behaviors), mesolevel (i.e., family functioning, peer relations, school experiences) and macrolevel (i.e., stigma related to homelessness and discrimination related to sexual orientation) outcomes in homeless youths?
2. To what extent are the relationships between mesosystem factors (i.e. family functioning, peer relations and school experiences) and psychosocial problems (mental health, substance use, and sexual risk behavior) among homeless youths moderated by sexual orientation?
3. To what extent are the relationships between macrosystem factors (i.e. stigma related to homelessness and discrimination based on sexual orientation) and mental health, substance use, and sexual risk behaviors in homeless youths moderated by sexual orientation?

Figure 1. Research Questions and Key Variables



The long term consequences of homelessness are dire, and often include unemployment, poverty, morbidity and mortality. For example, research shows that

homeless individuals are at high risk for physical and mental illness and have higher death rates than the general population (Cheung & Hwang, 2004; Roy et al., 2004). Also, homelessness is universally associated with high rates of death, however death rates among homeless men in Toronto are about one half that of homeless men in U.S. cities (Beiser & Stewart, 2005). Finally, homelessness reduces the quality of food, shelter, health care, education, and transportation of individuals in poverty (Fraser, 2004).

Significance of the Study

Individuals are recognizing their sexual orientation at earlier ages during adolescence than in the past (Frankowski et al., 2004). Health disparities based on sexual orientation exist in adults (Gay and Lesbian Medical Association and LGBT Health Experts, 2001). Therefore, highlighting possible problems in youths has the potential to inform interventions and programs that can prevent or address the disparities that begin in adolescence, and persist into adulthood. The consequences of inaction will have negative consequences for individuals and societies such as increased rates of suicidality, mental health problems, sexually transmitted diseases, homelessness, substance abuse.

To date, there are no studies that compare the psychosocial problems of sexual minority homeless youths compared with their homeless heterosexual counterparts using an ecological framework. Additionally, this study will include a measure of sexual orientation that includes three dimensions of sexual orientation (i.e. identification, attractions, and behaviors), versus most other studies which include only one or two dimension (e.g., Rew, Whittaker, Taylor-Seehafer, & Smith, 2005;Whitbeck, Chen, Hoyt, Tyler & Johnson, 2004a; Kidd, 2007; Milburn, Ayala, Rice, Batterman, & Rotheram-Borus, 2000; Moon, McFarland, Kellogg, Baxter, Katz, MacKellar, & Valleroy, 2000;

Gangamma, Slesnick, Toviessi, & Serovich, 2008). Furthermore, the inclusion of measures of discrimination and stigma and their relationships to psychosocial problems of homeless youths will also contribute to the knowledge base for this population.

CHAPTER 2: BACKGROUND LITERATURE

There is an established and growing body of empirical literature regarding psychosocial problems related to homelessness in sexual minority youths. This chapter will provide an overview of ecological systems theory and risk and protective factors framework and highlight studies related to the microsystem, mesosystem, and macrosystem discussed in chapter one. The section will highlight the empirical studies by describing the key findings and is organized based on ecological theory. The first section includes the microsystem variables mental health, substance use, and sexual risk behavior. The second section mainly addresses the mesosystem issues of family relationships, and peer relationships which includes school experiences. The third section discusses the macrosystem level issues of discrimination and stigma.

Ecological Systems Theory

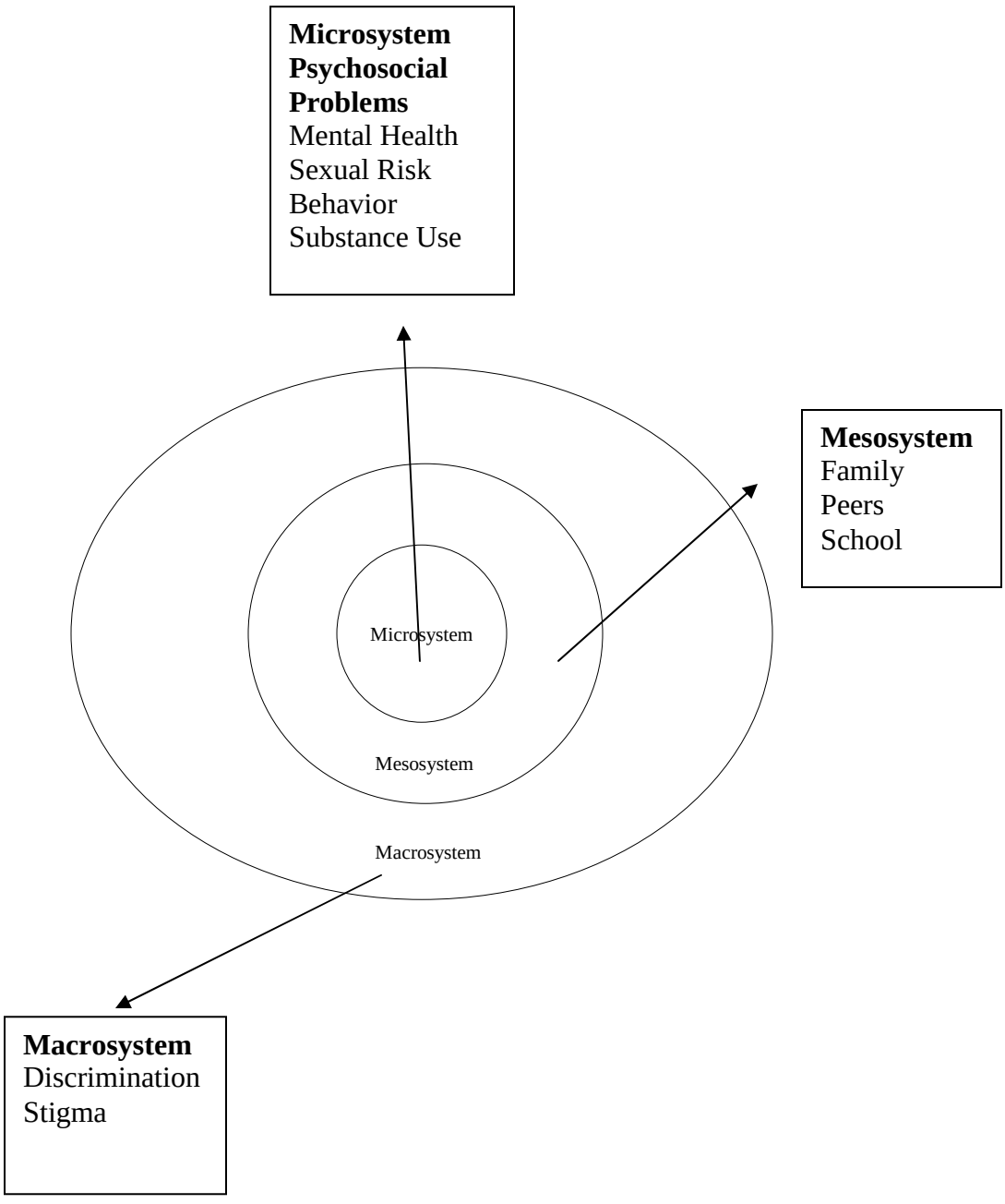
In 1979, Bronfenbrenner published the ecological systems model which views individual development as being nested within a set of interconnected systems. According to Bronfenbrenner (1989, p.188), "The ecology of human development is the scientific study of the progressive, mutual accommodation, throughout the life course, between an active, growing human being, and the changing properties of the immediate settings in which the developing person lives, as this process is affected by the relations between these settings, and the larger contexts in which the settings embedded."

The multisystemic levels include individual factors such as roles and characteristics of the developing individual (the microsystem); the immediate social environment, such as the peer group, the school, the family, religious institutions (the mesosystem); the social environment which impacts development with which the

individual does not interact directly, such as parental employment setting and school administrative issues (the exosystem); and finally, at the outermost level, the macrosystem which consists of broad societal factors, such as socioeconomic status (SES) and culture. The ecological framework can be utilized to organize the person-environment factors so that knowledge building and intervention can occur at the appropriate systems framework (Corocoran, 2000).

Bronfenbrenner focuses on three aspects of human development: (1) an individual's perspective of the environment; (2) the environment surrounding that individual; and (3) the dynamic interaction between the individual and the environment (Reifsnider, Gallagher, & Forgione, 2005). Hollander & Haber (1992) use Bronfebrenner's ecological transition model as a framework to study coming out in lesbians. The model takes into account activities such as sexual behavior, perceptions of the behavior, and social context in which behavior takes place. The ecological transition of coming out involves multiple alterations in the individuals that reach beyond the immediate family in the microsystem to impinge on the extended social network, or mesosystem. These alterations reach beyond the immediate family or associates in the microsystem to impinge on the extended social network or mesosystem. The effects of this transition may include (a) interruptions in relationships (e.g., parents, close friend, and religious representatives), (b) creation of new relationships (e.g., lesbian/gay friendships and development of relationships with sympathetic heterosexuals), (c) disruptions in settings (e.g., changing residences and socializing in different places), (d) development of new activities, (e) the degree of internal conflict, and (f) the availability of social support from the mesosystem.

Figure 2. Bronfenbrenner's Ecological System Theory Applied to Psychosocial Problems Associated with Homelessness in Sexual Minority Youths



Microsystem Factors (Psychosocial Problems)

Most of the studies comparing sexual minority youths to their heterosexual counterparts use one dimension of sexual orientation, self identification for analysis (Kidd, 2007; Whitbeck, Chen, Hoyt, Tyler, & Johnson, 2004a, Milburn, Ayala, Rice, Batterham, Rotheram-Borus, 2000; Gangamma, et al. 2008; Rew, Whittaker, Taylor-Seehafer, & Smith, 2005; Moon, McFarland, Kellogg, Baxter, Katz, Mackellar, Valleroy, 2000). There appears to be general consensus that sexual orientation is composed of several dimensions, namely (a) physical or emotional attraction, (b) sexual behavior, and (c) self-identification (Russell, 2006), however few articles in the empirical literature include more than one dimension (Noell & Ochs, 2001; Cochran, Stewart, Ginzler, & Cauce, 2002).

Mental Health Problems

There is a growing body of literature that examines mental health issues among homeless sexual minority youths. Findings indicate that homeless sexual minority youths are more likely to experience depressive episodes than their heterosexual counterparts (Whitbeck, et al., 2004a; Gangamma, et al., 2008; Rohde, Noell, Ochs, & Seeley, 2001; Cochran et al., 2002). Also there is a gender effect with homeless gay males being more likely to experience depression compared to heterosexual homeless males (Whitbeck et al., 2004a, Rohde et al., 2001). Depression preceded homelessness and was associated with a non-heterosexual orientation in older individuals (18 and older) and lifetime homosexual experience (Rohde, et al., 2001).

In general, significantly more homeless sexual minorities attempt suicide than their heterosexual counterparts (van Leeuwen, Boyle, Salomonsen-Sautel, Baker, Garcia,

Hoffman & Hopfer, 2006; Noell & Ochs, 2001). Identifying as a sexual minority is a main predictor for suicidality in males, though not for females (Leslie, Stein, Rotheram-Borus, 2002). Additionally, homeless sexual minority youths have reported significantly greater numbers of self-injurious acts compared to their heterosexual counterparts (Tyler, Whitbeck, Hoyt, & Johnson, 2003). Sexual minority status among homeless youths is associated with being more likely to have spent time in a locked mental health treatment facility (Noell & Ochs, 2001).

Substance Use

Illegal Drugs. There are a few studies that compare illegal drug use between homeless sexual minority youths and heterosexual homeless youths. Homeless sexual minority youths reported earlier onset of heroin, amphetamines and cocaine compared to their heterosexual counterparts (Moon et al., 2000). Also, injection drug use among homeless sexual minority youths is significantly more common than in homeless heterosexual youths (van Leeuwen et al., 2006; Noell & Ochs, 2001). Homeless lesbians were more likely to meet criteria for drug abuse than heterosexual females (Whitbeck et al., 2004a). Homeless sexual minority youths reported significantly more substances used during their lifetime, and within the past thirty days or the previous six months (van Leeuwen et al., 2006, Cochran et al., 2002).

The results from all studies do not confirm higher risk for sexual minorities. In one study, for males gay-bisexual status was associated with a lower likelihood of using marijuana (Noell & Ochs, 2001). Additionally, no significant differences were found in the use of any drugs between homeless sexual minority youths and heterosexual use

although total drug use was slightly higher among sexual minorities in the sample (Gangamma et al., 2008).

Alcohol. Homeless sexual minority youths report earlier onset of alcohol use compared to heterosexual homeless youths and are more likely to have an alcohol use disorder (Moon et al., 2000; Kipke et al., 1997). Also, homeless sexual minority youths drank more than five drinks in one sitting within the past two weeks which is significantly more than their heterosexual counterparts as well as reported having been in treatment for alcohol (van Leeuwen et al., 2006).

The literature also highlights gender effects regarding alcohol. Additionally, homeless gay males were less likely than homeless heterosexual males to meet criteria for alcohol abuse. Homeless lesbian females were more likely than heterosexual females to meet criteria for alcohol abuse (Whitbeck et al., 2004a).

Sexual Risk Behaviors

Survival Sex. Survival sex is a major issue of concern for homeless sexual minority youths and emerged as the strongest predictor of HIV risk for homeless sexual minority youths (Gangamma et al., 2008). Compared to homeless heterosexual youths, homeless sexual minority youths are more likely to engage in survival sex or sex (Van Leeuwen et al., 2006; Kipke et al., 1997; Tyler 2007; Whitbeck et al., 2001,Moon et al., 2000). The outcomes of the studies also provide a nuanced understanding of within group variance. There is a significant interaction between gender and sexual orientation as homeless gay males and homeless heterosexual females were more likely than homeless heterosexual males and homeless lesbians to engage in survival sex (Whitbeck et al., 2001; Whitbeck et al., 2004a). Among female street youths, having a female sexual partner is a strong

predictor of initiating involvement in prostitution (Weber, Boivin, Blais, Haley, & Roy, 2004). Gay and bisexual individuals are more likely to use the sex trade as a main method of making money compared to straight, lesbian and other street involved youths (O'Grady and Gaetz, 2002).

Condom Use and STD prevention. Survival sex is not the only sexual risk behavior that is found at elevated levels in homeless sexual minority youths. Condom use has also been explored in homeless sexual minority youths and the evidence is mixed regarding self-efficacy to use condoms, condom use, and sexual orientation in homeless youths (Taylor-Seehafer et al., 2007; Rew et al., 2005; Anderson, Freese, & Pennbridge, 1994; Moon et al., 2000). In one study, no significant differences were found in self-efficacy to use condoms or sexual risk behavior (Rew et al., 2005). At the same time, several studies suggest that homeless sexual minorities are less likely to use condoms during anal sex or to report lower intention to use condoms during intercourse (although not statistically significant in one case) compared to their homeless heterosexual counterparts (Taylor-Seehaher, et al., 2007; Moon et al., 2000; Cochran et al., 2002). Notably, gay/bisexual males were the group most likely to have used a condom during their most recent sexual encounter compared to heterosexual males (Moon et al., 2000). On the other hand, one study found that homeless gay men who finished the 10^{th} grade were more likely to use condoms than other homeless men who didn't finish 10^{th} grade (Anderson, Freese, & Pennbridge, 1994).

Homeless sexual minority youths report higher numbers of sexual partners compared to their homeless heterosexual counterparts (Moon et al., 2000; Cochran et al., 2002) and significantly earlier onset of sexual activity (Moon et al., 2000; Cochran, et al.,

2002). Differences in risk by sexual orientation were particularly pronounced among females: Lesbian/bisexual females often reported the earliest onset and the highest levels of risk behavior; heterosexual females reported the latest onset and lowest levels (Moon et al., 2000).

Heterosexual homeless youths had the weakest knowledge of HIV protective strategies especially compared with homeless young men who have sex with men (Wagner, Carlin, Cauce, & Tenner, 2001). Male and female runaway youths and homeless sexual minority youths were more likely to report sex with persons known to be HIV positive, sex while high on drugs, and sex with an injection drug user (Moon et al., 2000).

Summary

The literature comparing homeless sexual minority youths to their heterosexual counterparts is still in its infancy and is growing. Advancements are being made in the way that sexual orientation is measured in these studies. Suicide and depression among other mental health concerns are elevated among homeless sexual minorities and there appear to be gender differences regarding depression. The literature regarding drug use appears to be mixed. Most of the evidence suggests higher drug use among homeless sexual minority youths, but there is also evidence to the contrary. Homeless sexual minority youths are at higher risk for alcohol use than their heterosexual counterparts and there are gender differences. Regarding sexual risk behaviors, the limited data suggest that sexual minority youths have higher levels of survival sex and number of sexual partners compared to their heterosexual counterparts. However, the literature regarding

condom use and STD prevention is mixed. This dissertation will expand the knowledge in this area by addressing the following questions and hypotheses:

1. To what extent is sexual orientation associated with microlevel (i.e., mental health, substance use, and sexual risk behaviors), mesolevel (i.e., family functioning, peer relations, school experiences) and macrolevel (i.e., stigma related to homelessness and discrimination related to sexual orientation) outcomes in homeless youths?

H_1: Based on the empirical literature reviewed in this dissertation, it is hypothesized that sexual minority youths experience higher levels of negative microlevel (i.e., mental health, substance use, sexual risk behavior), mesolevel (i.e., family functioning, peer relationships, school experiences) and macrolevel outcomes (i.e., stigma related to homelessness and discrimination based on sexual orientation) compared to homeless heterosexual youths.

Mesosystem Factors

Family and Peer Relationships. Youths socialize in a variety of settings including at home and school. One of the most significant issues for sexual minority youths is disclosure of their sexual orientation to their family which can be either a protective or risk factor based on the family's reaction (Thompson & Johnston, 2004). Sexual minority youths experience verbal insults, physical abuse, conflicts related to their sexual orientation at home and from their peers in school and other settings (Elze, 2003; Hyde, 2005; Pilkington, & D'Augelli, 1995; Remafedi, 1987; Rew et al., 2005; Williams, Connolly, Pepler & Craig, 2005;).

There are very few studies that examine family and peer relationships as they relate to homelessness among sexual minorities. Twenty-six percent of a sample of

homeless lesbian and gay adolescents reported parental disapproval of their sexual orientation as a reason for their homelessness (Rew et al., 2005). There is little research exploring the parents' reaction to adolescent disclosure of their sexual minority status (Saltzburg, 2004). A part of the risk involved with sexual minority youth is reaction of their caretakers to their disclosure.

Having family level resources in place prior to the onset of a stressor, such as coming out, may buffer the effects of a crisis event. For example, men reporting to be from cohesive, adaptable, and non-authoritarian families prior to coming out perceived their parents' reactions as less negative compared to men reporting to be from disconnected, rigid, and authoritarian families (Willoughby, Malik, & Lindahl, 2006). A frequently cited precipitant of sexual minority nonfatal suicidal behavior is the turmoil associated with coming out to one's family (Cato & Canetto, 2003). However, these experiences have not been examined in a homeless sample.

School Experiences

Public school entrance is often cited as the occasion of stigma learning as the experience can begin on the first day of school with taunting, teasing, ostracism, and fights. This is a point in an individual's life when the domestic circle can not provide protection in some contexts (Goffman, 1963). Reports on school climate for gay and lesbian students in the United States suggest that negative attitudes toward gay and lesbian individuals are quite common in adolescence. Middle adolescents ages (14-16) are more likely than older adolescents ages (16-18) and young adults ages (19-26) to exhibit sexual prejudice related to social interaction with gay and lesbian peers (Horn, 2006). School policies specifically protecting sexual minorities from harassment existed

in 44% of junior/senior high schools surveyed (Fontaine, 1998). Also, students reporting same-sex attraction or uncertainty about their attraction status reported lower GPAs and lower school belonging (Rostosky, Owens, Zimmerman, & Riggle, 2003). Consistent with other literature, sexual minority high school students reported negative discussion of homosexuality in the classroom if it was discussed at all, not being able to identify someone who had been supportive of them, not being able to talk to the school counselor about issues of homosexuality, and negative responses to them because of their sexual orientation (Telljohann & Price, 1993).

The combination of sexual minority status and high levels of at school victimization is linked to the highest levels of health risk behaviors including higher levels of substance use, suicidality and sexual risk behaviors compared to their heterosexual counterparts (Bontempo, & D'Augelli, 2002). Sexual minority adolescents in schools with support groups for sexual minorities had lower rates of victimization and suicide attempts than at schools without support groups for sexual minorities (Goodenow, Szalacha & Westheimer, 2006). Youths who were considered gender atypical during childhood reported more victimization than their gender conforming counterparts (D'Augelli, Grossman, & Starks, 2006).

Regardless of age, sexual minority youths reported disproportionately high worries about losing friends, low feelings of control in their romantic relationships, and fears of never finding the type of romantic relationship they wanted. Sexual minority youths who were "out" to more heterosexual peers had larger peer networks but more friendship loss and friendship worries (Diamond & Lucas, 2004).

High School Completion. There is empirical evidence regarding factors associated with homelessness. At least two studies have linked youth homelessness to not having a high school diploma. A study of street involved youths conducted in Vancouver British Columbia found that having less than a high school diploma is associated with homelessness (Rachlis, Wood, Zhang, Montaner, & Kerr, 2009). Also, a study conducted in New York found that greater numbers of homeless adults with no history of psychotic illness lacked a high school diploma compared to those who were never homeless (Caton et al., 2000).

School Environment. School outcomes are related to the school environment which is not always a safe place for sexual minority youths. A national survey of school counselors' perceptions of sexual minority students found that 41% of counselors believed that schools are not doing enough to help students adjust to the school environment, 25% felt that teachers exhibited significant prejudice toward sexual minority students, 20% thought they were competent in counseling sexual minorities, and 1 in 5 reported that counseling a sexual minority student would be professionally rewarding (Price & Telljohann, 1991). Sexual minority students at schools with support groups for sexual minority students reported lower levels of victimization and suicide than those at schools without the support groups (Goodenow et al., 2006).

School Outcomes. There is scant literature regarding outcomes comparing sexual minorities to their heterosexual counterparts regarding school outcomes. Sexual minority girls report less positive attitudes and more school troubles particularly among bisexual girls who also report lower grade point averages (GPAs). Same-sex and bisexual attracted girls have compromised relationships with teachers and in the social context at

school. Bisexual girls have the most compromised feelings toward teachers. Males with bisexual attraction have school troubles and lower GPAs. Also, bisexual boys are significantly more likely to feel disliked and perceive that others are unfriendly toward them. Feelings about teachers are the biggest predictor of school troubles of bisexual attracted boys and girls in school which include paying attention, finishing homework, and getting along with others. Among males, school troubles are associated with social relationships. Ultimately, when taking into account of background characteristics, family relationships, feelings about teachers, and social interactions, bisexual attracted boys score consistently near two-tenths of a grade point below their heterosexual counterparts (Russell et al., 2001).

Regarding school issues, with the exception of high school diploma attainment (Rachlis et al., 2009), none of the abovementioned factors (school environment and school outcomes) have been examined in a homeless sample. The issues may play out differently and been related to some of higher levels of psychosocial problems between homeless sexual minority youths and their heterosexual counterparts.

Summary

There is a dearth of literature that looks at within group differences among sexual minority youths and among heterosexual youths. Very few studies explore family functioning, peer relations and school experiences as they relate to homelessness in a sample comparing homeless heterosexual or homeless sexual minority youths. Evidence suggests sexual minority youths cite parental disapproval of their sexual orientation as a reason for their homelessness. Peer relations and support as they relate to psychosocial problems related to homelessness are rarely explored in the literature. Schools continue

to be the site of harassment by peers and lack of support of sexual minority youths and other students, however, it is not known how this is related to homelessness and psychosocial problems related to homeless youths. Therefore, this dissertation will also address the following questions and hypotheses:

2. To what extent are the relationships between mesosystem factors (i.e. family functioning, peer relations and school experiences) and psychosocial problems (mental health, substance use, and sexual risk behavior) among homeless youths moderated by sexual orientation?

H_1: Homeless youths with higher levels of satisfaction with family communication will report lower levels of mental health problems, substance use problems and sexual risk behavior. The relationship between family communication and psychosocial problems will be different depending on sexual orientation.

H_2: Homeless youths with higher levels of negative peer relations will report higher levels of mental health problems, substance use problems, and sexual risk behavior. The relationship between negative peer relations and psychosocial problems will be different depending on sexual orientation.

H_3: Homeless youths with higher levels of school belonging will report lower levels of mental health problems, substance use problems, and sexual risk behavior. The relationship between school belonging and psychosocial problems will be different depending on sexual orientation.

Macrosystem Factors

The empirical literature on stigma related to homelessness, discrimination related to sexual orientation, and psychosocial problems in homeless sexual minority youths and

health and the empirical literature on discrimination and health focus on discrimination or stigma, but never both in a sample of homeless youths (Stuber et al., 2008). When prejudice researchers evaluate forms of discrimination without including stigma-related stress, they are missing important dimensions of stress processes that are likely contributing to poor health outcomes (Stuber et al., 2008). When stigma researchers exclude discrimination they are missing key dimensions of the stress process (Stuber et al., 2008).

Stigma

Goffman (1963) uses the term stigma to refer to an attribute that is deeply discrediting, but it should be seen as a language of relationships and not attributes. An attribute that stigmatizes one person that has the trait can confirm the usualness of another and therefore is neither creditable nor discreditable as an entity in itself. Of particular relevance to sexual minorities is the idea that when an individual acquires a new stigmatized self later in life, such as coming out, the discomfort felt about new associates may be replaced by an uneasiness felt regarding old associates who may be attached to the idea of what the person once was and may be unable to treat him with full acceptance (Goffman, 1963). Coming out is a process that occurs later in life.

There is a dearth of literature that examines stigma as it relates to homelessness and sexual orientation. Three studies have examined social stigma as it relates to the mental health of homeless youths and stigma was not found to be significantly related to sexual orientation in one of them (Kidd, 2007). However, stigma in this study was operationalized as general stigma related to being homeless, not stigma related to being a

sexual minority. Also, no measure of discrimination was included in the studies, and this is important to explore in stigmatized groups.

It is important to note that although stigma is a persistent predicament, not every member in a group suffers the same outcome (Link & Phelan, 2001). An approach based on the understanding of the effects of minority group status provides an alternative to medically based approaches of the past while in no way implying that sexual minority youths are not heir to all the problems faced by humankind (Martin & Hetrick, 1988).

