

LGB YOUTH'S RISKY SEXUAL BEHAVIOR: PROTECTIVE FACTORS AND GENDER  
DIFFERENCES

BY

JACQUELYN C. BEARD

DISSERTATION

Submitted in partial fulfillment of the requirements  
for the degree of Doctor of Philosophy in Educational Psychology  
in the Graduate College of the  
University of Illinois at Urbana-Champaign, 2013

Urbana, Illinois

Doctoral Committee:

Professor Dorothy Espelage, Chair  
Professor James Rounds  
Professor Ramona Oswald  
Anita Hund, Ph.D.

## Abstract

This study extends research on risky sexual behavior among LGB youth and provides a new perspective on how protective factors and gender differences may influence LGB youth's experiences with sexual risk-taking behavior. Consistent with previous research on differences in risky sexual behavior across LGB and heterosexual youth populations, chi-square analysis suggested that LGB youth were more likely than heterosexual youth to have unprotected sex. However, no significant differences were found with regard to sex with strangers and sex under the influence of substances. Given significant differences in age across heterosexual and LGB youth, age was included in subsequent analyses and found to be related to rates of sex under the influence of substances and to rates of unprotected sex. To address a gap in the literature around protective factors for LGB youth, logistic regression was performed to examine the moderating effects of protective factors on the relationship between sexual orientation and risky sexual behavior. Parental support was found to be protective against sex with strangers; however, parental support differentially buffered against this risky sexual behavior for heterosexual and LGB youth such that it was more protective for heterosexual youth. To extend research in the area of gender differences, differences in LGB boys' and girls' sexual risk-taking behaviors were examined. Findings suggested that LGB boys and girls engaged in risky sexual behavior at similar rates; however, boys were more likely than girls to engage in sex with someone they just met or did not know well. Implications for future research and public health practice with LGB youth are discussed.

## Acknowledgements

I would like to acknowledge the many wonderful people in my life who have made it possible for me to successfully complete this project and my doctoral degree. I would like to thank my doctoral advisor, Dr. Dorothy Espelage, for advising me in the second half of my doctoral degree and allowing me to use one of her rich datasets for my dissertation study. I also want to thank the other members of my doctoral committee, Dr. James Rounds, Dr. Ramona Oswald, and Dr. Anita Hund, for their time, thoughtful feedback, and helpful suggestions.

During my master's program at Indiana University, Dr. Charles Ridley invited me to be part of his research team, and that experience solidified my interest in research as well as my desire to pursue my doctorate. My fellow research team member, Laura Pruitt-Stephens, who is now a doctor herself, was a constant source of support and encouragement during that time. Thank you, Laura, for being a good friend to me over the years, both personally and professionally.

While at Indiana University (IU), I also met individuals who turned out to be my closest friends and biggest supporters outside of my family and my partner. Matt Devine, thank you for being a true friend, an amazing person, and a rock-solid source of support. Throughout graduate school, you have been there to celebrate my successes as well as to empathize with and encourage me during difficult times. I cherish our friendship and look forward to many years to come with you as my friend. Rose Hartzell, thank you for your endless support and love, both in good times and bad. Being a doctor yourself, you could truly understand the highs and lows of graduate school and the dissertation process. Thank you for your steadfast friendship.

I would be remiss not to thank my many other Counseling Psychology and IU friends who helped in my process of completing graduate school. Thank you for your friendship, your

help along the way, and the many good times spent on Kirkwood Avenue or out tailgating before football games. Moreover, I want to acknowledge my friends at Child's Preschool who provided just the right amount of distraction and fun during my part-time job there while completing my master's degree at IU. I will not forget our rounds of SkipBo while the children were napping and the tender moments shared with the three- and four-year-olds. And thank you to all of the Bloomington, Indiana friends I met through my partner, Jesse – our WGCL and Yogi's friends – you have been great sources of encouragement, laughter, and fun throughout this stressful process.

I would also like to acknowledge my friends and mentors from UIUC that helped me survive the doctoral program. Milo Dodson, my fellow cohort member, thank you for your friendship and support throughout the program. We are an “army of two,” and I cannot imagine having completed this program with anyone else. Your adventures always kept me entertained and provided a nice distraction from the intensity of the program. To all of my colleagues and fellow students in the Counseling Psychology program, thank you for the study sessions, academic advice, and all of your help along the way. I want to give a special thanks to my mentors from the Counseling Center, Dr. Rene Monteagudo, Dr. Anita Hund, and Dr. Marybeth Hallett. Thank you for all of your guidance, support, and encouragement throughout the graduate school and dissertation process. I really appreciate all of the help you have given me and the confidence you have instilled in me. And to my primary and secondary internship supervisors, Dr. Mary Russell and Dr. Lori Davis, for your support through the defense process – thank you.

A big thanks goes out to my family. To my Mom and Dad, thank you for your endless love and support and instilling in me the confidence that I could achieve whatever I set my mind

to. Thank you for your patience and understanding regarding how long the doctoral degree takes and how much effort and attention it requires. Thank you for your unwavering belief in me, and thank you for being proud of me. To my brother, Joe, thanks for all of the smiles you've put on my face throughout the years. Thanks for being you and for being a source of inspiration to me. I would also like to thank Dr. Mary Beth Hines, my future mother-in-law, for your support, advice, and encouragement throughout my doctoral degree.

Finally, to Jesse – my partner, fiancé, and soon-to-be husband – thank you for being the love of my life. Thank you for believing in me when I didn't believe in myself, for not letting me give up, and for keeping me sane during this crazy process. Thank you for moving to Illinois to be with me and for sticking by my side in good times and bad. Thank you for being my number one supporter and for being someone I can always count on. And thank you for your understanding, patience, and forgiveness during the stressful times in graduate school and the many occasions that my time was consumed by school. I could not have completed this degree without you. I look forward to many future endeavors with you by my side.

## TABLE OF CONTENTS

Chapter 1: Introduction.....	1
Chapter 2: Literature Review.....	2
Chapter 3: Methods.....	25
Chapter 4: Results.....	31
Chapter 5: Discussion.....	40
Chapter 6: Limitations and Implications.....	51
References.....	56
Tables and Figures.....	70

## Chapter 1: Introduction

A crucial part of the development process in adolescence is navigating one's sexuality (Moore & Rosenthal, 1993). As lesbian, gay, and bisexual (LGB) youth attempt to navigate their sexuality while simultaneously negotiating heterosexism and homophobia in their social and academic environments, they may be at greater risk for risky sexual behavior and other risk behaviors (DuRant, Kahn, Beckford, & Woods, 1997; Garofalo, Wolf, Kessel, Palfrey, & DuRant, 1999a; Williams, Connolly, Pepler, & Craig, 2005). Research indicates that LGB youth are more likely than heterosexual youth to report risky sexual behavior such as engaging in sex at an early age, multiple sexual partners, substance use prior to sex, unprotected sex, anonymous sexual partners (i.e., strangers), and high risk sexual encounters (Blake, Ledsky, Lehman, Goodenow, Sawyer & Hack, 2001; Garofalo et al., 1999a; Maguen & Armistead, 2000; Remafedi, 1994; Rosario, Meyer-Bahlburg, Hunter, & Gwadz, 1999). While protective factors such as parental support and parents' conversations with youth about sex may act as buffers against LGB youth's risky sexual behavior (Diaz & Ayala, 2001), little research to date has examined protective factors for LGB youth's risky sexual behavior (Saewyc, 2011). Furthermore, there may be gender differences with regard to LGB youth's risky sexual behavior, but little research has explored this topic (Bontempo & D'Augelli, 2002; Grov, Bimbi, Nanin, & Parsons, 2006). Given the health risks and negative consequences associated with risky sexual behavior, it is important to examine protective factors and gender differences for sexually active LGB youth to determine areas where educators might intervene to prevent or reduce this behavior. Thus, the present study examines the sexual risk behavior of sexually active LGB youth as compared to sexually active heterosexual youth in addition to potential protective factors and gender differences in LGB youth's risky sexual behavior.

## Chapter 2: Literature Review

### Background and Problem

Scholars have defined homophobia as negative attitudes or behaviors toward nonheterosexual identities and behaviors (Herek, 1995) and as the “widespread irrational fear and intolerance toward homosexuality” (Lips, 1988, p. 167). Similar to other forms of discrimination and prejudice, homophobia can be subtle or overt. Homophobia can range from name-calling, obscene gestures, and gay bashing jokes to threats, harassment, and assault (including sexual assault; Bass & Kaufman, 1996). Subtler examples of homophobia include a general uneasiness around LGB-identified people, avoidance of LGB people for fear of being labeled as LGB, and believing that LGB people are too outspoken about gay rights (Stakely, n.d.). A large portion of society still holds intolerant attitudes toward differences in sexual orientation, and these attitudes are held by many high school teachers, staff, and students. With regard to working with LGB students, many teachers are uncomfortable, unequipped, and often perpetuate a system of inequality for LGB students and their families (Dessel, 2010). In Dessel’s (2010) study using dialogue groups with 36 public school teachers, findings suggested that teachers were fearful, reluctant, and disagreed with the invitation to address sexual orientation in the classroom. In addition to fear of parents’ disapproval, some teachers reported silencing and a lack of support from administrators (Dessel, 2010). Research also indicates prevalent homophobic attitudes and behaviors among adolescents, and these attitudes and behaviors are linked to aggression and dominance behavior (Kosciw, 2004; Poteat, Espelage, & Green, 2007). Thus, homophobic attitudes are held not only by adults, but also by students themselves, and this has a detrimental impact on the health of LGB individuals. In Walker’s (2001) interview study of young lesbian women and gay men, he found that negative attitudes toward homosexuality

were linked to the subsequent negative effects on the psychological well-being of young lesbian and gay individuals.

Heterosexism has been defined as “an absence of gay and lesbian positive images and a deafening silence about the homosexual reality” (Briskin, 1994, p. 4). While LGB youth experience covert and overt homophobia on a regular basis, they also encounter a lack of positive images and visible representation of LGB individuals in their social and academic contexts. Thus, homophobia and heterosexism have a harmful effect on the well-being of LGB youth and may lead to a number of health risk behaviors.

### **Health Risk Behavior**

Health risk behavior is described as an action carried out with a frequency or intensity which escalates risk of injury or disease, regardless of whether the person is aware of the relationship between the activity and risk of injury or disease (Stephoe, 2007). Given this definition, sexual risk behavior may be considered as actions that increase one’s risk of sexually-related injury or disease. LGB youth have been found to engage in a number of sexual risk behaviors that put them at elevated risk for sexually transmitted infections (STIs), human immunodeficiency virus (HIV), and unintended pregnancy (Maguen & Armistead, 2000; Remafedi, 1994; Saewyc, Bearinger, Blum, & Resnick, 1998a). Further, these sexual risk behaviors may have psychological consequences such as regret, guilt, and shame.

Protective factors are defined as “attributes of persons, environments, situations, and events that relate to positive adaptation for children under conditions of adversity” (Gutman, 2007, p. 23). Quality of parenting has been identified as an essential factor in youth’s reactions to stressful situations, and parenting has been found to either protect youth from life circumstances or increase their vulnerability to adversity (Gutman, 2007). Thus, parental

support and parental conversations about sex may serve as important protective factors against risky sexual behavior by LGB youth.

While protective factors may influence health risk behavior, gender differences may also influence this behavior. Gender differences can be considered as differences between boys and girls that result from the interaction between biology and the environment in which boys and girls develop (Nobelius, 2004). Gender differences in LGB youth's risky sexual behavior may suggest the need to tailor prevention and intervention efforts differently for boys and girls.

This study will examine the aforementioned protective factors as well as gender differences as they relate to the problem of risky sexual behavior among sexually active LGB youth. First, a theoretical framework will be explained in order to situate and understand sexual risk behavior among LGB youth. Second, an overview of the literature on LGB youth's sexual activity and risky sexual behavior will be provided. Third, the limited research on LGB youth's parental relationships and parental support will be provided in order to illustrate the possible protective effects of these factors against risky sexual behavior. Next, the literature on gender differences in LGB youth's risky sexual behavior will be discussed. Finally, the current study will be outlined and findings will be presented.

### **Minority Stress Model**

Social stress refers to conditions in the social environment that are sources of stress and may cause negative mental and physical effects (Meyer, 2003). This concept includes conditions in the social environment that may have a strong impact on people with stigmatized social identities such as those from low socioeconomic status, racial and ethnic minorities, women and transgender individuals, and LGB individuals. Given this conceptualization, prejudice and discrimination, including classism, racism, sexism, and homophobia, are all forms of social

stress because they can induce changes that require individuals to adapt in response (Allison, 1998; Meyer, 1995, 2003; Mirowsky & Ross, 1989; Pearlin, 1999). This form of social stress is referred to as *minority stress* and encompasses the excess stress individuals from marginalized social identities are exposed to due to their social, or minority, position (Meyer, 2003).

The minority stress model (Meyer, 1995, 2003) draws from a number of relevant sociological and social psychological theories that focus on the adverse effects of social conditions on the experiences of affected individuals and groups (Allport, 1954; Crocker, Major, & Steele, 1998; Goffman, 1963; Jones et al., 1984). Social theorists described how dominant culture, social structures, and norms do not represent those of the minority group, and therefore, minority individuals are likely to encounter conflict (Merton, 1968; Pearlin, 1982). Furthermore, social comparison and symbolic interaction theorists view the social environment as a means of organizing individuals' experiences and providing meaning to their world (Stryker & Statham, 1985). Thus, these theorists posit that negative regard from others can produce negative self-regard. Similar to this understanding, social evaluation theorists hold that the way humans learn about themselves is by comparing themselves to others (Pettigrew, 1967). Negative evaluations by others, including prejudice and stereotypes about minority individuals, may cause detrimental psychological effects. Allport (1954) proposed that prejudice produces a harmful environment for minority individuals and that it may lead to damaging effects. Likewise, an important concept in minority stress theory is the notion of mismatch or disharmony with one's environment, as harmony with one's environment is considered an essential part of healthy living (Meyer, 2003; Selye, 1982).

Three assumptions underlie the minority stress concept. First, minority stress is unique from general stressors experienced by all people, and because it is different, it requires an

adaptation effort by stigmatized individuals above that required by individuals who are not stigmatized (Meyer, 2003). Second, minority stress is considered to be chronic because it is connected to relatively stable underlying social and cultural structures. Finally, minority stress is socially based in that it stems from social processes, institutions, and structures greater than the individual (Meyer, 2003).

Scholars have outlined three minority stress processes relevant to LGB individuals: internalized homophobia, expectations of rejection and discrimination (i.e., perceived stigma), and actual prejudice events (Meyer, 1995, 2003; Meyer & Dean, 1998). Another stress process considered important from psychological research on disclosure is concealment of one's sexual orientation. Concealing one's sexual orientation creates stress through internal psychological processes (Cole, Kemeny, Taylor, & Visscher, 1996; DiPlacido, 1998; Jourard, 1971; Pennebaker, 1995).

**Internalized Homophobia.** Internalized homophobia occurs when LGB individuals take in and direct negative societal attitudes toward themselves (Meyer, 1995). Before children are aware of their sexual orientation, they internalize homophobic societal attitudes. As LGB youth gain greater awareness of their same-sex attraction, they question their presumed heterosexuality and begin to apply labels such as “gay,” “lesbian,” or “bisexual” to themselves (Meyer, 1995). Simultaneously, LGB individuals begin to apply negative attitudes to themselves and view themselves from the perspective they imagine others have even though they might not be out to others yet (Thoits, 1985). Thus, a deviant identity emerges when one becomes aware of same-sex attraction and this threatens LGB individuals' psychological well-being (Goffman, 1963; Hetrick & Martin, 1984; Stein & Cohen, 1984).

