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School-Based Gay-Straight Alliances as a Protective Factor for Sexual Minority Youth

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SCHOOL BASED GAY-STRAIGHT ALLIANCES AS A PROTECTIVE FACTOR FOR SEXUAL MINORITY YOUTH

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Sexual minority youth have been found to be at-risk for engaging in negative health behaviors and for experiencing at-school victimization (Bontempo & D'Augelli, 2002). Specific benefits of attending a high school with a gay-straight alliance (GSA) have recently been published (e.g., fewer suicide attempts; Goodenow, Szalacha, & Westheimer, 2006). However, it is unclear whether GSAs have any impact on substance use behaviors. The purpose of this study was to examine the impact of attending a school with a GSA on sexual minority youths' high school experiences, mental health, and substance use behaviors. A total of 103 heterosexual and 145 sexual minority participants were recruited for this study. Analyses of covariance (ANCOVA) were used to compare sexual minority youth who attended a high school with a GSA (GSA+), sexual minority youth who did not attend a high school with a GSA (GSA-), and heterosexual youth (HET) to determine if differences in high school experiences, mental health, and substance use were present. Overall, the results indicated that GSA+ youth reported more positive school experiences, less problematic substance use, and less emotional distress when compared to GSA- youth. HET youth in this study had more positive outcomes compared to the sexual minority sample, with the exception of problematic substance use and high school GPA. The findings support considering high school GSAs as protective factors for sexual minority youth. The implications of these findings are discussed in further detail, along with the limitations of this research. Future directions for studying the potential benefits of attending a high school GSA for sexual minority youth are also provided.

Dedication

This work is dedicated to my amazingly crazy family.

We are separated by distance; yet, it is my hope, that with the completion of this thesis, we will be a step closer to enjoying each other's spirited company on a semi-regular basis.

Terry, Barb, Michelle, Lexi, Lois and Richard, I miss and love you all.

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Additionally, I would also like to thank the other members of my committee, which includes Dr. Greg Machek, Dr. Jennifer Robohm, and Dr. Casey Charles, for their helpful insights, suggestions, and criticisms toward this important body of research. Any worthwhile project also involves some degree of moral support from colleagues and friends, and this ship would not have sailed without Annesa Flentje, Noah Baker, Abby Kiklevich, Daniel Dewey, Jamie Hernandez-Armstrong, Leslie Croot, Renee Madathil, Haley Trontel, and Zac Velociraptor Lehman. I would also like to thank Scott Hulett for his help in programming my online survey, Jesse McCafferty for compiling a list of college LGBT student organizations, and Andrew Drwenski and Amy Else for assisting with data collection.

Finally, I would like to thank Booger the cat, who is in no way responsible for any aspect of this thesis, in part, because he is obese. Booger wants to dress up like a cowboy for Halloween and lick the butter off the pancakes which fall on the kitchen floor. Booger and I both thank the participants who willingly took part in this study. With their help, a little more is now known about sources of resilience for today's youth.

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Chapter I

INTRODUCTION

Prior research studying sexual minority youth[1] has often focused heavily on identifying the risks for developing negative health behaviors and psychopathology. Understanding these risks is essential to preventing negative health outcomes; however, researchers, having often focused on risks, have only recently begun to identify factors which may foster resilience. This is problematic because little information has been reported in the literature about potential protective factors that may counteract the increased risk for substance use behavior and other mental health problems reported among this population.

One method to identify potential sources of resilience would involve the examination of previous studies which attempt to identify risk factors in the development of substance use disorders and other forms of psychopathology among the adolescent sexual minority population. By examining the risk factor literature, potential sources of resilience can be identified to inform future research involving protective factors. For example, youth who experience high levels of at-school victimization are also more likely to report increased substance use (Bontempo & D'Augelli, 2002). At the same time, existing gay-straight alliances (GSAs), which are usually student led, school-based clubs or organizations whose goals typically involve improving the school climate for sexual minority youth and educating the school community about sexual minority issues

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[1] For the purposes of this manuscript, the term sexual minority applies to any individual who does not self-identify as heterosexual, or does not identify with the gender associated with his or her birth sex. Transgender people are included in this category because they may often experience challenges similar to that of gay, lesbian, and bisexual people. However, when identity development is reviewed in the introduction, the reader is asked to separate the terms gay, lesbian, bisexual, and transgender from the overarching category of sexual minority.

(GLSEN, 2007), have been shown to be related to decreases in at-school victimization (Goodenow, Szalacha, & Westheimer, 2006). Therefore, the potential positive benefits of decreased substance use by attending a school with a GSA warrant investigation.