There are two main challenges to the concept of stigma. The first is that many social scientists who study stigma do not belong to stigmatized groups and study it from the vantage points of theories uninformed by the lived experience of the people they study. The second is that research on stigma has had a decidedly individualistic focus (Link & Phelan, 2001).

Sexual Orientation Discrimination

Only one study has examined discrimination as it relates to sexual orientation in a homeless sample. A longitudinal study (Millburn et al., 2000), examined how newly homeless adolescents' discrimination experiences were associated with exiting homelessness after 6 months. Discrimination was related to sexual orientation. Sexual minority adolescents were more likely than heterosexual adolescents to report discrimination from peers, the police, due to being homeless and for being a sexual minority. The proportion of adolescents reporting discrimination significantly decreased for all adolescents from baseline to 6 months, both in terms of source and target, except for discrimination due to being sexual minority. The association of discrimination at baseline with exiting homelessness or remaining homeless after 6 months was only found

for discrimination when the adolescents were categorized into groups by sexual orientation.

Among adolescents who remained homeless after 6 months, sexual minority adolescents were more likely to report discrimination from family and peers than their heterosexual counterparts. Among adolescents who had exited homelessness after 6 months, sexual minority adolescents were more likely to report discrimination from police and due to being homeless compared to their heterosexual counterparts. It was also determined that the only form of discrimination that had any significant effect on adolescents exiting homelessness was discrimination from family members.

Krieger (1999) suggests three approaches to quantify the health effects to allow researchers to study discrimination as a determinant of population health. It can be measured indirectly, by inference at the individual level; directly, using measures of self-reported discrimination at the individual level; and in relation to institutional discrimination, at the population level.

Homophobia (Heterosexism)

One key distinction between sexual minority youths and their heterosexual counterparts is living in a society that does not accept their identity as normal. Understanding the environment in which prejudice and discrimination occur provides insight into heightened risks facing sexual minority youths.

American culture is hostile toward sexual minorities and this hostility is expressed overtly and covertly. All individuals are socialized to varying degrees to be negatively predisposed toward sexual minorities. The spectrum of negative biases ranges from

denial that sexual minorities exist to indictments of homosexuality as diseased or criminal (Gonsiorek, 1988).

Heterosexism is prejudice against those that are not heterosexual (Burns, Kadlec & Rexer, 2005). Simoni and Walters (2001) used the term heterosexism to include homophobia, fear, hatred, and prejudice people direct toward non-heterosexuals and the institutionalized oppression resulting from societal endorsement of heterosexuality as normative and superior to other sexual orientations. The authors state that homophobia implies individual pathology while heterosexism is broader and refers to the denial of rights and privileges to non-heterosexuals on a social level.

Findings indicate that there is little evidence to support the characterization of anti-homosexual responses as a phobia, rather anti-homosexual responses lie primarily within the realm of prejudice (Logan, 1996). According to Johnson and Johnson (2001), only relatively recently have the social scientific and therapeutic communities began to incorporate the concepts of homophobia and heterosexism to describe discrimination faced by sexual minorities. Homophobia is generally described as fear, loathing, prejudice, and discrimination directed at sexual minorities because of their sexual orientation. Heterosexism generally refers to an institutional framework and cultural context which views heterosexuality as the only normal and legitimate expression of love and sexuality. Among sexual minorities, homophobia can be more complex and manifest itself in the form of internalized homophobia, which is negative attitudes toward homosexuality that are incorporated into self-image, creating various psychological distortions and reactions (Gonsiorek, 1988).

Internalized homophobia has various expressions: overt and covert. Overt internalized homophobia presents in individuals who consciously accuse themselves of being evil, second class or inferior because of their homosexuality. They may abuse substances or engage in other self-destructive behaviors. Overt homophobia is psychologically painful, destabilizing, and less prevalent than covert forms. Covert forms of internalized homophobia are most common and may include tolerating discriminatory or abusive treatment from others or additional ways of sabotaging their efforts to accept themselves. Finally, one of the most sensitive indicators of internalized homophobia is the way in which an individual views other members of his or her own community. Excessive criticism of other sexual minorities may signify an individual's discomfort with his/her own status (Gonsiorek, 1988).

There are medical consequences related to homophobia which can be viewed as an environmental and social stressor which increases disease vulnerability, and results in poor coping styles, and thus is a health-related risk factor for gays and lesbians (O'Hanlan et al., 1997).

Summary

Macrosystem factors such as stigma related to homelessness and discrimination related to sexual orientation are rarely accounted for when comparing homeless sexual minority youths to their heterosexual counterparts. The literature regarding discrimination related to sexual orientation demonstrates that it does play a significant role with regarding to sexual orientation as it relates to exiting homelessness in homeless youths. However, it has not been explored as it relates to psychosocial problems. Stigma related to homelessness has not been explored as it relates to sexual risk behaviors and

substance use homeless youths. Therefore, the final question and hypotheses that this dissertation will address are:

3. To what extent are the relationships between macrosystem factors (i.e. stigma related to homelessness and discrimination based on sexual orientation) and mental health, substance use, and sexual risk behaviors in homeless youths moderated by sexual orientation?

H_1: Homeless youths with higher levels of stigma related to homelessness will report higher levels of mental health problems, substance use problems, and sexual risk behaviors. The relationship between stigma and psychosocial problems will be different depending on sexual orientation.

H_2: Homeless youths with higher levels of discrimination related to sexual orientation will report higher levels of mental health problems, substance use problems, and sexual risk behaviors. The relationship between discrimination and psychosocial problems will be different depending on sexual orientation.

CHAPTER 3: RESEARCH METHODS

This dissertation utilized a cross-sectional research design with structured face-to-face interviews of a convenience sample of homeless sexual minority and heterosexual homeless youths.

Sample

Recruitment Procedures. Potential subjects were initially approached to participate in the study when seeking drop-in or street outreach services at the agencies described below. The agency workers explained the study to gauge interest and if the person was interested to assess whether inclusion criteria was met. If eligible, the agency worker informed the individual of the general requirements, procedures and compensation. The recruitment flyer (see Appendix) had information regarding time required, compensation, inclusion criteria and other details about the study. If the individual was interested and willing to consent to the interview, they were referred to the principal investigator who obtained written consent and conducted the survey. Upon completion of the survey, compensation of $15 was paid for time. Toronto was selected as the city for the study because of its large homeless youth population, availability of services, generalizability to other large English speaking North American cities. The U.S.-Canada Fulbright program and the International Dissertation Award from the George Warren Brown School of Social Work at Washington University provided funds for the study.

Description of Agencies

Street Outreach Services (SOS) is located in downtown Toronto and serves street youths ages 16-25 and provides outreach services to homeless youths six nights per

week. They also offer a daily drop-in program which offers medical services, counseling services, legal clinic, housing support and other services. Six nights a week SOS staff members walk the streets of downtown Toronto to offer services. The Drop-in/Resource Centre is open weekdays, offering counseling, medical and legal assistance, life skills and pre-employment training and access to addiction and mental health programs. SOS is non-judgmental and recovery focused. Most of the clients had experienced long-term abuse, were involved in the sex-trade, and are sexual minorities. According to statistics reported by SOS in 2007, 85% of clients had no fixed addressed, 54% were male, 40% female, and 6% transgendered. Four hundred and fifty-two people used drop-in services and 931 individuals were contacted on the street that year.

Evergreen Yonge Street Mission serves street youths aged 25 and under and provides –drop-in services, health care, employment resources, and other services. Located in downtown Toronto, the agency was established in 1896. Based on statistics from Evergreen, it is expected that at least 25% will be sexual minority youths. In 2007-2008 the agency served 33,158 individuals in their drop-in program. Drop-in involves meals, art workshops, recreation, and housing for street-involved youths. The employment resource center offers: counseling, pre-employment training, job search, and resume help. In 2007-2008, 20,263 people used the employment resource center. The health center has free medical, dental, pre-natal, chiropractic and eye care as well as a nursery program and 9,131 individuals received services there. The staff and volunteers are committed to assisting people regardless of race, culture, religion, economic status, gender, sexual orientation or social condition. Approximately 175-200 youth were seen daily at the time of study.

Youthlink runs an Inner City drop-in resource center for homeless and street involved youths which includes housing support, employment training, legal support and other services for youths aged 12-24. In 2007-2008, the agency provided drop-in services to more than 1,000 street-involved youths. They also conduct street outreach five days each week doing a morning and evening shift. The agency operates using a non-judgmental harm reduction approach. Drop-in services five days weekly include: housing support, employment training and counseling, crisis counseling, legal aid, needle exchange, safe sex education, AIDS workshops, showers, cooking instruction and laundry facilities. An HIV Support Care Program provides support and care for HIV positive and AIDS-symptomatic street-involved youth. HIV, hepatitis C, sexually transmitted infection prevention and education workshops are also offered for at risk youths. The Peer Education Program engages previously involved street youth in an intensive program providing training, income, and employment.

Human Subjects Protections

Human subjects approval was obtained from the Research Ethics Board (REB) of the Office of Research Ethics at University of Toronto on June 11, 2009 and from the Institutional Review Board (IRB) at Washington University on July 17, 2009.

The legal age of consent for research is 16 in Ontario. Written informed consent was obtained right before data collection by the interviewer. The informed consent procedures occurred after individuals expressed interest in the study. Participants were provided with an information sheet that contained an overview of the project, confidentiality and procedures for the study. Information on the fact sheet and informed

consent was discussed by the P.I. with each potential subject and signed by the participant and P.I. The informed consent document is included in the appendix.

Instrumentation

To assess microlevel, mesolevel and macrolevel variables as indicated by the ecological model a collection of standardized and unstandardized instruments were used . Many of the instruments (i.e., CES-D, Health Risk Questionnaire, ADD Health, Social Stigma Survey) have been used or validated with homeless and/or sexual minority youths. However, other instruments have not, as indicated in Table One. Pilot testing of these latter instruments were conducted as described in the results section.

Table 1. Instruments used for Data Collection

Variable	Measure	Validation in previous studies for homeless or sexual minority youths	Number of Items	Use in Present Study	Level of Measurement
Microsystem					
Sexual orientation	Developed by investigator and adapted from (Rew et al., 2005; Whitbeck, 2004a) / Add Health	None	18	Independent	Categorical
Microsystem Psychosocial Problems					
Substance Use	1998 National Household Survey on Drug Use Abuse substance use items	None	61	Dependent	Continuous
Depression	CES-D	CESD-(Ritchey et al., 1990) Cronbach Alpha for homeless sample = .89; Garofolo et al., 2006) Cronbach Alpha for transgendered sample =.87	20	Dependent	Continuous
Suicide	Youth Risk Behavior Survey	None	5	Dependent	Continuous

Sexual Behavior	Health Risk Questionnaire	(Gangamma et al., 2008) use with homeless and sexual minority samples. Overall risk index has an alpha of .61. The internal reliability for the HIV risk subscale is .73.	10	Dependent	Continuous
Condom Use	Health Risk Questionnaire	(Gangamma et al., 2008) use with homeless and sexual minority samples. Overall risk index has an alpha of .61. The internal reliability for the HIV risk subscale is .73.	4	Dependent	Continuous
Mesosystem					
Family Communication	FACES-IV: Family Communication Scale	FACES III: (Willoughby et al., 2006) Gay men 18-26 Cohesion scale alpha=.89 Adaptability Scale alpha=.63	10	Independent	Continuous
Negative Peers	Items from Stiffman, A.R., Dore, P., Cunningham, R.M., & Earls, F. (1995) and Baker, F., Jodrey, D., Intagliata, J., & Straus, H. (1993).	None	9	Independent	Continuous
Positive Peers	Items from Stiffman, A.R., Dore, P., Cunningham, R.M., & Earls, F. (1995) and Baker, F., Jodrey, D., Intagliata, J., & Straus, H. (1993).	None	4	Independent	Continuous
School Engagement	Psychological Sense of School Membership (PSSM)	None	19	Independent	Continuous
Macrosystem					
Stigma	Social Stigma Survey	Kidd, 2007 Cronbach's Alpha on homeless and	13	Independent	Continuous

		sexual minority sample =.87			
Discrimination	AUDADIS-IV-sexual orientation discrimination scale	(Ruan et al., 2008) ICCs=,78 & .82 (two-time periods) on homeless and sexual minorities	16	Independent	Continuous

Reliability

Table 2 shows the results for the reliability analyses for all scales used in the present study. Items were reverse scored in the scales where appropriate. Alphas for already established scales used in the present study ranged from 0.79-0.90. Items that were not scales were combined to create indexes and a coefficient alpha was run to determine reliability. The alphas for the indexes created for this study range from 0.64-0.93.

Table 2. Results of Reliability Analysis for Present Study

SCALE	**Cronbach's Alpha**
Microsystem Psychosocial Problems	
CES-D (Depression)	0.89
*Suicidality	0.81
*Lifetime Total Substance Use	0.93
*Lifetime Condom Use	0.69
*Lifetime Sex	0.66
Mesosystem	
School Engagment	0.82
Family Communication	0.82
*Negative Peers	0.82
*Positive Peers	0.69
Macrosystem	
Social Stigma Survey	0.83
AUDADIS-IV (past 12 months)	0.88

*Note: Scales or indexes created for this study

Dependent Variables

Psychosocial Problems: *Substance Use, Mental Health, and Sexual Behaviors*

The Health Risk Questionnaire (HRQ) (Gangamma et al., 2008) was used to assess sexual risk behaviors and intravenous drug use. The scale incorporated questions from the Health Risk Survey (Kann et al., 1991) and Homeless Youth Questionnaire (Johnson, Aschkenasy, Herbers, & Gillenwater, 1996). Several subscales of the Health Risk Survey have been found to have acceptable reliabilities and pre-post test reliabilities of .76 and .81 respectively. The Homeless Youth Questionnaire, when aggregated into an overall risk index has an alpha of .61. The internal reliability for the HIV risk subscale is .73 (Johnson et. al, 1996).

Substance use was measured using the 1998 National Household Survey on Drug Abuse which was the last year the survey was done using paper and pencil (United States Department of Health and Human Services, 1998). The scale has been used on individuals 12 and older and measures age at first use as well as lifetime, annual, and past-month usage for the following drug classes: marijuana, cocaine (and crack), hallucinogens, heroin, inhalants, alcohol, tobacco, and nonmedical use of prescription drugs, including psychotherapeutics.

Center for Epidemiologic Studies Depression Scale (CES-D) (Radloff, 1977) was developed for use in studies of the epidemiology of depressive symptomotology in the general population. It can be used in studies of the relationships between depression and other variables across population subgroups. In the original three studies, the coefficient alphas ranged from .85-.95, split halves ranged from .76-.77 and, Spearman-Brown

ranged from .86-.87. Five questions from the CDC funded 2009 Youth Risk Behavior Survey (YRBS) were used to measure suicide.

Independent Variables

Microlevel: Demographics

Interview items were adapted from a survey used with homeless sexual minority youths by (Rew et al., 2005 and Whitbeck et al., 2004a to measure youths' sexual orientation. In order to assess sexual orientation and sexual orientation disclosure, questions from Section 16: Sexual Experiences and Sexually Transmitted Diseases (STDs), of the National Longitudinal Study of Adolescent Health (i.e. Add Health Study), the first nationally representative study of U.S. adolescents that includes questions regarding adolescent sexuality was used (Russell, 2006). Although information regarding psychometric properties is not provided in the literature, the survey instrument was extensively pilot tested (Udry, 2001).

Mesolevel: Family Functioning, Peer Relationships, School Experiences

The family communication subscale of the Family Adaptability and Cohesion Evaluation Scales FACES-IV was used for this study. The alpha coefficient in previous studies ranged from .91 to .93 (Gorall, Tiesel, and Olson, 2006).

School engagement was measured using the Psychological Sense of School Membership (PSSM) (Goodenow, 1993). The reported internal consistency reliability of the total 18-item scale was .77 to .88 for different samples (Goodenow, 1993). It was developed in an urban and suburban setting on a multi-ethnic sample of boys and girls in junior high and middle school. The instrument was designed to measure perceived belonging or psychological membership in the school environment.

Thirteen items were used to assess peer behaviors and have been used with youths in foster care (Auslander et al., 1998). The items measured positive and negative peer behaviors such as using drugs, running away from home and saving money. A continuous peer scale of negative peer influences was created which consisted of the variables: not in school and don't have a job, drink alcohol at least once a week, use drugs or marijuana at least once a week, have been in trouble with police or juvenile officer, have had babies or fathered children, ran away from where they were living, had failing grades in school, and have fights with other students. Because the variable "positive peers" had a low alpha coefficient (r=0.60), it was not included in the subsequent multivariate analyses.

Macrolevel: Stigma and Discrimination

A twelve-item social stigma survey was developed to assess the stigma associated with homelessness (Kidd, 2007). The survey was validated on a sample of street youths at agencies in Toronto and New York with Cronbach's Alpha = .87. The sample included males, females, MTF, white, black, Hispanic, native and mixed race individuals aged 14 to 24. The survey was developed using 7 adapted items derived from an inventory designed for persons with HIV, and 5 items developed from previous qualitative work in which street youth described their experiences of social stigma (Kidd, 2007).

The sexual orientation discrimination scale from AUDADIS-IV was used. The discrimination scale used appeared was modeled after the Experiences with Discrimination (EOD) scales developed by Krieger and colleagues (Ruan et al., 2008)

and was expanded to include discrimination based on sexual orientation, as well as to accommodate two time periods: the past 12 months, and prior to the past twelve months (Ruan et al., 2008). The discrimination scales were conceptualized as measuring self-reported experiences of, not perceived discrimination, although it is not clear whether perceptions and experiences with discrimination can be differentiated (Ruan et al., 2008).

The discrimination scale measuring sexual orientation included questions regarding discrimination pertaining to the ability to obtain health care/health insurance, treatment during health care, in public (streets, stores, restaurants), obtaining a job, getting admitted to school or training program, in the courts, by the police, obtaining housing, called names, made fun of, picked on, pushed, shoved, hit or threatened with harm (Ruan, et al., 2008). Test-retest reliability of the sexual orientation discrimination in both time periods was good (ICCs=0.78, 0.82) and was tested on a representative sample of adults in the United States aged 18 and up. Individuals 18 to 24 were oversampled and sexual minorities were included in the sample.

Procedures for Piloting and Refining Measures

The instrument was piloted with 5 individuals recruited from SOS in order to assess logical flow of questions, clarity of questions, cultural appropriateness, time required to administer and other issues that may have arisen during the interview. The same recruiting and compensation procedures were followed as for the study.

Procedures for Data Collection

Once informed consent was received the PI conducted the paper and pencil interview which was designed to last between 45-60 minutes. The pilot testing phase was

used to refine the interview and is described in detail in Chapter 4. All parts of the interview were administrated verbally by the principal investigator in face-to-face interviews.

Power Analysis

A power analysis using the most rigorous analysis (interaction effects, Questions 2&3) was conducted to determine the sample size needed to detect significant findings. Not all of the correlates will be included in the multivariate models since many of these control variables were expected to be correlated with each other. A maximum of six variables with one interaction term were used in each model (family, negative peers, school, age, gender and race) and (stigma, discrimination, race, age and gender) to test their relationship to each individual dependent variable. The sample size required for an effect size (ES) of 0.5, $\alpha = .05$ and $\beta = 0.2$ was 64 for each group for a total of 128 individuals (Lerman, 1996).

Data Analysis

Data Management

Data was entered into Excel and double entered to identify discrepancies. Inconsistent entries were corrected in consultation with the original survey. Data were transferred into SAS and descriptive statistics were run for each variable.

Completed surveys were stored in a locked filing cabinet in a locked office in the Centre of Excellence in Child Welfare (CECW) at the Factor Inwentash Faculty of Social Work at University of Toronto. Surveys were transported from the site of the interview to the University of Toronto in a locked briefcase. Matching consent forms and surveys were separated from each other. Data were transferred to the United States and are

currently locked in a file cabinet with restricted access at the George Warren Brown School of Social Work at Washington University in St. Louis.

Data Analysis Plan

Univariate analyses were computed on all variables and distributions were examined. For continuous variables (i.e., lifetime substance use), measures of central tendency (mean, median, mode, standard deviation) were run. Percentages and frequencies were run for categorical variables (i.e., race, gender, sexual orientation). After bivariate analysis and correlations are determined using independent variables, multivariate models were constructed using significant variables. Appropriate diagnostic techniques for regression models were performed in order to identify outliers and make sure that assumptions weren't violated including multicollinearity, leverage, discrepancy and influence (Cohen, Cohen, West & Aiken, 2003). The following section describes the methods of analyses that correspond to each of the research questions.

Analysis for Research Question 1

Descriptive statistics were used to describe the sample. Dependent variables to be analyzed for this question were substance use, mental health and sexual risk behavior. Independent variables were sexual orientation, peer relations, family communication, school, discrimination and stigma. Bivariate analysis using t-tests or chi-square were conducted between the independent (sexual orientation, peer relations, family communication, school, discrimination and stigma) and dependent variables (substance use, sexual risk behavior, mental health) depending on the level of measurement.

Analysis for Research Question 2

The dependent variables used to address question two were substance use, mental health, and sexual risk behavior. Independent variables are family communication, peer relations and school experiences as well as demographic variables. Correlations between the independent variables and the dependent variables were run. Multiple regression with interaction terms were used to test the moderating effect of sexual identity on the relationship between mesolevel factors and psychosocial problems.

Analysis for Research Question 3

The independent variables for the analysis for question three are stigma and discrimination and the dependent variables are mental health, substance use and sexual risk behaviors. Correlations between the independent and dependent variables were run. Multiple regression with interaction terms were used to test the moderating effect of sexual identity on the relationship between macro-level factors and psychosocial problems.

CHAPTER 4 – RESULTS

Results of Pilot Phase

Pilot interviews were conducted at S.O.S. on August 18th and 19th 2009. Before the pilot was conducted, the principal investigator met the agency directors at Youthlink, S.O.S., and Evergreen to get their feedback on the survey as well as consultations with dissertation committee members. According to procedures previously used with SMY or vulnerable youths by Ensign and Ammerman (2008) and D'Augelli and Grossman (2006), respondents were asked to provide feedback in several areas. Areas that were addressed include language of survey, whether any of the questions seemed to be strange or unusual, their opinion of the order of the questions, how appropriate the response categories were, improvements that can be made in introductions and questions and any other problems they think might be encountered during the interview including fatigue (Bowden, Fox-Rushby, Nyandieka, & Wanjau, 2002).

The pilot interviews also served as practice in using the survey for the sole interviewer, the PI. A copy of the instrument was also provided to the agency director(s) to get feedback. A database and codebook were created once the final instrument was designed. Five individuals were recruited by agency staff at S.O.S. and compensated $20 for their participation. Four of the interviews lasted an average of 46 minutes with a range of 43-55 minutes. Rosenburg's self-esteem scale (1965) was added to the fifth interview and it lasted 73 minutes. After the pilot, it was determined that the self-esteem scale should not be added to the survey because it is not a hypothesized variable of interest and is not found in the literature regarding homeless sexual minority youths.

The sample consisted of three men and two women who were either gay (n=1), bisexual (n=2) and two straight (n=2). Also, they were white (n=3), aboriginal (n=1) and black (Jamaican- Canadian) (n=1) (see Table 3). There were no 16 or 17 years olds in the pilot sample, however, there were two individuals for whom 8th grade was the highest level of school completed, which may have been more meaningful when addressing how well the concepts and vocabulary used in the survey were understood.

Table 3. Demographic Information of Subjects Interviewed for Pilot (N=5)

Variable	**n (%)**
Race	
Black	1 (20)
White	3 (60)
Aboriginal	1 (20)
Gender	
Male	3 (60)
Female	2 (40)
Sexual Identity	
Gay	1 (20)
Bisexual	2 (40)
Straight	2 (40)
Age	
18 years	1 (20)
20 years	1 (20)
23 years	2 (40)
24 years	1 (20)
Highest Grade Completed	
8th grade	3 (60)
10th grade	1 (20)
12th grade	1 (20)
Duration of Current Episode of Homlessness	
2 months	1(20)
-	1(20)
Logical Skip	1(20)
6 months	1(20)
15 days	1(2)

Issues Raised in Pilot

A few issues of concern surfaced during the pilot which led to subsequent changes that were reviewed with the chair of the dissertation (see Table 4). For example, one of the subjects interviewed for the pilot had been in 22 foster homes, 16 group homes, and 4 open custodies in 16 years starting at age 3, was a ward of the court until 19, but ran away at age 15. His longest placement was 3 months and didn't have anyone he considers family and doesn't know his birth parents. The family questions (section F) were skipped during this interview because the individual did not have a family to think about to answer the questions and stated that he couldn't answer them honestly. The individual suggested that earlier on, questions should be asked to find out if subjects know their family or to get a better understanding of an individual's family before the family section of the survey. As a result questions were added to the demographic section from the Bridges to Life Study (Auslander et al., 1998).

The peer relations scale also yielded results which required modifications. There were a number of instances when respondents answered "don't know" and that was not an answer category provided in the pilot survey. One participant told the PI that she met her friends in the shelters and they don't discuss the details asked in some of the questions (i.e. condom use). Two respondents answered "don't know" to whether their friend got failing grades in school (question C8), three individuals responded don't" to the question regarding their friends condom use during sex (question C9), one person indicated they didn't know whether their friends ran away from where they were living (question C6), not in school or have a job (question C1), and have ever had sex (question C7). As a result of these responses, "don't know" was added as a category on the final

survey. Also, a question regarding friends was added to the demographic section to get more information about a respondent's peer group in response to the individual mentioned meeting her friends in shelters. Questions A14 through A19 were added to address current living situation, family, and friends.