Theorists posit that while internalized homophobia is likely most acute during the beginning of one's coming out process, it likely does not subside completely when the individual accepts his or her sexual identity (Cass, 1984; Coleman, 1982). The strength of early socialization experiences in combination with continued exposure to homophobic attitudes likely means that internalized homophobia influences an LGB person's psychological adjustment throughout his or her life (Gonsiorek, 1988; Hetrick & Martin, 1984; Malyon, 1982; Meyer, 1995). Studies have found internalized homophobia to be associated with risky sexual behavior (Meyer & Dean, 1998), greater substance use (Glaus, 1988; Meyer & Dean, 1998), eating disorders (Williamson & Hartley, 1998), and suicidality (Remafedi, French, Story, Resnick, & Blum, 1998).

**Perceived Stigma.** Research has documented the negative effects of stigma and labeling (e.g., Goffman, 1963; Jones et al., 1984; Link & Cullen, 1990). LGB and other stigmatized individuals experience anxiety related to interactions in society, and specifically, anxiety that others do not accept them and fear that others can disrespect them for something that is out of their control (Goffman, 1963; Meyer, 1995). As a result of the prejudice they experience, Allport (1954) contends that stigmatized individuals may develop defensive coping strategies. Minority individuals who experience high levels of stigma may expect to be rejected, discriminated against, and to be the target of violence. In response to this, these individuals develop a high degree of vigilance which is chronic and repeatedly evoked in everyday life interactions with dominant group members. This level of vigilance requires a great deal of energy and resources and thus, is quite stressful (Allport, 1954). LGB youth commonly conceal their sexual identity as a means of coping (Hetrick & Martin, 1987). This kind of hiding requires

a great deal of attention to one's behavior, including clothing, language, and mannerisms, in order to avoid being discovered.

Not surprisingly, the stress associated with vigilance can cause LGB individuals to develop a sense of fear and mistrust of others and a sense of alienation from larger society (Meyer, 1995). Scholars have described the cost of hypervigilance and the amount of energy required to reconcile one's LGB identity with stigma from society (e.g., Cohen, Evans, Stokols, & Krantz, 1986; Warren, 1980). The considerable effort exerted by LGB individuals can lead to coping fatigue (Cohen et al., 1986). Thus, LGB youth who experience high levels of stigma will experience chronic stress as they try to avoid harm by remaining vigilant (Meyer, 1995). Saewyc's (2011) overview of health disparities among sexual minority youth during the past decade found that a number of studies reported direct links between exposure to stigma and discrimination and health risk behaviors including: depression, post-traumatic stress disorder (PTSD), suicidality, substance use and abuse, and risky sexual behaviors including unprotected sex resulting in teen pregnancy.

**Prejudice Events.** Prejudice events, or discrimination and violence, against LGB individuals occurs to a great extent in the United States. While progress is being made, and currently six states and the District of Columbia allow gay marriage, discrimination and violence directed at LGB Americans still is widespread. The more visible LGB individuals are, the more likely they are to be targets of homophobic prejudice, discrimination, and violence (Meyer, 1995).

Rejection, discrimination, and violence due to one's stigmatized minority identity are the most overt sources of minority stress (Garnets, Herek, & Levy, 1990). Garnets et al. (1990) assert that victimization interferes with one's views of the world as meaningful and orderly, and

therefore, leads to self-devaluation. Prejudice events have a significant impact on LGB individuals because of the cultural meaning behind the events (Brooks, 1981). While gay-bashing jokes and homophobic slurs may seem like minor events, they may evoke deep feelings of rejection and fears of violence (Meyer, 1995).

In Meyer's (1995) original study of the minority stress model, he found that gay men who experienced high levels of minority stress were at a two- to three-fold increased likelihood of experiencing high levels of psychological distress. Similarly, research among LGB youth suggests that stigma-related harassment, discrimination, and victimization are related to greater mental health symptoms and suicidality (e.g., Huebner, Rebchook, & Kegeles, 2004). In a study of 301 lesbian, gay, bisexual, transgender, and questioning (LGBTQ) youth in Ireland, findings suggested that minority stressors significantly predicted negative psychological outcomes among participants (Kelleher, 2009). Moreover, an interview study of 10 sexual minority adolescents with clinically significant depressive symptoms found that participants identified LGB-related discrimination and victimization as a major contributor to their depressive and suicidal symptoms (Diamond et al., 2011). Friedman et al. (2011) hypothesized that the victimization sexual minority youth experience may be a causal mechanism contributing to the higher rates of mental health issues, substance use, and risky sexual behavior reported by sexual minority youth. A number of studies used Meyer's (1995, 2003) minority stress model to explain health related outcomes (e.g., depression, suicidality, workplace problems, substance abuse, and body image problems) in lesbian and gay (LG) populations (Diaz, Ayala, Bein, Henne, & Marin, 2001; Hamilton & Mahalik, 2009; Herek, Gillis, & Cogan, 1999; Kimmel & Mahalik, 2005; Meyer, 1995; Saewyc, 2011; Waldo, 1999). Given its previous application to similar research, this model may be useful in explaining LGB youth's risky sexual behavior.

## **Sexual Activity and Risky Sexual Behavior**

For purposes of the current investigation, sex is defined as voluntary sexual contact or sexual intercourse with another person, including oral, anal and/or genital (i.e., penis/vagina) touching. Thus, sex is considered a broader term that encompasses both sexual intercourse and other sexual activity. Sexual intercourse includes intercourse involving penis/anus and penis/vagina. Unfortunately, most of the literature on risky sexual behavior among adolescents refers to “sexual intercourse” without specifying penis/anus or penis/vagina. In the literature review that follows, if sexual intercourse is not clearly defined, it is because the study being described did not provide a specific definition.

LGB youth are more likely than heterosexual youth to report engaging in sexual intercourse (Blake et al., 2001; Coker, Austin, & Schuster, 2010; Cryan, Perry, Jiang, & Silvia, 2010; Goodenow, Szalacha, Robin, and Westheimer, 2008; Saewyc, 2011). An investigation using the Youth Risk Behavior Survey (YRBS)<sup>1</sup> among Rhode Island high school students found that LGB and unsure students were more likely to have recent sexual intercourse compared to heterosexual students (44% versus 31%, respectively; Cryan et al., 2010). Furthermore, in Saewyc’s (2011) review of large-scale population based studies on health disparities among adolescents, she found that sexual minority adolescents are just as likely or more likely than heterosexual adolescents to have ever had sexual intercourse. While these studies did not specify anal or vaginal intercourse, Remafedi’s (1994) study of 239 gay and bisexual male adolescent

---

<sup>1</sup> Many studies investigating health risk behaviors among adolescents use the Youth Risk Behavior Survey (YRBS). The Center for Disease Control and Prevention (CDC) developed this survey in 1990 to assess health risk behaviors that contribute markedly to the leading causes of death, disability, and social problems among youths and adults in the United States. NOTE: Sexual intercourse was not defined in these YRBS studies.

volunteers from community sites found that 68% of participants reported having anal sex during their lifetime and 42% reported having vaginal sex during their lifetime.

Not only are LGB youth more likely to engage in sexual intercourse as compared to heterosexual youth, but they also are more likely to initiate sexual intercourse before age 13 (i.e., early initiation; Coker et al., 2010; Garofalo et al., 1999a; Karki, Gasiorowicz, & Hollander, 2010; Saewyc, 2011). A study with an anonymous, representative sample of 4,159 Massachusetts public high school students using the YRBS concluded that LGB youth reported early initiation of sexual intercourse more frequently than heterosexual youth (Garofalo et al., 1999a). Similarly, research using the YRBS with 2,430 Wisconsin public high school students found that LGB youth were nearly four times more likely than heterosexual youth to have sexual intercourse before the age of 13 (23.8% and 6.4%, respectively; Karki et al., 2010).

A number of scholars found that LGB youth engage in more risky sexual behaviors than heterosexual youth (Blake et al., 2001; Bontempo & D'Augelli, 2002; Coker et al., 2010; Garofalo et al., 1999a; Saewyc, 2011). Specifically, Blake et al. (2001) concluded that, compared to heterosexual youth, LGB youth were significantly more likely to report more sexual partners. Similar to these findings, Goodenow et al. (2008) examined 3,973 sexually experienced adolescent females (i.e., participants reporting sexual contact with males, females, or both) from four successive waves of the Massachusetts YRBS and found that females who identified as lesbian, bisexual, or unsure or who had any same-sex sexual experience were at greater likelihood than heterosexual-identified females to report multiple lifetime and recent sexual partners. Moreover, studies (Cryan et al., 2010; Garofalo et al., 1999a) indicate that LGB youth are more likely than their heterosexual peers to have sexual intercourse with four or more partners. While findings are mixed, some studies indicate that LGB youth use alcohol or drugs

before sex more often than heterosexual youth (Blake et al., 2001; Maguen & Armistead, 2000). In Maguen & Armistead's (2000) study of 117 Southern gay, lesbian, and bisexual youth, 38% of LGB youth reported having sex after drinking alcohol in the past year while 19% reported having sex after using drugs in the past year. These rates are higher than those found in studies with general samples of youth which did not assess sexual orientation. However, Goodenow et al. (2008) found no statistically significant difference in heterosexual and LB female adolescents' use of substances prior to last intercourse. Differences in risky sexual behaviors may be explained by minority stress. The discrimination and minority-related stress LGB youth experience may be prompting them to engage in risky sexual activities as a means of satisfying sexual desires they have been told are inappropriate and as a means of feeling connected to others amidst widespread marginalization from their peers, family, and school.

Another indicator of risky sexual behavior is failure to use a condom during intercourse. Studies by Rosario, Hunter, & Gwadz (1994a, 1994b) revealed that LGB youth were inconsistent in their use of condoms or other barrier methods during sexual intercourse. Furthermore, some lesbian and bisexual female participants reported unprotected vaginal intercourse with their gay and bisexual male friends (Rosario et al., 1994b). Similarly, an investigation into 239 gay and bisexual male adolescents' sexual practices found that participants who engaged in intercourse often were less likely to use condoms consistently (Remafedi, 1994). While participants in this study were significantly more likely to report having male sexual partners than female sexual partners, participants were more likely to report never using condoms during vaginal sex as compared to anal sex. Moreover, Maguen & Armistead (2000) found that LGB adolescents in their sample reported unprotected anal sex (36%), unprotected vaginal sex (28%), and unprotected oral sex (79%). While Blake et al., (2001) concluded that LGB youth are not more

or less likely than heterosexual youth to use condoms during sex, a study of LGB and unsure high school students in Rhode Island using the YBRS found that LGB and unsure students were more likely than heterosexual students to engage in sex without a condom (56% versus 37%; Cryan et al., 2010). The decreased use of condoms and other barrier methods may be attributable to minority stress which causes LGB youth to devalue themselves and engage in risky health behaviors in response.

On a related note, although one study found that lesbian and bisexual female youth were as likely as heterosexual female youth to have engaged in intercourse, lesbian and bisexual female youth reported twice the rate of pregnancy as their heterosexual peers (12% and 5-6%, respectively; Saewyc et al., 1998a). Additionally, research throughout the United States in recent years has found that LGB and questioning youth are 2-10 times more likely to be involved in a pregnancy compared to heterosexual peers (Blake et al., 2001; Coker et al., 2010; Goodenow et al., 2008; Saewyc, 2011). These findings are consistent with what Troiden (1988) described as “heterosexual immersion,” when LGB youth try to cure themselves of their same-sex desire by fantasizing about and sexually engaging with opposite-sex partners. Perhaps in their attempts to determine if they are heterosexual or to prove to others that they are heterosexual, LGB youth are engaging in risky opposite-sex sexual experiences and thus, are more likely to be involved in a pregnancy.

In addition to the aforementioned risky sexual behaviors, having intercourse with a partner who has an STI, HIV, or who uses intravenous drugs is classified as a high risk sexual encounter. An investigation into sexual risk behaviors among a sample of LGB youth in New York City revealed that 23% of males and 21% of females had at least one high risk sexual encounter (Rosario et al., 1999). Moreover, research on LGB adolescents’ HIV risk acts found

that adolescents reported having partners who are at risk for HIV (Rosario, Hunter, & Gwadz, 1994a, 1994b). Likewise, a study on gay and bisexual male adolescents' HIV-related behaviors by Remafedi (1994) found that two-thirds of subjects engaged in behavior that placed them at high risk for HIV exposure. Furthermore, findings from an investigation on the prevalence of unprotected sex among Southern LGB youth indicate that 6% of subjects had a sexual partner who was an intravenous drug user, 7% had a sexual partner who was HIV-infected, 11% had an STI during their lifetime, and 34% had at least one anonymous partner (Maguen & Armistead, 2000). Finally, Saewyc et al. (2006) examined five cohorts of adolescents in the Pacific Northwest and found that in comparison to sexual nonminority youth, sexual minority youth had a significantly higher prevalence of all seven HIV risk behaviors (i.e., use of injection drugs, early initiation of sexual intercourse, number of recent sexual partners, number of lifetime sexual partners, condom use, STI diagnosis, and alcohol or drug use during last sexual intercourse).

Internalized homophobia may help explain LGB youth's increased likelihood of engaging in risky sexual encounters. Self-hatred and messages that their sexual desires are not "natural" or "normal" may cause LGB youth to act in ways that confirm these devaluing messages and place themselves at risk for sexually transmitted illnesses. Protective factors are critical to study in order to help prevent and reduce this risky sexual behavior.

### **Protective Factors**

While a number of factors may buffer LGB youth from engaging in risky sexual behavior, this study examines parental support and parental conversations about sex as protective factors. Research suggests that these protective factors may decrease the chance of LGB youth experiencing a number of negative outcomes, including risky sexual behavior.

**Parental Support.** Research investigating youth's parental relationships suggests that supportive, highly satisfying relationships with parents buffer youth from many negative outcomes, including engaging in sex and risky sexual behavior. While the vast majority of research on the association between parental relationships and youth's sexual behavior has focused on general populations of youth rather than LGB youth specifically, findings from these studies may suggest that LGB youth would benefit similarly from positive parental relationships.

Positive relationships with parents buffer youth from engaging in sex. Lammers, Ireland, Resnick, and Blum (2000) found that, among adolescents aged 13 to 18, believing adults or parents cared and high parental expectations were associated with lower levels of sexual activity. Moreover, findings from a study on teenagers' perceptions of maternal disapproval of sex indicate that teenagers who feel highly satisfied with their parental relationships are 2.7 times less likely to engage in sex as compared to teenagers who feel low satisfaction with their parental relationships (Dittus & Jaccard, 2000). This study also found that teenagers' parental relationship satisfaction was correlated with higher probability of using birth control if sex occurred and lower probability of pregnancy during the ensuing 12 months (Dittus & Jaccard, 2000). In relation, a report on teen behavior and the role of parental involvement by the Council of Economic Advisors (2000) found that 57.6% of teenagers who felt close to their mother and/or father had sex by the age of 17 to 19; whereas, 70.6% of teenagers who did not feel close to their mother and/or father had sex by the age of 17 to 19. Extending these findings to LGB youth, highly satisfying, close parental relationships in which LGB youth believe parents care may act as a buffer against high rates of sexual activity and risky sexual behavior.

A number of studies on LGB youth's parental relationships and risk behaviors other than risky sexual behavior indicate that parental support serves as a protective factor (D'Augelli,

2002, 2003b; Diamond et al., 2011; Eisenberg & Resnick, 2006; Espelage, Aragon, Birkett, & Koenig, 2008; Evans, Hawton, & Rodham, 2004; Floyd, Stein, Harter, Allison, & Nye, 1999; Hershberger & D'Augelli, 1995). Floyd et al. (1999) found that LGB adolescents who reported high levels of parental support, good communication, and emotional closeness with their parents had fewer depressive symptoms and less suicidality. Other studies have found similar results, such that LGB youth who have parental and peer support reported fewer mental health symptoms (D'Augelli, 2002, 2003b). Additionally, LGB students experiencing moderate levels of homophobic teasing and moderate to high levels of parental support endorsed significantly less depression-suicidal feelings and less alcohol-marijuana use (Espelage et al., 2008). These scholars also concluded that the combined effect of parental support and positive school climate protected LGB youth from depression and drug use (Espelage et al., 2008). Similarly, a number of studies have found that parental support moderated the negative effects of gay-related victimization for LGB youth (D'Augelli, 2003a; Evans et al., 2004; Hershberger & D'Augelli, 1995). Diamond et al. (2011) interviewed 10 sexual minority adolescents with clinically significant depressive symptoms and found that adolescents identified family support as a crucial buffer against outside negative forces.