Williams, Connolly, Pepler, and Craig, (2005) examined the association between victimization and depression and externalizing psychopathologies using a sample of 97 sexual minority high school students recruited from four urban Canadian high schools. Victimization was assessed across three dimensions: bullying, peer sexual harassment, and peer physical abuse. Sexual minority youth in this study, when compared to their heterosexual peers, reported significantly higher amounts of depression and externalizing symptoms. The authors found that victimization mediated the relationship between sexual orientation and externalizing symptoms, while victimization mediated the relationship between sexual orientation and depression at a level which approached significance ($p < .10$). The findings highlighted the indirect role that victimization can play in the development of psychopathology. The role of victimization is almost always taken into account by theories which attempt to explain why sexual minority youth are at-risk for developing problematic drinking and psychopathology. At the same time, little information is known about how GSAs might impact the victimization of sexual minority youth.

On the topic of theories which attempt to explain why sexual minority youth are at-risk for developing problematic drinking and psychopathology, the most recent explanation has come from Rosario, Schrimshaw and Hunter (2004) who asserted that specific periods of time during sexual minority identity development are potentially risky for experiencing increased substance use. Once again, examining the interplay between high school GSAs, identity development, and victimization as it relates to the development of problematic substance use and psychopathology is important, especially if GSAs positively impact the development of sexual minorities by reducing victimization while fostering social support.

By using information which pertains to specific risk factors for sexual minority youth in the development of substance use disorders (SUDs) and general psychopathology, the possibilities for identifying potential protective factors can be illuminated. The above examples call for an evaluation of sexual minority identity development, victimization, psychopathology, and substance use within the context of the high school GSA. For these reasons, the empirical and theoretical literature related to sexual minority identity development will be reviewed. This is followed by an overview of the research related to the development of psychopathology and SUDs among sexual minority youth. Finally, the current literature related to the impact of programs designed to improve the lives of sexual minorities in educational settings will be reviewed, followed by the specific hypotheses for this study.

Sexual and Gender Minority Identity Development

Multiple models of sexual and gender minority identity development exist, yet as Becky Liddle pointed out, "typically models of identity development begin with an assumption of heterosexuality, such as when a girl assumes that she will someday marry a man" (Liddle, 2007, p. 52). A parental assumption of a heterosexual sexual orientation is similar to a parental assumption of gender identity based upon birth sex, and these assumptions are the basis or foundation for each model of sexual or gender identity development in our current society. As research has delved deeper into minority identity development, the specificity of models has increased so far as to develop specific models for gay, lesbian, bisexual, and transgender identity development.

In 1979, Vivian Cass outlined a general model of identity development which was applicable to sexual minority individuals regardless of gender. Cass's model begins with "Identity Confusion" where the individual first experiences awareness of the same-sex attractions. This is followed by "Identity Comparison," where the individual realizes the possibility that he or she may be a sexual minority. "Identity Tolerance" is the next stage, where the individual realizes he or she is not alone in his or her sexual minority status and thus begins to seek out other sexual minority individuals. Next, Cass described "Identity Acceptance," the stage in which the individual begins to accept rather than tolerate his or her sexual minority status. "Identity Pride" and "Identity Synthesis" are the final stages of Cass's model in which the individual first immerses her- or himself into the gay community, and then integrates a sexual minority identity into an overall sense of identity. Cass's model is appealing for its simplicity, yet as McCarn and Fassinger (1996) pointed out, simplicity is also a primary criticism of sexual identity development models.

As highlighted by Haldeman (2007), Cass's 1979 model often places the individual in the context of the gay community to determine the progression of an individual's identity development. Haldeman argued that because the gay community is a primary component of Cass's model, the specifics of an individual's interpersonal relationships are unduly minimized. Coleman's model of identity development (1982) examined this process and attempted to account for more interpersonal dynamics within an identity development framework (Haldeman, 2007). Coleman's model outlined five stages which include: pre-coming out, coming out, exploration, first relationships, and finally, identity integration. Overall, Coleman's and Cass's models are quite similar, except that Coleman emphasized normative behavior within the sexual minority community and romantic relationships, whereas Cass remained more globally focused on identity acceptance and the gay community as a whole.

Work by McCarn and Fassinger (1996) presented a dual-phase developmental perspective in their model of lesbian identity development (the model has also been used to describe sexual minority males, see Hunter & Hickerson, 2003, chapter 4 for details). Specifically, they argued that self realization of sexual minority status (within the individual) may or may not occur prior to involvement within the sexual minority community (group membership). McCarn and Fassinger's model contained what they preferred to call phases, which occur in both individual and group domains.

The first phase in McCarn and Fassinger's (1996) model is "Awareness." From the individual standpoint, this is the awareness of feeling or being different. From the group domain, this phase results in an awareness of other sexual minority individuals. The next phase is "Exploration," where the individual explores strong or sexual feelings towards other women, and also explores the possibility of belonging to a lesbian community. The "Deepening/Commitment" phase individually pertains to self-knowledge, and self-realization of a more solidified lesbian status, while also involving a greater understanding of the consequences of identifying with a marginalized minority group. The last phase, "Internalization/Synthesis" involves the integration of the individual's love for women and her sexual behavior with her overall identity, while continually identifying as a member of a minority group across multiple domains. Conceptually, this dichotomous distinction makes sense. For example, an individual could easily assimilate into the sexual minority community (frequent gay bars, develop friendships with sexual minority individuals) prior to self-labeling or even viewing oneself as being a member of the sexual minority community. The individual may recognize that some same-sex attraction is present; however, the stability of labeling oneself as being a sexual minority may not be concretely established.