Table 4. Changes Made to the Survey After the Pilot

Observation or Suggested Change	**Modification**
One respondent suggested making survey shorter.	The survey was not shortened because the average length, 46 minutes, was less than the hour that participants agreed to during the consent process. The questions related to hypothesized relationships in the study.
I accidentally did not ask one respondent question A10, but also noticed that if there is a skip to A14, important questions are missed.	Eliminated skip pattern at question A10
Respondents suggested adding additional drugs (i.e., Percocet, oxycontin).	The change was not made because the substance use section asks for other drugs not listed after each classification so this is accounted for. Also, respondents did respond when asked had they used other substances not listed (i.e., Air Wick, Oxycontin, Percocet, Salvia, Ketamine)
Noticed question B12 read "I feel very different from most other students here." Here could have been interpreted as at the agency the participant was being interviewed at.	Changed the word "here" to "my school" which is consistent with the rest of the school scale.
The skip pattern at B19 was incorrect.	Changed answer b from "no skip B20" to "no, skip to section C"
Question C14 used inconsistent language.	Change "peers" to friends who are about your age.
Introduction to stigma section did not offer the option for answer choices to be read in lieu of using the cards.	"or I can read the responses to you." Was added to the introduction of the stigma section (section D).
Respondents feared judgement when asked about lifetime sexual behavior as the first question about sex	Added categories for lifetime sexual partners and moved it to the last question on the survey

Results of Main Study

Sample Demographics

The sample consisted of 147 homeless youths aged 16-24 years (*M*=20.88, *SD=2.22*). More than half of the sample (69%) was male. Sixty percent identified as white, 20% as black, 10% as other, 7% as aboriginal and 3% as Asian. Table 5 displays the demographics of the entire sample. For subsequent analyses in this study demographic variables were recoded as follows. Race was coded as white and non-white keeping consistent with other studies. Gender was male, female and transgender (Male-to-Female, intersex, genderqueer and pansexual) to represent gender categories identified by respondents. Sexual orientation was non-sexual minority (heterosexual) and sexual minority (mostly heterosexual, bisexual, gay or lesbian, asexual) to create the variable of interest and age was recoded as adolescents (16-18) and emerging adults (19-24) to account for developmental differences. The variables race age and gender will be used as control variables in the analyses.

Table 5. Sample Demographics (N=147)*

VARIABLE	N	%
Gender		
Males	101	68.7
Females	41	27.9
Males-to-Females	2	1.4
Intersex	1	0.7
Genderqueer	2	1.4
Race		
White	88	59.9
Black	30	20.4
Aboriginal (including First Nations or Metis)	10	6.8
Asian	5	3.4
Other	14	9.5
Sexual Orientation Identity		
Heterosexual	83	56.5
Mostly Heterosexual	12	8.2
Bisexual	33	22.5
Gay or Lesbian	10	6.8
Asexual	2	1.4
Pansexual	7	4.8
Age	*M*=20.9 *SD*=2.2	*Skewness*= -0.4 *Kurtosis*=-0.7 *Range*= 16-24

*Sample sizes will vary in individual analyses due to missing data and skip pattern.

Univariate Statistics

Mental Health Problems. Descriptive statistics (i.e., mean, standard deviation, skewness, kurtosis, and range) for the dependent variable (depression) and frequencies for suicide and suicide ideation (past 12 months) were computed on the whole sample of 147 youths (see Table 6). Twenty-five percent of the sample seriously considered attempting suicide (n=27) in the past 12 months, 17% (n=24) of the sample attempted suicide at least one time, and of those attempts, 8% (n=12) resulted in an injury. The average score of the sample on the CES-D is 23 which is considered mildly depressed.

Table 6. Mental Health Problems (N=147)

VARIABLE	N	%
Felt Sad or Hopeless Almost Everyday for Two Weeks or More in a Row that Stopped Doing Usual Activities (Past 12 Months)	64	43.5
Seriously Consider Attempting Suicide (Past 12 Months)	37	25.2
Made a Plan about Suicide Attempt (Past 12 Months)	27	18.3
Number of Suicide Attempts (Past 12 Months)		
0 Times	122	83.6
1 Time	8	5.5
2 or 3 Times	9	6.2
4 or 5 Times	3	2.1
6 or More Times	4	2.7
Attempt Resulted in Injury, Poisoning, or Overdose that had to be Treated by a Doctor or Nurse (Past 12 Months)	12	8.2
CES-D	*M*= 23.5 *SD*= 13.3	*Skewness*=0.2 *Kurtosis*= -0.9 *Range*= 0-57

Substance Use. Descriptive statistics were run for the dependent substance use variables. Table 7 displays the results for lifetime substance use. Table 8 displays the results for last time a substance was used. More than half of the sample has used five of the substances in their lifetime. Ninety-six percent (n=141) have used alcohol, 91% (n=134) have used marijuana, 60% (n=88) have used ecstacy, 54% (n=79) have used psilocybin (mushrooms), and 50% have used cocaine.

Table 7. Lifetime Substance Use (N=147)

VARIABLE	N	%
Alcohol	141	95.9
Marijuana	134	91.2
Cocaine	73	49.7
Crack Cocaine	31	21.1
Heroin	14	9.5
Hallucinogens		
LSD (Acid)	47	32.0
PCP (Angel Dust)	20	13.6
Peyote	15	10.2
Mescaline	13	8.8
Psilocybin (Mushrooms)	79	53.7
Ecstacy	88	59.9
Inhalants		
Amyl Nitrate, Poppers, Locker Room Odorizers or Rush	28	19.1
Correction Fluid, Degreaser, or Cleaning Fluid	3	2.0
Gasoline or Lighter Fluid	4	2.7
Glue, Shoe Polish, or Touluene	6	4.1
Halothane, Ether, or Other Anesthetics	3	2.0
Lacquer Thinner of Other Paint Solvents	3	2.0
Lighter Gases (Propane, Butane)	3	2.0
Nitrous Oxide (Whippets)	13	8.8
Spray Paints	3	2.0
Other Aerosol Sprays	6	4.1
Analgesics		
Codeine	29	19.7
Demerol	13	8.8
Dilaudid	13	8.8
Methadone	11	7.5
Morphine	24	16.3
Percodan	18	12.2
Talwin	3	2.0
Tylenol with Codeine	34	23.1
Tranquilizers		
Atarax	1	0.7
Ativan	9	6.1
Diazepam	9	6.1
Librium	4	2.7
Valium	25	17.0
Xanax	7	4.8
Stimulants		
Benzedrine	3	2.0
Biphetamine	1	0.7
Dexamyl	1	0.7
Dexedrine	13	8.8
Methamphetamine	28	19.1
Methedrine	3	2.0
Preludin	1	0.7

Sexual Risk Behaviors. Descriptive statistics were run on the dependent variables regarding sexual risk behaviors. Table 8 shows lifetime sexual risk behaviors.

Eighty-three percent (n=113) of the sample have had sex while under the influence of drugs and alcohol, 54% (n=74) have had sex with more than one partner in 24 hours, 25% (n=34) of the sample have engaged in survival sex in their lifetime, and 26% (n=36) have had sex with someone who worked as a prostitute in their lifetime.

Table 8. Lifetime Sexual Behaviors (N=147)

VARIABLE	N	%
Survival Sex		
Yes	34	24.8
No	103	75.2
Condom Always	21	61.8
Condom Sometimes	6	17.7
Condom Rarely	1	2.9
Condom Never	6	17.7
Anal Sex		
Yes	62	45.3
No	75	54.7
Insertive	23	37.7
Receptive	12	19.7
Both	26	42.6
Condom Always	30	48.4
Condom Sometimes	14	22.6
Condom Rarely	4	6.5
Condom Never	14	22.6
Vaginal Sex		
Yes	129	94.2
No	8	5.8
Insertive	94	72.9
Receptive	24	18.6
Both	11	8.5
Condom Always	39	30.5
Condom Sometimes	54	42.2
Condom Rarely	20	15.6
Condom Never	15	11.7
Oral Sex		
Yes	123	89.8
No	14	10.2
Perform	3	2.5
Receive	19	15.6
Both	100	82.0
Condom Always	11	8.9
Condom Sometimes	23	18.7
Condom Rarely	25	20.3
Condom Never	64	52.0
Sex with Prostitute		
Yes	36	26.3
No	101	73.7
Sex Under Influence of Drugs and Alcohol		
Yes	113	82.5
No	24	17.5

Sex with IV Drug User		
Yes	27	19.7
No	110	80.3
Sex with Someone with HIV		
Yes	11	8.0
No	126	92.0
Casual Sex		
Yes	117	85.4
No	20	14.6
Sex with More than 1 Partner in 24 Hours		
Yes	74	54.0
No	63	46.0

Family. Univariate statistics were run on the family communication scale which measures level of satisfaction with family communication. The mean was 31.46, standard deviation 8.67, skewness -0.38, kurtosis -0.54 and the range was 10-50.

Peers. Table 9 shows descriptive statistics related to negative peers and Table 10 shows the descriptive statistics for positive peers.

Table 9. Negative Peer Group Characteristics (N=147)

VARIABLE	N	%
Negative Peers		
Are Not in School and Don't Have a Job		
None		
A Few	10	6.8
About Half	59	40.1
Most	37	25.2
All	34	23.1
	7	4.8
Drink Alcohol at Least Once a Week		
None	6	4.1
A Few	28	19.1
About Half	18	12.2
Most	60	40.8
All	35	23.8
Use Drugs or Marijuana		
None	3	2.0
A Few	22	15.0
About Half	22	15.0
Most	52	35.4
All	48	32.7
Have been in Trouble with Police or Juvenile Officer		
None	11	7.6
A Few	43	29.9
About Half	30	20.8
Most	44	30.6
All	16	11.1
Have Had Babies or Fathered Children		
None	18	12.3
A Few	81	55.5
About Half	21	14.4
Most	23	15.8
All	3	2.1
Have Run Away from Where They were Living		
None	24	17.1
A Few	64	45.7
About Half	22	15.7
Most	21	15.0
All	7	5.0
Have Had Sex		
None	2	1.4
A Few	11	7.7
About Half	5	3.5
Most	45	31.5
All	80	55.9
Have Had Failing Grades in School		
None		
A Few	11	7.9
About Half	44	31.4
Most	31	22.1
All	40	28.6
	12	8.6
Have Had Physical Fights with Other Students		
None	14	9.8
A Few	63	44.1
About Half	29	20.3
Most	28	19.6
All	9	6.3

Regarding negative peers, fifty-six percent of the sample say that all of their friends have had sex, thirty-three percent say all of their friends have used drugs or marijuana, twenty-four percent said that all of their friends drank alcohol once a week and 1 in 5 reported that all of their friends use condoms when having sex (17.4%).

Table 10. Positive Peer Group Characteristics (n=147)

Positive Peers Who…		
Go To College or Plan to Go to College		
None	10	6.9
A Few	73	50.0
About Half	35	24.0
Most	18	12.3
All	10	6.9
Save Money		
None	25	17.5
A Few	64	44.8
About Half	26	18.2
Most	24	16.8
All	4	2.8
Use Condoms When Having Sex		
None	6	5.00
A Few	25	20.7
About Half	36	29.8
Most	31	25.6
All	21	17.4
Have a Job		
None	6	4.10
A Few	79	53.7
About Half	34	23.1
Most	19	12.9
All	9	6.1

Regarding positive peers, six percent say all of their friends have jobs, three percent say all of their friends save money and seven percent say all of their friends go to college or plan to go to college.

School, Stigma and Discrimination. Table 11 shows the distribution of the independent variables: school engagement, stigma, and discrimination in the past year. Eighty-seven percent of the sample was not currently enrolled in school at the time they were interviewed.

Table 11. Univariate Statistics of School, Stigma and Discrimination

VARIABLE	Mean	Standard Deviation	Skewness	Kurtosis	Range
School Engagement (n=143)	3.1	0.8	-0.3	-0.4	1.2 – 4.6
Stigma (n=143)	31.0	6.4	0.3	0.5	17-51
Discrimination (n=147)	3.7	5.4	1.8	2.6	0-24

On average, the sample has a positive sense of school engagement as indicated by a mean of 3.1 as a mean of less thatn 3 indicates a more negative feeling of school engagement.

Research Question 1: Results

1. To what extent is sexual orientation associated with microlevel (i.e., mental health, substance use, and sexual risk behaviors), mesolevel (i.e. family functioning, peer relations, school experiences) and macrolevel (i.e. stigma related to homelessness and discrimination related to sexual orientation) outcomes in homeless youths?

H_1: Based on the empirical literature reviewed in this dissertation, it is hypothesized that sexual minority youths experience higher levels of psychosocial problems at the microlevel (i.e. mental health, substance use, sexual risk behavior), mesolevel (i.e. family functioning, peer relationships, school experiences) and macrolevel outcomes (i.e. stigma

related to homelessness and discrimination based on sexual orientation) compared to homeless heterosexual youths.

Individual Characteristics.

Mental Health Problems. Chi-square analyses were performed to examine mental health outcome differences by sexual minority status (see Table 12). A dichotomous variable for number of suicide attempts, 0 attempts or 1 or more attempts, was created from a five-level variable,. An independent samples t-test was performed to compare depression scores in homeless sexual minority youths and homeless heterosexual youths (see Table 12). Results indicate that homeless sexual minority youths were more likely to have seriously considered suicide during the past 12 months (χ^2=18.9, df=1, p<.0001), made a plan about committing suicide during the past 12 months (χ^2=6.3, df=1, p=0.012), attempted suicide (χ^2=10.3, df=1, p=0.001), and injured themselves during a suicide attempt (χ^2=10.14, df=2, p=0.006). There was a statistically significant difference in depression symptoms for homeless sexual minority youths (*M*= 26.8, *SD*= 13.3) and homeless heterosexual youths (*M*=20.8, *SD*=12.8); (t=2.78, df=144, p=0.006); homeless sexual minority youths exhibited more depression symptoms. The suicide variables were combined to create a scale. A T-test was performed to examine the relationship between sexual identity and suicide (see Table 12). Results indicate a significant difference in suicide by sexual orientation. Homeless sexual minority youths reported more lifetime suicide or suicide ideation (*M*=1.61, *SD*=1.72) compared to homeless heterosexual youths (*M*=0.70, *SD*=1.17) (t=3.77, df=144, p=0.0002). There was no difference in age between sexual minority and heterosexual youths.

Table 12. Suicide and Depressive Symptoms by Sexual Identity

VARIABLE			**X^2**
Sexual Identity	**Sexual Minority N (%)**	**Non-Sexual Minority n (%)**	
Stopped Doing Usual Activities for 2 Weeks or More in a Row (n=147)	32 (48)	32 (40)	1.19
Seriously Considered Suicide in Past 12 Months (n=147)	28 (42)	9 (11)	18.9***
Made a Plan About How Suicide Would be Attempted (n=147)	18 (27)	9 (11)	6.3**
Attempted Suicide 1 or More Times in the Past Year (n=146)	18 (27)	6 (8)	10.3**
Suicide Attempted that Ended in Injury Treated by Doctor or Nurse in Past 12 Months (n=147)	10 (15)	2 (2)	10.1**
Total Depressive Symptoms (n=146)	*M*=26.84 [+] *SD*=13.31	*M*=20.83[+] *SD*=12.77	T=2.78**
Suicide (n=146)	*M*=1.61 *SD*=1.72	*M*=0.70 *SD*=1.17	T=3.77**

p<=0.01,*p<=0.0001

[+]*Note:* CES-D scores of 16-26 are considered mild depression and scores of 27 and above are indicative of major depression or is a more stringent cutoff suggested for depression in medical samples (Zich, Attkisson, & Greenfield, 1990).

Sexual Risk Behaviors. Chi-square analyses were conducted to examine the relationship between sexual identity and sexual risk behaviors (see table 13). Results indicate that sexual minority youths were more likely to engage in lifetime survival sex (χ^2=21.3, df=1, p<.0001), have had anal sex in their life (χ^2=26.5, df=1, p<.0001), have had sex with a prostitute in their lifetime (χ^2=14.3, df=1, p=0.0002), have had sex with an IV drug user in their life (χ^2=14.4, df=1, p=0.0002), have had sex with someone with HIV (χ^2=10.1, df=1, p=0.0015), have had anal sex in the past 3 months (χ^2=21.8, df=1, p<.0001), have had casual sex in the past 3 months (χ^2=8.0, df=1, p=0.0048) and were more likely to have had sex with more than one partner in a 24 hour time span. Non-sexual minority youths were more likely to have had vaginal intercourse in the past 3 months (χ^2=11.0, df=1, p=0.0009).

Also, a new variable was created to capture the number of sexual behaviors from the above table, which had been engaged in during the lifetime of the individuals. A t-test was performed to assess the differences in the number of sexual behaviors based on sexual identity (see Table 13). Results indicate that was a statistical difference by sexual identity and lifetime sexual behavior. Homeless sexual minority youths (*M*=6.20, *SD*=2.10) have engaged in more of the sexual behaviors than their homeless heterosexual counterparts (*M*=4.56, *SD*=1.51) (t=5.36, df=135, p<0.0001).

Additionally, a new scale measuring lifetime condom use was created by summing the items and dividing them by 4, which corresponds to frequency of condom use in the categorical response category. A t-test was performed to test the difference is frequency of lifetime condom use by sexual identity (see Table 13). Results indicate a statistical difference in lifetime condom use frequency. Homeless sexual minority scored

higher on the frequency scale which means they were more likely to have used condoms sometimes (*M*=1.73, *SD*=0.82) compared to homeless heterosexual youth who scored lower which indicates they were more likely to always use condoms (*M*=1.38, *SD*=0.63) (t=2.83, df=135, p=0.005).

Table 13. Sexual Identity by Sexual Risk Behavior (n=137)

VARIABLE	**Sexual Minority N (%)**	**Non-Sexual Minority n (%)**	**X^2**
Lifetime Survival Sex	27 (44)	7 (9)	21.30***
Lifetime Anal Sex	43 (69)	19 (25)	26.55***
Lifetime Oral Sex	58 (94)	65 (87)	1.75
Lifetime Sex with Prostitute	26 (42)	10 (13)	14.33**
Lifetime Sex with IV Drug User	21 (34)	6 (8)	14.36**
Lifetime Casual Sex	55 (89)	62 (83)	0.99
Lifetimes Sex with > 1 Person in 24 Hours	35 (56)	39 (52)	0.27
Sex with > 1 Person in 24 Hours	19 (31)	13 (17)	3.36*
Lifetime Sexual Behavior	*M*=6.20 *SD*=2.10	*M*=4.56 *SD*=1.51	T=5.36***
Lifetime Condom Use Frequency	*M*=1.73 *SD*=0.82	*M*=1.38 *SD*=0.63	T=2.38**

*p<.05,**p<=0.01,***p<=0.0001

Substance Use. Chi-square analyses were conducted to examine the relationship between sexual identity and lifetime substance use (see Table 14). Results indicate that sexual minorities were more likely to have reported lifetime use of: cocaine (χ^2=4.26, df=1, p=0.04), LSD (χ^2=15.05, df=1, p=0.0001), crack (χ^2=13.63, df=1, p=0.0002), heroin (χ^2=7.09, df=1, p=0.0077), PCP (χ^2=15.05, df=1, p=0.0001), ecstasy (χ^2=4.82, df=1, p=0.0281), and methamphetamine (χ^2=19.39, df=1, p<.0001).

All substance use variables were combined to create a total lifetime substance use index. A t-test was conducted to determine if there was a difference in number of substances used lifetime based on sexual identity (see Table 14). There was a statistically significant difference between the mean number of lifetime substances used. Homeless sexual minorities used a higher number of substances in their lifetime (M=9.38, SD=7.81) compared to their homeless heterosexual counterparts (M=4.74, SD=3.53) (t=4.78, df=145, p<0.0001). Since the lifetime substance use variable was skewed (skewness=2.39, kurtosis=8.47), a log transformation was performed, the results of the transformation and t-test using the transformed variable (see Table 14). The transformed variable was used for all future analyses. The new skewness was 0.18 and the new kurtosis was -0.38.

Table 14. Sexual Identity by Lifetime Substance Use (N=147)

VARIABLE	**Sexual Minority N (%)**	**Non-Sexual Minority n (%)**	**X^2**
Marijuana	59 (89)	75 (93)	NS
Crack	23 (35)	8 (10)	13.63**
Cocaine	39 (59)	34 (42)	4.26*
Heroin	11 (17)	3 (4)	7.09**
Hallucinogens			
LSD	32 (48)	15 (19)	15.01***
PCP	17 (26)	3 (4)	15.05***
Peyote	11 (17)	4 (5)	5.46*
Mescaline	11 (17)	2 (2)	9.09**
Mushrooms	42 (63)	37 (46)	4.71*
Ecstacy	46 (70)	42 (52)	4.82*
Poppers	24 (36)	4 (5)	23.29***
Inhalents			
Whippets	11 (17)	2 (2)	9.09**
Analgesics			
Codeine	19 (29)	10 (12)	6.21**
Demerol	10 (15)	3 (4)	5.91**
Dilaudid	11 (17)	2 (2)	9.09**
Morphine	15 (23)	9 (11)	3.59
Percodan	10 (15)	8 (10)	0.94
Tylenol with Codeine	19 (29)	15 (19)	2.16
Tranquilizers			
Valium	20 (30)	5 (6)	15.00***
Stimulants			
Dexadrine	11 (17)	2 (2)	9.09**
Methamphetamine	23 (35)	5 (6)	19.39***
Variable	**Sexual Minority**	**Non-Sexual Minority**	**T**
Lifetime Substance Use	*M*=9.38 *SD*=7.81	*M*=4.74 *SD*=3.53	T=4.78***
Lifetime Substance Use (log transformed)	*M*=1.95 *SD*=0.80	*M*=1.40 *SD*=0.64	T=4.56***

*p<=.05, **p<=.01,***<=0.0001

Family. T-test analysis examined the relationship between sexual identity and family communication (see Table 15). Results indicate that there was a statistical

difference in satisfaction with family communication. Homeless sexual minorities (*M*=29.82, *SD*=9.61*)* had low satisfaction with the communication in their families and homeless non-sexual minorities (*M*=32.79, *SD*=7.64), *(*t= -2.08, p=0.04) had moderate satisfaction with their family's communication.

Peers. Chi-square analyses examined the relationship between sexual identity and peer relationships (See Table 16). A three level variable was created from the original five level variable: none or a few, about half, and most or all. The original five levels were none, a few, about half, most, all. Results indicate that being a homeless sexual minority youth was associated with reporting that most or all of their friends were not in school and without jobs (χ^2= 10.61, df=2, p=0.0050), with reporting to have run away from where they were living (χ^2=8.64, df=2, p=0.01) and had failing grades in school (χ^2=6.16, df= p=0.05).

A t-test was performed to test difference based on sexual identity and negative peer relationships (see Table 16). Results indicate that there was a statistical difference based on sexual identity. Homeless sexual minority youths had more negative peer relationships (*M*=20.25, *SD*=5.99) compared to their heterosexual counterparts (*M*=17.99, *SD*=6.14) (t=2.11, df=129, p=0.04). There were no significant differences in positive peers and sexual identity status.

School. A t-test was conducted to assess the relationship between sexual identity and psychological sense of school belonging (see Table 16). Results indicate that there was no difference between homeless sexual minority youths and their heterosexual counterparts.

Table 15. Sexual Identity by Peer Relationships and School

VARIABLE	Sexual Minority N (%)	Non-Sexual Minority n (%)	X^2
Most/All Peers Not in School and Don't Have a Job (n=147)	26 (39)	15 (19)	10.62*
Most/All Peers Drink Alcohol at Least Once a Week (n=147)	44 (67)	51 (63)	4.15
Most/All Peers Use Drugs or Marijuana Once a Week (n=147)	50 (76)	50 (62)	4.08
Most/All Peers Have Been in Trouble with Police or Juvenile Officer (n=144)	29 (45)	31 (39)	1.10
Most/All Peers Have Had Babies or Fathered Children (n=146)	9 (14)	17 (21)	3.49
Most/All Peers Ran Away from where they were living (n=138)	19 (32)	9 (12)	8.64**
Most/All Peers Had Failing Grades in School (n=138)	30 (49)	22 (29)	6.16*
Most/All Peers Use Condoms When Having Sex (n=119)	24 (46)	28 (42)	1.16
Most/All Peers Have Fights With Other Students (n=143)	15 (24)	22 (27)	0.41
Most/All Peers Go to College or Plan to Go to College (n=146)	10 (15)	18 (22)	1.37
Most/All Peers Save Money (n=143)	10 (15)	18 (23)	1.28
Most/All Peers Have a Job (n=147)	10 (15)	18 (22)	3.84
Total Scale Scores	**Sexual Minority**	**Non-Sexual Minority**	**T**
Negative Peer Relationships (n=131)	*M*=20.25 *SD*=5.99	*M*=17.99 *SD*=6.14	2.11*
Positive Peer Relationships (n=129)	*M*=6.96 *SD*=2.91	*M*=7.21 *SD*=2.91	-0.65
Psychological Sense of School Belonging (n=143)	*M*=2.95 *SD*=0.78	*M*=3.18 *SD*=0.73	0.08+

*p<=.05; **p<=.01

Note: Although the t-value is not statistically significant it is marginally significant (p=0.07), 3 is a tipping point for which students have more positive or negative experiences in school. Homeless sexual minorities average sum score is below 3 indicating more negative experiences and homeless heterosexual youths average sum score is above 3 indicating more positive experiences.

Stigma. Chi-square analyses were performed to examine the relationship between sexual identity and stigma related to homelessness (see Table 17). A dichotomous variable was created: agree or disagree from a four response variable: strongly agree, agree, disagree, and strongly disagree. Results indicate that homeless sexually minority youths were more likely to be physically assaulted because they are homeless (χ^2=4.48, df=1, p=0.03). Homeless sexual minority youths (*M*=29.73, SD=6.72) had significantly lower total scores on the stigma scale which indicates higher levels of stigma related to being homeless compared to homeless heterosexual youths (*M*=32.09, *SD*=5.96) (t=-2.22, df=141, p=0.03).

Discrimination. T-tests were performed to examine the relationship between discrimination based on sexual orientation and sexual identity (see Table 17). Results indicate that homeless sexual minority (*M*=6.92, *SD*=6.26) youth experienced more discrimination in the past 12 months compared to homeless heterosexual youths (*M*=1.05, *SD*=2.36) (t=7.80, df=145, p<.0001).