In contrast, several studies have shown that family rejection and a lack of parental support increases LGB youth's likelihood of experiencing negative outcomes. Diamond et al. (2011) found that a number of adolescents in their study attributed their depressive symptoms to lack of family acceptance and family conflict related to their sexual orientation. Related to these findings, among a sample of 224 LGB young adults, those who experienced higher family rejection were 8.4 times more likely to attempt suicide, 5.9 times more likely to report high levels of depression, 3.4 times more likely to use illegal drugs, and 3.4 times more likely to

engage in unprotected sex in comparison to peers with no or low levels of family rejection (Ryan Huebner, Diaz, & Sanchez, 2009). Furthermore, a study by Remafedi, Farrow, and Deisher (1991) on gay and bisexual male adolescents' suicide risk factors found that dysfunction in the family was related to suicide attempt. Thus, parental support appears to buffer LGB youth from negative outcomes and risky behavior, while, lack of support and dysfunction in the family is related to negative outcomes, such as depression and suicide attempt.

Unfortunately, LGB youth often report less support from their parents than heterosexual youth (Eisenberg & Resnick, 2006; Karki et al., 2010; Williams et al., 2005). In a study of 97 LGB and questioning high school students, Williams et al. (2005) found that LGB adolescents reported less social support than heterosexual adolescents, both from family and from peers. In addition, a study of Wisconsin youth suggests that a lower percentage of LGB youth (73.1%) agree that they experience family love, help, and support when they need it as compared to heterosexual youth (86.3%; Karki et al., 2010). LGB youth's reported lack of social support may be related to lack of acceptance from their parents. Boxer, Cook, & Herdt (1991) studied parent-child relations among 200 LGB youth in Chicago and found that many youth intensely feared their father's reactions to their sexual orientation, and nearly 10% who disclosed to their fathers were kicked out of their home. Findings from this study also indicate that LGB youth's relationships with their mothers were significantly better than with their fathers, and youth disclosed their sexual orientation earlier and more often to their mothers than to their fathers (Boxer et al., 1991). Parental support and family acceptance are important protective factors, and Diaz and Ayala (2001) found family acceptance to be the most important protective factor against HIV infection in their study of Latino gay men. Given the importance of parental

relationships, parental support will be examined as a protective factor against risky sexual behavior among LGB youth in this study.

**Parental Conversations about Sex.** Research on parents' conversations with their LGB youth about sex is scarce. Studies on general populations of youth, without taking into account sexual orientation, indicate that parental communication with youth is protective against youth engaging in sex. Karofsky, Zeng, and Kosorok (2000) conducted a ten-year longitudinal study with 259 pediatric patients aged 12-21 at a teaching hospital in Wisconsin and found that the level of adolescent-parental communication was related to abstinence of sexual intercourse. These scholars found that a high level of communication with mothers was more closely related to abstinence than communication level with fathers; however, communication with parents decreased with adolescents' increasing age. Moreover, a study by Rose et al. (2005) examined the influence of parents on the sexual behavior of early adolescents among 408 adolescents in Washington D.C. These authors concluded that higher relationship quality and fewer barriers to communication served as protective factors against adolescents' expected level of sexual activity in the next 12 months. Considering LGB youth report less support from their parents and less satisfaction in their parental relationships, it is likely that smaller percentages of LGB youth discuss sex-based topics with their parents in comparison to the youth in the aforementioned studies. Furthermore, for those LGB youth who are not out to their parents, conversations about sex that their parents have with them most likely do not address their specific needs. For LGB youth who are out to their parents, conversations about sex may serve as a protective factor against risky sexual behavior. While protective factors for LGB youth's risky sexual behavior is an under-studied area, gender differences in LGB youth's risky sexual behavior is an additional area in need of research.

## **Gender Differences**

Gender differences exist in the coming out process for LGB men and women, such that women in general tend to begin the process later than men (Bell, Weinberg, & Hammersmith, 1981; Garofalo, Wolf, Wissow, Woods, & Goodman, 1999b; Grov et al., 2006). Scholars contend that this difference is due to men gaining awareness of their same-gender feelings at a younger age than women (Bell et al., 1981; Grov et al., 2006; Troiden, 1979). Given this difference in the coming out process, hypotheses can be formed regarding gender differences that may occur with regard to LGB youth's sexual activity. For example, LGB boys may have an earlier sexual debut and more sexual partners than their female counterparts due to experiencing the coming out process earlier.

The limited research on gender differences in LGB youth's risky sexual behavior is mixed. In Bontempo and D'Augelli's (2002) study of 119 lesbian, bisexual, and questioning (LBQ) female high school students and 196 gay, bisexual, and questioning (GBQ) male high school students using the YBRS in Massachusetts and Vermont, findings suggested that LGBQ males and females did not differ significantly on a sexual risk index assessing condom use and drug use before last intercourse. On the other hand, Saewyc, Bearinger, Heinz, Blum, and Resnick (1998b) did find gender differences in sexual health risk behavior among LGB youth in their study. These scholars separated their sample of 394 LGB youth into younger girls and boys (14 years or younger) and older girls and boys (15 years or older). While this study did not define sexual intercourse (i.e., anal or vaginal), it did assess the gender of participants' sexual partners. Among younger LGB girls and boys in this study, a greater percentage of boys had engaged in sexual intercourse as compared to girls. Interestingly, a significantly higher number of younger LGB girls had sexual experience with a male compared to the number of younger

boys who had a male partner, and a significantly higher number of younger LGB boys had sexual experience with a female compared to the number of younger girls who had a female partner. This heterosexual sexual experience may be explained by heterosexual immersion in which one attempts to extinguish his or her same-sex desires by engaging in sexual activity with opposite-sex partners (Troiden, 1988). Furthermore, among the sample of older LGB youth in this study, a greater percentage of girls than boys had a sexual debut at or before age 13. Significantly higher percentages of girls in both age groups experienced sexual abuse, and this may partially explain why a greater percentage of girls than boys in the older group had experienced sexual intercourse before age 13. However, overall, a greater proportion of LGB boys than girls in this study had sexual experience, and this is consistent with boys experiencing the coming out process at earlier ages than girls.

While there is little research on gender differences in LGB youth's risky sexual behavior, research exists on gender differences in other health risk behaviors among LGB youth. For example, a study of 154 LGB adolescents from LGB youth organizations in New York found that female adolescents were at greater risk of substance use and abuse as compared to male adolescents (Rosario, Hunter, & Gwadz, 1997). Rosario et al. (1997) hypothesized that this gender difference may result from LGB females experiencing more difficulty coping with stigma given that girls are socialized to avoid interpersonal conflict. With regard to other health risk behavior, Garofalo et al. (1999b) studied gender differences in lesbian, gay, bisexual, and "not sure" (LGBN) youth's suicide attempts and found that being male and GBN increased youth's risk of suicide attempt, but this trend was not present for LBN females. These scholars speculated that gender nonconformity, isolation, social rejection, and parental acceptance may impact sexual minority males differently than sexual minority females and therefore explain the

independent association between sexual orientation and suicide attempt for males. Taken together, there appears to be gender differences that exist in health risk behaviors among LGB youth; however, research is limited and the findings are mixed. Grov et al. (2006) argue that little research addresses demographic differences, such as gender, age, and racial diversity, within the LGB community, and that these differences are imperative to examine in order to inform public health practice and to meet the varying needs of the community.

Regarding gender differences in protective factors, the research in this area focuses on general samples of youth, without consideration of sexual orientation. A number of studies highlight gender differences in youth's parental relationships and parental communication (Dilorio, Kelly, & Hockenberry-Eaton, 1999; McNeely et al., 2002; Rose et al., 2005; Nolin & Petersen, 1992). A study by Dilorio et al. (1999) on youth aged 13-15 years old found that female youth were most likely to discuss sexuality issues with their mothers. Less than 20 percent of female youth discussed sexuality issues with their fathers, and compared to female youth, fewer male youth discussed sex-based topics with their parents (Dilorio et al., 1999). Similarly, a study of 84 mother-father-child triads from a metropolitan area found that parent-daughter communication about sexuality was more wide-ranging than parent-son communication (Nolin & Petersen, 1992). Furthermore, in comparison to daughters, sons had less communication within the family, fewer opportunities to discuss sexuality with their same sex parent, and fewer discussions related to topics that teach family values and norms about sexuality. Not surprisingly, sons in this study reported feeling less comfortable talking about sexuality within the family than did daughters. Reflecting on the qualitative data from their study, Nolin and Peterson (1992) concluded that the sexual socialization of fathers made it

difficult for them to talk to their sons and that a sexual double standard also may be contributing to the gender differences in family communication.

Not only does parental communication around sexuality appear to be different for girls and boys, but it is also differentially protective against sexual intercourse. McNeely et al. (2002) studied the maternal influence on timing of first sex among 2006 adolescents aged 14 and 15 years. Findings from this study suggest that mothers talked more often to their daughters about sex and birth control than to their sons, but mothers were consistent in their opposition to both sons and daughters being sexually active. McNeely et al. (2002) concluded that maternal factors were not protective for male adolescents' onset of sexual intercourse; however, maternal factors were influential with regard to female adolescent's onset of sexual intercourse. Rose et al. (2005) found somewhat similar results in their study of parental influence on the sexual behavior of adolescents. When parental relationship quality was at its lowest, girls were significantly more likely than boys to have sexual intercourse. On the other hand, girls were less likely than boys to engage in sexual intercourse as parental relationship quality improved. Rose et al. (2005) found a similar gender effect related to barriers to parental communication. They concluded that poor parental relationship quality and high barriers to parental communication made girls particularly vulnerable to sexual intercourse. These studies indicate that when parental support and communication are high, girls benefit more from these protective factors than boys. If these gender differences exist among LGB youth, it would indicate the need to identify additional protective factors for LGB boys. Overall, the literature suggests that gender differences exist in youth's risky sexual behavior and protective factors, and further research is needed to determine if these gender differences also exist among subsamples of LGB youth.

Research in this area will inform public health practice and how to address different needs within the LGB youth community.

### **Present Study and Hypotheses**

Because previous research suggests that LGB youth are more likely to engage in risky sexual behaviors as compared to heterosexual youth (Blake et al., 2001; Cryan et al., 2010; Maguen & Armistead, 2000), one purpose of this study is to examine whether differences in risky sexual behavior between sexually active heterosexual and LGB youth exist in a sample of Midwestern high school students. Furthermore, given the potential health concerns (e.g., STIs, HIV) associated with risky sexual behavior, it is important to determine protective factors that buffer LGB youth from engaging in this behavior. Thus, parental support and parental conversations about sex will be included as variables that potentially are related to a decrease in the likelihood of LGB youth's risky sexual behavior based on research that suggests these factors are related to fewer risk behaviors and negative outcomes among LGB youth (D'Augelli, 2002; Espelage et al., 2008). Given the scarcity of research on gender differences in sexual behavior among LGB youth (Groves et al., 2006), another purpose of this study is to explore gender differences in risky sexual behaviors among the subsample of LGB youth. Correspondingly, potential gender differences in protective factors related to risky sexual behavior also will be examined. Thus, this study aims to make contributions by addressing gaps in the literature in the areas of: (a) protective factors for sexually active LGB youth related to risky sexual behavior and (b) gender differences in risky sexual behavior among sexually active LGB youth.

Based on the limited amount of extant literature, the following hypotheses will be examined in the present study. Sexually active students who identify as LGB will report more partners who they do not know well (Garafolo et al., 1999a), more use of alcohol or drugs during

sex (Blake et al., 2001; Maguen & Armistead, 2000), and increased rate of unprotected sex as compared to heterosexual students (Remafedi, 1994). Sexually active LGB students also will report lower levels of parental support and fewer conversations with parents about sex in relation to sexually active heterosexual students (Williams et al., 2005). Moreover, it is hypothesized that parental support and parental conversations about sex will moderate the relationship between sexual orientation and risky sexual behavior (Floyd et al., 1999). In terms of gender differences, it is hypothesized that LGB boys will report more anonymous partners (Bell et al., 1981; Grov et al., 2006) while LGB girls will report more sexual activity under the influence of substances (Rosario et al., 1997) and more unprotected sex compared to LGB boys (Saewyc et al., 1998a). Finally, LGB girls are expected to report greater parental support and parental conversations about sex in comparison to LGB boys (Dilorio et al., 1999).

## Chapter 3: Methods

### Participants

The original sample of high school students included 9,716 participants. After 274 participants were removed from the sample for one or more missing pieces of demographic information, 9,442 were remaining. Next, sexually active participants were selected by examining a survey item related to sexual activity. Participants who reported ever having voluntary sexual intercourse (penis/vagina or penis/anal), ever having voluntary oral sexual contact (mouth/penis or mouth/vagina), and those that ever voluntarily engaged in sexual contact that included touching another person's penis or vagina with their hand were included in the sample. The resulting total was 3,899 sexually active high school students. Forty-eight participants who identified as Transgender, 77 participants who identified as Questioning, and four subjects who identified as age 12 or younger also were dropped from the sample. Transgender students face gender identity issues that are unique and different from some issues that LGB-identified students face, and questioning students also experience struggles that are different from those who self-identify as LGB. Due to the tendency of transgender and questioning students to have highly elevated responses on negative outcomes as compared to LGB students, these participants were excluded so as to provide a clearer picture of LGB-identified students' experiences. Further, participants 12 years and younger were excluded because they are not of traditional high school age and may skew the data. Of the remaining 3,762 participants, 248 identified as LGB. To obtain an equal sample of heterosexual students to compare to the LGB students, IBM SPSS Statistics 19.0 generated a random sample of 248 participants from the sexually active heterosexual students in the sample. Thus, the final sample

for the present study is composed of 496 sexually active high school students from a Midwestern U.S. public school district.

Participants completed a survey consisting of a wide range of questions related to their school experiences (bullying, grades, connection to school), parental support, and sexual behavior. Students were categorized into two groups: (a) youth who identified as lesbian, gay, or bisexual (LGB) and (b) youth who identified as not being LGB, and these participants were classified as heterosexual. Of this sample, 59.9% ( $n = 297$ ) of participants identified as female, and 40.1% ( $n = 199$ ) identified as male. The mean age of participants was 16.15 years of age ( $SD = 1.14$ ). Participants' ages ranged from 14-18, and heterosexual and LGB students' ages were significantly different, with heterosexual students being older (Heterosexual:  $M = 16.26$ ,  $SD = 1.13$ ; LGB:  $M = 16.04$ ,  $SD = 1.14$ ; See Table I). Because of age differences between LGB and heterosexual students, all variables were further compared with age. Significant differences in other demographic variables also existed for each sexual orientation group (e.g., Heterosexual: Female = 54.1%,  $n = 185$ , Male = 45.9%,  $n = 157$ ; LGB: Female = 68.7%,  $n = 235$ , Male = 31%,  $n = 106$ ). See Table I for additional descriptive data and frequencies by sexual orientation.

### **Measures**

The 2008 Dane County high school survey consisted of a wide range of established measures and single item indicators. Single item indicators were used in order to limit the number of survey items and in cases where the construct of interest is captured with one item. The anonymous youth survey consisted of 117 items, but only those items relevant to the present study will be included for analysis.

**Demographic questionnaire.** Participants were asked to complete a demographic questionnaire to obtain information about their age, grade in school, gender, racial or ethnic group, and participation in free or reduced-cost lunch.

**Sexual Orientation.** The following item was used to assess sexual orientation: “Do you identify yourself as any of the following? (Check all that apply).” The following options appeared after the stem: *Gay, Lesbian, Bi-sexual, Transgender, Questioning my sexual orientation, None of the above*. Participants who identified as *None of the above* comprised 50% ( $n = 248$ ) of the sample and will be referred to as *heterosexual*. Participants who identified as *Gay, Lesbian, or Bi-sexual* comprised 50% ( $n = 248$ ) of the sample and will be referred to as *LGB*. Students who identified as *Transgender, Questioning my sexual orientation*, or who did not respond were excluded from the sample. See Table II for detailed information on LGB participants’ sexual orientation self-identification.