Table 16. Sexual Identity by Stigma and Discrimination (N=147)

VARIABLE	**Sexual Minority N (%)**	**Non-Sexual Minority n (%)**	**t-value**
Total Stigma Scale Sum	*M*=29.73 *SD*=6.72	*M*=32.09 *SD*=5.96	-2.22*
Discrimination Scale Sum Score (Past 12 months)	*M*=6.92 *SD*=6.26	*M*=1.05 *SD*=2.36	7.80***

*p<=.05; ***p<0.0001

Question 2: Results

2. To what extent are the relationships between mesosystem factors (i.e., family functioning, peer relations and school experiences) and psychosocial problems (mental health, substance use, and sexual risk behavior) among homeless youths moderated by sexual orientation?

H_1: Homeless youths with higher levels of satisfaction with family communication will report lower levels of mental health problems, substance use problems and sexual risk behavior. The relationship between family communication and psychosocial problems will be different depending on sexual orientation.

H_2: Homeless youths with higher levels of negative peer relations will report higher levels of mental health problems, substance use problems, and sexual risk behavior. The relationship between negative peer relations and psychosocial problems will be different depending on sexual orientation.

H_3: Homeless youths with higher levels of school belonging will report lower levels of mental health problems, substance use problems, and sexual risk behavior. The relationship between school belonging and psychosocial problems will be different depending on sexual orientation.

Correlations were run to determine the relationship between mesosystem factors and psychosocial problems (see Table 18). Higher levels of school belonging was associated with lower levels of suicide ($r=-0.37$, $p<0.0001$), more negative peers was associated with more sexual behaviors ($r=0.35$, $p<0.0001$), more positive peers was associate with lower sexual behaviors ($r=-0.23$, $p<0.01$), higher levels of school engagement was associated with lower levels of suicide ($r=-0.2$, $p=0.0031$), higher levels

of negative peers was associated with higher substance use ($r=0.04$, $p<0.0001$), more positive peers was associated with lower substance use ($r=-0.18$, $p=0.04$), more negative peers was associated with more condom use ($r=0.25$, $p=0.006$), more positive peers was associated with less depression ($r=0.20$, $p=0.03$). More satisfaction with family communication was associated with lower levels of depression ($r=-0.38$, $p<0.0001$) and suicide ($r=-0.30$, $p<0.01$).

Table 17. Correlations between Mesosystem, Factors, Macrosystem Factors and Psychosocial Problems

	School Engagement	Family Communication	Negative Peers	Stigma	Discrimination (past 12 months	Suicide	Depression	Substance Use	Sex Risk Beh	Co Use
Mesosytem Factors										
School	1									
Family Communication	0.39***	1								
Negative Peers	-0.13	0.06	1							
Macrosystem Factors										
Stigma	0.36***	0.32***	-0.23	1						
Discrimination (past 12 months)	-0.20*	-0.16	0.16	-0.29	1					
Microsystem Psychosocial Problems										
Suicide	-0.25**	-0.30**	0.05	-0.22**	0.31**	1				
Depression	-.37***	-0.38***	0.09	-0.54***	0.33***	0.42***	1			
Substance Use	-0.13	-0.09	0.40***	-0.21*	0.20*	0.08	0.04	1		
Sex Risk Behavior	-0.01	0.01	0.35***	-0.13	0.28**	0.19*	0.04	0.53***	1	
Condom Use	-0.01	0.08	0.25**	-0.57	0.05	0.16	0.01	0.28**	0.57 ***	1

*p<0.05; **p<0.01; ***p<0.0001

Mesosytem Factors to Predict Depression

A simultaneous multiple regression was run to analyze the relationship between mesosystem factors and depressive symptoms. Result indicated that the main effects model was significant; R^2=0.22, (F(7,115)=4.69, p=0.0001 (See Table 19). Family communication (b=-0.38,t=-2.74, p=0.007) and school engagement (b=-4.32,t=-2.61, p=0.01) were significantly associated with depression. Higher family communication was associated with less depressive symptoms and higher school engagement was associated with lower levels of depression. There were only 5 individuals who were transgendered so the model model would not calculate transgender versus male. Therefore in all models forward represents females with the males as the reference group.

Table 18. Sexual Identity, Mesosystem Factors on Depression Main Effects Model (n=123)

Variable	Parameter Estimate	Standard Error	Standardized Estimate
Race	1.81	2.33	0.07
Gender	1.18	2.87	0.04
Age	2.9	3.20	0.07
Sexual Identity	-1.64	2.41	-0.06
Negative Peers	0.14	0.19	0.06
Family Communication	-0.38	0.14	-0.26**
School Engagement	-4.32	1.65	-0.24**

**p<0.01

In order to test if sexual identity moderated the relationship between family communication and depression, a simultaneous multiple regression including the interaction term was performed (see Table 20). The overall model was significant R^2=0.22, (F(8,114)=44.12, p=0.0002. However, the interaction between family communication and sexual identity to predict depression was not. Thus, there was no differential effect of family communication on depression depending on sexual identity.

Table 19. Interaction Between Sexual Identity and Family Communication on Depression (n=123)

Variable	Parameter Estimate	Standard Error	Standardized Estimate
Race	1.94	2.34	0.07
Gender	0.87	2.92	0.03
Age	2.87	3.21	0.08
Sexual Identity	-6.58	8.54	-0.24
Negative Peers	0.13	0.19	0.06
Family Communication	-0.46	0.19	-0.31*
School Engagement	-4.24	1.66	-0.24*
Family Communication*Sexual Identity	0.16	0.26	0.20

*p<0.05

In order to test if sexual identity moderates the relationship between negative peers and depression, a simultaneous multiple regression was performed (see Table 21). Results indicate that the overall model was significant**;** R^2=0.23, (F(8,114)=4.30, p=0.0002). However, the interaction between sexual identity and negative peers was not significant. Thus, there is not a differential effect of negative peers on depression depending on sexual identity.

Table 20. Interaction Between Sexual Identity and Negative Peers on Depression (n=123)

Variable	Parameter Estimate	Standard Error	Standardized Estimate
Race	2.50	2.39	0.09
Gender	1.05	2.87	0.03
Age	3.01	3.20	0.08
Sexual Identity	7.18	7.75	0.26
Negative Peers	0.40	0.29	0.19**
Family Communication	-0.38	0.14	-0.25*
School Engagement	-4.26	1.65	-0.24
Sexual Identity*Negative Peers	-0.46	0.38	-0.34

p<0.05;**p<0.01

In order to test if sexual identity moderates the relationship between school engagement and depression, a simultaneous multiple regression was performed (see

Table 22). Results indicate that the overall model was significant**;** R^2=0.23, (F(8,114)=4.18, p=0.0002). However, the interaction between sexual identity and school engagement was not significant. Thus, there is not a differential effect of school engagement on depression depending on sexual identity.

Table 21. Interaction Between Sexual Identity and School Engagement on Depression (n=123)

Variable	**Parameter Estimate**	**Standard Error**	**Standardized Estimate**
Race	1.73	2.33	0.06
Gender	1.17	2.87	0.04
Age	2.90	3.21	0.08
Sexual Identity	6.19	9.67	0.23
Negative Peers	0.15	0.19	0.07
Family Communication	-0.41	0.14	-0.27**
School Engagement	-2.88	2.39	-0.16
Sexual Identity*School Engagement	-2.52	3.01	-0.31

**p<0.01

Mesosystem Factors to Predict Suicide

A simultaneous multiple regression was performed to analyze the relationship between mesosystem factors, sexual identity and suicide (see Table 23). Results indicated that the main effects model was significant**;** R^2=0.18, (F(7,115)=3.65, p=0.0014. Family communication was associated with suicide (b=-0.03, t=-2.17, p=0.03) with higher levels of family communication associated with lower levels of suicide.

Table 22. Sexual Identity and Mesosystem Factors on Suicide Main Effects Model(n=123)

Variable	Parameter Estimate	Standard Error	Standardized Estimate
Race	0.06	0.26	0.02
Gender	0.23	0.32	0.06
Age	-0.54	0.36	-0.14
Sexual Identity	-0.49	0.27	-0.17
Negative Peers	0.01	0.02	0.04
Family Communication	-0.03	0.02	-0.21*
School Engagement	-0.23	0.18	-0.12

*p<0.05

To test whether or not sexual identity moderated the relationship between family communication and suicide, a simultaneous multiple regression including the interaction term was performed (see Table 24). The overall model was significant**;** R^2=0.19, (F(8,114)=3.39, p=0.0016. However, the interaction between sexual identity and family communication to predict suicide was not. Thus, there was no differential effect of family communication on suicide.

Table 23. Interaction Between Sexual Identity and Family Communication on Suicide (n=123)

Variable	Parameter Estimate	Standard Error	Standardized Estimate
Race	0.09	0.26	0.03
Gender	0.16	0.32	0.05
Age	-0.54	0.36	-0.14
Sexual Identity	-1.60	0.95	-0.54
Negative Peers	0.01	0.02	0.03
Family Communication	-0.05	0.02	-0.31*
School Engagement	-0.22	0.18	-0.11
Sexual Identity*Family Communication	0.04	0.03	0.41

*p<0.05

A simultaneous multiple regression with interaction term was performed to test whether or not sexual identity moderates the relationship between negative peers and suicide (see Table 25). The overall model was significant R^2=0.20; (F(8,114)=3.61, p<0.0009. The interaction between sexual identity and negative peers was not significant. Thus, there was not a differential effect of negative peers on suicide depending on sexual identity.

Table 24. Interaction Between Sexual Identity and Negative Peers on Suicide (n=123)

Variable	Parameter Estimate	Standard Error	Standardized Estimate
Race	-0.05	0.26	-0.02
Gender	0.25	0.32	0.07
Age	-0.55	0.35	-0.14
Sexual Identity	-1.89	0.86	-0.64*
Negative Peers	-0.03	0.03	-0.14
Family Communication	-0.04	0.02	-0.21*
School Engagement	-0.24	0.18	-0.12
Negative Peers*Sexual Identity	0.07	0.04	0.50

*p<0.05

A simultaneous multiple regression with interaction term was performed to test whether or not sexual identity moderates the relationship between school engagement and suicide (see Table 26). The overall model was significant R^2=0.18; (F(8,114)=3.18, p<0.003. The interaction between sexual identity and school engagement was not significant. Thus, there was not a differential effect of school engagement on suicide depending on sexual identity.

Table 25. Interaction Between Sexual Identity and School Engagement on Suicide (n=123)

Variable	Parameter Estimate	Standard Error	Standardized Estimate
Race	0.06	0.26	0.02
Gender	0.23	0.32	0.07
Age	-0.54	0.36	-0.14
Sexual Identity	-0.18	1.08	-0.06
Negative Peers	0.01	0.02	0.04
Family Communication	-0.03	0.02	-0.21
School Engagement	-0.17	0.27	-0.10
Negative Peers*School Engagement	-0.10	0.34	-0.11

*p<0.05

Mesosystem Factors to Predict Substance Use

A simultaneous multiple regression was performed to test the main effects of mesosystem factors on substance use (log transformed) (see Table 27). The overall model was significant**;** R^2=0.38, (F(7,112)=9.73, p<0.0001. Sexual identity was associated with suicide (b=-0.43, t=-3.55, p=0.0006) as was negative peers (b=0.04,t=5.05,p<0.0001). Sexual minority status was associated with more substance use and more negative peers was associated with more substance use.

Table 26. Sexual Identity and Mesosystem on Substance Use Main Effects Model (n=120)

Variable	Parameter Estimate	Standard Error	Standardized Estimate
Race	0.51	0.12	0.19
Gender	-1.33	0.15	-0.17
Age	0.78	0.16	0.11
Sexual Identity	-1.49	0.12	-0.29**
Negative Peers	0.10	0.01	0.40***
Family Communication	-0.01	0.01	-0.16
School Engagement	0.09	0.08	-0.01

p<0.01;*p<0.0001

A multiple regression with interaction term was performed to test whether or not sexual identity moderated the relationship between negative peers and substance use (see

Table 28). The overall model was significant R^2=0.43,(F(8,111)=10.48, p<0.0001. The interaction between sexual identity and negative peers was significant (b=-0.06,t=-3.19, p=0.002). For homeless sexual minorities, the more negative peers they have, the more substances they used and the slope is .08 (p<0.0001). For heterosexual youths, there was no effect between negative peers and substance use as the slope is .02 (p=0.09).

Table 27. Interaction Between Sexual Identity and Negative Peers on Substance Use (n=120)

Variable	Parameter Estimate	Standard Error	Standardized Estimate
Race	0.39	0.12	0.26**
Gender	-0.29	0.14	-0.17*
Age	0.23	0.16	0.11
Sexual Identity	0.74	0.38	0.49
Negative Peers	0.08	0.01	0.66***
Family Communication	-0.01	0.01	-0.13
School Engagement	0.01	0.08	0.01
Sexual Identity*Negative Peers	-0.06	0.02	-0.81**

*p<0.05;**p<0.01,***p<0.0001

A simultaneous multiple regression with interaction term was performed to test whether or not sexual identity moderated the relationship between family communication and substance use (see Table 29). The overall model was significant R^2=0.38, (F(8,111)=8.52, p<0.0001. However, the interaction between sexual identity and family communication was not significant. Thus, there is not a differential effect of family communication on substance use depending on sexual identity.

Table 28. Interaction Between Sexual Identity and Family Communication on Substance Use (n=120)

Variable	Parameter Estimate	Standard Error	Standardized Estimate
Race	0.28	0.11	0.19*
Gender	-0.27	0.15	-0.16
Age	0.22	0.16	0.11
Sexual Identity	-0.16	0.44	-0.11
Negative Peers	0.05	0.01	0.40***
Family Communication	-0.01	0.01	-0.11
School Engagement	-0.01	0.08	-0.01
Sexual Identity*Family Communication	-0.01	0.01	-0.19

*p<0.05,**p<0.01,***p<0.0001

A simultaneous multiple regression with interaction term was performed to test whether or not sexual identity moderated the relationship between school engagement and substance use (see Table 30). The overall model was significant R^2=0.38, (F(8,111)=8.52, p<0.0001. However, the interaction between sexual identity and school engagement was not significant. Thus, there is not a differential effect of school engagement on substance use depending on sexual identity.

Table 29. Interaction Between Sexual Identity and School Engagement on Substance Use (n=120)

Variable	Parameter Estimate	Standard Error	Standardized Estimate
Race	0.29	0.12	0.19*
Gender	-0.29	0.15	-0.17
Age	0.22	0.16	0.11
Sexual Identity	-0.39	0.49	-0.26
Negative Peers	0.05	0.01	0.39***
Family Communication	-0.01	0.01	-0.16
School Engagement	0.00	0.12	0.00
Sexual Identity*School Engagement	-0.01	0.15	-0.03

*p<0.05,**p<0.01,***p<0.0001

Mesosystem Factors to Predict Condom Use

A simultaneous multiple regression was performed in order to analyze the relationship between sexual identity, mesosystem factors and condom use (see Table 31). The main effects model was significant**;** R^2=0.14, (F(7,107)=2.47,p=0.02). Negative peers significantly was associated with condom use (b=0.03,t=2.2,p=0.03) with more negative peers associated with being more likely to not use a condom. Sexual minorities are associated with condom use and are less likely to use a condom (b=-0.28,t=-2.08,p=0.04).

Table 30. Main Effects Model of Sexual Identity, Mesosystem on Condom Use (n=115)

Variable	**Parameter Estimate**	**Standard Error**	**Standardized Estimate**
Race	0.08	0.13	0.05
Gender	-0.27	0.16	-0.17
Age	0.23	0.19	0.11
Sexual Identity	-0.28	0.13	-0.20*
Negative Peers	0.03	0.01	0.22*
Family Communication	0.00	0.01	0.05
School Engagement	0.01	0.09	0.01

*p<0.05

A simultaneous multiple regression with interaction term was use to analyze if sexual identity moderated the relationship between family communication and condom use (see Table 32). The overall model was significant**;** R^2=0.16, (F(8,106)=2.51,p=0.02). The interaction between sexual identity and family communication was not significant. Thus, there was not a differential effect between family communication and condom use depending on sexual identity.

Table 31. Interaction Between Sexual Identity and Family Communication on Condom Use (n=115)

Variable	Parameter Estimate	Standard Error	Standardized Estimate
Race	0.07	0.13	0.05
Gender	-0.22	0.16	-0.14
Age	0.22	0.19	0.11
Sexual Identity	0.45	0.48	0.32
Negative Peers	0.03	0.01	0.22*
Family Communication	0.01	0.01	0.18
School Engagement	-0.01	0.09	-0.01
Sexual Identity*Family Communication	-0.02	0.01	-0.58

*p<0.05

A simultaneous multiple regression with interaction term was run to determine if sexual identity moderates the relationship between negative peers and condom use (see Table 33). The overall model was significant**;** R^2=0.20, (F(8,106)=3.38,p=0.002). The interaction between sexual identity and negative peers was significant (b—0.07,t=-2.92, p<0.005) and predicted condom use. For sexual minorities, the more negative peers the more likely to not to use condoms as the slope is 1.04 (p=0.03), but for homeless heterosexual youths, there was no effect between negative peers and condom use as the slope is -0.00 (p=0.87).

Table 32. Interaction Between Sexual Identity and Negative Peers on Condom Use (n=115)

Variable	Parameter Estimate	Standard Error	Standardized Estimate
Race	0.20	0.14	0.14
Gender	-0.27	0.16	-0.17
Age	0.21	0.18	0.11
Sexual Identity	1.05	0.47	0.76*
Negative Peers	0.06	0.02	0.54**
Family Communication	0.00	0.01	0.05
School Engagement	0.02	0.09	0.02
Sexual Identity*Negative Peers	-0.07	0.02	-0.98**

*p<0.05,**p<0.01,***p<0.0001

A simultaneous multiple regression with interaction term was use to analyze if sexual identity moderated the relationship between school engagement and condom use (see Table 34). The overall model was significant**;** R^2=0.14, (F(8,106)=2.16,p=0.04). The interaction between sexual identity and family communication was not significant. Thus, there is not a differential effect between school engagement and condom use depending on sexual identity.

Table 33. Interaction Between Sexual Identity and School Engagement on Condom Use (n=115)

Variable	Standardized Estimate	Standard Error	Parameter Estimate
Race	0.08	0.13	0.06
Gender	-0.27	0.16	-0.17
Age	0.23	0.19	0.11
Sexual Identity	-0.13	0.54	-0.09
Negative Peers	0.03	0.01	0.22*
Family Communication	0.00	0.01	0.04
School Engagement	0.04	0.14	0.04
Sexual Identity*School Engagement	-0.05	0.17	-0.12

*p<0.05,**p<0.01,***p<0.0001

Mesosystem Factors to Predict Sexual Behavior

A simultaneous multiple regression was performed to examine the main effects of mesosystem factors on sexual behavior (see Table 35). The main effects model was significant**;** R^2=0.38, (F(7,107)=9.40, p<0.0001. Sexual orientation was associated with sexual behavior (b=-1.49, t=-4.88,p<0.0001) as was negative peers (b=0.10,t=3.66,p=0.0004). Sexual minority status was associated with higher sexual risk behavior and more negative peers was associated with more sexual risk behaviors.

Table 34. Main Effects Model of Mesosystem Factors on Sexual Behavior (n=115)

Variable	**Parameter Estimate**	**Standard Error**	**Standardized Estimate**
Race	0.51	0.30	0.14
Gender	-1.33	0.37	-0.31**
Age	0.78	0.43	0.15
Sexual Identity	-1.49	0.31	-0.40***
Negative Peers	0.10	0.03	0.30**
Family Communication	-0.01	0.02	-0.06
School Engagement	0.09	0.21	0.04

*p<0.05;**p<0.01;***p<0.0001

In order to test whether or not sexual orientation moderated the relationship between family communication and sexual behavior, a simultaneous multiple regression with interaction term was conducted (see Table 36). The overall model was significant**;** R^2=0.38, (F(8,106)=8.17, p<0.0001. However, the interaction was not significant as sexual identity did not moderate the relationship between sexual identity and family communication. Thus, there was no differential effect of family communication and sexual behavior depending on sexual identity.

Table 35. Interaction Between Sexual Identity and Family Communication on Sexual Behavior (n=115)

Variable	Parameter Estimate	Standard Error	Standardized Estimate
Race	0.51	0.30	0.14
Gender	-1.31	0.37	-0.31**
Age	0.79	0.43	0.15
Sexual Identity	-1.15	1.10	-0.31
Negative Peers	0.10	0.03	0.30**
Family Communication	-0.01	0.02	-0.03
Sexual Identity*Family Communication	-0.01	0.03	-0.10
School Engagement	0.08	0.02	0.03

*p<0.05;**p<0.01;***p<0.0001

A simultaneous multiple regression with interaction term was used to examine whether or not sexual identity moderates the relationship between negative peers and sexual behavior (see Table 37). The overall model was significant**;** R^2=0.41, (F(8,106)=9.02,p<0.0001). The interaction was significant as sexual identity moderated the relationship between negative peers and sexual behavior (b=-0.11,t=-2.07,p=0.04). For sexual minorities, the more negative peers the higher the sexual risk behavior. The slope for homeless sexual minorities is 0.16 (p=0.0001) and there was no effect for homeless heterosexual youths with a slope of 0.05 ((p=0.15).

Table 36. Interaction Between Sexual Identity and Negative Peers on Sexual Behavior (n=115)

Variable	Parameter Estimate	Standard Error	Standardized Estimate
Race	0.71	0.31	0.19*
Gender	-1.33	0.36	-0.31**
Age	0.76	0.42	0.14
Sexual Identity	0.69	1.09	0.19
Negative Peers	0.16	0.04	0.50**
Family Communication	-0.01	0.02	-0.06
School Engagement	0.11	0.20	0.05
Sexual Identity*Negative Peers	-0.11	0.05	-0.60*

*p<0.05;**p<0.01;***p<0.0001

In order to test whether or not sexual orientation moderated the relationship between school engagement and sexual behavior, a simultaneous multiple regression with interaction term was conducted (see Table 38). The overall model was significant**;** R^2=0.38, (F(8,106)=8.15, p<0.0001. However, the interaction was not significant as sexual identity did not moderate the relationship between sexual identity and school engagement. Thus, there is not a differential effect of school engagement and sexual behavior depending on sexual identity.

Table 37. Interaction Between Sexual Identity and School Engagement on Sexual Behavior (n=115)

Variable	Parameter Estimate	Standard Error	Standardized Estimate
Race	0.52	0.30	0.14
Gender	-1.33	0.37	-0.31**
Age	0.78	0.43	0.15
Sexual Identity	-1.54	1.23	-0.42
Negative Peers	0.10	0.03	0.30**
Family Communication	-0.01	0.02	-0.06
School Engagement	0.08	0.31	0.03
Sexual Identity*School Engagement	0.02	0.38	0.01

*p<0.05;**p<0.01;***p<0.0001

Question 3: Results

3. To what extent are the relationships between macrosystem factors (i.e. stigma related to homelessness and discrimination based on sexual orientation) and mental health, substance use, and sexual risk behaviors in homeless youths moderated by sexual orientation?

H_1: Homeless youths with higher levels of stigma related to homelessness will report higher levels of mental health problems, substance use problems, and sexual risk behaviors. The relationship between stigma and psychosocial problems will be different depending on sexual orientation.

H_2: Homeless youths with higher levels of discrimination related to sexual orientation will report higher levels of mental health problems, substance use problems, and sexual risk behaviors. The relationship between discrimination and psychosocial problems will be different depending on sexual orientation.

Correlations were run to examine the relationship between macrosystem factors and psychosocial problems (see Table 18). A higher number of depressive symptoms were associated with more discrimination in the past 12 months ($r=0.33$, $p<0.0001$), more depressive symptoms were associated with more discrimination before 12 months ago ($r=0.22$, $p=0.008$), more depressive symptoms were associated with lower stigma score (more stigma) ($r=-0.54$, $p<0.0001$), more lifetime substance use was associated with more discrimination before 12 months ago ($r=0.17$, $p=0.04$), more substance use was associated with more discrimination in the past 12 months ($r=0.20$, $p=0.01$), more substance use was associated with lower stigma score (more stigma) ($r=-0.21$, $p=0.01$), more suicide was associated with more discrimination before 12 months ago ($r=0.23$,

p=0.005), more suicide was associated with more discrimination in the past 12 months (r=0.31, p=0.0001), more suicidal ideation was associated with lower stigma score (more stigma) (r=-0.22, p=0.010), more sexual behavior was associated with more discrimination before 12 months ago (r=0.27, p=0.002), more discrimination within the past 12 months was associated with more sexual behavior (r=0.28, p=0.00).

Macrosystem Factors to Predict Depression

Simultaneous multiple regression was performed to analyze the relationship between macrosystem factors and depression (see Table 39). The overall model was significant; R^2=0.33, (F(6,135)=10.89, p<0.0001. Stigma was associated with depression (b=-1.04,t=-6.41,p<0.0001) with lower stigma score (higher stigma) being associated with more depressive symptoms.

Table 38. Main Effects Model of Macrosystem Factors on Depression (n=142)

Variable	Parameter Estimate	Standard Error	Standardized Estimate
Race	-1.42	2.02	-0.05
Gender	1.16	2.33	0.04
Age	-1.74	2.87	-0.05
Sexual Identity	-1.80	2.35	-0.07
Stigma	-1.04	0.16	-0.50***
Discrimination	0.35	0.23	0.14

***p<0.05

In order to test if sexual identity moderated the relationship between stigma and depression, a simultaneous multiple regression with interaction term was performed (see Table 40). The model overall model was significant**;** R^2=0.33, (F(7,134)=9.43, p<0.0001). The interaction between stigma and sexual identity was not significant as sexual identity did not moderate the relationship between stigma and depression. Thus, there was no differential effect of stigma on depression depending on sexual identity.

Table 39. Interaction Between Sexual Identity and Stigma on Depression (n=142)

Variable	Parameter Estimate	Standard Error	Standardized Estimate
Race	-1.55	2.03	-0.06
Gender	1.18	2.33	0.04
Age	-1.81	2.88	-0.05
Sexual Identity	3.90	10.02	0.15
Stigma	-0.95	0.22	-0.46***
Discrimination	0.38	0.23	0.15
Sexual Identity*Stigma	-0.18	0.31	-0.22

***p<0.0001

In order to test if sexual identity moderated the relationship between discrimination and depression, a simultaneous multiple regression with interaction term was performed (see Table 41). The model overall model was significant**;** R^2=0.33, (F(7,134)=9.39, p<0.0001). The interaction between discrimination and sexual identity was not significant as sexual identity did not moderate the relationship between discrimination and depression. Thus, there is not a differential effect of discrimination on depression depending on sexual identity.