**Risky Sexual Behavior.** Three items assess participants’ risky sexual behavior. Before these items participants are provided with a definition: “sex means VOLUNTARY sexual contact or sexual intercourse with another person including oral, anal and/or genital (penis/vagina) touching.” To determine the extent to which students are having sexual activity with strangers, participants were asked to respond to how many sexual partners they had that they just met or did not know well. The seven response options included *None ever* to *More than 10*, and this item will be referred to as “Stranger sex.” The second item reads: “Have you ever had sex with someone while under the influence of alcohol, marijuana or other drugs?” with four response options ranging from *No, never* to *Yes, all the time*. This item, which will be referred to as “Drug sex,” was included to assess for how often students are engaging in sexual activity under the influence of substances. The final item, referred to as “Unprotected sex,” asks

participants to respond to how often they use a barrier method such as condom or dental dam to protect against sexually related infections. The response choices ranged from *Always use* to *Never use*.

**Parental Support.** Six items assessed parental monitoring, love, and support. Before this six-item scale, the stem read: “My parents...” Example items included: “Set clear rules about what I can and cannot do; Have talked with me about my future plans; Love and support me.” Participants were asked to respond to these items using a Likert-type response format ranging from (1) *Strongly Disagree* to (4) *Strongly Agree*. Participants’ responses to this scale were averaged to calculate a total score for “parental support,” with higher scores representing greater parental monitoring, love, and support. The internal consistency estimates in the present study were  $\alpha = .81$  for heterosexual students and  $\alpha = .79$  for LGB students.

**Parental Conversations about Sex.** A three-item scale assessed conversations youth’s parents had with them regarding sex. Participants are asked to respond to “How often in the past 12 months have you had a good talk with your parents/guardians about any of the following: Postponing sexual activity; How to have a good relationship with boyfriend or girlfriend; About birth control or sexually transmitted infections.” Response options ranged from (1) *Never* through (4) *more than 4 times*. Responses on these items were averaged to create a “parental conversations” score with higher scores representing more frequent conversations with parents about sex. Reliability estimates for the present study were  $\alpha = .74$  for heterosexual students and  $\alpha = .73$  for LGB students.

## **Procedure**

Data were collected in 2008-2009, as part of a larger investigation of youth’s opinions, concerns, attitudes, behaviors, and experiences in order to provide information to educators,

service providers, parents, policy-makers, and funding bodies to be used for planning and development of youth programs and public policies. The Dane County Youth Assessment (DCYA) is a county-wide survey administered across all schools in the county as a collaborative project among the schools and several community organizations (e.g., United Way, Department of Human Services). The county is geographically diverse, ranging from small working farms to a large city. Approximately 16% to 58% of students across all of the schools received free or reduced-cost lunch. Students in 7-12<sup>th</sup> grades from 30 schools in Dane County, Wisconsin participated in the study by completing anonymous surveys during proctored sessions at school (collected via SurveyMonkey). Representatives from participating schools were trained to administer the survey. Each student's completion of the survey was voluntary and anonymous. At the beginning of the original study, a waiver of passive parental consent was employed. School administrators indicated that parents in this county often sign statements in the beginning of the year that their students will be asked to complete a wide range of surveys that will be used for educational and social planning. Parents were given information about the study and asked to sign the form and return it if they did not give consent for their student's participation. Additionally, child written assent was obtained prior to taking part in the proctored survey session. Students were asked to volunteer to complete the survey and were told that they could stop at any point if they did not feel comfortable or they could not participate at all. Researchers emphasized the voluntary and confidential nature of the investigation and that students could discontinue their participation at any point during the process without penalty. Students also were informed that they may refrain from responding to certain items. The response rate was very high, ranging from 90 to 95% across the 30 schools. The present study will focus on high

school students only (9-12<sup>th</sup> grades), specifically sexually active students who identify as LGB and as non-LGB (i.e., heterosexual).

## Chapter 4: Results

### Descriptive Statistics

Means, standard deviations, and intercorrelations among study variables measured on a continuous scale are reported by sexual orientation group in Table III. Sexual orientation differences in study variables are presented in subsequent sections.

### Hypothesis #1: Examining Differences in Risky Sexual Behaviors by Sexual Orientation

To test differences in Stranger sex, Drug sex, and Unprotected sex across sexual orientation groups, three chi-square analyses were computed. In order to streamline the reporting and interpretation of results for the Stranger sex item, some categories of responses with zeroes in them were collapsed to create fewer categories of responses. For example, the response categories of 5-6 partners, 7-8 partners, 9-10 partners, and 10 or more partners were collapsed into the category “5 or more partners.” Contrary to predictions, there was not a significant difference between LGB youth and heterosexual youth on the Stranger sex item,  $\chi^2(3, N = 490) = 6.18, p = .10, \phi_C = .11$  (See Table IV). One hundred fifty-two of 246 (61.8%) LGB participants reported never having Stranger sex; whereas, 176 of 244 (72.1%) heterosexual participants reported never having Stranger sex. Twenty-six percent of LGB participants reported having 1-2 partners they just met or did not know well compared to 18% of heterosexual participants. Smaller percentages of participants (4.5% of LGB youth and 3.3% of heterosexual youth) endorsed having 3-4 partners who they did not know well. Additionally, 7.7% of LGB participants indicated they had 5 or more partners on the Stranger sex item as compared to 6.6% of heterosexual participants. In order to determine if engagement in Stranger sex differs with age, a chi-square analysis was computed. No significant differences in Stranger sex were present across age categories,  $\chi^2(3, N = 489) = 13.39, p = .34, \phi_C = .10$ .

Similar to findings for Stranger sex, chi-square analysis revealed that the difference in Drug sex across LGB and heterosexual youth was not significant,  $\chi^2(3, N = 493) = 7.56, p = .06, \phi_C = .12$ . As shown in Table V, 53.0% of LGB youth reported never having Drug sex compared to 64.6% of heterosexual youth. While 23.6% of heterosexual participants reported having sex under the influence of substances “a few times,” 28.7% of LGB participants reported this frequency. Moreover, 15.0% of LGB youth endorsed having sexual activity “many” times under the influence, while only 9.3% of heterosexual youth reported engaging in this behavior “many” times. Small percentages of participants (3.2% of LGB youth and 2.4% of heterosexual youth) indicated they have Drug sex “all the time.” To test for differences in Drug sex across age, a chi-square analysis was calculated and a significant difference was found,  $\chi^2(3, N = 492) = 29.23, p = .00, \phi_C = .14$  (See Table VI).

Regarding the last risky sexual behavior item, Unprotected sex, chi-square analysis revealed significant differences across sexual orientation groups as well,  $\chi^2(3, N = 468) = 8.12, p = .04, \phi_C = .13$  (See Table VII). Similar to the Stranger sex item, response categories for this item were collapsed in cases where there were zeroes or very small percentages of participants in those categories. For example, “Most of the time” and “About half the time” were collapsed to create “Half the time or more,” and “Sometimes use” and “Rarely use” were collapsed to create “Occasionally use.” In response to how frequently they use barrier methods to prevent STIs, 30.4% of LGB youth and 42.0% of heterosexual youth indicated that they “Always use” barrier methods. Forty-five of 237 (19%) LGB participants compared to 42 of 231 (18.2%) reported using barriers “Half the time or more.” Further, 16.5% of LGB youth and 15.2% of heterosexual youth reported that they “Occasionally use” barrier methods to prevent STIs. Notably, a larger percentage of LGB participants (34.2%) than heterosexual participants

(24.7%) reported “Never” using barrier methods. A chi-square analysis to examine difference in barrier use across age was significant,  $\chi^2(3, N = 467) = 28.07, p = .00, \phi_C = .14$  (See Table VIII).

### **Hypothesis #2: Examining Differences in Protective Factors by Sexual Orientation**

A multivariate analysis of variance (MANOVA) was conducted to compare LGB and heterosexual students on the two protective factor scales: parental support and parental conversations about sex. The MANOVA indicated significant differences by sexual orientation,  $F(2, 483) = 11.39, p < .00, \eta^2 = .05$ . As hypothesized, LGB participants had significantly lower levels of parental support ( $M = 3.11, SD = 0.60$ ) than heterosexual participants ( $M = 3.33, SD = 0.55$ ),  $F(1, 484) = 17.45, p < .00, \eta^2 = .04$ . Differences by sexual orientation were not present for parental conversations about sex,  $F(1, 484) = 1.10, p = .30, \eta^2 = .00$  (See Table IX).

Additionally, a MANOVA was performed to test for differences in parental support and parental conversations about sex across age categories. Results of the MANOVA suggested that no significant differences in the protective factors were present across age categories,  $F(8, 958) = 1.10, p = .36, \eta^2 = .01$ .

### **Hypothesis #3: Examining Protective Factors as Moderators for Risky Sexual Behavior**

To determine if the protective factors (parental support and parental conversations about sex) moderate the relationship between sexual orientation and the three risky sexual behavior outcomes, a series of three logistic regressions were performed. In preparation for regression analysis, the independent variable, sexual orientation, was dummy coded (i.e., heterosexual = 0, LGB = 1). Next, responses on the three outcome variables, Stranger sex, Drug sex, and Unprotected sex, were dummy coded to reflect “low or no risk” (0) and “elevated risk” (1). For example, the Stranger sex response option “None ever” was coded as a zero, as was the Drug sex response option “No, never” and the Unprotected sex response option “Always use.” All other

response options to these items, which would indicate at least some sexual health risk, were coded as one to reflect an elevated risk of STI and/or unintended pregnancy.

Further, the moderator variables (i.e., parental support and parental conversations) were centered since they are measured on continuous scales (Aiken & West, 1991; Frazier, Tix, & Barron, 2004). Centering the moderator variables (i.e., placing them into deviation units by subtracting the sample means to produce revised sample means of zero) decreases problems related to multicollinearity (i.e., high correlations) among the variables in the regression equation (Cohen, Cohen, West, & Aiken, 2003; Frazier et al., 2004). To represent the interaction between the predictor and moderator variables, product terms were created by multiplying the newly coded predictor variable, sexual orientation, by the centered moderator variables (Frazier et al., 2004). Thus, there were two interaction terms due to the two moderator variables. The dummy-coded predictor and centered moderator variables were entered into the first block of the regression model along with age, and the two interaction terms were entered into the second block of the model. Three logistic regression analyses, one for each outcome variable, were conducted in IBM SPSS Statistics Version 19 (2011).

The first regression analysis tested whether parental support and parental conversations moderate the relationship between sexual orientation and Stranger sex. While the interaction between sexual orientation and parental conversations was nonsignificant, the interaction between sexual orientation and parental support was significant ( $\beta = .73, p < .05$ ; See Table X). For significant interactions in logistic regression, the odds ratio does not illustrate the nature of the interaction, so the interaction must be graphed in order to appropriately interpret the interaction. Based on the interpretation of the graph for this interaction (See Figure I), parental support buffered against the risk for Stranger sex, but it was less protective for LGB youth in

comparison to heterosexual youth. While the probability of engaging in sex with a stranger is greatest for heterosexual youth who have the lowest parental support, as parental support increases, the probability of engaging in sex with a stranger decreases significantly for heterosexual youth. As parental support increases for LGB youth, the probability of engaging in sex with a stranger also declines, but the decline is not as sharp as the decline for heterosexual youth.

Sexual orientation and parental support significantly predicted Stranger sex in the regression analysis (sexual orientation:  $\beta = .41, p < .05$ ; parental support:  $\beta = -.98, p < .00$ ). The odds ratios for these direct effects better illustrate what the coefficients represent. Significant odds ratios with values below one indicate that the independent variable reduces the odds of the dependent variable having a value of one (elevated risk of Stranger sex), and significant odds ratios greater than one indicate an increase in the odds of the dependent variable having a value of one. To calculate the percent change in the odds of the dependent variable having a value of one, the odds ratio can have one subtracted from it and then it can be multiplied by 100 (Crosnoe, Mistry, & Elder Jr., 2002). Thus, the odds ratio for sexual orientation ( $e^{\beta} = 1.50$ ) indicated that being LGB was associated with a 50% increase in the odds of engaging in Stranger sex. The odds ratio for parental support ( $e^{\beta} = .38$ ) suggested that for every unit increase in this variable (e.g., moving toward greater agreement that one's parents love and support them) was associated with a 62% decrease in the odds of having sex with a stranger. Parental conversations and age were nonsignificant in both steps of the analysis.

The next logistic regression analysis was conducted to determine if parental support and parental conversations about sex moderated the relationship between sexual orientation and Drug sex. This analysis did not produce significant interactions, indicating that neither parental

support nor parental conversations moderated the effect of sexual orientation on Drug sex. However, sexual orientation, age, and parental support had significant direct effects on the probability of engaging in sex under the influence of substances. As suggested by the odds ratio for sexual orientation ( $\beta = .42, p < .05, e^{\beta} = 1.52$ ), being LGB was correlated with a 52% increase in the odds of having Drug sex (See Table XI). Moreover, every year increase in age was related to a 43% increase in the odds of engaging in sex under the influence of substances ( $\beta = .36, p < .00, e^{\beta} = 1.43$ ). Additionally, the odds ratio for parental support ( $\beta = -.83, p < .00, e^{\beta} = .44$ ) denoted that every unit increase in this variable was associated with a 56% decrease in the odds of having sex under the influence of substances. The parental conversations scale was not a significant predictor of sex under the influence of substances.

In the last logistic regression analysis, parental support and parental conversations about sex were examined to determine if they moderate the relationship between sexual orientation and Unprotected sex. Similar to the interactions in the previous regression analysis, the interactions with Unprotected sex were not significant. In contrast to previous analysis, parental support and age were not significant predictors of Unprotected sex; however, sexual orientation was a significant predictor in both steps of the model (See Table XII). The odds ratio for sexual orientation ( $\beta = .55, p < .05, e^{\beta} = 1.73$ ) suggested that being LGB was associated with a 73% increase in the odds of engaging in sex without using barrier methods. Analogous to previous analyses, the Parental conversations scale was nonsignificant in this analysis as well. Further research is needed to determine the viability of this measure.

#### **Hypothesis #4: Examining Gender Differences in Risky Sexual Behavior**

In order to examine differences in Stranger sex, Drug sex, and Unprotected sex by both sexual orientation and gender, participants were categorized into four groups (i.e., LGB girls,

LGB boys, heterosexual girls, and heterosexual boys) and three chi-square analyses were performed. It should be noted that there were not equal numbers of participants in each of these groups due to the demographics of the sample and missing data for certain items. For each analysis, the subsample of LGB girls was  $n = 178$ , the subsample of LGB boys ranged from  $n = 68-69$ , the subsample of heterosexual girls ranged from  $n = 115-117$ , and the subsample of heterosexual boys was  $n = 129$ . Moreover, significant differences in age were not present across these four groups,  $F(3, 491) = 1.61, p = .19$ . As predicted, there was a significant difference between these groups on the Stranger sex item,  $\chi^2(9, N = 490) = 27.92, p = .00, \phi_C = .14$  (See Table XIII). Similar percentages of LGB boys, LGB girls, and heterosexual boys (57.4%, 63.5%, 65.1%, respectively) reported never engaging in Stranger sex and a larger percentage of heterosexual girls (80.0%) reported never engaging in Stranger sex. The LGB girls group had the highest percentage of participants (27.5%) who reported having 1-2 partners they just met or did not know well while heterosexual girls group had the lowest percentage of participants (14.8%) who reported this number of partners who were strangers. LGB boys and heterosexual boys had similar percentages of participants (22.1% and 20.9%, respectively) who reported having 1-2 partners they just met or did not know well. Small percentages of participants in each group reported having 3-4 partners who they just met or did not know well (LGB girls: 5.1%; LGB boys: 2.9%; heterosexual boys: 4.7%; heterosexual girls: 1.7%). In contrast, LGB boys had the highest percentage of participants (17.6%) that indicated they had 5 or more partners on the Stranger sex outcome. All other groups had considerably lower rates of participants who reported having 5 or more partners on this item (LGB girls: 3.9%; heterosexual boys: 9.3%; heterosexual girls: 3.5%).