Table 40. Interaction Between Sexual Identity and Discrimination on Depression (n=142)

Variable	Parameter Estimate	Standard Error	Standardized Estimate
Race	-1.43	2.02	-0.05
Gender	1.12	2.33	0.04
Age	-1.69	2.87	-0.05
Sexual Identity	-2.62	2.58	-0.10
Stigma	-1.04	0.16	-0.50***
Discrimination	0.29	0.24	0.12
Sexual Identity*Discrimination	0.49	0.64	0.06

***p<0.0001

Macrosystem Factors to Predict Suicide

A simultaneous multiple regression was used to analyze the relationship between macrosystem factors on suicide (see Table 42). The main effects model was significant

R^2=0.19, (F(6,135)=5.40, p<0.0001). Sexual identity was associated with suicide (b=-0.65,t=-2.22,p=0.03) as was stigma (b=-0.04,t=-2.12, p=0.04). Sexual minorities experienced more suicide and stigma.

Table 41. Main Effects Model of Macrosystems Factors on Suicide (n=142)

Variable	Parameter Estimate	Standard Error	Standardized Estimate
Race	-0.25	0.24	-0.08
Gender	0.25	0.28	0.07
Age	-0.66	0.35	-0.16
Sexual Identity	-0.65	0.29	-0.22*
Stigma	-0.04	0.02	-0.18*
Discrimination	0.04	0.03	0.13

*p<0.05

A simultaneous multiple regression with interaction term was performed to test if sexual identity moderated the relationship between stigma and suicide (see Table 43). The overall model was significant R^2=0.19**;** (F(=7,134)=4.60,p=0.0001. However, the interaction term was not significant as sexual identity did not moderate the relationship between stigma and suicide. Thus, there was not a differential effect of stigma on suicide depending on sexual identity.

Table 42. Interaction Between Sexual Identity and Stigma on Suicide (n=142)

Variable	Parameter Estimate	Standard Error	Standardized Estimate
Race	-0.25	0.25	-0.08
Gender	0.25	0.29	0.07
Age	-0.66	0.35	-0.16
Sexual Identity	-0.52	1.24	-0.18
Stigma	-0.04	0.03	-0.17
Discrimination	0.04	0.03	0.14
Stigma*Sexual Identity	-0.00	0.04	-0.04

*p<0.05

A simultaneous multiple regression with interaction term was performed to test if sexual identity moderated the relationship between discrimination and suicide (see Table 44). The overall model was significant R^2=0.19**;** (F(=7,134)=4.60,p=0.0001. However, the interaction term was not significant as sexual identity did not moderate the relationship between discrimination and suicide. Thus, there was not a differential effect of discrimination on suicide depending on sexual identity.

Table 43. Interaction Between Sexual Identity and Discrimination on Suicide (n=142)

Variable	Parameter Estimate	Standard Error	Standardized Estimate
Race	-0.26	0.25	-0.08
Gender	0.25	0.29	0.07
Age	-0.65	0.36	-0.16
Sexual Identity	-0.67	0.32	-0.22*
Stigma	-0.04	0.02	-0.18*
Discrimination	0.04	0.03	0.13
Discrimination*Sexual Identity	0.02	0.12	0.01

*p<0.05

Macrosystem Factors to Predict Substance Use

A simultaneous multiple regression was performed to examine the relationship between macrosystem factors and substance use (see Table 45). The main effects model was significant**;** R^2=0.27, (F(6,131)=8.07,p<0.0001. Sexual identity was associated with predicted substance use (b=-0.55,t=-3.83, p=0.0002). Sexual minorities used more substances in the lifetime.

Table 44. Main Effects Model of Macrosystem Factors on Substance Use (n=138)

Variable	Parameter Estimate	Standard Error	Standardized Estimate
Race	0.43	0.12	0.28**
Gender	-0.24	0.14	-0.14
Age	0.14	0.18	0.06
Sexual Identity	-0.55	0.14	-0.36**
Stigma	-0.02	0.01	-0.15
Discrimination	-0.01	0.01	-0.06

p<0.01;*p<0.0001

A simultaneous multiple regression with interaction term was performed to test whether or not sexual identity moderates the relationship between stigma and substance use (see Table 46). The overall model was significant**;** R^2=0.27, (F(7,130)=6.96, p<0.0001. However, the interaction between stigma and sexual identity was not significant. Sexual identity did not moderate the relationship between stigma and substance use. Thus, there was no differential effect of stigma on substance use depending on sexual identity.

Table 45. Interaction Between Sexual Identity and Stigma on Substance Use (n=138)

Variable	Parameter Estimate	Standard Error	Standardized Estimate
Race	0.44	0.12	0.28
Gender	-0.24	0.14	-0.14
Age	0.15	0.18	0.07
Sexual Identity	-0.96	0.61	-0.62
Stigma	-0.02	0.01	-0.21
Discrimination	-0.01	0.01	-0.07
Sexual identity*Stigma	0.01	0.02	0.28

p<0.01;*p<0.0001

A simultaneous multiple regression with interaction term was performed to test whether or not sexual identity moderates the relationship between discrimination and substance use (see Table 47). The overall model was significant**;** R^2=0.27,

(F(7,130)=7.04, p<0.0001. However, the interaction between discrimination and sexual identity was not significant. Sexual identity does not moderate the relationship between discrimination and substance use. Thus, there is no differential effect of discrimination on substance use depending on sexual identity.

Table 46. Interaction Between Sexual Identity and Discrimination on Substance Use (n=138)

Variable	Parameter Estimate	Standard Error	Standardized Estimate
Race	0.44	0.12	-0.28**
Gender	-0.24	0.14	-0.14
Age	0.14	0.18	0.06
Sexual Identity	-0.61	0.16	-0.39**
Stigma	-0.02	0.01	-0.16
Discrimination	-0.01	0.01	-0.09
Sexual identity*Discrimination	0.04	0.04	0.08

p<0.01;*p<0.0001

Macrosystem Factors to Predict Sexual Behavior

A simultaneous multiple regression was run to examine the relationship between macrosystem factors and sexual behavior (see Table 48). The main effects model was significant**;** R^2=0.33, (F(6,127)=10.25,p<0.0001. Sexual identity was associated with sexual behavior (b=-1.71,t=-4.79, p<0.0001) with sexual minorities engaging in more sexual risk behavior.

Table 47. Main Effects of Macrosystem Factors on Sexual Behavior (n=134)

Variable	Parameter Estimate	Standard Error	Standardized Estimate
Race	0.81	0.31	0.20**
Gender	-1.25	0.35	-0.28**
Age	1.00	0.47	0.17*
Sexual identity	-1.71	0.36	-0.44***
Stigma	0.00	0.02	0.02
Discrimination	0.01	0.03	0.02

p<0.01;*p<0.0001

A simultaneous multiple regression with interaction term was performed to analyze whether or not sexual identity moderated the relationship between stigma and sexual behavior (see Table 48). The model overall was significant**;** R^2=0.33, (F(7,126)=8.74, p<0.0001. However, the interaction term was not significant. Sexual identity did not moderate the relationship between stigma and sexual behavior. Thus, there is not a differential effect of stigma on sexual behavior depending on sexual identity.

Table 48. Interaction Between Sexual Identity and Stigma on Sexual Behavior (n=134)

Variable	Parameter Estimate	Standard Error	Standardized Estimate
Race	0.80	0.31	0.20*
Gender	-1.24	0.35	-0.28**
Age	0.99	0.47	0.16*
Sexual Identity	-1.23	1.49	-0.31
Stigma	0.01	0.03	0.04
Discrimination	0.01	0.03	0.03
Sexual identity*Stigma	-0.02	0.05	-0.13

p<0.01;*p<0.0001

A simultaneous multiple regression with interaction term was performed to analyze whether or not sexual identity moderated the relationship between discrimination and sexual behavior (see Table 49). The model overall was significant**;** R^2=0.33, (F(7,126)=8.80, p<0.0001. However, the interaction term was not significant. Sexual identity did not moderate the relationship between discrimination and sexual behavior. Thus, there is not a differential effect of discrimination on sexual behavior depending on sexual identity.

Table 49. Interaction Between Sexual Identity and Discrimination on Sexual Behavior (n=134)

Variable	Parameter Estimate	Standard Error	Standardized Estimate
Race	0.81	0.31	0.21
Gender	-1.25	0.35	-0.28
Age	0.99	0.47	0.16
Sexual Identity	-1.81	0.39	-0.46
Stigma	0.00	0.02	0.02
Discrimination	-0.00	0.04	-0.00
Sexual identity*Discrimination	0.06	0.10	0.05

p<0.01;*p<0.0001

Macrosystem Factors to Predict Condom Use

A simultaneous multiple regression was used to analyze the relationship between macrosystem factors and condom use (see Table 50). The main effects model was significant**;** R^2=0.10, (F(6,127)=2.39,p=0.03. Sexual identity was associated with condom use (-0.50,t=-3.17, p=0.002) with sexual minorities less likely to use condoms.

Table 50. Main Effects Model for Macrosystem Factors on Condom Use (n=134)

Variable	Parameter Estimate	Standard Error	Standardized Estimate
Race	0.11	0.13	0.07
Gender	-0.24	0.15	-0.14
Age	0.22	0.20	0.09
Sexual Identity	-0.50	0.16	-0.33**
Stigma	-0.00	0.01	-0.01
Discrimination	-0.02	0.01	-0.13

**p<0.01

A simultaneous multiple regression with interaction term was used to examine whether or not sexual identity moderated the relationship between stigma and condom use (see Table 51). The model with interaction term was not significant.

Table 51. Interaction Between Sexual Identity and Stigma on Condom Use (n=134)

Variable	Parameter Estimate	Standard Error	Standardized Estimate
Race	0.10	0.14	0.07
Gender	-0.24	0.16	-0.14
Age	0.21	0.21	0.09
Sexual Identity	-0.19	0.65	-0.13
Stigma	0.00	0.01	0.03
Discrimination	-0.02	0.02	-0.13
Stigma*Sexual Identity	-0.01	0.01	-0.22

A simultaneous multiple regression with interaction term was used to examine whether or not sexual identity moderated the relationship between discrimination and condom use (see Table 52). The model with interaction term was not significant.

Table 52. Interaction Between Sexual Identity and Discrimination on Condom Use (n=134)

Variable	Parameter Estimate	Standard Error	Standardized Estimate
Race	0.11	0.13	0.07
Gender	-0.24	0.16	-0.14
Age	0.21	0.21	0.09
Sexual Identity	-0.51	0.17	-0.35**
Stigma	-0.00	0.01	-0.01
Discrimination	-0.02	0.02	-0.14
Discrimination*Sexual Identity	0.01	0.04	0.02

**p<0.01

MANOVA was considered to assess the relationship between the independent variables and dependent variables simultaneously in one model, however it was determined that the variables were not as highly correlated as anticipated. For example, the highest correlation was between sexual behavior and substance use which was r=.53. For each independent variable, separate models were created and this considered appropropriate.

CHAPTER 5

Discussion

Few studies have explored contextual factors in homeless sexual minority youths. This study contributes to the literature because it compared homeless sexual minority youths to their heterosexual counterparts regarding psychosocial problems (mental health, substance use and sexual risk behavior). Additionally, the relationships between mesosystem factors and psychosocial problems and macrosystem factors and psychosocial problems were also examined. Lastly, this study determined whether sexual identity moderated the relationship between mesosystem factors and psychosocial problems and the relationship between macrosystem factors and psychosocial problems.

Overall, the study found significant differences in psychosocial problems, mesosystem factors, and macrosystem factors between homeless sexual minority youths and homeless heterosexual youths. Specifically, homeless sexual minority youths fare more poorly than their heterosexual counterparts related to mental health, substance use, sexual risk behavior, family, negative peers, stigma and discrimination. Understanding the nature and direction of the differences is an important step in understanding disparities regarding negative outcomes of this population of youths.

Previous studies documented the heighted risk facing homeless sexual minority youth compared to their heterosexual counterparts regarding mental health, substance use and sexual risk behaviors (Cochran et al., 2006). The findings in the present study confirmed prior research, indicating that there is still much work to be done to reduce the disparities outlined in Healthy People 2010.

Another important finding was that the relationships between contextual factors (mesosystem and macrosystem) and psychosocial problems differed depending on sexual identity for some outcomes, but not for others. For mental health problems (i.e., suicidality and depression) there were no differential effects of sexual identity on the relationships between family, negative peers, school, and stigma and these mental health problems of homeless youth. This suggests that although homeless sexual minority youths fare more poorly than heterosexual homeless youths across multiple factors, the factors that may influence the psychosocial problems are similar, especially mental health problems. The finding suggests that there may be other factors related to being homeless that may explain the differences between sexual minority and heterosexual youths.

Question one examined differences between homeless sexual minority youths and their heterosexual counterparts regarding psychosocial problems, microsystem factors and mesosystem factors. Overall, findings from this study confirmed the first hypothesis that sexual minorities experienced higher levels of psychosocial problems, and negative mesosystem and macrosystem factors with the exception of two; school engagement and positive peers, for which there were no significant differences.

Sexual Orientation and Psychosocial Problems.

Mental Health. The higher levels of depression and suicide among homeless sexual minority youths in this sample, were consistent with those found in other studies that examined sexual orientation and mental health in samples of homeless youths (Cochran et al., 2002; Whitbeck et al., 2004b; Leslie et al., 2002; Rohde et al., 2001; Whitbeck et al., 2004a). Understanding the greater risk for mental health problems among sexual minorities can be explained by conceptualizations of minority stress

(Meyer, 2003). Researchers posit that sexual minorities live in a stressful and hostile social environment created by stigma, prejudice, and discrimination, and expectations of rejection, hiding and concealing, and internalized homophobia (Meyer, 2003). These processes have been proposed to explain the mental health disparities between sexual minority and heterosexual youths, and may also apply to homeless youth in the present study.

It is important to note that the differences in CES-D scores in this sample were not only statistically significant, but clinically significant as well. CES-D scores of 16-26 are considered mild depression and scores of 27 and above are indicative of major depression (Zich, Attkisson, & Greenfield, 1990). In this sample, the mean score for homeless sexual minority youths was 26.8 compared to a mean of 20.8 for heterosexual homeless youths, indicating clinically meaningful differences between sexual minority and heterosexual homeless youths. This finding suggests that different interventions may be needed to treat or prevent major depression in sexual minority youths, and that all homeless youths should be targeted for prevention efforts. Current interventions should be further evaluated to determine if different interventions for homeless sexual minority youths should be developed.

Substance Use. Question 1 also compared lifetime substance use in homeless sexual minorities youths to their heterosexual counterparts. The significantly greater number of substances used by sexual minorities in this sample is consistent with other studies that compared homeless sexual minority and heterosexual youths (Cochran et al., 2002; Moon et al., 2000; Whitbeck et al, 2004a;Noell & Ochs, 2001; Kipke et al, 1997; Van Leeuwen et al., 2006). The higher number of substances used by sexual minorities may be related

to coping with daily difficulties and survival challenges of living on the street in addition to minority stress (Cochran et al., 2002).

Sexual Risk Behavior. Question 1 also explored sexual risk behaviors according to sexual identity. The relationship between sexual risk behavior and sexual identity was also relatively unexplored in the literature regarding homeless sexual minority youths. Homeless sexual minority youths were less likely to use condoms and engage in more high risk sex. The findings are consistent with previous studies (Moon et. al., 2000; Cochran et al., 2002), but there is a dearth of literature that examined sex with high risk partners in homeless sexual minority youths. It might be the case that homeless sexual minority youths are engaging in more risky sex because they are also more likely to engage in survival sex and more money is paid if a condom is not used.

Sexual Identity and Mesosystem Factors

Family. Homeless sexual minorities were less satisfied with communication in their families compared to homeless heterosexual youths. It is possible that the dissatisfaction is related to disapproval of the individual's sexual minority status. Although satisfaction with family communication was relatively low in the sample in general, homeless sexual minorities were less satisfied. One study found that 26% of a sample of homeless sexual minority youths reported parental disapproval of their sexual orientation as a reason for their homelessness (Rew et al. 2005). Although parental disapproval may or may not be the cause of homelessness, it may be a contributing factor to problems and tensions within the family which including the family's communication style and patterns.

Peers. Findings indicate that there is a significant difference in negative peer behaviors between homeless sexual minority youths and their heterosexual counterparts; sexual minorities had more peers engaging in negative behaviors than heterosexual youths.

In terms of positive peer relationships, there were no statistical differences between the two groups. It could be that peers that engage in positive behaviors may be a protective factor that may have the same effect in both groups, but needs to be tested further. The finding also could be due in part to measurement error because the index only had 3 items and an alpha coefficient of 0.69. Questions still remain regarding the composition of peer groups and a better understanding of the role of positive peers in the population.

S*chool.* There were no statistical differences between homeless sexual minority youths and their heterosexual counterparts regarding school engagement. This finding is inconsistent with previous studies which found students with same-sex attraction reporting lower school belonging (Rostosky et al., 2003). One explanation for the non significant finding between sexual minority youths and heterosexual youths is that the responses may have been biased. For example, some of the participants were not currently in school and were instructed to think about the last year they were in school. Some were of school age and were no longer attending school, and others were beyond school age. If a respondent was 24 years old and had graduated at age 18, he/she was recalling his/her school experience from 6 years ago. It is unclear whether the lack of significant differences in school engagement between homeless sexual minority youths and their heterosexual counterparts is a true finding, or due in part to response bias,

because most of the subjects (87%) were not currently in school. Of the 16-18 year olds, 57% were not in school, and of the 19-24 year old respondents, 93% were not in school.

School remains an important variable as public school entrance is often cited as the beginning of stigma learning, as the experience can begin on the first day of school with taunting, teasing, ostracism, and fights regarding perceived sexual identity. This is a point in an individual's life when the family can not provide protection in some contexts (Goffman, 1963). This study operationalized being a sexual minority based on whether or not the individual identified as a sexual minority, as opposed to the study by Rostosky and colleagues (2003) which classified a sexual minority as someone who is attracted to someone of the same sex.

Sexual Identity and Macrosystem Factors

Stigma. Homeless sexual minorities experienced more stigma related to being homeless than heterosexual homeless youths, which is consistent with the other known study that examined stigma as it related to sexual orientation in a homeless sample (Kidd, 2007). Findings from this study contribute to the literature as it found significant differences in stigma between homeless sexual minority youths and their heterosexual counterparts. The differences may partially be explained by higher levels of victimization experienced by homeless sexual minority youths while living on the street which may be related to vulnerability related to perceived sexual orientation or gender identity.

Sexual Identity and the Relationship Between Mesosytem Factors and Psychosocial Problems

Question 2 examined the relationship between mesosystem factors (family communication, negative peers, and school engagement) and psychosocial problems to

determine whether or not sexual identity moderated this relationship. At the bivariate level, school engagement was significantly correlated with depression and suicide, but not with substance use, sexual risk behavior or condom use. Likewise, family communication was significantly correlated with suicide and depression, but was not correlated with substance use, sexual risk behavior or condom use -- similar to school engagement. The difference in family communication did not predict mental health, substance use or sexual risk behavior; and it is not clear what role the individual's sexual identity plays in dissatisfaction with family communication.

In the multivariate analyses, sexual identity did significantly moderate the relationship between negative peers and condom use, negative peers and substance use and negative peers and sexual risk behavior, 3 out of 5 dependent variables. Homeless youths who have friends who are engaging in more negative behaviors reported significantly higher levels of substance use, sexual risk behaviors and lower condom use, and there was a differential effect by sexual identity status; sexual minority youths were more negatively influenced by their peers who are engage in risky and delinquent behaviors than heterosexual youths.

These findings are consistent with another study (Kipke et al., 1997) that examined substance use and sexual risk behaviors as they related to peer group affiliation. The study found that respondents who affiliated with the gay/bisexual group were more likely to report difficulty not giving in to peer pressure to have unprotected sex and affiliation with none of the other peer groups (druggie, skater/deadhead, hustler, gang, student/athlete, or punker) was not found to be associated with giving in to peer

pressure to have unprotected sex. The present study did not examine peer pressure, or the makeup of the peer group.

One explanation for this could be that the size and make-up of the social networks of the two groups may be different, and smaller more homogeneous networks may be more common among sexual minority youths. In these networks, negative peers may have more influence. Previous research indicates that for sexual minorities having a diverse group of friends, sexual identity serves as a protective factor as opposed to having a group of friends who are all sexual minorities (Van de Kerckhove & Vincke, 2007). Sexual identity did not moderate the relationship between negative peers and the other two psychosocial problems – depression and suicide. Negative peers had different influences on the outcomes in two major domains – risky behaviors (substance use, condom use, and sexual risk behaviors) and mental health outcomes.

Another possible explanation for the significant association of negative peers on homeless sexual minority youths regarding substance use, condom use and sexual risk behaviors might be due to the mental health status of the sexual minorities in the sample. Homeless sexual minorities were severely depressed and more suicidal compared to their heterosexual counterparts. The depression and suicide or the combination of the two may have made the sexual minorities more vulnerable to the negative influences of peers.

The relationship between other mesosystem factors (school engagement and family communication) and all five psychosocial problems did not significantly differ according to the youths' sexual identity status. It is possible that additional contextual factors may explain the differences. Also, it is important to note that the modifiable variables such as negative peers and family communication could have been tested as the

moderators and the analysis would have been the same although the interpretation would have been different although still a moderated relationship (Gogineni, Alsup, & Gillespie, 1995). An example of this would be the question: Does family communication moderate the relationship between sexual identity and substance use?

Question 3: Sexual Identity and the Relationship Between Macrosystem Factors and Psychosocial Problems

Question 3 examined the relationship between macrosystem factors and psychosocial problems and whether or not the relationship between them is moderated by sexual identity. Stigma was significantly correlated with suicide, depression and substance use, but was not correlated with sexual risk behavior or condom use. Discrimination within the past year was significantly correlated with suicide, depression, substance use, and sexual risk behavior, but was not correlated with condom use. None of the relationships between stigma and psychosocial problems have a differential effect depending on sexual identity therefore the first hypothesis is rejected and the null hypothesis is accepted. As mentioned before, the effect of sexual identity on the relationship between discrimination and psychosocial problems was not able to be tested; therefore the second hypothesis is not accepted or rejected.

A closer examination of the social stigma survey scale shows that "victimization" was the item that was significantly different between sexual minority and heterosexual youths. Homeless sexual minority youths were more likely to have been physically assaulted according to an item on the stigma scale. Perhaps a measure with several items related to victimization may be useful, particularly victimization related to perceived

sexual orientation and gender identity. It may be the case that perpetrators sense a particular vulnerability among homeless sexual minority youths.

Only three studies have examined stigma as it relates to mental health outcomes in homeless youths and it was found to be significantly related to sexual orientation in two of them (Kidd, 2007). This study's findings are consistent with previous work, and extend the research in this population by examining stigma's relationship to substance use, and sexual risk behavior.

Methodological Strengths and Limitations

The study had several strengths and limitations in the areas of sampling, measurement, and data collection and procedures.

Sampling

Because the sample is a convenience sample, findings can only be generalized to other homeless youth who access community-based agencies for out-reach and 'drop-in' services. The experiences and problems of homeless youths who are not receiving services may be different from those in this study. It is possible that a non-service sample population of homeless youths would be worse off than a sample receiving services, or conversely, that youths not receiving services do not have the need for services and may be better off that the present sample. Collecting data from three community-based agencies may have increased the diversity of the sample, and increased the generalizability as well, at least for large urban cities that are similar to Toronto. For example one study of homeless youths that examine sexual minorities sampled from New York and Toronto and its findings are considered to be generalizable to other large urban, English speaking cities in North America (Kidd, 2007). Also, the analysis was not

stratified by agency. Therefore, it is unknown whether or not agencies are correlated with an outcome variable (i.e. mental health, substance use, or sexual risk behavior) or an explanatory one such as negative peers which is an example of Simpson's Paradox, when a covariate is correlated with an outcome variable and an explanatory variable (Appleton, French, & Vanderpump, 1996).

Measurement

There are several issues related to measurement in this study. Some of the measures had not been validated in homeless youths, sexual minorities or both. Although some of those demonstrated adequate to good reliability (e.g. school engagement), some had lower reliabilities (e.g. lifetime condom use) which may have been a problem. Other measures, such as family communication and peer behaviors, had no collateral data collected or objective verification. For example, family communication was based on the report of one member of the family and other members were not queried regarding their satisfaction with family communication. Last there may have been some bias in how youths answered the questions about school engagement since many of them were no longer in school. The further back a respondent had to think back to answer a question, the less accurate the response may be (Drake & Jonson-Reid, 2008).

Last, this study operationalized "homelessness" as being in an unstable housing situation at least 7 days in the past month. This may have included individuals into the sample who could have potentially been housed. However, homelessness is cyclical and most of the participants had been homeless multiple time. Moreover, other studies have used the 7 day inclusion criteria as well (Chau, 2007). Also, this study did not examine

frequency or recency of substance use which may be more indicative of a problem with substance use.

Data Collection and Procedures

The interviewer was the same for all interviews which contributed to consistent delivery of the survey and increased reliability. However, the interviewer characteristics differed from that of most of the subjects (race, age, gender), and this may have introduced response bias such as social desirability depending on how the subject perceived the interviewer.

Despite these limitations, the study had several strengths and opportunities to contribute to gaps in the literature. The inclusion of ecological variables also removed the focus from individual characteristics to contextual factors such as family, discrimination, stigma, peers and school. Also, everyone who was asked to participate and was eligible, participated in the study. Only one person was turned away because he needed the interview to be administered in Spanish. Many of the instruments used in the sample demonstrated good reliability and some of them (e.g. family communication and school engagement) were used in a homeless sexual minority population for the first time.

Implications

The findings from this study have implications for theory. The significant interaction between negative peers and sexual risk behavior, condom use and substance use extends Bronfenbrenner's (1989) Ecological System's Theory. In this case, the dynamic interaction between the person and the environment happens in sexual minorities with regard to negative peers and sexual risk behavior, condom use and sexual

risk behavior. Although the effect was not present in heterosexual homeless youths, ecological systems theory still proves a useful framework for future research involving homeless sexual minority youths.