Moreover, chi-square analysis suggested that the four sexual orientation x gender groups were not significantly different with regard to engaging in sexual activity under the influence of substances,  $\chi^2(9, N = 683) = 11.84, p = .22, \phi_C = .09$ . As shown in Table XIV, 62.0% of heterosexual boys, 67.5% of heterosexual girls, 59.4% of LGB boys, and 50.6% of LGB girls reported never having Drug sex. Twenty-four percent of heterosexual boys and 23.1% of heterosexual girls reported having sex under the influence of substances “a few times,” while 23.2% of LGB boys and 30.9% of LGB girls reported this frequency of sex under the influence. Further, 15.2% of LGB girls and 14.5% of LGB boys endorsed having sexual activity “many” times under the influence, whereas 10.1% of heterosexual boys and 8.5% of heterosexual girls, reported engaging in this behavior “many” times. Small percentages of participants (3.4% of LGB girls, 2.9% of LGB boys, 3.9% of heterosexual boys, and 0.9% of heterosexual girls) reported that they have Drug sex “all the time.”

With regard to Unprotected sex, chi-square analysis indicated no significant differences across sexual orientation x gender groups,  $\chi^2(9, N = 468) = 14.13, p = .12, \phi_C = .10$  (See Table XV). LGB girls had the smallest percentage of participants (28.3%) that reported “always” using barrier methods to prevent STIs while heterosexual boys had the largest percentage of participants (46.3%) that reported “always” using barrier methods. LGB boys and heterosexual girls had similar percentages of participants who reported always using barrier methods (35.9% and 37.3%, respectively). Across the four groups, similar percentages of participants reported using barrier methods half the time or more to prevent STIs (LGB girls: 17.9%; LGB boys: 21.9%; heterosexual girls: 18.2%; heterosexual boys: 18.2%). Furthermore, 17.9% of LGB girls, 12.5% of LGB boys, 19.1% of heterosexual girls, and 11.6% of heterosexual boys reported using barrier methods “occasionally” to prevent STIs. LGB girls had the highest percentage of

participants (35.8%) that responded “Never” using barrier methods. While heterosexual girls and boys had smaller percentages of participants who “Never” use barrier methods (25.5% and 24.0%, respectively), 29.7% of LGB boys also reported “Never” using barrier methods.

### **Hypothesis #5: Examining Gender Differences in Protective Factors**

A MANOVA was performed to compare means for the four sexual orientation x gender groups on parental support and parental conversations about sex. The MANOVA indicated significant differences across groups,  $F(6, 962) = 6.51, p < .00, \eta^2 = .04$ . Results suggested that the four groups were significantly different with regard to parental support,  $F(3, 482) = 5.85, p < .00, \eta^2 = .04$ . As displayed in Table XVI, Tukey HSD post hoc comparisons revealed that both LGB girls ( $M = 3.12, SD = 0.63$ ) and boys ( $M = 3.09, SD = 0.48$ ) had significantly lower levels of parental support than heterosexual girls ( $M = 3.34, SD = 0.55$ ) and boys ( $M = 3.32, SD = 0.55$ ). Difference across groups was also present for parental conversations about sex,  $F(3, 482) = 5.65, p < .00, \eta^2 = .03$ . Tukey HSD post hoc comparisons indicated that heterosexual boys ( $M = 1.59, SD = 0.68$ ) had significantly fewer parental conversations about sex in comparison to LGB girls ( $M = 1.78, SD = 0.79$ ) and heterosexual girls ( $M = 1.62, SD = 0.79$ ). Statistical analyses may not have been able to detect significant differences in this measure for LGB boys in comparison to LGB and heterosexual girls due to the smaller subsample size of LGB boys ( $n = 65$ ).

## **Chapter 5: Discussion**

The current investigation advances previous research on risky sexual behavior among LGB youth (Blake et al., 2001; Garofalo et al., 1999a; Maguen & Armistead, 2000; Remafedi, 1994; Rosario et al., 1999; Saewyc, 2011) and provides new information on how protective factors and gender differences may influence LGB youth's experiences with sexual risk-taking behavior. Findings suggest that LGB and heterosexual youth are more similar than different in their sexual risk-taking behavior and that most youth in this study did not engage in risky sexual behaviors. With regard to protective factors, one protective factor in particular, parental support, appears to differentially buffer against sex with strangers for heterosexual and LGB youth. Results also suggest that LGB boys' and girls' sexual risk-taking behaviors are very similar overall, but one important difference exists. Below, key findings from the present study are described and implications are discussed for research and practice with LGB youth.

### **Risky Sexual Behavior Differences by Sexual Orientation Group**

Findings suggest that most sexually active LGB and heterosexual youth do not engage in two of the three risky sexual behaviors (i.e., sex with strangers and sex under the influence of substances). Accordingly, there were no significant differences across LGB and heterosexual youth on the outcome related to having sex with a stranger. This finding is inconsistent with research that indicates elevated rates of sex with anonymous partners among LGB youth (Maguen & Armistead, 2000). However, Saewyc (2011) found that, in her review of literature on health disparities among LGB youth over the past decade, findings from studies exploring sexual risk behavior are largely mixed. The inconsistencies in the literature clearly indicate the need for additional research in this area. This study investigated differences in sexual risk behavior among sexually active high school students, not all high school students, which may

explain why no difference was found in the stranger sex outcome across sexual orientation groups. Many health disparity studies examine sexual risk behavior among all students, regardless of their status as sexually active. Because a higher percentage of LGB students are sexually active as compared to heterosexual students, the differences between these groups on sexual behavior outcomes tend to be artificially inflated when studies include students who are not sexually active. Perhaps some sexual risk behavior differences are reduced or disappear when similar (i.e., sexually active) groups of LGB and heterosexual students are compared. Given differences in age across LGB and heterosexual participants, age was examined for the outcome related to sex with strangers; however, no significant differences were present across age groups. Other demographic factors besides age may be more influential with regard to the likelihood of having sex with a stranger.

Similarly, there were no significant differences across sexual orientation groups with regard to sex under the influence of substances. This finding contrasts previous research that indicates LGB youth have greater substance use compared to heterosexual youth (Rosario et al., 1997) and research that indicates LGB youth are more likely to engage in sex under the influence of substances as compared to heterosexual youth (Blake et al., 2001; Maguen & Armistead, 2000). Perhaps LGB youth are not at as great a risk for health risk behavior as they were in previous years. With more Gay Straight Alliances (GSAs) in high schools and greater attention to the needs of LGB students, they may have healthier coping strategies for the discrimination and oppression that they are faced with and be less likely to engage in health risk behaviors. Additionally, as aforementioned, it is possible that problematic research methodology contributed to the pathologization of LGB students in prior studies related to their rates of health risk behavior. The finding that most LGB and heterosexual youth in this study were not

engaging in risky sexual behavior may be viewed as a strength and may suggest that LGB and heterosexual youth are more similar than different with regard to their rates of risky sexual behavior.

While there were not significant differences in rates of sex under the influence of substances across sexual orientation groups, there were significant differences across age groups. The findings suggested that 17 and 18 year olds are more likely than youth ages 14-16 to engage in sex under the influence of substances. Perhaps 17 and 18 year olds who have gained the ability to drive and increased independence associated with this milestone have more opportunities to engage in risky sexual behavior than younger youth. Additionally, 17 and 18 year olds have more opportunities to work since they are of legal working age, and this may expose them to older individuals who have access to substances and who are more likely to engage in sex under the influence of substances.

Notably, LGB youth were significantly less likely than heterosexual youth to use barrier methods to prevent STIs. LGB youth were more likely to never use protection during sex while heterosexual youth were more likely to always use protection during sex. While research on LGB youth's barrier use is mixed, this finding supports previous research that indicates LGB youth use barrier methods less frequently than heterosexual youth (Cryan et al., 2010) and research that indicates LGB youth are more likely than heterosexual youth to be involved in an unintended pregnancy (Blake et al., 2001; Coker et al., 2010; Goodenow et al., 2008; Saewyc, 2011). Risky sexual behavior among LGB youth such as unprotected sex resulting in teen pregnancy has been directly linked to exposure to stigma and discrimination (Saewyc, 2011). Because the minority stress LGB youth experience is directly related to their sexual orientation and sexuality, sexual encounters may elicit greater anxiety and distress for LGB youth than what

is experienced by heterosexual youth during sexual encounters. Research on stress, attention, and performance indicates that a great deal of stress results in limited ability to focus attention and in degradation of one's performance (Chajut & Algom, 2003; Lehner, Seyed-Solorforough, O'Connor, Sak, & Mullin, 1997). As a result of their elevated distress, LGB youth may have fewer cognitive resources to attend to all aspects of the sexual encounter, such as using barrier methods to prevent STIs and unintended pregnancy.

Similar to differences by age in sex under the influence of substances, there were also differences across age groups in likelihood of engaging in unprotected sex. Interestingly, 15 year olds were more likely than any other age group to report never using barrier methods to prevent STIs. Additional research is warranted to replicate these findings and to determine what changes are occurring from ages 14 to 15 that may contribute to the increase in unprotected sex. Given the aforementioned disparity in unprotected sex for LGB youth, protective factors must be examined in order to promote sexual health among LGB youth.

### **Protective Factor Differences by Sexual Orientation Group**

As hypothesized, LGB participants reported significantly less parental support than heterosexual participants. While this finding is not surprising given previous research that suggests this trend (Williams et al., 2005), it is unfortunate given the added stigma and stress LGB youth experience. The decreased parental support combined with minority stress likely compounds the health risk behavior LGB youth experience. Though heterosexual youth were more likely to report parental support, this protective factor may still buffer risky sexual behavior for those LGB youth who receive parental support. While LGB and heterosexual youth differed significantly on parental support, there was no significant difference on the parental conversations about sex measure. Due to the mostly nonsignificant findings accompanying this

measure, additional research is needed to determine the appropriateness of this measure's use and how it may be improved upon. Further, there were no differences in parental support and parental conversations about sex across age groups, suggesting that this demographic factor has little relationship with these protective factors. Perhaps parental protective factors remain relatively constant as youth age, while other demographic factors such as sexual orientation and gender have a greater influence on the degree of parents' support and involvement.

### **Protective Factors and Moderation**

The moderator effects of the protective factors were mixed. Parental support significantly moderated the relationship between sexual orientation and the probability of having sex with a stranger, and the effects of parental support were more protective for heterosexual youth than for LGB youth. Interestingly, heterosexual youth with the lowest levels of parental support were most likely to engage in sex with a stranger. However, for heterosexual youth, as parental support increased, the probability of engaging in sex with strangers decreased significantly. For LGB youth, this pattern held but was less dramatic given that LGB youth with low parental support had lower probability of engaging in sex with a stranger in comparison to heterosexual youth. Thus, for heterosexual youth, parental support appears to be a key factor related to risk of having sex with a stranger; whereas, for LGB youth, parental support is less influential with regard to risk of having sex with a stranger.

Minority stress may account for the difference in parental supports' protectiveness against sex with strangers for LGB youth as compared to heterosexual youth. While parental support may be protective against typical stressors high school students face during this time of their development, it may be less protective against complex, pervasive forms of stress such as the minority stress LGB youth face. The minority stress (i.e., internalized homophobia, stigma,

prejudice events) LGB youth experience may cause them to internalize expectations of rejection (Kelleher, 2009). In order to minimize the chance of rejection, LGB youth may choose to engage in sexual experiences with strangers who they have less chances of being rejected by, and who they can avoid seeing again, further minimizing their chances of rejection. Given that heterosexual youth do not experience minority stress related to their sexual orientation, they experience fewer forms of stress preceding and during their sexual encounters. For this reason, parental support may be less protective against sex with strangers for LGB youth than for heterosexual youth. Additionally, this study examined non-specific parental support; thus, if the parental support being measured in this study was specifically related to sexual orientation, minority stress, or sexual health, it may have been more protective against sexual risk behavior for LGB youth than non-specific parental support.

With regard to sex under the influence of substances, neither parental support nor parental conversations about sex moderated the relationship between sexual orientation and this outcome. The lack of significant findings may be related to the difficulty in detecting moderation in survey studies. On the other hand, youth who engage in one risk behavior are likely to engage in additional risk behaviors (Jessor, 1991), and parental factors alone may not provide enough protection against complex risk-taking behavior. While the direct effect of parental support on sex under the influence of substances was significant, the effects were not dramatic (i.e., two-fold or greater decrease in odds). This finding suggests that various protective factors combined with parental factors may be necessary to buffer against the combination of substance use and sexual activity. In this case, parental support and parental conversations about sex might not be appropriate protective factors for sex under the influence of substances.

Similarly, the moderator effect of parental support on the relationship between sexual orientation and unprotected sex was not significant. Parental support had no significant direct effect on the probability of having unprotected sex. As previously mentioned, this finding may be explained by the lack of specificity in the type of parental support measured by this study. Parental support specifically related to sexual health or sexual orientation may have been more protective against youth's rates of unprotected sex as compared to non-specific parental support. Moreover, perhaps other factors, such as peer culture and pressure from sexual partners, are more influential on youth's likelihood of using barrier methods than parental love and support. Findings suggested that LGB youth were nearly twice as likely as heterosexual youth to engage in unprotected sex. Given the substantial health risks accompanying unprotected sex, this finding highlights the need for additional research examining protective factors that buffer against unprotected sex among LGB youth. Findings suggested that LGB youth were nearly twice as likely as heterosexual youth to engage in unprotected sex. Additional research is necessary to determine additional factors besides sexual orientation that may be related to youth's likelihood of having unprotected sex.

Regarding the finding that parental support buffered against sex with strangers but did not buffer against sex under the influence of substances or unprotected sex, youth's level of connectedness and quality of relationships may explain this difference. Sex with a stranger is the only outcome in this study that specifies the kind of relationship, or lack thereof, that the youth has with their sexual partner. Neither sex under the influence of substances nor unprotected sex specifies the degree of connectedness that the youth has with their sexual partner. However, because the outcome of sex with strangers refers to having sex with someone that the youth just met or does not know well, this may explain why parental support (i.e., feeling loved, supported,

and connected to one's parents) buffered against this outcome as compared to the other two risky sexual behavior outcomes. Feeling connected to and supported by one's parents appears to be important with regard to engaging in risky behavior with strangers.

Unlike parental support, parental conversations about sex was not a significant moderator for any of the three risky sexual behaviors, and in each regression model its direct effects were nonsignificant. Given that the quality and content of the conversations parents have with their children about sex is unknown, and it also is unknown whether parents of LGB children are talking to them about issues unique to same-gender relationships, it is not surprising that this variable did not buffer health risk behaviors in the way it was hypothesized. Further research is needed to attend to the validity of this variable and to gather detailed information about quality and content of parental conversations in order to make more informed conclusions.

### **Risky Sexual Behavior Differences by Gender**

In contrast to previous research, there were gender differences in only one of the three risky sexual behaviors. For the outcome related to having sex with strangers, there was a significant gender difference such that LGB girls were more likely to report never having sex with strangers while LGB boys were more likely to report having five or more sexual partners who were strangers. This finding supports research that boys tend to engage in the coming out process earlier than girls and therefore have more sexual partners during adolescence as compared to girls (Bell et al., 1981; Grov et al., 2006). Provided that minority stress, particularly internalized homophobia, tends to be at its highest early on in the coming out process, LGB boys in high school likely experience greater levels of minority stress than LGB girls in high school who become aware of their sexual orientation later and come out later in life. This difference in minority stress level may also explain the gender difference in number of anonymous sexual

partners. LGB boys may be motivated by fear and rejection to have sexual experiences with strangers rather than acquaintances or friends. Public health educators might direct additional efforts toward LGB boys to educate them about how to safely “hook up” and thereby decrease their risk of STIs and promote their sexual health. Further research is needed to verify this finding and to determine if this gender difference would change with equal sample sizes of LGB girls and boys.

Regarding sex under the influence of substances, there were no significant differences across the four sexual orientation and gender groups. The lack of differences between LGB girls and boys with regard to sex under the influence of substances contrasts with prior research which indicated LGB girls were more likely to use substances compared to LGB boys (Rosario et al., 1997). This finding highlights the similarities among sexually active youth, across both sexual orientation and gender. The majority of youth did not engage in sex under the influence of substances, suggesting that this may not be as much of a concern as has been raised by previous research. Future research may investigate the process by which sexually active youth choose to engage in or not engage in sex under the influence of substances so as to learn what factors contribute to youth engaging in this health risk behavior and how educators might intervene to prevent it.

For the last risky sexual behavior, unprotected sex, LGB girls and boys were not significantly different from one another. However, LGB girls were considerably more likely to report never using barrier methods during sex as compared to heterosexual boys and girls. Research suggests that LGB youth are more likely to be involved in a pregnancy as compared to heterosexual youth (Blake et al., 2001; Coker et al., 2010; Goodenow et al., 2008; Saewyc, 2011). It is possible that some LGB girls and boys in this study are engaging in unprotected sex

with one another, as has been found in previous research (Rosario et al., 1994b). Provided the health risks associated with unprotected sex and the potential psychological consequences of forced sexual contact, STIs, and unintended pregnancy, LGB girls and boys would benefit from prevention and intervention efforts aimed at promoting barrier use and assertiveness training on how to advocate for safe sex. Taken together, these findings suggest that LGB girls and boys are more similar than different in their sexual risk-taking behavior, but LGB boys are at greater risk of having sex with partners they just met or do not know well.

### **Protective Factor Differences by Gender & Sexual Orientation Group**

Gender differences were present for both of the protective factors. Regarding parental support, LGB boys and girls reported significantly less support than heterosexual boys and girls, but there were no significant differences between LGB boys and girls. This finding highlights the need for additional supports and protective factors in LGB youth's lives given that they often do not receive as much support from home as heterosexual youth do. Interestingly, heterosexual boys reported significantly fewer parental conversations about sex than both LGB and heterosexual girls; however, LGB boys were not significantly different from other groups on this protective factor. Given the significantly smaller sample of LGB boys ( $n = 65$ ) in comparison to other groups, the statistical analyses may not have been able to detect a difference on this measure. Further research is warranted to determine if LGB boys are similar to heterosexual boys with regard to parental conversations about sex. This gender difference finding is consistent with prior research on general populations of boys and girls, without regard to sexual orientation, which found that girls tend to report greater parental conversations than boys (Dilorio et al., 1999). These gender differences may be explained by the way boys and girls are socialized and by the tendency of children to receive information about their sexuality from their

same gender parent, with fathers feeling less comfortable discussing these topics than mothers (Nolin & Petersen, 1992). Additionally, parents may be more concerned with talking to their daughters about sex due to the risk of them becoming pregnant. More research is needed to address potential protective factors for LGB youth to help buffer against the minority stress and health behavior inequities they experience.

## **Chapter 6: Limitations and Implications**

### **Limitations and Directions for Future Research**

While results from this study provide initial evidence that differences in protective factors for risky sexual behavior exist across LGB and heterosexual youth and that gender differences in risky sexual behavior exist among LGB youth, there are several limitations. Participants in the sample were from predominantly white high schools in Wisconsin, and their results may not be generalizable to samples in other geographic regions. Therefore, future research should attempt to draw samples from multiple high schools across a range of geographic regions. Furthermore, there were significantly more females in this sample as compared to males, which may affect the generalizability of these results and also may impact the significance of the gender differences found in this study. Future research should attempt to include equal subsamples of females and males.

Because few studies compare gender differences within LGB youth samples, and because this study did not include equal subsamples of LGB females and males, additional research is needed to determine if the results in this study are replicated in other samples of LGB female and male high school students. In addition, this study included only one measure of sexual orientation (i.e., self-identification), which limits the conclusions that can be drawn with regard to LGB youth's sexual activity. Future research should attempt to measure sexual orientation in multiple ways (i.e., self-identification, gender of sexual partners, etc.) in order to gain a more complex understanding of LGB youth's sexual behavior and whether their behavior is with same-gender or opposite-gender partners. Additionally, sexual orientation was measured by asking participants if they identified as lesbian, gay, transgender, questioning (LGBTQ) or "None of the above," and participants who identified as "None of the above" were categorized as

heterosexual. However, participants who identify as queer, pansexual, or other non-heterosexual identities may have selected “None of the above,” and thus, this is an additional limitation to the generalizability of this sample. Because questioning and transgender youth were excluded from this study, future research should explore the sexual behavior of these groups to determine how they may be similar to and different from LGB youth’s sexual behavior.

Moreover, future research is needed to determine the viability of including the Parental Conversations about Sex scale in survey research. This three-item measure had largely nonsignificant findings. This measure may be improved upon by adding additional questions or replacing items, but additional research is needed to determine the best course of action for this scale. Finally, several analyses in this study had low effect sizes. Incorporating multiple responses for the categorical variables and comparing across a number of groups may contribute to lower effect sizes when the actual difference in the outcome is limited to a small subset of comparisons in the analysis. In addition, because sexual risk behavior is a complex behavior that is influenced by a number of factors, sexual orientation and gender might be two contributors among many that account for this behavior. Thus, this study may not have measured all possible factors contributing to sexual risk behavior among high school youth. Additional research that includes multiple possible contributing factors to sexual risk behavior is warranted in the future.

Several points may be addressed by future research. Mixed methods studies have the potential to contribute a richer and multifaceted picture of protective factors and gender differences in LGB youth’s sexual activity beyond what can be achieved with quantitative methods alone. For example, mixed method investigation would allow a deeper understanding of the process of how protective factors buffer against risky sexual behavior for LGB youth. Further investigation into how LGB boys’ and girls’ sexual behavior is similar to and different

from one another would allow a better understanding of the different needs among LGB high school students and how public health educators might address these gender differences in their prevention and intervention efforts. Furthermore, examining additional protective factors for risky sexual behavior and how these may be different for LGB boys and girls may shed light on how to address their varying needs and where to specifically target limited resources available in their communities.

### **Implications for Public Health Educators**

Findings from the present study have important implications for public health educators and school counselors. LGB and heterosexual youth engaged in sex with strangers and sex under the influence of substances at similar rates; however, LGB youth were significantly more likely to engage in unprotected sex as compared to heterosexual youth. Furthermore, results from this research suggest that LGB girls and boys are more similar than different in their sexual risk-taking behavior; however, one important gender difference warrants attention from educators and counselors.

Because LGB youth are more likely to engage in unprotected sex, they also are more likely to contract STIs and to be part of an unintended pregnancy. Public health educators might intervene with programming that promotes barrier use and assertiveness training for LGB youth given their higher rates of unprotected sex. Additionally, educators might seek to prevent risky sexual behavior among sexually active youth, both LGB and heterosexual, by creating programming that teaches youth how to have healthy, safe sex and healthy coping strategies instead of using substances. Given that the majority of LGB and heterosexual youth did not engage in sex with strangers and sex under the influence of substances, educators might examine

the strengths and resources that prevented these youth from engaging in risky sexual behavior so as to promote these factors among general populations of youth.

In particular, a gender difference in LGB youth's risky sexual behavior suggests that boys may be more likely than girls to contract an STI. LGB boys are more likely than LGB girls to engage in sex with partners they just met or do not know well, and sexual activity with anonymous sexual partners increases the chances that a youth will contract an STI or be the victim of assault (Maguen & Armistead, 2000). Often, youth who engage in sex with strangers do not know their partner's sexual health history and whether their partner uses injection drugs. Additionally, youth who engage in sex with partners they do not know may be subject to forced sexual contact; therefore, public health educators should be aware of this concern with sexually active LGB boys and direct efforts at teaching them how to be safe during their sexual encounters. For example, programs could be implemented that provide barrier methods to sexually active LGB boys and that describe ways they can plan ahead and advocate for safe sex when engaged in sexual encounters.

Another avenue through which public health educators may seek to intervene is through the parents of LGB youth. Public health educators should encourage positive, supportive relationships among LGB youth and their parents, as this may serve as a buffer against youth engaging in risky sexual behavior. They also might investigate additional protective factors that safeguard LGB youth against engaging in risky sexual behavior. Regarding the high school context, school counselors working with LGB youth should attend to creating a safe and open environment where youth can talk about their sexuality and ask questions they may have. Support from trusted adults at school may bolster parental support from home to further buffer LGB youth against engaging in risky sexual behavior. Given the constant minority stress that

LGB youth have to contend with (Meyer, 1995, 2003), school counselors may also focus their efforts on developing a safe space, such as a support group, where LGB youth can connect with one another to receive the support they may not be receiving at home. Public health educators could partner with school counselors to help create safe environments for LGB youth to connect with peers in healthy ways and to implement ongoing programs aimed at deterring risky sex and promoting barrier use.

## References

- Aiken, L. S. & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.
- Allison, K. W. (1998). Stress and oppressed social category membership. In J. K. Swim & C. Stangor (Eds.), *Prejudice: The target's perspective* (pp. 145-170). San Diego, CA: Academic Press.
- Allport, G. W. (1954). *The nature of prejudice*. Reading, MA: Addison-Wesley.
- Bass, E., & Kaufman, K. (1996). *Free your mind: The book for gay, lesbian and bisexual youth and their allies*. New York: Harper Collins.
- Bell, A. P., Weinberg, M. S., & Hammersmith, S. K. (1981). *Sexual preference: Its development in men and women*. Bloomington, IN: Indiana University Press.
- Blake, S. M., Ledsky, R., Lehman, T., Goodenow, C., Sawyer, R., & Hack, T. (2001). Preventing sexual risk behaviors among gay, lesbian, and bisexual adolescents: the benefits of gay-sensitive HIV instruction in schools. *American Journal of Public Health, 91*, 940-946.  
doi:10.2105/AJPH.91.6.940
- Bontempo, D. E., & D'Augelli, A. R. (2002). Effects of at-school victimization and sexual orientation on lesbian, gay, or bisexual youths' health risk behaviors. *Journal of Adolescent Health, 30*, 364-374. doi:10.1016/S1054-139X(01)00415-3
- Boxer, A. M., Cook, J. A., & Herdt, G. (1991). Double jeopardy: Identity transitions and parent-child relations among gay and lesbian youth. In K. Pillemer & K. McCartney (Eds.), *Parent-child relations throughout life*. (pp. 59-92). Hillsdale, NJ: Erlbaum.
- Briskin, L. (1994). *Feminist pedagogy: Teaching and learning liberation*. Ottawa, ON: CRIAW/ICREF.

- Brooks, V. R. (1981). *Minority stress and lesbian women*. Lexington, MA: Lexington Books, D. C. Health and Co.
- Cass, V. C. (1984). Homosexual identity formation: Testing a theoretical model. *The Journal of Sex Research*, 20, 143-167. doi:10.1080/00224498409551214
- Chajut, E., & Algom, D. (2003). Selective attention improves under stress: Implications for theories of social cognition. *Journal of Personality and Social Psychology*, 85, 231-248.
- Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences* (3<sup>rd</sup> Ed.). Mahwah, NJ: Erlbaum.
- Cohen, S., Evans, G. W., Stokols, D., & Krantz, D. S. (1986). *Behavior, health, and environmental stress*. New York: Plenum Press.
- Coker, T. R., Austin, S. B., & Schuster, M. A. (2010). The health and health care of lesbian, gay, and bisexual adolescents. *Annual Review of Public Health*, 31,457-477. doi:10.1146/annurev.publhealth.012809.103636
- Cole, S. W., Kemeny, M. E., Taylor, S. E., & Visscher, B. R. (1996). Elevated physical health risk among gay men who conceal their homosexual identity. *Health Psychology*, 15, 243-251. doi:10.1037/0278-6133.15.4.243
- Coleman, E. (1982). Developmental stages of the coming out process. *Journal of Homosexuality*, 7, 31-43. doi:10.1300/J082v07n02\_06
- Council of Economic Advisors. (2000). *Teens and their parents in the 21<sup>st</sup> century: An examination of trends in teen behavior and the role of parental involvement*. Washington, D.C.: The White House.

- Crocker, J., Major, B., & Steele, C. (1998). Social stigma. In D. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (4<sup>th</sup> ed., pp. 504-553). Boston: McGraw-Hill.
- Crosnoe, R., Mistry, R. S., & Elder, G. H., Jr. (2002). Economic disadvantage, family dynamics, and adolescent enrollment in higher education. *Journal of Marriage and the Family*, *64*, 690-702. doi:10.1111/j.1741-3737.2002.00690.x
- Cryan, B., Perry, D., Jiang, Y., & Silvia, A. M. (2010). *'Youth-at-risk' – 2009 Sexual orientation and health risks: RI public high school students*. Providence, RI: Rhode Island Department of Health.
- D'Augelli, A. R. (2002). The cutting edges of lesbian and gay psychology. In A. Coyle & C. Kitzinger (Eds.), *Lesbian and gay psychology: New perspectives* (pp. xiii-xvi). London: British Psychological Society/Blackwell.
- D'Augelli, A. R. (2003a). Lesbian and bisexual female youths aged 14 to 21: Developmental challenges and victimization experiences. *Journal of Lesbian Studies*, *7*, 9-29.
- D'Augelli, A. R. (2003b). Mental health problems among lesbian, gay, and bisexual youths ages 14 to 21. *Clinical Child Psychiatry and Psychiatry*, *7*, 439-462.
- Dessel, A. B. (2010). Effects of intergroup dialogue: Public school teachers and sexual orientation prejudice. *Small Group Research*, *41*, 556-592.  
doi:10.1177/1046496410369560
- Diamond, G. M., Shilo, G., Jurgensen, E., D'Augelli, A., Samarova, V., & White, K. (2011). How depressed and suicidal sexual minority adolescents understand the causes of their distress. *Journal of Gay & Lesbian Mental Health*, *15*, 130-151.  
doi:10.1080/19359705.2010.532668

- Diaz, R. M., & Ayala, G. (2001). *Social discrimination and health: The case of Latino gay men and HIV risk*. New York, NY: Policy Institute, National Gay & Lesbian Task Force.
- Diaz, R. M., Ayala, G., Bein, E., Henne, J., & Marin, B. V. (2001). The impact of homophobia, poverty, and racism on the mental health of gay and bisexual Latino men: Findings from 3 U.S. cities. *American Journal of Public Health, 91*, 927-932.  
doi:10.2105/AJPH.91.6.927
- Dilorio, C., Kelley, M., & Hockenberry-Eaton, M. (1999). Communication about sexual issues: Mothers, fathers and friends. *Journal of Adolescent Health, 24*, 181-189.  
doi:10.1016/S1054-139X(98)00115-3
- DiPlacido, J. (1998). Minority stress among lesbians, gay men, and bisexuals: A consequence of heterosexism, homophobia, and stigmatization. In G. M. Herek (Ed.), *Stigma and sexual orientation: Vol 4. Understanding prejudice against lesbians, gay men, and bisexuals* (pp. 138-159). Thousand Oaks: Sage.
- Dittus, P. J., & Jaccard, J. (2000). Adolescents' perceptions of maternal disapproval of sex: Relationship to sexual outcomes. *Journal of Adolescent Health, 26*, 268-278.  
doi:10.1016/S1054-139X(99)00096-8
- DuRant, R. H., Kahn, J., Beckford, P. H., & Woods, E. R. (1997). The association of weapon carrying and fighting on school property and other health risk and problem behaviors among high school students. *Archives of Pediatric Adolescent Medicine, 151*, 360-366.
- Eisenberg, M. E., & Resnick, M. D. (2006). Suicidality among gay, lesbian and bisexual youth: The role of protective factors. *Journal of Adolescent Health, 39*, 662-668.  
doi:10.1016/j.jadohealth.2006.04.024