Practice and Policy

The results of this study have relevance to current social work practice and policy. Based on findings from this study, family communication may also been an appropriate point of intervention to eliminate disparities between homeless sexual minority youths and their heterosexual counterparts. Providing family therapy to discuss sexual identity may help families deal with youths who are coming out and may serve as an intervention if the youth is out of the home or as a preventative service to keep the youth in the home safely. Best practices used with sexual minority youths in out-of-home care suggests that intervention by providers who are trained to assess family dynamics, provide counseling and accurate information about sexual minority issues, and educate families about the effects of their words, actions and behaviors on their child's well-being help families adjust more quickly (Wilber, Ryan and Marksamer, 2006; Ryan & Diaz, 2005). These suggestions may be helpful when addressing the needs of families of homeless sexual minority youths. The interventions were helpful in increasing the level of family communication and ultimately improve the health and mental health outcomes of the individual (Ryan & Diaz, 2005).

Based on preliminary data from the Family Acceptance Project, new approaches that build on family strengths to increase support, reduce sexual minority youths's risk, and promote their well-being. They have found that even non-accepting families are

motivated to modify negative behaviors once they learn how specific actions, words, and behaviors affect their sexual minority youth's well-being (Ryan, 2008).

According to Ryan (2008), the most urgently needed next step is to develop interventions that are sensitive to the needs of sexual minorities to help families with different levels of understanding, coping abilities and capacities to increase support for sexual minority youths to decrease risk. A family-related approach to prevention and care may help prevent multiple negative health outcomes in homeless sexual minority youths.

Negative peers having more influence regarding negative behaviors in homeless sexual minority youths has implications for intervention. Peer-based interventions particularly regarding substance use and sexual risk are warranted. It is possible that the peers of the youths are transient so making sure program address the nature of the peer groups is important.

The Mpowerment Project, is a peer led intervention targeted at sexual minorities that addressed unprotected sex and as a result, saw an increase in condom use (Kegeles, Hays, & Coates, 1996). The three components were outreach, small groups and a publicity campaign and was based on the idea that change happens through informal communication and modeling peers within interpersonal networks (Kegeles et al., 1996). The peer-led intervention approach can be applied to the homeless sexual minority youth community regarding substance use and sexual risk behavior. A peer-led cyber social network intervention may be effective as many of the youth utilize cybercafés to communicate with their peers on the internet since they are open late and are safer when many places are closed.

Practitioners at community programs that address public health and homeless issues can acknowledge the contribution of homophobia to substance use and encourage acceptance of sexual minorities among street youths to reduce the additional stigma that they face in shelters and on the streets. The provision of services sensitive to sexual identity includes asking about sexual orientation to demonstrate that it is an acceptable topic of conversation and in order to provide services that are sensitive to the issue.

The overrepresentation of homeless sexual minority youths in this sample although not a representative sample or a prevalence study, has implications for advocating for anti-discrimination policies regarding housing. Currently, 20 states and the District of Columbia and Canada have laws prohibiting discrimination based on sexual orientation and gender identity in housing. On March 11, 2010 H.R. 4828 was introduced to prohibit housing discrimination based on sexual orientation or gender identity amending the Civil Rights Act of 1964 (http://www.thomas.gov/cgibin/bdquery/D?d111:3:./temp/~bdvAXK:@@@L&summ2=m&|/bss/111search.html|).

Future Research and Prevention

The results of the study answers some questions about homeless sexual minority youths, but many more remain. Questions related to the findings include: do the differences regarding psychosocial problems, mesosystem factors and microsystem factors between homeless sexual minority youths and their heterosexual counterparts persist into the future as adults?

Questions regarding frequency and recency of substance use are also questions for future research since the question in this study looked exclusively at lifetime substance use. The same questions regarding sexual risk can also be addressed in future studies.

Additionally, the influence of peers still has room for continued exploration. What are the additional characteristics of the peer groups outside of positive and negative influences? What is the composition of the sexual orientation of the peer groups? Where did they meet their peers, and how long have they known them? Understanding some of these interactions would help development more population appropriate interventions to change the nature of the impact of negative peer relations in homeless sexual minority youths.

Additional questions for future research in general include: Are specialty shelters working for prevention and intervention efforts regarding homeless sexual minority youths? Does it take homeless sexual minority youths longer to exit homeless than heterosexual homeless youths? What are the effects of multiple stigmatized identities, such as being a homeless racial and sexual minority? What are provider perceptions of homeless sexual minority youths? Further exploration of the role of contextual factors is also imperative to inform interventions to reduce disparities between homeless sexual minority youths and their heterosexual counterparts and the population as a whole. Also, one dimension of sexual orientation was examined, sexual identity, it is possible that same-sex attraction or same-sex sexual behavior are stronger moderators of the relationship between meosoystem factors and psychosocial problems?

In conclusion, the findings from this study extend the work of previous studies to understand the contextual factors influencing the psychosocial problems of sexual

minority youths by comparing them to heterosexual youths. Social Work with youths in general should be more inclusive of sexual minority concerns, more specifically, with homeless youths. Further understanding of the mesolevel factors and macrolevel factors contributing to disparities in psychosocial problems between homeless sexual minority youths and their heterosexual counterparts is required; and continued research will further clarify the relationships between the systems and the individual. Reduction in disparities in psychosocial problems between homeless sexual minority youths and their heterosexual counterparts would contribute to the health of society. Social Work researchers, practitioners and policymakers can serve as advocates for this vulnerable and sometimes invisible population.

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Appendix

Washington University in St. Louis

Human Research Protection Office

Barnes-Jewish Hospital
St. Louis Children's Hospital
Washington University

July 17, 2009

Maurice N. Gattis, MS, BA
Social Work (General)
Box 1196

HRPO Number: 09-0813
Title: Stigma, Discrimination, and Psychosocial Problems: A Comparison of Homeless Sexual Minority Youths and their Heterosexual Counterparts
Funding Source: Auslander Wendy, Dr.(Faculty Sponsor);Fulbright
Exempt Status Verified: 7/17/2009
Type of Revew: New (Behavioral Exempt 2)
HIPAA Compliance: Exempt

The Washington University Human Research Protection Office ("HRPO") complies with Federal regulations 45 CFR 46, 45 CFR 164, 21 CFR 50, and 21 CFR 56. Accordingly, the above-referenced project has met criteria for exemption as allowed in 45 CFR 46.101(b).

Because we have determined that the activities described in this application meet current criteria for research that is exempt from federal regulations governing human participants, your project is not subject to the requirement for continuing review or documentation of informed consent. No further action is required as long as research procedures described in this application remain the same.

You are, however, required to obtain IRB approval for any revisions or modifications to your original project description prior to implementation of those changes. You are also responsible for reporting any unanticipated events involving risk to research participants or others, and all other requirements as outlined in the WU HRPO Assurance of Commitment and Policies_ Procedures (https://hrpo.wustl.edu) (click on "policies" tab). This includes reporting any unanticipated problems involving risk to research participants or others.

If you have questions or require additional information, please contact us at (314) 633-7400 or eIRB@msnotes.wustl.edu.

Sincerely,

Philip A. Ludbrook, M.D.
Executive Chair and Associate Dean

Mitch Sommers, Ph.D.
Chair, Behavioral Minimal Risk Subcom

Auslander Wendy, Dr.

Medical Center Office: 660 South Euclid Ave., Campus Box 8089, St. Louis, MO 63110 Phone: (314) 633-7400, FAX: (314) 367-3041

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University of Toronto

Office of the Vice-President, Research
Office of Research Ethics

PROTOCOL REFERENCE #23960

June 11, 2009
Dr. Aron Shlonsky
Factor Inwentash Faculty of Social Work
246 Bloor St. West
Toronto, ON M5S 1A1

Mr. Maurice Gattis
Factor Inwentash Faculty of Social Work
246 Bloor St. West
Toronto, ON M5S 1A1

Dear Dr. Shlonsky and Mr. Gattis:

Re: Your research protocol entitled "Stigma, Discrimination and Psychosocial Problems: A Comparison of Homeless Sexual Minority Youths and their Heterosexual Counterparts"

ETHICS APPROVAL Original Approval Date: June 11, 2009
Expiry Date: June 10, 2010
Continuing Review Level: 2

We are writing to advise you that the Health Sciences Research Ethics Board has granted approval to the above-named research study, for a period of **one year**, under the REB's expedited review process. Ongoing projects must be renewed prior to the expiry date.

The following consent documents (revised May 25, 2009) have been approved for use in this study:

Recruitment Flyer
Information Sheet and Informed Consent to Participate in a Research Study

Any changes to the approved protocol or consent materials must be reviewed and approved through the amendment process prior to its implementation. Any adverse or unanticipated events should be reported to the Office of Research Ethics as soon as possible.

Please ensure that you submit an Annual Renewal Form or a Study Completion Report at least 30 days prior to the expiry date of your study.

If your research has funding attached, please contact the relevant Research Funding Officer in Research Services to ensure that your funds are released.
Best wishes for the successful completion of your project.

Yours sincerely,
Daniel Gyewu
Research Ethics Coordinator

UNIVERSITY OF TORONTO

Psychosocial Problems of Homeless Sexual Minority Youths and their Heterosexual Counterparts

Maurice Gattis, Principal Investigator

Funded by: The Canada-U.S. Fulbright Program and the International Dissertation Award from the George Warren Brown School of Social Work of Washington University

A Study Conducted by: University of Toronto &Washington University

Washington University in St.Louis

U of T/ WU ID #: |__|__|__| **ID**

EVERGREEN YONGE STREET MISSION…1 S.O.S….2 YOUTHLINK…3 **SITE**

INTERVIEW DATE: |__|__| / |__|__| / |__|__|__|__| **IMONTH IDAY IYEAR**

MONTH DAY YEAR

TIME START: |__|__|:|__|__| AM……1 PM……2
STIMEHOUR STIMEMIN

TIME END: |__|__|:|__|__| AM……1 PM……2
ETIMEHOUR ETIMEMIN

Table of Contents

Thank you for agreeing to participate in our study. We are interested in finding about young people's experiences with homelessness, family, peers, school, substance use, sexual behaviors and mental health. We consider you to be the expert on this topic and there are no right or wrong answers. No one will see your answers and your name will not be attached to this survey. Please let me know if you have any questions. I would like to start by asking you a few basic questions about your background.

Section A - DEMOGRAPHIC INFORMATION

A1. How old are you? _____ (in years) **AGE**

A2. Where were you born? **BIRTHLOC**

1. Greater Toronto Area (GTA) Toronto
2. Outside of GTA in Ontario
3. Other Provinces _____
4. Outside of Canada: _____

A3. What is the highest level of grade of school or year of college you completed?

1. 6th grade **EDUCATION**
2. 7th grade
3. 8th grade
4. 9th grade
5. 10th grade
6. 11th grade
7. 12th grade
8. First year college
9. Second year college
10. Third year college
11. Fourth year college
12. Other

A4. Are you currently in school? ____ If yes, what kind?_____ **SCHOOL**

A5. What is your income? ____ per month **INCOME**

A6. What is your employment status? **WORK**

1. Work full time
2. Work part time
3. Unemployed

A7. How old were you when you left home and were on your own for the first time?____ (years) **AGEOWN**

A8. Have you ever spent one or more nights on the street in an abandoned building or another place out in the open? **OPEN**

a. yes
b. no

A9. Please select as many of the following as apply for why you no longer live at home with parents: **OWN**

1. problems in school
2. they are emotionally abusive to me
3. they are physically abusive to me
4. they are sexually abusive to me
5. they do not approve of my drug and/or alcohol abuse
6. they are not alive
7. I ran away from home
8. they threw me out
9. they do not approve of my sexual orientation
10. problems with the police
11. problems with drugs
12. other _____

A10. How many times have you been homeless?_____ **EPISODES**

A11. How long have you been homeless this time?_____ **DURATION**

A12. What is your gender? **GENDER**

1. Male
2. Female
3. MTF
4. FTM
5. Two-spirit
6. intersex
7. Unsure
8. Questioning
9. Genderqueer

A13. What is your race? **RACE**

1. White
2. Black
3. Aboriginal (including First Nations or Metis)
4. Asian
5. Other (please specify): _____

A14. What is your current living situation? **LIVSIT**

1. shelter
2. friend's house
3. relative's house
4. the streets
5. transitional living program
6. other_____

A15. Who is the woman or women who raised you most of your life? Is she your (READ LIST)? **WOMAN**

1. Biological mother
2. Step mother
3. Foster mother
4. Adoptive mother
5. Grandmother/aunt/sister/cousin
6. Mother's partner
7. Another woman (Who?) _____
8. No woman

A16. Who is the man or men who raised you most of your life? Is he your (READ LIST)? **MAN**

1. Biological father
2. Step father
3. Foster father
4. Adoptive father
5. Grandfather/uncle/brother/cousin
6. Father's partner
7. Another man (Who?) _____
8. No man

A17. In the past year, have you lived in any of these settings for at least one week? **WEEK**

1. Biological parent
2. Foster parent
3. Relative's home
4. Group home or residential treatment facility
5. Mental health facility
6. Correctional facility
7. Legal adoptive family
8. On the street
9. Any where else _____

A19. How long has it been since you last talked to your family?_____ **TALK**

A20. Where did you meet your friends? **FRIENDS**

1. school
2. shelter
3. streets
4. childhood
5. other
6. I don't have any friends

SEXUAL ORIENTATION

A21. Have you ever had a romantic attraction to a female? **AFEMALE**

a. No
b. Yes

A22. Have you ever had a romantic attraction to a male? **AMALE**

1. No
2. Yes

A23. Please choose the description that best fits how you think about yourself.

a. 100% heterosexual (straight) **IDENTITY**
b. Mostly heterosexual (straight), but somewhat attracted to people of my own sex
c. Bisexual – attracted to men and women equally
d. Mostly homosexual (gay or lesbian), but somewhat attracted to people of the opposite sex
e. 100% homosexual (gay or lesbian)
f. Not sexually attracted to either males or females
g. MSM
h. WSM

9. Pansexual

[if above question = 1 or 2 skip the next question]

Rew et al., 2005; Whitbeck et al., 2004a; Add Health

SEXUAL ORIENTATION DISCLOSURE

A24. Which of your parents knows… **PARENTS**
[if above question = 3, add:]…**that you are bisexual?**
[if above question =4 or 5, add:]…**about your homosexuality?**

1. Neither parent knows
2. Only mother knows
3. Only father knows
4. Both parents know
5. Refused
6. Don't know
7. Legitimate Skip
8. Other_____

[if above question = 2, 3 or 4,] ask…

A25. *When did your _____ find out that you are _____? **FINDOUT**
[if above question = 2, add:] **mother**
[if above question = 3, add:] **father**
[if above question = 4, add:] **parents**
[if above question =8, add:] insert scenario described in other

[if 2 questions above = 3:] add **bisexual**
[if 2 questions above = 4 OR 5:] add **homosexual**

1. Before leaving their house
2. After leaving their house
3. Don't know
4. Refused

Rew et al., 2005; Whitbeck et al., 2004a; Add Health; Bridges study

Section B - SCHOOL EXPERIENCES

Next, I would like to ask questions about your experiences in school. If you are not currently in school, please think about the most recent year you were in school when answering the questions. Please use card 1 for your responses or I can read the answer choices.

B1. I feel like a real part of my school. **SCHOOL1**

1 2 3 4 5

Not at all true Completely true

B2. People at my school notice when I'm good at something. **SCHOOL2**

1 2 3 4 5

Not at all true Completely true

B3. It is hard for people like me to be accepted at my school. **SCHOOL3**

1 2 3 4 5

Not at all true Completely true

B4. Other students in my school take my opinions seriously. **SCHOOL4**

1 2 3 4 5

Not at all true Completely true

B5. Most teachers at my school are interested in me. **SCHOOL5**

1 2 3 4 5

Not at all true Completely true

B6. Sometimes I feel as if I don't belong at my school. **SCHOOL6**

1 2 3 4 5

Not at all true Completely true

B7. There's at least one teacher or another adult in my school I can talk to if I have a problem. **SCHOOL7**

1 2 3 4 5

Not at all true Completely true

B8. People at my school are friendly to me. **SCHOOL8**

1 2 3 4 5

Not at all true Completely true

B9. Teachers at my school are not interested in people like me. **SCHOOL9**

1 2 3 4 5

Not at all true Completely true

Goodenow, 1993

B10. I am included in lots of activities at my school. **SCHOOL10**
1 2 3 4 5
Not at all true Completely true

B11. I am treated with as much respect at my school as other students. **SCHOOL11**
1 2 3 4 5
Not at all true Completely true

B12. I feel very different from most other students at my school. **SCHOOL12**
1 2 3 4 5
Not at all true Completely true

B13. I can really be myself at my school. **SCHOOL13**
1 2 3 4 5
Not at all true Completely true

B14. The teachers at my school respect me. **SCHOOL14**
1 2 3 4 5
Not at all true Completely true

B15. People at my school know I can do good work. **SCHOOL15**
1 2 3 4 5
Not at all true Completely true

B16. I wish I were in a different school. **SCHOOL16**
1 2 3 4 5
Not at all true Completely true

B17. I feel proud of belonging to my school. **SCHOOL17**
1 2 3 4 5
Not at all true Completely true

B18. Other students at my school like me the way I am. **SCHOOL18**
1 2 3 4 5
Not at all true Completely true

if sexual minority then ask
B19. Were you out as (gay, lesbian, bisexual, transgendered) in school? **SCHOOL19**
a. Yes, continue to B20
b. No, skip to section C

B20. When did you come out at school?_____ **SCHOOL20**

B21. Who did you come out to at school?_____ **SCHOOL21**

B22. Were you outed? **SCHOOL22**

1.Yes
2. No

B23. Did you experience homophobia at school? **SCHOOL23**

1. Yes
2. No

B24. Did coming out at school effect your relationship with peers? **SCHOOL24**

1. Yes, positively
2. Yes, negatively
3. No

B25. Did coming out effect school academic performance? **SCHOOL25**

1. Yes, positively
2. Yes, negatively
3. No

B26. Did coming out effect school engagement? **SCHOOL26**

1. Yes, positively
2. Yes, negatively
3. No

Section C - PEER RELATIONSHIPS

Now I am going to ask about friends who are about your age.

C1. How many of your friends who are about your age are <u>not</u> in school and <u>don't</u> have a job? (READ LIST) **PEER1**

0…….None
1…….A Few
2…….About half
3…….Most
4…….All

C2. How many of your friends who are about your age drink alcohol at least once a week? **PEER2**

0…….None
1…….A Few
2…….About half
3…….Most
4…….All

C3. How many of your friends who are about your age use drugs or marijuana? **PEER3**

0…….None
1…….A Few
2…….About half
3…….Most
4…….All

How many of your friends who are about your age:

C4. Have been in trouble with the police or juvenile officer? **PEER4**

0…….None
1…….A Few
2…….About half
3…….Most
4…….All

Stiffman, A.R., Dore, P., Cunningham, R.M., & Earls, F. (1995). Person and Environment in HIV risk behavior change between adolescence and young adulthood. <u>Health Education Quarterly, 22</u>(2), 233-248.
Baker, F., Jodrey, D., Intagliata, J., & Straus, H. (1993). Community support services and functioning of the seriously mentally ill. <u>Community Mental Health Journal, 29</u> (4), 321-331.

C5. Have had babies or fathered children? **PEER5**

0…….None
1…….A Few
2…….About half
3…….Most
4…….All

C6. Have run away from where they were living? **PEER6**

0…….None
1…….A Few
2…….About half
3…….Most
4…….All

How many of your friends who are about your age:

C7. Have ever had sexual intercourse? **PEER7**

0…….None
1…….A Few
2…….About half
3…….Most
4…….All

C8. Have had failing grades in school? **PEER8**

0…….None
1…….A Few
2…….About half
3…….Most
4…….All

Stiffman, A.R., Dore, P., Cunningham, R.M., & Earls, F. (1995). Person and Environment in HIV risk behavior change between adolescence and young adulthood. Health Education Quarterly, 22(2), 233-248.
Baker, F., Jodrey, D., Intagliata, J., & Straus, H. (1993). Community support services and functioning of the seriously mentally ill. Community Mental Health Journal, 29 (4), 321-331.

C9. Use condoms when having sex? **PEER9**

0…….None
1…….A Few
2…….About half
3…….Most
4…….All

C10. Have physical fights with other students in school? **PEER10**

0…….None
1…….A Few
2…….About half
3…….Most
4…….All

How many of your friends who are about your age:

C11. Go to college, or plan to go to college? **PEER11**

0…….None
1…….A Few
2…….About half
3…….Most
4…….All

C12. Save money? **PEER12**

0…….None
1…….A Few
2…….About half
3…….Most
4…….All

C13. Have a job? **PEER13**

0…….None
1…….A Few
2…….About half
3…….Most
4…….All

Stiffman, A.R., Dore, P., Cunningham, R.M., & Earls, F. (1995). Person and Environment in HIV risk behavior change between adolescence and young adulthood. Health Education Quarterly, 22(2), 233-248.
Baker, F., Jodrey, D., Intagliata, J., & Straus, H. (1993). Community support services and functioning of the seriously mentally ill. Community Mental Health Journal, 29 (4), 321-331.

C14. Are most of your friends who are about your age? **PEER14**

0….straight
1….both gay, lesbian, bisexual and straight
2….gay, lesbian, and bisexual

Section D – STIGMA

In the next section, I will ask you questions regarding your experience as a homeless individual. Please tell me how much you agree or disagree with the following statements. Please use card 2 for your responses or I can read the responses to you.

D1. I have been hurt by how people have reacted to me being homeless: **STIGMA1**

Strongly agree	Agree	Disagree	Strongly Disagree
1	2	3	4

D2. I have been insulted by strangers because I am homeless: **STIGMA2**

Strongly agree	Agree	Disagree	Strongly Disagree
1	2	3	4

D3. I have been physically assaulted because I am homeless: **STIGMA3**

Strongly agree	Agree	Disagree	Strongly Disagree
1	2	3	4

D4. People seem afraid of me because I am homeless: **STIGMA4**

Strongly agree	Agree	Disagree	Strongly Disagree
1	2	3	4

D5. Some people act as though it is my fault that I am homeless: **STIGMA5**

Strongly agree	Agree	Disagree	Strongly Disagree
1	2	3	4

D6. I feel that I am not as good as others because I am homeless: **STIGMA6**

Strongly agree	Agree	Disagree	Strongly Disagree
1	2	3	4

D7. I feel guilty and ashamed because I am homeless: **STIGMA7**

Strongly agree	Agree	Disagree	Strongly Disagree
1	2	3	4

D8. Most people think that homeless people are lazy and disgusting: **STIGMA8**

Strongly agree	Agree	Disagree	Strongly Disagree
1	2	3	4

D9. Homeless can't get jobs because they are homeless: **STIGMA9**

Strongly agree	Agree	Disagree	Strongly Disagree
1	2	3	4

D10. Homeless people are harassed by the police because they are homeless: **STIGMA10**

Strongly agree	Agree	Disagree	Strongly Disagree
1	2	3	4

D11. Knowing that you are homeless, people look for things wrong about you:

Strongly agree	Agree	Disagree	Strongly Disagree **STIGMA11**
1	2	3	4

D12. Homeless people are treated like outcasts: **STIGMA12**

Strongly agree	Agree	Disagree	Strongly Disagree
1	2	3	4

D13. I have to fight against the opinions and values of society: **STIGMA13**

Strongly agree	Agree	Disagree	Strongly Disagree
1	2	3	4

Kidd, 2007

Section E - DISCRIMINATION

Now I'd like to know how often you have experienced discrimination, been prevented from doing something, or been harassed or made to feel inferior in any of the following situations because of your sexual orientation. During the last 12 months how often did you experience discrimination… Please use card 3 or I can read the answer choices.

E1. Ability to obtain health care **DISCRIM1**

0 = "never," 1 = "almost never," 2 = "sometimes," 3 = "fairly often," 4 = "very often"

E2. In how you were treated when you got care **DISCRIM2**

0 = "never," 1= "almost never," 2= "sometimes," 3 = "fairly often," 4 = "very often"

E3. In public, like on the street, in stores or in restaurants **DISCRIM3**

0 = "never," 1 = "almost never," 2= "sometimes," 3 = "fairly often," 4 = "very often"

E4. Obtaining a job, on the job, or getting admitted to school or training program, or in the courts or by the police, or obtaining housing **DISCRIM4**

0 = "never," 1 = "almost never," 2 = "sometimes," 3 = "fairly often," 4 = "very often"

E5. Called homophobic name(s) **DISCRIM5**

0 = "never," 1 = "almost never," 2 = "sometimes," 3 = "fairly often," 4 = "very often"

E6. Made fun of, picked on, pushed, shoved, hit or threatened with harm **DISCRIM6**

0 = "never," 1 = "almost never," 2 = "sometimes," 3 = "fairly often," 4 = "very often"

E7. (In public settings/Access to public facilities) like bathrooms, restaurants, elevators or public transportation **DISCRIM7**

0 = "never," 1 = "almost never," 2 = "sometimes," 3 = "fairly often," 4 = "very often"

Before 12 months ago, about how often did you experience discrimination…

E8. Ability to obtain health care/health insurance **DISCRIM8**

0 = "never," 1 = "almost never," 2 = "sometimes," 3 = fairly often," 4 = "very often"

E9. In how you were treated when you got care **DISCRIM9**

0 = "never," 1 = "almost never," 2 = "sometimes," 3 = fairly often," 4 = "very often"

E10. In public, like on the street, in stores or restaurants **DISCRIM10**

0 = "never," 1 = "almost never," 2 = "sometimes," 3 = "fairly often," 4 = "very often"

E11. Obtaining a job, on the job, or getting admitted to school or training program, or in the courts or by the police or obtaining housing **DISCRIM11**

0 = "never," 1 = "almost never," 2 = "sometimes," 3 = "fairly often," 4 = "very often"

E12. Called homophobic name (s) **DISCRIM12**

0 = "never," 1 = "almost never," 2 = "sometimes," 3 = "fairly often," 4 = "very often"

E13. Made fun of, pick on, pushed, shoved, hit or threatened with harm **DISCRIM13**

0 = "never," 1 = "almost never," 2 = "sometimes," 3 = "fairly often," 4 = "very often"

E14. (In public settings/Access to public facilities) like bathrooms, restaurants, elevators or public transportation **DISCRIM14**

0 = "never," 1 = "almost never," 2 = "sometimes," 3 = "fairly often," 4 = "very often"

When you are treated unfairly because of your sexual orientation:

E15. Do you usually accept it as a fact or do you try to do something about it? **DISCRIM15**

E16. Do you usually talk to other people about it or do you keep it to yourself? **DISCRIM16**

(Items collectively scored as engaged "do something/talk to others" = 2; moderate "do something/keep to self," = 1; and passive "accept it/keep to self," = 0)

Ruan et al., 2008

Section F - FAMILY

The next questions will ask information about your family that you spent most time with growing up. This includes mother, father, step-father, step mother, or same-sex partner of your mother or father and siblings. Now, please tell me how much you agree or disagree with the following statements about your family of origin. Please use card 4 or I can read the answer choices.

F1. Family members are involved in each others lives. **FAMILY1**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

F2. Our family tries new ways of dealing with problems. **FAMILY2**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

F3. We get along better with people outside our family than inside. **FAMILY3**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

F4. We spend too much time together. **FAMILY4**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

F5. There are strict consequences for breaking the rules in our family. **FAMILY5**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

F6. We never seem to get organized in our family. **FAMILY6**

1	2	3	4	5
Strongly Disagree	Gene rally Disagree	Undecided	Generally Agree	Strongly Agree

F7. Family members feel very close to each other. **FAMILY7**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

FACES IV: Olson, Gorall, & Tiesel, 2006

F8. Parents equally share leadership in our family. **FAMILY8**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

F9. Family members seem to avoid contact with each other when at home. **FAMILY9**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

F10. Family members feel pressured to spend most free time together. **FAMILY10**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

F11. There are clear consequences when a family member does something wrong. **FAMILY11**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

F12. It is hard to know who the leader is in our family. **FAMILY12**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

F13. Family members are supportive of each other during difficult times. **FAMILY13**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

F14. Discipline is fair in our family. **FAMILY14**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

F15. Family members know very little about the friends of other family members. **FAMILY15**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

FACES IV: Olson, Gorall, & Tiesel, 2006

F16. Family members are too dependent on each other. **FAMILY16**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

F17. Our family has a rule for almost every possible situation. **FAMILY17**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

F18. Things do not get done in our family. **FAMILY18**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

F19. Family members consult other family members on important decisions. **FAMILY19**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

F20. My family is able to adjust to change when necessary. **FAMILY20**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

F21. Family members are on their own when there is a problem to be solved. **FAMILY21**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

F22. Family members have little need for friends outside the family. **FAMILY22**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

F23. Our family is highly organized. **FAMILY23**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

FACES IV: Olson, Gorall, & Tiesel, 2006

F24. It is unclear who is responsible for things (chores, activities) in our family. **FAMILY24**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

F25. Family members like to spend some of their free time with each other. **FAMILY25**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

F26. We shift household responsibilities from person to person. **FAMILY26**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

F27. Our family seldom does things together. **FAMILY27**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

F28. We feel too connected to each other. **FAMILY28**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

F29. Our family becomes frustrated when there is a change in our plans or routines. **FAMILY29**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

F30. There is no leadership in our family. **FAMILY30**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

F31. Although family members have individual interests, they still participate in family activities. **FAMILY31**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

---

FACES IV: Olson, Gorall, & Tiesel, 2006

F32. We have clear rules and roles in our family. **FAMILY32**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

F33. Family members seldom depend on each other. **FAMILY33**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

F34. We resent family members doing things outside the family. **FAMILY34**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

F35. It is important to follow rules in our family. **FAMILY35**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

F36. Our family has a hard time keeping track of who does various household tasks. **FAMILY36**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

F37. Our family has a good balance of separateness and closeness. **FAMILY37**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

F38. When problems arise, we compromise. **FAMILY38**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

F39. Family members mainly operate independently. **FAMILY39**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

FACES IV: Olson, Gorall, & Tiesel, 2006

F40. Family members feel guilty if they want to spend time away from the family. **FAMILY40**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

F41. Once a decision is made, it is very difficult to modify that decision. **FAMILY41**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

F42. Our family feels hectic and disorganized. **FAMILY42**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

F43. Family members are dissatisfied with how they communicate with each other. **FAMILY43**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

F44. Family members are very good listeners. **FAMILY44**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

F45. Family members express affection for each other. **FAMILY45**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

F46. Family members are able to ask each other for what they want. **FAMILY46**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

F47. Family members can calmly discuss problems with each other. **FAMILY47**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

FACES IV: Olson, Gorall, & Tiesel, 2006

F48. Family members discuss their ideas and beliefs with each other. **FAMILY48**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

F49. When family members ask questions of each other, they get honest answers. **FAMILY49**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

F50. Family members try to understand each other's feelings. **FAMILY50**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

F51. When angry, family members seldom say negative things about each other. **FAMILY51**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

F52. Family members express their true feelings to each other. **FAMILY52**

1	2	3	4	5
Strongly Disagree	Generally Disagree	Undecided	Generally Agree	Strongly Agree

FACES IV: Olson, Gorall, & Tiesel, 2006

Section G – Substance Use

ALCOHOL

The next few questions are about <u>drinks</u> of alcoholic beverages. By a "drink" we mean a can or bottle of beer, a glass of wine or a wine cooler, a shot of liquor, or a mixed drink with liquor in it.

G1. Have you ever, even once, had a drink of any type of alcoholic beverage? ***Do not include sips from another person's drink.*** **SU1**

Yes, I have had a drink of an alcoholic beverage……..1

No, I have never had a drink of any alcoholic beverage in my life……..2

G2. How old were you the first time you had a drink of any alcoholic beverage? ***Do not include sips from another person's drink.*** **SU2**

The first time I drank an alcoholic beverage, I was…….____ years old

I have never drunk an alcoholic beverage in my life…….91

G3. Think ab^{out} the last time you drank any type of alcoholic beverage. How long has it been since you last drank an alcoholic beverage? **SU3**

Within the past 30 days……..…..1

More than 30 days ago but within the past 12 months..…..…….….2

More than 12 months ago but within the past 3 years…...……...3

More than 3 years ago……...…….....4

I have never drunk and alcoholic beverage in my life……91

G4. Now think about the past 12 months, from your 12-month reference date through today. On how many days in the past 12 months did you drink an alcoholic beverage? **SU4**

More than 300 days (every day or almost every day……..….1

At least 201 but not more than 300 days (5 to 6 days a week)…..……..2

At least 10 1 but not more than 200 days (3 to 4 days a week)…..……..3

At least 51 but not more than 100 days (1 to 2 days a week)…..……....4

At least 25 but not more than 50 days (3 to 4 days a month)…..……....5

At least 12 but not more than 24 days (1 to 2 days a month)…..……..…6

At least 6 but not more than 11 days (less than one day a month).....……..…7

At least 3 but not more than 5 days in the past 12 months……....……..8

At least 1 but not more than 2 days in the past 12 months……....……..…9

IF NONE, MARK ONE BOX FOR BEST ANSWER

I have drunk alcoholic beverages but not during the past twelve months…….93

I have never drunk an alcoholic beverage in my life……...…91

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G5. During the past 12 months, when you drank alcoholic beverages, on how many days did you get very high or drunk? **SU5**

More than 300 days (every day or almost every day)……1

At least 201 but not more than 300 days (5 to 6 days a week)……..……2

At least 101 but not more than 200 days (3 to 4 days a week)……..……3

At least 51 but not more than 100 days (1 to 2 days a week)……..……..4

At least 25 but not more than 50 days (3 to 4 days a month)……..……..5

At least 12 but not more than 24 days (1 to 2 days a month)……..……...6

At least 6 but not more than 11 days (less than one day a month)…..……..7

At least 3 but not more than 5 days in the past 12 months……8

At least 1 but not more than 2 days in the past 12 months……....9

IF NONE, MARK ONE BOX FOR BEST ANSWER

I drank an alcoholic beverage in the past 12 months but I did not get very high or drunk…….…….90

I have drunk alcoholic beverages but not during the past 12 months…...……..93

I have never drunk an alcoholic beverage in my life…..……91

THE NEXT THREE QUESTIONS REFER TO THE PAST 30 DAYS ONLY

G6. Think specifically about the past 30 days-- that is, from your 30-day reference date up to and including today. During the past 30 days, on how many days did you drink one ore more drinks of alcoholic beverages? **SU6**

Number of days I had a drink of an alcoholic beverage…….._____

IF NONE, MARK ONE BOX FOR BEST ANSWER

I have drunk alcoholic beverages but not during the past 30 days…..……....93

I have never drunk an alcoholic beverage in my life……...…….91

G7. On the days that you drank during the past 30 days, how many drinks did you usually have? ***Count as a drink a can or bottle of beer; a wine cooler or glass of wine, champagne, or sherry; a shot of liquor or a mixed drink or cocktail.*** **SU7**

On the days I had an alcoholic beverage, I usually had……...…____drinks per day

IF NONE, MARK ONE BOX FOR BEST ANSWER

I have drunk alcoholic beverages but not during the past 30 days…...…….....93

I have never drunk an alcoholic beverage in my life……...…….91

G8. During the past 30 days, on how many days did you have 5 or more drinks on the same occasion? ***By "occasion," we mean at the same time or within a couple of hours of each other.*** **SU8**

Number of days I drank 5 or more drinks of an alcoholic beverage……._____

IF NONE, MARK ONE BOX FOR BEST ANSWER

On the days I drank during the past 30 days, I never had 5 or more drinks……..90

I have drunk alcoholic beverages but not during the past 30 days…….....93

I have never drunk an alcoholic beverage in my life……...…..91

MARIJUANA

The questions in this section are about marijuana and hashish. Marijuana is also called pot or grass. Marijuana is usually smoked-- either in cigarettes, called joints, or in a pipe. It is sometimes cooked in food. Hashish is a form of marijuana that is also called "hash." It is usually smoked in a pipe. Another form of hashish is hash oil.

G9. Have you ever, even once, used marijuana or hashish? **SU9**

Yes, I have used marijuana or hashish……1

No, I have never used marijuana or hashish in my life……...2

G10. How old were you the first time you used marijuana or hashish? **SU10**

The first time I used marijuana or hashish, I was..……____years old

I have never used marijuana or hashish in my life…...…….91

G11. Think about the entire time since you first used marijuana or hashish. Altogether, on how many days in your life have you used marijuana or hashish? **SU11**

More than 300 days……..……..….1

.

At least 101 but not more than 300 days……...…….2

At least 12 but not more than 100 days……...3

At least 3 but not more than 11 days…….…..……4

At least 1 but not more than 2 days…….5

I have never used marijuana or hashish in my life……..……..91

G12. How long has it been since you last used marijuana or hashish? **SU12**

Within the past 30 days……1

More than 30 days ago but within the past 12 months……...…….2

More than 12 days ago but within the past 3 years……..……...3

More than 3 years ago…..……...4

I have never used marijuana or hashish in my life…….……..…….91

G13. Now think about the past 12 months, from your 12-month reference date through today. On how many days in the past 12 months did you use marijuana or hashish? **SU13**

More than 300 days (every day or almost every day)……1

At least 201 but not more than 300 days (5 to 6 days a week)……..……2

At least 101 but not more than 200 days (3 to 4 days a week)……..……3

At least 51 but not more than 100 days (1 to 2 days a week)……..……..4

At least 25 but not more than 50 days (3 to 4 days a month)……..……..5

At least 12 but not more than 24 days (1 to 2 days a month)……..……..6

At least 6 but not more than 11 days (less than one day a month)…….....7

At least 3 but not more than 5 days in the past 12 months……..……..8

At least 1 but not more than 2 days in the past 12 months……..……..9

IF NONE, MARK <u>ONE</u> BOX FOR BEST ANSWER

I have used marijuana or hashish but not during the past 12 months……..93

I have never used marijuana or hashish in my life……...……91

G14. Think specifically about the past 30 days-- that is, from your 30-day reference date up to and including today. During the past 30 days, on how many days did you use marijuana or hashish? **SU14**

Number of days I used marijuana or hashish…….……_____

IF NONE, MARK <u>ONE</u> BOX FOR BEST ANSWER

I have used marijuana or hashish but not during the past 30 days……93

I have never used marijuana or hashish in my life……91

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COCAINE

The questions in this section are about cocaine, including all the different forms of cocaine such as powder, "crack," free base and coca paste.

G15. Have you ever, even once, used any form of cocaine? **SU15**

Yes, I have used some form of cocaine……1

No, I have never used any form of cocaine in my life……...2

G16. How old were you the first time you used cocaine, in any form? **SU16**

The first time I used some form of cocaine, I was……..____years old

I have never used any form of cocaine in my life……91

G17. Think about the entire time since you first used cocaine. Altogether, on how many days in your life have you used cocaine? **SU17**

More than 300 days……1

At least 101 but not more than 300 days……..…….2

At least 12 but not more than 100 days……..……...3

At least 3 but not more than 11 days…….……4

At least 1 but not more than 2 days……5

I have never used any form of cocaine in my life……..……..91

G18. How long has it been since you last used any form of cocaine? **SU18**

Within the past 30 days……..1

More than 30 days ago but within the past 12 months……...2

More than 12 months ago but within the past 3 years……3

More than 3 years ago……4

I have never used any form of cocaine in my life…….91

G19. Now think about the past 12 months. On how many days in the past 12 months did you use cocaine? **SU19**

More than 300 days (every day or almost every day)……...1

At least 201 but not more than 300 days (5 to 6 days a week)…….……2

At least 101 but not more than 200 days (3 to 4 days a week)…….……3

At least 51 but not more than 100 days (1 to 2 days a week)…….……..4

At least 25 but not more than 50 days (3 to 4 days a month)…….……..5

At least 12 but not more than 24 days (1 to 2 days a month)…….……..6

At least 6 but not more than 11 days (less than one day a month)…….……..7

At least 3 but not more than 5 days in the past 12 months…….……..8

At least 1 but not more than 2 days in the past 12 months…….……..9

IF NONE, MARK <u>ONE</u> BOX FOR BEST ANSWER

I have used cocaine but not during the past 12 months…….93

I have never used any form of cocaine in my life…….…….91

G20. Think specifically about the past 30 days. During the past 30 days, on how many days did you use cocaine? **SU20**

Number of days I used some form of cocaine……...……____

IF NONE, MARK <u>ONE</u> BOX FOR BEST ANSWER

I have used cocaine but not during the past 30 days……..93

I have never used any form of cocaine in my life……..……91

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CRACK COCAINE

The next 6 questions refer only to crack cocaine (cocaine in rock or chunk form) and not the other forms of cocaine.

G21. Have you ever, even once, used crack? **SU21**

Yes, I have used crack…..……...…….1

No, I have never used crack in my life……...……...2

G22. How old were you the first time you used crack? **SU22**

The first time I used crack, I was…..……..____years old

I have never used crack in my life…….……91

G23. Think about the entire time since you first used crack. Altogether, on how many days in your life have you used crack? **SU23**

More than 300 days……...1

At least 101 but not more than 300 days……...……2

At least 12 but not more than 100 days……...……..3

At least 3 but not more than 11 days……...……..4

At least 1 but not more than 2 days……...……5

I have never used "crack" in my life…….……..91

G24. How long has it been since you last used crack? **SU24**

Within the past 30 days……..1

More than 30 days ago but within the past 12 months……...2

More than 12 months ago but within the past 3 years……3

More than 3 years ago……...……..4

I have never used "crack" in my life…….91

G25. Now think about the past 12 months, from your 12-month reference date through today. On how many days in the past 12 months did you use crack? **SU25**

More than 300 days (every day or almost every day)…….....1

At least 201 but not more than 300 days (5 to 6 days a week)……2

At least 101 but not more than 200 days (3 to 4 days a week)……3

At least 51 but not more than 100 days (1 to 2 days a week)……..4

At least 25 but not more than 50 days (3 to 4 days a month)……..5

At least 12 but not more than 24 days (1 to 2 days a month)……..6

At least 6 but not more than 11 days (less than one day a month)……..7

At least 3 but not more than 5 days in the past 12 months……..8

At least 1 but not more than 2 days in the past 12 months……..9

IF NONE, MARK ONE BOX FOR BEST ANSWER

I have used crack but not during the past 12 months…….……...…93

I have never used crack in my life…….……...…….91

G26. Think specifically about the past 30 days -- that is, from your 30-day reference day up to and including today. During the past 30 days, on how many days did you use crack? **SU26**

Number of days I used crack..…….…….……____

IF NONE, MARK ONE BOX FOR BEST ANSWER

I have used crack but not during the past 30 days…....……..93

I have never used crack in my life…...……...……....……..91

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HEROIN

G27. Have you <u>ever</u>, even once, used any heroin? **SU27**

Yes, I have used heroin……..1

No, I have never used heroin in my life…….……...…2

G28. How old were you the first time you used heroin, in any form? **SU28**

The first time I used heroin, I was……..……..____years old

I have never used heroin in my life…….…….91

G29. Think about the entire time since you first used heroin. Altogether, on how many days in your life have you used heroin? **SU29**

More than 300 days…… ……1

At least 101 but not more than 300 days……2

At least 12 but not more than 100 days……..3

At least 3 but not more than 11 days……..4

At least 1 but not more than 2 days……...…….5

I have never used heroin in my life……...…….……..91

G30. How long has it been since you last used heroin? **SU30**

Within the past 30 days……..1

More than 30 days ago but within the past 12 months……...2

More than 12 months ago but within the past 3 years……3

More than 3 years ago……..…4

I have never used heroin in my life……..……..91

G31. Now think about the past 12 months. On how many days in the past 12 months did you use heroin? **SU31**

More than 300 days (every day or almost every day)…….……1

At least 201 but not more than 300 days (5 to 6 days a week)……..……2

At least 101 but not more than 200 days (3 to 4 days a week)……..……3

At least 51 but not more than 100 days (1 to 2 days a week)……..……..4

At least 25 but not more than 50 days (3 to 4 days a month)……..……..5

At least 12 but not more than 24 days (1 to 2 days a month)……..……..6

At least 6 but not more than 11 days (less than one day a month)…….....7

At least 3 but not more than 5 days in the past 12 months……..8

At least 1 but not more than 2 days in the past 12 months……..9

IF NONE, MARK <u>ONE</u> BOX FOR BEST ANSWER

I have used heroin but not during the past 12 months…..……..……93

I have never used heroin in my life…….……..…….91

G32. Think specifically about the past 30 days. During the past 30 days, on how many days did you use heroin? **SU32**

Number of days I used heroin……..…….……____

IF NONE, MARK <u>ONE</u> BOX FOR BEST ANSWER

I have used heroin but not during the past 30 days……..……..93

I have never used heroin in my life……..…….…….....91

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HALLUCINOGENS

G33. As I read the following list of hallucinogens, please tell me if you have ever used that hallucinogen, even once. **SU33**

	Ever use? YES	NO
a. LSD ("acid")…….…….....**SU33a**	**1**	**2**
b. PCP ("angel dust," phencyclidine)…….....**SU33b**	**1**	**2**
c. Peyote…….……**SU33c**	**1**	**2**
d. Mescaline……**SU33d**	**1**	**2**
e. Psilocybin (mushrooms)……**SU33e**	**1**	**2**
f. "Ecstacy" (MDMA)……...……**SU33f**	**1**	**2**
g. Have you ever used a hallucinogens name you don't know?.....**SU33g**	**1**	**2**
h. Have you ever used any other hallucinogens besides the ones listed above?.....**SU33h**	**1**	**2**

PLEASE PRINT NAME(S) OF OTHER HALLUCINOGENS BELOW **:**

_____

_____

G34. How old were you the first time you used LSD, PCP, or any other hallucinogen? **SU34**

The first time I used a hallucinogen, I was……..____years old

I have never used a hallucinogen in my life.……...…….91

G35. Think about the entire time since you first used LSD, PCP or any other hallucinogen. Altogether, on how many days in your life have you used LSD, PCP, or any other hallucinogen? **SU35**

More than 300 days……...……...…1

At least 101 but not more than 300 days…..……2

At least 12 but not more than 100 days…..……..3

At least 3 but not more than 11 days……..……..4

At least 1 but not more than 2 days…….……5

I have never used a hallucinogen in my life…..…...……..91

G36. How long has it been since you last used LSD, PCP, or any other hallucinogen? **SU36**

Within the past 30 days……..1

More than 30 days ago but within the past 12 months……...2

More than 12 months ago but within the past 3 years…...…….3

More than 3 years ago……..……..4

I have never used a hallucinogen in my life.……..…….....91

G37. Now think about the past 12 months, from your 12-month reference date through today. On how many days in the past 12 months did you use LSD, PCP, or any other hallucinogen? **SU37**

More than 300 days (every day or almost every day)……..……1

At least 201 but not more than 300 days (5 to 6 days a week)……2

At least 101 but not more than 200 days (3 to 4 days a week)……3

At least 51 but not more than 100 days (1 to 2 days a week)……..4

At least 25 but not more than 5 0 days (3 to 4 days a month)……..5

At least 12 but not more than 24 days (1 to 2 days a month)……..6

At least 6 but not more than 11 days (less than one day a month)……..7

At least 3 but not more than 5 days in the past 12 months……..8

At least 1 but not more than 2 days in the past 12 months……..9

IF NONE, MARK ONE BOX FOR BEST ANSWER

I have used an hallucinogen but not during the past 12 months…….....…93

I have never used any hallucinogen in my life…….……...…….91

G38. Think specifically about the past 30 days -- that is, from your 30-day reference day up to and including today. During the past 30 days, on how many days did you use LSD, PCP, or and other hallucinogen? **SU38**

Number of days I used LSD, PCP, or any other hallucinogen..……____

IF NONE, MARK ONE BOX FOR BEST ANSWER

I have used an hallucinogen but not during the past 30 days……..……..93

I have never used any hallucinogen in my life……...……..91

G39. Now think only about LSD. How long has it been since you last used LSD?

SU39

Within the past 30 days……..……1

More than 30 days ago but within the past 12 months……..……..2

More than 12 months ago but within the past 3 years…….……3

More than 3 years ago…….……4

I have never used LSD in my life……..…….....91

G40. Now think only about PCP. How long has it been since you last used PCP?

SU40

Within the past 30 days……..……..…1

More than 30 days ago but with in the past 12 months…….……...2

More than 12 months ago but within the past 3 years…….……...…….3

More than 3 years ago……..……...…….…4

I have never used PCP in my life…….……..…….....91

INHALANTS

G41. As I read the following list of inhalants, please tell me if you have ever used that kind of inhalant, even once, for kicks or to get high. **SU41**

	Ever used for Kicks or to get high? YES	NO
a. Amyl nitrate, "poppers," locker room odorizers, or "rush" **SU41a**	1	2
b. Correction fluid, degreaser, or cleaning fluid **SU41b**	1	2
c. Gasoline or lighter fluid **SU41c**	1	2
d. Glue, shoe polish, or toluene **SU41d**	1	2
e. Halothane, ether, or other anesthetics **SU41e**	1	2
f. Lacquer thinner or other paint solvents **SU41f**	1	2
g. Lighter gases (butane, propane) **SU41g**	1	2
h. Nitrous oxide or "whippets" **SU41h**	1	2
i. Spray paints **SU41i**	1	2
j. Other aerosol sprays **SU41j**	1	2
k. Have you ever used an inhalant whose name you don't know for kicks or to get high? **SU41k**	1	2
l. Have you ever used any other inhalants, besides those listed above, for kicks or to get high? **SU41l**	1	2

PLEASE PRINT NAME(S) OF OTHER INHALANTS BELOW:

_____

_____

G42. How old were you the first time you used any inhalant for kicks or to get high? **SU42**

The first time I used any inhalant for kicks or to get high, I was……..____years old

I have never used any inhalant for kicks or to get high in my life…….……91

G43. Think about the entire time since you first used any inhalant for kicks or to get high. Altogether, on how many days in your life have you used an inhalant of any kind? **SU43**

More than 300 days…….……1

At least 101 but not more than 300 days…….……2

At least 12 but not more than 100 days……...3

At least 3 but not more than 11 days…….……..4

At least 1 but not more than 2 days…….5

I have never used any inhalant for kicks or to get high in my life…….91

G44. How long has it been since you last used any inhalant for kicks or to get high? **SU44**

Within the past 30 days……...……...…1

More than 30 days ago but within the past 12 months…...……...2

More than 12 months ago but within the past 3 years…..…….3

More than 3 years ago…….…….….4

I have never used any inhalants for kicks or to get high in my life.……...91

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G45. Now think about the past 12 months. On how many days in the past 12 months did you use an inhalant for kicks or to get high? **SU45**

More than 300 days (every day or almost every day)……...……...1

At least 201 but not more than 300 days (5 to 6 days a week)……2

At least 101 but not more than 200 days (3 to 4 days a week)……3

At least 51 but not more than 100 days (1 to 2 days a week)……..4

At least 25 but not more than 50 days (3 to 4 days a month)……..5

At least 12 but not more than 24 days (1 to 2 days a month)……..6

At least 6 but not more than 11 days (less than one day a month)……..7

At least 3 but not more than 5 days in the past 12 months……...……...8

At least 1 but not more than 2 days in the past 12 months……..……9

IF NONE, MARK <u>ONE</u> BOX FOR BEST ANSWER

I have used an inhalant for kicks or to get high but not during the past 12 months……93

I have never used any inhalant for kicks or to get high in my life.……..91

G46. Think specifically about the past 30 days. During the past 30 days, on how many days did you use any inhalant for kicks or to get high? **SU46**

Number of days I used some kind of inhalant for kicks Or to get high……...……____

IF NONE, MARK <u>ONE</u> BOX FOR BEST ANSWER

I have used an inhalant for kicks or to het high but not during the past 30 days……....93

I have never used any inhalant for kicks or to get high in my life…...……...91

ANALGESICS

G47. As I read the following list of prescription pain killers, please tell whether or not you have ever used that pain killer when it was not prescribed for you, or that you took only for the experience or feeling it caused. Again, we are interested in all kinds of prescription pain killers, in pill or non-pill form. **SU47**