- Espelage, D. L., Aragon, S. R., Birkett, M., & Koenig, B. W. (2008). Homophobic teasing, psychological outcomes, and sexual orientation among high school students: What influence do parents and schools have? *School Psychology Review, 37*, 202-216.
- Evans, E., Hawton, K., & Rodham, K. (2004). Factors associated with suicidal phenomena in adolescents: A systematic review of population based studies. *Clinical Psychology Review, 24*, 957-979. doi:10.1016/j.cpr.2004.04.005
- Floyd, F. J., Stein, T. S., Harter, K. S. M., Allison, A., & Nye, C. L. (1999). Gay, lesbian, and bisexual youths: Separation-individuation, parental attitudes, identity consolidation, and well-being. *Journal of Youth and Adolescence, 28*, 719-739.  
doi:10.1023/A:1021691601737
- Frazier, P. A., Tix, A. P., & Barron, K. E. (2004). Testing moderator and mediator effects in counseling psychology research. *Journal of Counseling Psychology, 51*, 115-134.  
doi:10.1037/0022-0167.51.1.115
- Friedman, M. S., Marshal, M. P., Guadamuz, T. E., Wei, C., Wong, C. F., Saewyc, E. M., & Stall, R. (2011). A meta-analysis of disparities in childhood sexual abuse, parental physical abuse, and peer victimization among sexual minority and sexual nonminority individuals. *American Journal of Public Health, 101*, 1481-1494.  
doi:10.2105/AJPH.2009.190009
- Garnets, L., Herek, G. M., & Levy, B. (1990). Violence and victimization of lesbians and gay men: Mental health consequences. *Journal of Interpersonal Violence, 5*, 366-383.  
doi:10.1177/088626090005003010

- Garofalo, R., Wolf, R. C., Kessel, S., Palfrey, J., & DuRant, R. H. (1999a). The association between health risk behaviors and sexual orientation among a school-based sample of adolescents. *Pediatrics, 101*, 895-902. doi:10.1542/peds.101.5.895
- Garofalo, R., Wolf, R. C., Wissow, L. S., Woods, E. R., Goodman, E. (1999b). Sexual orientation and risk of suicide attempts among a representative sample of youth. *Archives of Pediatric Adolescent Medicine, 153*, 487-493.
- Glaus, O. (1988). Alcoholism, chemical dependency and the lesbian client. *Women and Therapy, 8*, 121-144.
- Goffman, E. (1963). *Stigma: Notes on the management of spoiled identity*. New York: Touchstone.
- Gonsiorek, J. C. (1988). Mental health issues of gay and lesbian adolescents. *Journal of Adolescent Health Care, 9*, 114-122. doi:10.1016/0197-0070(88)90057-5
- Goodenow, C., Szalacha, L. A., Robin, L. E., & Westheimer, K. (2008). Dimensions of sexual orientation and HIV-related risk among adolescent females: Evidence from a statewide survey. *American Journal of Public Health, 98*, 1051-1058.  
doi:10.2105/AJPH.2005.080531
- Grov, C., Bimbi, D. S., Nanin, J. E., & Parsons, J. T. (2006). Race, ethnicity, gender, and generational factors associated with the coming-out process among gay, lesbian, and bisexual individuals. *Journal of Sex Research, 43*, 115-121.  
doi:10.1080/00224490609552306
- Gutman, L. M. (2007). Risk and resilience. *Encyclopedia of Infant and Early Childhood Development*. Oxford: Elsevier Limited.

- Hamilton, C. J., & Mahalik, J. R. (2009). Minority stress, masculinity, and social norms predicting gay men's health risk behaviors. *Journal of Counseling Psychology, 56*, 132-141. doi:10.1037/a0014440
- Herek, G. M. (1995). Psychological heterosexism in the United States. In A. R. D'Augelli & C. J. Patterson (Eds.), *Lesbian, gay, and bisexual identities over the lifespan: Psychological perspectives* (pp. 321-346). New York: Oxford University Press.
- Herek, G. M., Gillis, J. R., & Cogan, J. C. (1999). Psychological sequelae of hate-crime victimization among lesbian, gay, and bisexual adults. *Journal of Consulting and Clinical Psychology, 67*, 945-951. doi:10.1037/0022-006X.67.6.945
- Hetrick, E. S., & Martin, A. D. (1984). Ego-dystonic homosexuality: A developmental view. In E. S. Hetrick & T. S. Stein (Eds.), *Innovations in psychotherapy with homosexuals* (pp. 2-21). Washington, D.C.: American Psychiatric Association Press.
- Hershberger, S. L., & D'Augelli, A. R. (1995). The impact of victimization on the mental health and suicidality of lesbian, gay, and bisexual youths. *Developmental Psychology, 31*, 65-74. doi:10.1037/0012-1649.31.1.65
- Huebner, D. M., Rebchook, G. M., & Kegeles, S. M. (2004). Experiences of harassment, discrimination and physical violence among young gay and bisexual men. *American Journal of Public Health, 94*, 1200-1203. doi:10.2105/AJPH.94.7.1200
- Jessor, R. (1991). Risk behavior in adolescence: A psychosocial framework for understanding and action. *Journal of Adolescent Health, 12*, 597-605. doi:10.1016/1054-139X(91)90007-K
- Jones, E. E., Farina, A., Hestrof, A. H., Markus, H., Miller, D. T., & Scott, R. A. (1984). *Social stigma: The psychology of marked relationships*. New York: Freeman.

- Jourard, S. M. (1971). *The transparent self*. New York: Van Nostrand Reinhold.
- Karki, C., Gasiorowicz, M., & Hollander, G. (2010). *Risk behaviors and health conditions of youth engaging in same-sex sexual behaviors: Analysis of the 2009 Wisconsin Youth Risk Behavior Survey (YBRS)*. Madison, WI: Wisconsin Department of Health Services.
- Karofsky, P. S., Zeng, L., Kosorok, M. R. (2000). Relationship between adolescent-parental communication and initiation of first intercourse by adolescents. *Journal of Adolescent Health, 28*, 41-45. doi:10.1016/S1054-139X(00)00156-7
- Kelleher, C. (2009). Minority stress and health: Implications for lesbian, gay, bisexual, transgender, and questioning (LGBTQ) young people. *Counselling Psychology Quarterly, 22*, 373-379. doi:10.1080/09515070903334995
- Kimmel, S. B., & Mahalik, J. R. (2005). Body image concerns of gay men: The roles of minority stress and conformity to masculine norms. *Journal of Consulting and Clinical Psychology, 73*, 1185-1190. doi:10.1037/0022-006X.73.6.1185
- Kosciw, J. G., (2004). *The 2003 National School Climate Survey: The school-related experiences of our nation's lesbian, gay, bisexual, and transgender youth*. New York: Gay, Lesbian, and Straight Education Network.
- Lammers, C., Ireland, M., Resnick, M., & Blum, R. (2000). Influences on adolescents' decision to postpone onset of sexual intercourse: A survival analysis of virginity among youths aged 13 to 18 years. *Journal of Adolescent Health, 26*, 42-48. doi:10.1016/S1054-139X(99)00041-5
- Lehner, P., Seyed-Solorforough, M., O'Connor, M.F., Sak, S., & Mullin, T. (1997). Cognitive biases and time stress in team decision making. *IEEE Transactions on Systems, Man, & Cybernetics Part A: Systems & Humans, 27*, 698-703.

- Link, B. G., & Cullen, F. (1990). The labeling theory of mental disorders: A review of the evidence. In J. Greenley (Ed.), *Mental illness in social context* (pp. 75-105). Greenwich, CT: JAI Press.
- Lips, H. (1988). *Sex and gender: An introduction*. Mountain View, CA: Alyson Publications.
- Maguen, S., & Armistead, L. (2000). Prevalence of unprotected sex and HIV-antibody testing among gay, lesbian, and bisexual youth. *The Journal of Sex Research, 37*, 169-174. doi:10.1080/00224490009552034
- Malyon, A. K. (1982). Psychotherapeutic implications of internalized homophobia in gay men. *Journal of Homosexuality, 7*, 59-69. doi:10.1300/J082v07n02\_8
- McNeely, C., Shew, M. L., Beuhring, T., Sieving, R., Miller, B. C., & Blum, R. W. (2002). Mothers' influence on the timing of first sex among 14- and 15-year-olds. *Journal of Adolescent Health, 31*, 256-265. doi:10.1016/S1054-139X(02)00350-6
- Merton, R. K. (1968). *Social theory and social structure*. New York: Free Press.
- Meyer, I. H. (1995). Minority stress and mental health in gay men. *Journal of Health and Social Behavior, 36*, 38-56. doi:10.2307/2137286
- Meyer, I. H. (2003). Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: Conceptual issues and research evidence. *Psychological Bulletin, 129*, 674-697. doi:10.1037/0033-2909.129.5.674
- Meyer, I. H., & Dean, L. (1998). Internalized homophobia, intimacy, and sexual behavior among gay and bisexual men. In G. M. Herek (Ed.), *Stigma and sexual orientation: Understanding prejudice against lesbians, gay men, and bisexuals* (pp. 160-186). Thousand Oaks, CA: Sage.

- Mirowsky, J., & Ross, C. E. (1989). *Social causes of psychological distress*. Hawthorne, NY: Aldine De Gruyter.
- Moore, S., & Rosenthal, D. (1993). *Sexuality in adolescence*. New York: Routledge.
- Nobelius, A. (2004). *When is it sex difference and when is it gender difference?* Retrieved June 19, 2012, from <http://www.med.monash.edu.au/gendermed/difference.html>
- Nolin, M. J., & Petersen, K. K. (1992). Gender differences in parent-child communication about sexuality: An exploratory study. *Journal of Adolescent Research, 7*, 59-79.  
doi:10.1177/074355489271005
- Pearlin, L. I. (1982). The social context of stress. In L. Goldberger & S. Breznitz (Eds.), *Handbook of stress: Theoretical and clinical aspects* (pp. 367-379). New York: Academic Press.
- Pearlin, L. I. (1999). The stress process revisited: Reflections on concepts and their interrelationships. In C. S. Aneshensel & J. C. Phelan (Eds.), *Handbook of the sociology of mental health* (pp. 395-415). New York: Kluwer Academic/Plenum.
- Pennebaker, J. W. (1995). *Emotion, disclosure, and health*. Washington, D.C.: American Psychological Association. doi:10.1037/10182-000
- Pettigrew, T. F. (1967). Social evaluation theory: Convergences and applications. In D. Levine (Ed.), *Nebraska symposium on motivation* (Vol. 15, pp.241-304). Lincoln: University of Nebraska Press.
- Poteat, V. P., & Espelage, D. L., & Green, H. D. Jr. (2007). The socialization of dominance: Peer group contextual effects on homophobic and dominance attitudes. *Journal of Personality and Social Psychology, 92*, 1040-1050. doi:10.1037/0022-3514.92.6.1040

- Remafedi, G. (1994). Predictors of unprotected intercourse among gay and bisexual youth: Knowledge, beliefs, and behavior. *Pediatrics*, *94*, 163-168.
- Remafedi, G., Farrow, J. A., & Deisher, R. W. (1991). Risk factors for attempted suicide in gay and bisexual youth. *Pediatrics*, *87*, 869-875.
- Remafedi, G., French, S., Story, M., Resnick, M. D., & Blum, R. (1998). The relationship between suicide risk and sexual orientation: Results of a population-based study. *American Journal of Public Health*, *88*, 57-60. doi:10.2105/AJPH.88.1.57
- Rosario, M., Hunter, J., & Gwadz, M. (1994a). *HIV risk acts of gay/bisexual male adolescents*. Paper presented at AIDS' Impact, the 2<sup>nd</sup> International Conference on Biopsychological Aspects of HIV Infection, Brighton, United Kingdom.
- Rosario, M., Hunter, J., & Gwadz, M. (1994b). *HIV risk acts of lesbian/bisexual female adolescents*. Paper presented at AIDS' Impact, the 2<sup>nd</sup> International Conference on Biopsychological Aspects of HIV Infection, Brighton, United Kingdom.
- Rosario, M., Hunter, J., & Gwadz, M. (1997). Exploration of substance abuse among lesbian, gay, and bisexual youth: Prevalence and correlates. *Journal of Adolescent Research*, *12*, 454-476. doi:10.1177/0743554897124003
- Rosario, M., Meyer-Bahlburg, H.F., Hunter, J., & Gwadz, M. (1999). Sexual risk behaviors of gay, lesbian, and bisexual youths in New York City: prevalence and correlates. *AIDS Education Prevention*, *11*, 476-496.
- Rose, A., Koo, H. P., Bhaskar, B., Anderson, K., White, G., & Jenkins, R. R. (2005). The influence of primary caregivers on the sexual behavior of early adolescents. *Journal of Adolescent Health*, *37*, 134-144. doi:10.1016/j.jadohealth.2005.02.009

- Ryan, C., Huebner, D., Diaz, R. M., & Sanchez, J. (2009). Family rejection as a predictor of negative health outcomes in White and Latino lesbian, gay, and bisexual young adults. *Pediatrics, 123*, 346-352. doi:10.1542/peds.2007-3524
- Saewyc, E. M. (2011). Research on adolescent sexual orientation: Development, health disparities, stigma, and resilience. *Journal of Research on Adolescence, 21*, 256-272. doi:10.1111/j.1532-7795.2010.00727.x
- Saewyc, E. M., Bearinger, L. H., Blum, R. W., & Resnick, M. D. (1998a). Sexual intercourse, abuse and pregnancy among adolescent women: Does sexual orientation make a difference? *Family Planning Perspectives, 31*, 127-131. doi:10.2307/2991695
- Saewyc, E. M., Bearinger, L. H., Heinz, P. A., Blum, R. W., & Resnick, M. D. (1998b). Gender differences in health and risk behaviors among bisexual and homosexual adolescents. *Journal of Adolescent Health, 23*, 181-188. doi:10.1016/S1054-139X(97)00260-7
- Saewyc, E., Skay, C., Richens, K., Reis, E., Poon, C., & Murphy, A. (2006). Sexual orientation, sexual abuse, and HIV-risk behaviors among adolescents in the Pacific Northwest. *American Journal of Public Health, 96*, 1104-1110. doi:10.2105/AJPH.2005.065870
- Selye, H. (1982). Stress and holistic medicine. In D. S. Sutterley & G. F. Donnelly (Eds.), *Coping with stress: A nursing perspective* (pp. 69-72). Rockville, MD: Aspen Systems.
- Stakely, R. S. (n.d.). *Examples of subtle homophobia, heterosexism, and sexism*. Retrieved August 2, 2012, from <http://www.library.wisc.edu/EDVRC/docs/public/pdfs/LIReadings/ExamplesHomophobia.pdf>
- Stein, T. S., & Cohen, C. J. (1984). Psychotherapy with gay men and lesbians: An examination of homophobia, coming-out, and identity. In E. S. Hetrick & T. S. Stein (Eds.),

- Innovations in psychotherapy with homosexuals* (pp. 59-73). Washington D.C.: American Psychiatric Association Press.
- Step toe, A. (2007). Health behavior and stress. *Encyclopedia of Stress*. Oxford: Elsevier Limited.
- Stryker, S., & Statham, A. (1985). A symbolic interaction and role theory. In G. Lindzey & E. Aronson (Eds.), *Handbook of social psychology* (pp. 311-378). New York: Random House.
- Thoits, P. A. (1985). Self-labeling processes in mental illness: The role of emotional deviance. *American Journal of Sociology*, *91*, 221-249. doi:10.1086/228276
- Troiden, R. R. (1979). Becoming homosexual: A model of gay identity acquisition. *Psychiatry*, *42*, 362-373.
- Troiden, R. R. (1988). Homosexual identity development. *Journal of Adolescent Health Care*, *9*, 105-113.
- Waldo, C. R. (1999). Working in a majority context: A structural model of heterosexism as minority stress in the workplace. *Journal of Counseling Psychology*, *46*, 218-232. doi:10.1037/0022-0167.46.2.218
- Walker, P. (2001). Sexual identity, psychological well-being and suicide risk among lesbian and gay young people. *Educational and Child Psychology*, *18*, 47-61.
- Warren, C. (1980). Homosexuality and stigma. In J. Marmor (Ed.), *Homosexual behavior: A modern appraisal* (pp. 123-141). New York: Basic Books.
- Williams, T., Connolly, J., Pepler, D., Craig, W. (2005). Peer victimization, social support, and psychosocial adjustment of sexual minority adolescents. *Journal of Youth and Adolescence*, *34*, 471-482. doi:10.1007/s10964-005-7264-x

Williamson, I., & Hartley, P. (1998). British research into the increased vulnerability of young gay men to eating disturbance and body dissatisfaction. *European Eating Disorders Review*, 6, 60-70. doi:10.1002/(SICI)1099-0968(199809)6:3<160::AID-ERV252>3.0.CO;2-H

## Tables and Figures

Table I

*Participant Demographics for LGB (N = 248) and Heterosexual Students (N = 248)*

Variable	LGB		Heterosexual	
	<i>n</i>	%	<i>n</i>	%
<b>1. Age*</b>				
14	25	10.1%	17	6.9%
15	60	24.3%	49	19.8%
16	63	25.5%	67	27.0%
17	78	31.6%	82	33.1%
18	21	8.5%	33	13.3%
<b>2. Grade*</b>				
9 <sup>th</sup>	46	18.5%	25	10.1%
10 <sup>th</sup>	66	26.6%	65	26.2%
11 <sup>th</sup>	67	27.0%	66	26.6%
12 <sup>th</sup>	69	27.8%	92	37.1%
<b>3. Gender**</b>				
Female	179	72.2%	118	47.6%
Male	69	27.8%	130	52.4%
<b>4. Race*</b>				
Asian (not Hmong)	6	2.4%	0	0.0%
Black or African American	16	6.5%	19	7.7%
Hispanic	5	2.0%	6	2.4%
Hmong/Southeast Asian	6	2.4%	1	0.4%
Mixed Race	24	9.7%	19	7.7%

Table I (cont.)

Native American	4	1.6%	1	0.4%
Other	7	2.8%	3	1.2%
White (not Hispanic)	180	72.6%	199	80.2%
5. Free or Reduced-Cost Lunch*				
Yes	63	27.0%	46	19.4%
No	165	70.8%	178	75.1%
Don't Know	5	2.1%	13	5.5%

---

*Note.* LGB and Heterosexual students differed significantly on age using an analysis of variance level of .05. LGB and Heterosexual students also differed significantly on grade, gender, race, and free or reduced-cost lunch using a Chi-Square alpha level of .05.

\* $p < .05$ .

\*\* $p < .01$ .

Table II

*Sexual Orientation Self-Identification for LGB Subsample (N = 248)*

Sexual Orientation	LGB	
	<i>n</i>	%
Gay	28	11.3%
Lesbian	21	8.5%
Bisexual	206	83.1%

*Note.* Participants were instructed to choose all identities that apply. One female participant identified as lesbian and bisexual. Two female participants identified as gay and lesbian. Two male participants and one female participant identified as gay and bisexual. One female participant identified as gay, lesbian, and bisexual.

Table III

*Means, Standard Deviations, and Intercorrelations for Study Variables for LGB (N = 248) and Heterosexual Students (N = 248)*

Variable	1	2	Mean	SD	$\alpha$	Possible Range
			(Heterosexual)			
1. Parental Support	—	.19**	3.33	0.55	.81	1-4
2. Parental Conversations	.36**	—	1.75	0.73	.74	1-4
<i>Mean</i> (LGB)	3.11	1.82				
<i>SD</i> (LGB)	0.60	0.84				
$\alpha$	.79	.73				

*Note.* Intercorrelations for heterosexual students are presented above the diagonal, and intercorrelations for LGB students are presented below the diagonal. Means and standard deviations for heterosexual students are presented in the horizontal rows, above the diagonal, and means and standard deviations for LGB students are presented in the vertical columns, below the diagonal. Parental Support = Parental Support scale; Parental Conversations = Parental Conversations about Sex scale.

\*\* $p < .00$ .

Table IV

*Number of Sexual Partners that were Strangers: by Sexual Orientation*

Stranger Sex	LGB ( <i>n</i> = 246)	Heterosexual ( <i>n</i> = 244)	$\chi^2$	$\phi_c$
None Ever	61.8%	72.1%	6.18 <sup>a</sup>	.11
1-2 People	26.0%	18.0%		
3-4 People	4.5%	3.3%		
5 or More	7.7%	6.6%		

*Note.* <sup>a</sup>Chi-square analysis was not significant (*p* = .10).

Table V

*Number of Times Had Sex Under the Influence of Substances: by Sexual Orientation*

Drug Sex	LGB ( <i>n</i> = 247)	Heterosexual ( <i>n</i> = 246)	$\chi^2$	$\phi_c$
Never	53.0%	64.6%	7.56 <sup>a</sup>	.12
Few Times	28.7%	23.6%		
Many Times	15.0%	9.3%		
All the Time	3.2%	2.4%		

*Note.* <sup>a</sup>Chi-square analysis was not significant (*p* = .06).

Table VI

*Number of Times Had Sex Under the Influence of Substances: by Age*

Drug Sex	14 (n = 41)	15 (n = 108)	16 (n = 129)	17 (n = 160)	18 (n = 54)	$\chi^2$	$\phi_c$
Never	78.0%	62.0%	66.7%	47.5%	51.9%	29.23**	.14
Few Times	9.8%	31.5%	20.2%	31.3%	27.8%		
Many Times	9.8%	5.6%	10.1%	18.1%	14.8%		
All the Time	2.4%	0.9%	3.1%	3.1%	5.6%		

*Note.* \*\* $p < .01$ .

Table VII

*Frequency of Barrier Use to Prevent STIs: by Sexual Orientation*

Unprotected Sex	LGB ( <i>n</i> = 237)	Heterosexual ( <i>n</i> = 231)	$\chi^2$	$\phi_c$
Always Use	30.4%	42.0%	8.12*	.13
Half Time Or More	19.0%	18.2%		
Occasionally	16.5%	15.2%		
Never Use	34.2%	24.7%		

*Note.* \* $p < .05$ .

Table VIII

*Frequency of Barrier Use to Prevent STIs: by Age*

Unprotected Sex	14 (n = 40)	15 (n = 104)	16 (n = 116)	17 (n = 154)	18 (n = 53)	$\chi^2$	$\phi_c$
Always Use	47.5%	38.5%	32.8%	33.1%	39.6%	28.07**	.14
Half Time Or More	10.0%	8.7%	21.6%	27.3%	13.2%		
Occasionally	12.5%	12.5%	17.2%	18.8%	13.2%		
Never Use	30.0%	40.4%	28.4%	20.8%	34.0%		

*Note.* \*\* $p < .01$ .

Table IX

*Protective Factors for Sexual Orientation Groups*

Protective Factor	<i>df</i>	F	$\eta^2$	<i>p</i>	LGB ( <i>n</i> = 242)		Heterosexual ( <i>n</i> = 244)	
					<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Parental Support <sup>a</sup>	1	17.45	.04	.00	3.11	.60	3.33	.55
Parental Conversations	1	1.10	.00	.30	1.82	.84	1.75	.73

*Note.* <sup>a</sup> LGB and Heterosexual students differed significantly on Parental Support at  $p < .01$ .

Table X

*Logistic Regression Analysis for Variables Predicting Stranger Sex for LGB (N = 240) and Heterosexual Students (N = 240)*

Predictor	$\beta$	SE $\beta$	Wald's $\chi^2$	df	p	$e^\beta$ (odds ratio)	95% CI
Model 1							
Sexual Orientation	.38	.20	3.43	1	.06	1.46	.98, 2.17
Age	.09	.09	1.06	1	.30	1.10	.92, 1.30
Parental Support	-.57*	.18	10.45	1	.00	.56	.40, .80
Parental Conversations	.01	.13	.01	1	.93	1.01	.78, 1.31
Constant	-2.38*	1.44	2.71	1	.10	.09	
Model 2							
Sexual Orientation	.41*	.20	3.96	1	.047	1.50	1.01, 2.23
Age	.09	.09	.94	1	.33	1.09	.92, 1.30
Parental Support	-.98*	.27	12.74	1	.00	.38	.22, .64
Parental Conversations	.05	.21	.05	1	.82	1.05	.70, 1.58
Sexual Orientation X Parental Support	.73*	.36	4.05	1	.04	2.08	1.02, 4.23

Table X (cont.)

Sexual Orientation X Parental Conversations	-.11	.27	.15	1	.70	.90	.53, 1.53
Constant	-2.28*	1.45	2.48	1	.12	.10	

---

*Note.* Reference group for sexual orientation is heterosexual students, coded heterosexual = 0 and LGB = 1. Parental Support = Parental Support scale coded from 1 for *Strongly Disagree* to 4 for *Strongly Agree*. Parental Conversations = Parent Conversations about Sex scale coded from 1 for *Never* to 4 for *More than 4 times*. Age ranges from 14-18. Outcome variable, Stranger Sex, coded 0 for *None* or 1 for *1 or more partners*.

\* $p < .05$ .

Table XI

*Logistic Regression Analysis for Variables Predicting Drug Sex for LGB (N = 241) and Heterosexual Students (N = 242)*

Predictor	$\beta$	SE $\beta$	Wald's $\chi^2$	<i>df</i>	<i>p</i>	$e^\beta$ (odds ratio)	95% CI
Model 1							
Sexual Orientation	.42*	.20	4.46	1	.04	1.52	1.03, 2.24
Age	.36*	.09	16.10	1	.00	1.43	1.20, 1.70
Parental Support	-.83*	.18	20.58	1	.00	.44	.31, .62
Parental Conversations	.12	.13	.92	1	.34	1.13	.88, 1.45
Constant	-6.31*	1.46	18.73	1	.00	.00	
Model 2							
Sexual Orientation	.42*	.20	4.50	1	.03	1.52	1.03, 2.25
Age	.35*	.09	15.75	1	.00	1.42	1.20, 1.69
Parental Support	-1.05*	.27	14.73	1	.00	.35	.20, .60
Parental Conversations	.27	.20	1.77	1	.18	1.31	.88, 1.93
Sexual Orientation X Parental Support	.43	.37	1.37	1	.24	1.54	.75, 3.17

Table XI (cont.)

Sexual Orientation X Parental Conversations	-.26	.26	1.02	1	.31	.77	.46, 1.28
Constant	-6.23*	1.46	18.21	1	.00	.00	

*Note.* Reference group for sexual orientation is heterosexual students, coded heterosexual = 0 and LGB = 1. Parental Support = Parental Support scale coded from 1 for *Strongly Disagree* to 4 for *Strongly Agree*. Parental Conversations = Parent Conversations about Sex scale coded from 1 for *Never* to 4 for *More than 4 times*. Age ranges from 14-18. Outcome variable, Drug Sex, coded 0 for *Never* or 1 for *A few times or more*.

\* $p < .05$ .

Table XII

*Logistic Regression Analysis for Variables Predicting Unprotected Sex for LGB (N = 232) and Heterosexual Students (N = 228)*

Predictor	$\beta$	SE $\beta$	Wald's $\chi^2$	<i>df</i>	<i>p</i>	$e^\beta$ (odds ratio)	95% CI
Model 1							
Sexual Orientation	.55*	.20	7.26	1	.01	1.73	1.16, 2.56
Age	.11	.09	1.61	1	.21	1.12	.94, 1.32
Parental Support	-.08	.18	.19	1	.66	.92	.65, 1.31
Parental Conversations	-.13	.13	.98	1	.32	.88	.69, 1.13
Constant	-1.46*	1.41	1.07	1	.30	.23	
Model 2							
Sexual Orientation	.56*	.21	7.40	1	.01	1.75	1.17, 2.63
Age	.10	.09	1.43	1	.23	1.11	.94, 1.32
Parental Support	-.38	.26	2.16	1	.14	.69	.42, 1.13
Parental Conversations	.01	.19	.01	1	.94	1.01	.70, 1.47
Sexual Orientation X Parental Support	.64	.36	3.08	1	.08	1.89	.93, 3.85

Table XII (cont.)

Sexual Orientation X							
Parental Conversations	-0.31	.26	1.43	1	.23	.73	.44, 1.22
Constant	-1.33	1.42	.88	1	.35	.26	

---

*Note.* Reference group for sexual orientation is heterosexual students, coded heterosexual = 0 and LGB = 1. Parental Support = Parental Support scale coded from 1 for *Strongly Disagree* to 4 for *Strongly Agree*. Parental Conversations = Parent Conversations about Sex scale coded from 1 for *Never* to 4 for *More than 4 times*. Age ranges from 14-18. Outcome variable, Unprotected Sex, coded 0 for *Not Applicable/Always Use* or 1 for *Most of the time or less frequently*.

\* $p < .05$ .

Table XIII

*Number of Sexual Partners that were Strangers: by Sexual Orientation and Gender*

Stranger Sex	LGB Girls ( <i>n</i> = 178)	LGB Boys ( <i>n</i> = 68)	Heterosexual Girls ( <i>n</i> = 115)	Heterosexual Boys ( <i>n</i> = 129)	$\chi^2$	$\phi_c$
None Ever	63.5%	57.4%	80.0%	65.1%	27.92**	.14
1-2 People	27.5%	22.1%	14.8%	20.9%		
3-4 People	5.1%	2.9%	1.7%	4.7%		
5 or More	3.9%	17.6%	3.5%	9.3%		

*Note.* \*\**p* < .01.

Table XIV

*Number of Times Had Sex Under the Influence of Substances: by Sexual Orientation and Gender*

Drug Sex	LGB Girls (n = 178)	LGB Boys (n = 69)	Heterosexual Girls (n = 117)	Heterosexual Boys (n = 129)	$\chi^2$	$\phi_c$
Never	50.6%	59.4%	67.5%	62.0%	11.84 <sup>a</sup>	.09
Few Times	30.9%	23.2%	23.1%	24.0%		
Many Times	15.2%	14.5%	8.5%	10.1%		
All the Time	3.4%	2.9%	0.9%	3.9%		

*Note.* <sup>a</sup>Chi-square analysis was not significant (p=.22).

Table XV

*Frequency of Barrier Use to Prevent STIs: by Sexual Orientation and Gender*

Unprotected Sex	LGB Girls ( <i>n</i> = 178)	LGB Boys ( <i>n</i> = 69)	Heterosexual Girls ( <i>n</i> = 117)	Heterosexual Boys ( <i>n</i> = 129)	$\chi^2$	$\phi_c$
Always Use	28.3%	35.9%	37.3%	46.3%	14.13 <sup>a</sup>	.10
Half Time Or More	17.9%	21.9%	18.2%	18.2%		
Occasionally	17.9%	12.5%	19.1%	11.6%		
Never Use	35.8%	29.7%	25.5%	24.0%		

*Note.* <sup>a</sup>Chi-square analysis was not significant (*p*=.12).

Table XVI

*Descriptive Statistics and Multivariate Analysis of Variance (MANOVA) for Sexual Orientation and Gender Differences on Protective Factors*

	Group A:		Group B:		Group C:		Group D:		Tukey HSD <sup>1</sup>
	LGB Girls ( <i>n</i> = 177)		LGB Boys ( <i>n</i> = 65)		Heterosexual Girls ( <i>n</i> = 118)		Heterosexual Boys ( <i>n</i> = 126)		
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>p</i> < .05
Parental Support	3.12	.63	3.09	.48	3.34	.55	3.32	.55	A, B < C, D
Parental Conversations	1.78	.79	1.62	.79	1.91	.75	1.59	.68	D < A, C

*Note.* <sup>1</sup>Letters separated by commas are not significantly different from one another, and letters not present indicate that the cluster is not significantly different from any other cluster. The significance level for Tukey HSD follow up tests is  $p < .05$ . Parental Support = Parental Support scale; Parental Conversations = Parental Conversations about Sex scale. Higher scores on Parental Support indicate greater perceived parental support (possible range = 1-4). Higher scores on Parental Conversations indicate greater number of conversations with parents about sex (possible range = 1-4).

Figure I

*Moderation Effect of Parental Support on the Relationship between Sexual Orientation and Stranger Sex*