	Ever used without a prescription or for the experience? YES	NO	
a. Codeine……	1	2	**SU47a**
b. Darvon……	1	2	**SU47b**
c. Demerol……	1	2	**SU47c**
d. Dilaudid……	1	2	**SU47d**
e. Methadone……	1	2	**SU47e**
f. Morphine……	1	2	**SU47f**
g. Percodan……	1	2	**SU47g**
h. Talwin……	1	2	**SU47h**
i. Tylenol with codeine……	1	2	**SU47i**
j. Have you ever used a pain killer whose name you don't now that was not prescribed for you, or that you took only for the experience or feeling it caused?.....	1	2	**SU47j**
k. Have you ever used any other pain killer besides the ones listed above, that was not prescribed for you, or that you took only for the experience or feeling it caused?.....	1	2	**SU47k**

PLEASE PRINT NAME(S) OF OTHER PAIN KILLERS BELOW:

_____

_____

If you answered "NO" to each of the items a through k in question G47 above, circle 91 on the right and proceed to TRANQUILIZERS. Otherwise, continue with the next question below. 91

G48. How old were you the first time you used a pain killer that was <u>not</u> prescribed for you, or that you took only for the experience or feeling it caused? SU48

The first time I used a pain killer that was <u>not</u> prescribed for me or that I took only for the experience of feeling it caused, I was…._____years old

G49. Think about the entire time since you first used a pain killer that was <u>not</u> prescribed for you, or that you took only for the experience or feeling it caused. Altogether, on how many days in your life have you used a pain killer that was <u>not</u> prescribed for you, or that you took only for the experience or feeling it caused? SU49

More than 300 days……1

At least 101 but not more than 300 days……2

At least 12 but not more than 1 00 days……..3

At least 3 but not more than 11 days……..4

At least 1 but not more than 2 days……...…….……5

G50. How long has it been since you last used a pain killer that was <u>not</u> prescribed for you, or that you took only for the experience or feeling it caused? SU50

Within the past 30 days……..1

More than 30 days ago but within the past 12 months……...2

More than 12 months ago but within the past 3 years……3

More than 3 years ago…….4

G51. Now think about the past 12 months. On how many days in the past 12 months did you use a pain killer that was <u>not</u> prescribed for you, or that you took only for the experience or feeling it caused? SU51

More than 300 days (every day or almost every day)…….……...….1

At least 201 but not more than 300 days (5 to 6 days a week)……2

At least 101 but not more than 200 days (3 to 4 days a week)……3

At least 51 but not more than 100 days (1 to 2 days a week)……..4

At least 25 but not more than 50 days (3 to 4 days a month)……..5

At least 12 but not more than 24 days (1 to 2 days a month)……..6

At least 6 but not more than 11 days (less than one day a month)……...…..7

At least 3 but not more than 5 days in the past 12 months……..8

At least 1 but not more than 2 days in the past 12 months……..9

I have used a pain killer that was <u>not</u> prescribed for you, or that you took only for the experience or feeling it caused but not during the past 12 months……...…93

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TRANQUILIZERS

G52. As I read the following list of prescription tranquilizers, please tell me whether you have ever used that tranquilizer when it was not prescribed for you, or that you took only for the experience or feeling it caused. Again, we are interested in all kinds of prescription tranquilizers, in pill or non-pill form. **SU52**

	Ever used without a prescription or for the experience? YES	NO	
a. Atarax……	1	2	**SU52a**
b. Ativan……	1	2	**SU52b**
c. Diazepam……	1	2	**SU52c**
d. Librium……	1	2	**SU52d**
e. Tranxen……	1	2	**SU52e**
f. Valium……	1	2	**SU52f**
g. Xanax……	1	2	**SU52g**
h. Have you ever used a tranquilizer whose name you don't know that was not prescribed for you, or that you took only for the experience or feeling it caused?.....	1	2	**SU52h**
i. Have you ever used any other tranquilizer besides the ones listed above, that was not prescribed for you, or that you took only for the experience of feeling it caused?.....	1	2	**SU52i**

PLEASE PRINT NAME(S) OF OTHER TRANQUILIZERS BELOW:

_____

_____

If you answered "NO" to each of the items a through i in question G52 above, circle 91 on the right and proceed to STIMULANTS. Otherwise, continue with the next question below. 91

G53. How old were you the first time you used a tranquilizer that was <u>not</u> prescribed for you, or that you took only for the experience of feeling it caused? **SU53**

The first time I used a tranquilizer that was <u>not</u> prescribed for me, or that I took only for the experience of feeling it caused, I was…..____years old

G54. Think about the entire time since you first used a tranquilizer that was <u>not</u> prescribed for you, or that you took only for the experience of feeling it caused. Altogether, on how many days in your life have you used a tranquilizer that was <u>not</u> prescribed for you, or that you took only for the experience of feeling it caused? **SU54**

More than 300 days……...……..….1

At least 101 but not more than 300 days……..……....2

At least 12 but not more than 100 days…….……...3

At least 3 but not more than 11 days……4

.

At least 1 but not more than 2 days…….….5

G55. How long has it been since you last used a tranquilizer that was <u>not</u> prescribed for you, or that you took only for the experience of feeling it caused? **SU55**

Within the past 30 days……..……..1

More than 30 days ago but within the past 12 months…….…...2

More than 12 months ago but within the past 3 years…..……3

More than 3 years ago…….4

G56. Now think about the past 12 months, from your 12-month reference date through today. On how many days in the past 12 months did you use a tranquilizer that was <u>not</u> prescribed for you, or that you took only for the experience of feeling it caused? **SU56**

More than 300 days (every day or almost every day)…….……1

At least 201 but not more than 3 00 days (5 to 6 days a week)……2

At least 101 but not more than 200 days (3 to 4 days a week)...….……3

At least 51 but not more than 100 days (1 to 2 days a week)...…….……..4

At least 25 but not more than 50 days (3 to 4 days a month)...….……..5

At least 12 but not more than 24 days (1 to 2 days a month)...…….……..6

At least 6 but not more than 11 days (less than one day a month)…...…….……..7

At least 3 but not more than 5 days in the past 12 months……...….……..8

At least 1 but not more than 2 days in the past 12 months……...…….……..9

I have used a tranquilizer that was <u>not</u> prescribed for you, or that you took only for the experience of feeling it caused, but not during the past 12 months……..…93

STIMULANTS

G57. As I read the following prescription stimulants, please tell me whether you have ever used that stimulant when it was not prescribed for you, or that you took only for the experience or feeling it caused. Again, we are interested in all kinds of prescription stimulants, in pill or non-pill form. **SU57**

	Ever used without a prescription or for the experience? YES	NO	
a. Benzedrine……	1	2	**SU57a**
b. Biphetamine……	1	2	**SU57b**
c. Dexamyl……	1	2	**SU57c**
d. Dexedrine……	1	2	**SU57d**
e. Fastin……	1	2	**SU57e**
f. Ionamin……	1	2	**SU57f**
g. Methamphetamine……	1	2	**SU57g**
h. Methedrine……	1	2	**SU57h**
i. Preludin……	1	2	**SU57i**
j. Have you ever used a stimulant whose name you don't know that was not prescribed for you, or that you took only for the experience or feeling it caused?.....	1	2	**SU57j**
k. Have you ever used any other stimulant besides the ones listed above, that was not prescribed for you, or that you took only for the experience or feeling it caused?.....	1	2	**SU57k**

PLEASE PRINT NAME(S) OF OTHER STIMULANTS BELOW:

_____

_____

If you answered "NO" to each of the items a through k in question G57 above, circle 91 on the right and proceed to Mental Health. Otherwise, continue with the next question below. 91

G58. How old were you the first time you used a stimulant that was not prescribed for you, or that you took only for the experience or feeling it caused? SU58

The first time I used a stimulant that was not prescribed for me or that I took only for the experience of feeling it caused, I was……..____years old

G59. Think about the entire time since you first used a stimulant that was not prescribed for you, or that you took only for the experience or feeling it caused. Altogether, on how many days in your life have you used a stimulant that was not prescribed for you, or that you took only for the experience or feeling it caused? SU59

More than 300 days……..……...1

At least 101 but not more than 300 days…….……2

At least 12 but not more than 100 days…….……..3

At least 3 but not more than 11 days……...4

At least 1 but not more than 2 days…….5

G60. How long has it been since you last used a stimulant that was not prescribed for you, or that you took only for the experience or feeling it caused? SU60

Within the past 30 days……..……...…1

More than 30 days ago but within the past 12 months……..……...2

More than 12 months ago but within the past 3 years…….3

More than 3 years ago…….….4

G61. Now think about the past 12 months. On how many days in the past 12 months did you use a stimulant that was not prescribed for you, or that you took only for the experience or feeling it caused? **SU61**

More than 300 days (every day or almost every day)……..……....1

At least 201 but not more than 300 days (5 to 6 days a week)……2

At least 101 but not more than 200 days (3 to 4 days a week)……3

At least 51 but not more than 100 days (1 to 2 days a week)…..…..……..4

At least 25 but not more than 50 days (3 to 4 days a month)…..…..……..5

At least 12 but not more than 24 days (1 to 2 days a month)…..…..……..6

At least 6 but not more than 11 days (less than one day a month)…....……7

At least 3 but not more than 5 days in the past 12 months……...……..8

At least 1 but not more than 2 days in the past 12 months……...……..9

I have used a stimulant that was not prescribed for you, or that you took only for the experience or feeling it caused but not during the past 12 months……..…93

1998 National Household Survey on Drug Use

Section H – MENTAL HEALTH
Center for Epidemiologic Studies Depression Scale (CES-D)

I will read a list of ways you might have felt or behaved. Please tell me how often you have felt this way during the past week. Please use card 5 or I can read the answer options.

H1. I was bothered by things that usually don't bother me. **MH1**

0 Rarely or none of the time (less than one day)
1 Some or a little of the time (1-2 days)
2 Occasionally or a moderate amount of time (3-4 days)
3 Most or all of the time (5-7 days)

H2. I did not feel like eating; my appetite was poor. **MH2**

0 Rarely or none of the time (less than one day)
1 Some or a little of the time (1-2 days)
2 Occasionally or a moderate amount of time (3-4 days)
3 Most or all of the time (5-7 days)

H3. I felt that I could not shake off the blues even with help from my family or friends. **MH3**

0 Rarely or none of the time (less than one day)
1 Some or a little of the time (1-2 days)
2 Occasionally or a moderate amount of time (3-4 days)
3 Most or all of the time (5-7 days)

H4. I felt I was just as good as other people. **MH4**

0 Rarely or none of the time (less than one day)
1 Some or a little of the time (1-2 days)
2 Occasionally or a moderate amount of time (3-4 days)
3 Most or all of the time (5-7 days)

H5. I had trouble keeping my mind on what I was doing. **MH5**

0 Rarely or none of the time (less than one day)
1 Some or a little of the time (1-2 days)
2 Occasionally or a moderate amount of time (3-4 days)
3 Most or all of the time (5-7 days)

Radloff, 1977

H6. I felt depressed. **MH6**

0 Rarely or none of the time (less than one day)
1 Some or a little of the time (1-2 days)
2 Occasionally or a moderate amount of time (3-4 days)
3 Most or all of the time (5-7 days)

H7. I felt that everything I did was an effort. **MH7**

0 Rarely or none of the time (less than one day)
1 Some or a little of the time (1-2 days)
2 Occasionally or a moderate amount of time (3-4 days)
3 Most or all of the time (5-7 days)

H8. I felt hopeful about the future. **MH8**

0 Rarely or none of the time (less than one day)
1 Some or a little of the time (1-2 days)
2 Occasionally or a moderate amount of time (3-4 days)
3 Most or all of the time (5-7 days)

H9. I thought my life had been a failure. **MH9**

0 Rarely or none of the time (less than one day)
1 Some or a little of the time (1-2 days)
2 Occasionally or a moderate amount of time (3-4 days)
3 Most or all of the time (5-7 days)

H10. I felt fearful. **MH10**

0 Rarely or none of the time (less than one day)
1 Some or a little of the time (1-2 days)
2 Occasionally or a moderate amount of time (3-4 days)
3 Most or all of the time (5-7 days)

H11. My sleep was restless. **MH11**

0 Rarely or none of the time (less than one day)
1 Some or a little of the time (1-2 days)
2 Occasionally or a moderate amount of time (3-4 days)
3 Most or all of the time (5-7 days)

H12. I was happy. **MH12**

0 Rarely or none of the time (less than one day)
1 Some or a little of the time (1-2 days)
2 Occasionally or a moderate amount of time (3-4 days)
3 Most or all of the time (5-7 days)

H13. I talked less than usual. **MH13**

0 Rarely or none of the time (less than one day)
1 Some or a little of the time (1-2 days)
2 Occasionally or a moderate amount of time (3-4 days)
3 Most or all of the time (5-7 days)

H14. I felt lonely. **MH14**

0 Rarely or none of the time (less than one day)
1 Some or a little of the time (1-2 days)
2 Occasionally or a moderate amount of time (3-4 days)
3 Most or all of the time (5-7 days)

H15. People were unfriendly. **MH15**

0 Rarely or none of the time (less than one day)
1 Some or a little of the time (1-2 days)
2 Occasionally or a moderate amount of time (3-4 days)
3 Most or all of the time (5-7 days)

H16. I enjoyed life. **MH16**

0 Rarely or none of the time (less than one day)
1 Some or a little of the time (1-2 days)
2 Occasionally or a moderate amount of time (3-4 days)
3 Most or all of the time (5-7 days)

Radloff, 1977

H17. I had crying spells. **MH17**

0 Rarely or none of the time (less than one day)
1 Some or a little of the time (1-2 days)
2 Occasionally or a moderate amount of time (3-4 days)
3 Most or all of the time (5-7 days)

H18. I felt sad. **MH18**

0 Rarely or none of the time (less than one day)
1 Some or a little of the time (1-2 days)
2 Occasionally or a moderate amount of time (3-4 days)
3 Most or all of the time (5-7 days)

H19. I felt that people disliked me. **MH19**

0 Rarely or none of the time (less than one day)
1 Some or a little of the time (1-2 days)
2 Occasionally or a moderate amount of time (3-4 days)
3 Most or all of the time (5-7 days)

H20. I could not get going. **MH20**

0 Rarely or none of the time (less than one day)
1 Some or a little of the time (1-2 days)
2 Occasionally or a moderate amount of time (3-4 days)
3 Most or all of the time (5-7 days)

Radloff, 1977

Youth Risk Behavior Survey

The next 5 questions ask about sad feelings and attempted suicide. Sometimes people feel so depressed about the future that they may consider attempting suicide, that is, taking some action to end their own life.

H21. During the past 12 months, did you ever feel so sad or hopeless almost every day for **two weeks or more in a row** that you stopped doing some usual activities? **MH21**

1. Yes
2. No

H22. During the past 12 months, did you ever **seriously** consider attempting suicide? **MH22**

1. Yes
2. No

H23. During the past 12 months, did you make a plan about how you would attempt suicide? **MH23**

1. Yes
2. No

H24. During the past 12 months, how many times did you actually attempt suicide? **MH24**

1. 0 times
2. 1 time
3. 2 or 3 times
4. 4 or 5 times
5. 6 or more times

H25. If you attempted suicide during the past 12 months, did any attempt result in an injury, poisoning, or overdose that had to be treated by a doctor or nurse? **MH25**

1. **I did not attempt suicide** during the past 12 month
2. Yes
3. No

Section I – SEXUAL RISK BEHAVIOR

HEALTH RISK QUESTIONNAIRE

The next questions about health risk behaviors. Please give the best answer to the following questions. We know that some individuals have had sexual contact against their will, we are only interested in your sexual behaviors that are voluntary or unforced.

I1. Have you ever had voluntary or unforced sex (oral, vaginal, anal) with someone? **SEX1**

1. Yes 2. No **.....IF "NO", END SURVEY**

I2. How old were you the first time you had sex (oral, vaginal, anal)? _____ years old **SEX2**

I3. That first time you had sex, did you or your partner use **a condom or a rubber?** **SEX3**

1. Yes 2. No

I4. What was the gender of your last sex partner? **SEX4**

1. Male 2. Female 3. FTM 4. MTF

The next questions will ask about lifetime sexual activity.

I5. Have you ever engaged in casual sex, such as non-monogamous sex, a one night stand, or sex with someone who you didn't intend to have a relationship with? (Do not include prostitution)? **SEX5**

1. Yes 2. No

I6. Have you ever had sex with more than one partner within a 24-hour time span? **SEX6**

1. Yes 2. No

I7. Have you ever engaged in anal sex? **SEX7**

1. Yes 2. No

I7a. If YES, were you: 1. anal receptive 2. anal insertive **SEX7a**

3. both anal receptive and insertive

I7b. If YES, How often did you or your partner use a condom for anal sex?

SEX7b

1. Always 2. Sometimes 3. Rarely 4. Never

I8. Have you ever engaged in oral sex? **SEX8**

1. Yes 2. No

I8a. If YES, did you: **SEX8a**

1. receive oral 2. give oral 3. both receive and give oral

I8b. If YES, how often did you or your partner use a condom for oral sex? **SEX8b**

1. Always 2. Sometimes 3. Rarely 4. Never

I9. Have you ever engaged in vaginal intercourse? **SEX9**

1. Yes 2. No

I9a. If YES, were you: **SEX9a**

1. vaginal receptive 2. vaginal insertive 3. both vaginal receptive and insertive

I9b. If YES, How often did you or your partner use a condom? **SEX9b**

1. Always 2. Sometimes 3. Rarely 4 Never

I10.As far as you know have you ever had sex with: **SEX10**

I10a. Anyone who has ever worked as a prostitute? **SEX10a**

1. Yes 2. No

I10b. A drug user who shoots-up (someone who uses needles?) **SEX10b**

1. Yes 2. No

I10c. Someone who had AIDS? **SEX10c**

1. Yes 2. No

I11. Did these sexual activities cause you problems at home? **SEX11**

1. Yes 2. No

I12. Have you ever engaged in survival sex? That is, the exchange of sex for drugs, food, shelter or money? 1. Yes 2. No **SEX12**

I12a. When engaging in survival sex, how often did you or your partner use a condom? **SEX12a**

1. Always 2. Sometimes 3. Rarely 4. Never

I12b. Have you ever had survival sex with? **SEX12b**

1. Men 2. Women or 3. Both

I12c. When engaging in survival sex, were you? **SEX12c**

1. Vaginal Receptive 2. Vaginal Insertive 3. Oral receptive 4. Oral Performing 5. Anal Insertive 6. Anal Receptive

I13. Have you ever engaged in any type of sex when you and/or your partner had been using alcohol or drugs? 1. Yes 2. No **SEX13**

I14. Have you ever had an STD or Venereal Disease (any sexually transmitted disease)?

1. Yes 2. No **SEX14**

I14a. If yes, which one?_____ **SEX14a**

I15. The <u>last</u> time you had sex with someone, did you or your partner use a condom or rubber? **SEX15**

1. Yes 2. No

The next questions will ask about you sexual activity within the past 3 months.

I16. With how many **people** have you had sex (anal, oral or vaginal) in the past 3 months? **SEX16**

_____ people

I17. With how many **men** have you had sex (anal, oral or vaginal) with in the past 3 months? **SEX17**

_____ men

I18. With how many **women** have you had sex (anal, oral or vaginal) with in the past 3 months? **SEX18**

_____ women

I19. Have you ever engaged in casual sex, such as non-monogamous sex, a one night stand, or sex with someone who you didn't intend to have a relationship within the past 3 months? (Do not include prostitution) **SEX19**

1. Yes 2. No

I20. Have you had sex with more than one partner within a 24-hour time span in the last 3 months? **SEX20**

1. Yes 2. No

I21. Have you engaged in anal sex in the last 3 months? **SEX21**

1. Yes 2. No

I21a. If YES, were you: 1. anal insertive **SEX21a**

2. anal receptive 3. both anal receptive and anal insertive

Gangamma et al., 2008

I21b. If YES, In the last 3 months, how often did you or your partner use a condom for anal sex? **SEX21b**

1. Always 2. Sometimes 3. Rarely 4. Never

I22. Have you engaged in oral sex in the past 3 months? **SEX22**

1. Yes 2. No

I22a. If YES, did you: **SEX22a**

1. receive oral 2. give oral 3. both receive and give oral

I22b. If YES, in the past 3 months, how often did you or your partner use a condom for oral sex? **SEX22b**

1. Always 2. Sometimes 3. Rarely 4. Never

I23. Have you engaged in vaginal intercourse in the past 3 months? **SEX23**

1. Yes 2. No

I23a. If YES, were you: **SEX23a**

1. vaginal receptive 2. vaginal insertive 3. both vaginal receptive and insertive

I23b. If YES, In the last 3 months, how often do you or your partner use a condom for vaginal sex? **SEX23b**

1. Always 2. Sometimes 3. Rarely 4. Never

I24.As far as you know, in the past 3 months, have you had sex with: **SEX24**

I24a. Anyone who has ever worked as a prostitute? **SEX24a**

1. Yes 2. No

I24b. A drug user who shoots-up (someone who uses needles?) **SEX24b**

1. Yes 2. No

I24c. Someone who had AIDS? **SEX24c**

1. Yes 2. No

I25. Did these sexual activities cause you problems at home? **SEX25**

1. Yes 2. No

I26. Have you engaged in survival sex in the past 3 months? That is, the exchange of sex for drugs, food, shelter or money? **SEX26**

1. Yes 2. No

I26a. If YES, Within the past 3 months, when engaging in survival sex, how often did you or your partner use a condom? **SEX26a**

1. Always 2. Sometimes 3. Rarely 4. Never

I26b. Within the past 3 months, have you had survival sex with? **SEX26b**

1. Men 2. Women or 3. Both

I26c. When engaging in survival sex in the past 3 months, were you? **SEX26c**

1. Vaginal receptive 2. Vaginal Insertive 3. Oral Receptive 4. Oral Performing 5. Anal Insertive or 6. Anal Receptive

I27. Within the past 3 months, have you engaged in any type of sex when you and/or your partner had been using alcohol or drugs? **SEX27**

1. Yes 2. No

These next few question will ask about your sexual behavior within the past 12 months.

I28. With how many **people** have you had sex (anal, oral or vaginal) in the past 12 months? **SEX28**

_____ people

I29. With how many **men** have you had sex (anal, oral or vaginal) with in the past 12 months? **SEX29**

_____ men

Gangamma et al., 2008

I30. With how many **women** have you had sex (anal, oral or vaginal) with in the past 12 months? **SEX30**

_____ women

I31. Have you ever engaged in casual sex, such as non-monogamous sex, a one night stand, or sex with someone who you didn't intend to have a relationship with in the last 12 months? (Do not include prostitution) **SEX31**

1. Yes 2. No

I32. Have you had sex with more than one partner within a 24-hour time span in the last 12 months? **SEX32**

1. Yes 2. No

I33. Have you engaged in anal sex in the last 12 months? **SEX33**

1. Yes 2. No

I33a. If YES, were you: 1. anal receptive 2. anal insertive **SEX33a**
3. both anal receptive and insertive

I33b. If YES, In the last 12 months, how often did you or your partner use a condom for anal sex? **SEX33b**

1. Always 2. Sometimes 3. Rarely 4. Never

I34. Have you engaged in oral sex in the past 12 months? **SEX34**

1. Yes 2. No

I34a. If YES, did you: **SEX34a**

1. receive oral 2. give oral 3. both receive and give oral

I34b. If YES, In the past 12 months, how often did you or your partner use a condom for oral sex? **SEX34b**

1. Always 2. Sometimes 3. Rarely 4. Never

I35. Have you engaged in vaginal intercourse in the past 12 months? **SEX35**

1. Yes 2. No

I35a. If YES, were you: **SEX35a**

1. vaginal receptive 2. vaginal insertive 3. both vaginal receptive and insertive

I35b. If YES, In the past 12 months, how often do you or your partner use a condom? **SEX35b**

1. Always 2. Sometimes 3 Rarely 4. Never

I36.As far as you know, in the past 12 months, have you had sex with: **SEX36**

I36a. Anyone who has ever worked as a prostitute? **SEX36a**

1.Yes 2. No

I36b. A drug user who shoots-up (someone who uses needles?) **SEX36b**

1. Yes 2. No

I36c. Someone who had AIDS? **SEX36c**

1. Yes 2. No

I37. Did these sexual activities cause you problems at home? **SEX37**

1. Yes 2. No

I38. Have you engaged in survival sex in the past 12 months? That is, the exchange of sex for drugs, food, shelter or money? 1. Yes 2. No **SEX38**

I38a. If YES, Within the past 12 months, when engaging in survival sex, how often did you or your partner use a condom? **SEX38a**

1. Always 2. Sometimes 3. Rarely 4. Never

I38b. If YES, Within the past 12 months, have you had survival sex with?

1. Men 2. Women or 3. Both **SEX38b**

I38c. If YES, When engaging in survival sex in the past 12 months, were you? **SEX38c**

1. Vaginal Receptive 2. Vaginal Insertive 3. Oral Receptive 4. Oral Performing 5. Anal Insertive or 6..Anal Receptive

I39. Have you engaged in any type of sex when you and/or your partner had been using alcohol or drugs in the past 12 months? 1. Yes 2. No **SEX39**

The last three questions will ask about lifetime sexual activity.

I40. With how many **people** have you ever had sex (anal, oral or vaginal)? **SEX40**

1. 0
2. 1-10
3. 11-20
4. 21-30
5. 31-40
6. 41-50
7. 51-60
8. 61-70
9. 71-80
10. 81-90
11. 91-100
12. More than 100

I41. With how many **men** have you ever had sex (anal, oral or vaginal) with? **SEX41**

_____ men

I42. With how many **women** have you ever had sex (anal, oral or vaginal) with? **SEX42**

_____ women

That was the last question and this concludes the interview. Thank you for your time.

Gangamma et al., 2008

Participants Needed for Research Study!!

Are you between **16-24 years of age**, have not had a stable place to live for at least 7 days within the past month and willing to share your life experiences?

We are conducting a study about homelessness among heterosexual and gay lesbian, bisexual and transgendered (GLBT) youths and experiences with school, family, friends, substance use, discrimination and HIV risk.

If you meet the above criteria and are interested in participating in a research study to complete a questionnaire and/or to be interviewed, please call 416-978-2742 or let your outreach worker know that you would like to be involved.

You will be paid $15 upon completion of the questionnaire and/or interview.

All information will be kept **confidential**.