Research conducted by Diamond (2000) examined the stability of sexual minority identities in women. Diamond found that half of the 80 subjects (age 18-25) participating in a two year study of female sexual minority identity development no longer identified as a sexual minority at follow-up. The author argued that fluidity in identity is not random but is representative in an overlap between lesbianism and bisexuality. Diamond questioned the traditional stage models of identity development and called for a more complex examination of identity development. This sentiment was echoed by Rosario, Hunter, Maguen, Gwadz and Smith (2001) who suggested that identity development is extremely complex; it is multi-dimensional and encompassing of sexual identity, attitudes, comfort levels of homosexuality and self-disclosure, and involvement with the larger sexual minority community.

With the fluidity reported by Diamond (2000), it can be difficult to ascertain whether youth who are in the early stages of developing a sexual minority identity will actually identify as a sexual minority later in life. This complicates research attempting to study sexual minorities in the adolescent years. As Fontaine and Hammond (1996) mentioned, most youth who are confused about their emotions and sexual identities eventually define their sexual orientation as heterosexual. Yet, for those youth who experience more intense emotional attractions or report "feeling different," a sexual minority identity is typically developed (Savin-Williams & Diamond, 1999).

According to Fox (2000), bisexual identities are typically adopted when individuals are in their early to mid-20s; however, women tend to self-identify as bisexual earlier than men. Bisexual identity development stages were proposed by Weinberg, William, and Pryor (1994, 1998) using longitudinal data. In bisexual identity development, the first stage noted is that of "initial confusion," which is followed by finding and applying some label, settling into that label, and finally, experiencing a continued uncertainty about sexual identity (Weinberg et. al., 1994, 1998). The notion that bisexual individuals experience continued uncertainty about their sexual identity should be made with caution. This ideology can give rise to negative stereotypes (e.g. the comment that bisexuals are "on the fence" and do not know whether they like men or women), which unfairly stigmatize this population and fail to consider the broader societal context in which a bisexual identify is formed.

Last but not least, the dominant model which accounts for the development of a transgender identity is the transgender emergence model put forth by Lev (2004). Lev developed this model in an attempt to capture the decision making processes of transgender individuals who are considering sexual reassignment surgery (SRS); however, it can be applicable to individuals who do not seek SRS. The first stage in Lev's model is that of "awareness." The individual in this stage is likely to be in a great deal of emotional pain and distress. The second stage is the "seeking out-reaching out" stage where the individual seeks knowledge and support regarding transgenderism. The third stage is the "disclosure" stage. Here the individual discloses his or her transgender status to significant others such as partners, family members, and friends. The fourth and fifth stages involve "exploration" of different transgender identities and possibilities regarding the transition process and/or bodily modifications. The sixth stage of integration involves the individual "synthesizing" a transgender identity with the additional aspects of his or her own unique life and experiences.

While other models of transgenderism and transgender identity development have been proposed (see Blanchard 1985; 1993), their grounding in the medical model often makes them less than desirable and highly controversial because they are considered to invalidate and pathologize transgender individuals (see Dreger, 2008, for a review of a recent controversy surrounding the promotion of Blanchard's research and theories). The therapeutic, theoretical, and empirical utility of these theories and models are diminished by the incorporation of a gender identity disorder diagnosis and the utilization of a pejorative lexicon. Lev's model, on the other hand, is focused on an affirmation and exploration of a transgender identity, while describing relevant therapeutic tasks for each stage. This notion of affirmation in the context of therapy is not unique to transgender individuals, but rather, it is a key feature in the treatment of both sexual and gender minority clients.

Criticisms of sexual minority identity development models exist. McCarn and Fassinger (1996) argued that these models (with the exception of transgender emergence model) have primarily been based on anecdotal evidence. They also questioned the generalizability and methodology of specific models that have been developed using small and unrepresentative samples and measures of identity development that have failed to garner empirical support.

With the growing complexities and uncertainties in examining sexual minority identity development, understanding the associations between the development of a sexual minority identity and the development of health risk behaviors continues to be a daunting task. Researchers studying identity development have, at times, linked psychological distress with specific stages of sexual minority identity development (Rosario et al., 2004). However, there still appears to be lack of communication between researchers studying identity development and researchers studying the development of substance use disorders among sexual minorities. Recently, researchers studying the development of substance use disorders among sexual minorities have discovered evidence which highlights the importance of incorporating findings from identity developmentalists into their research methodologies (see Rosario et al., 2004).

Theoretical Understanding of Substance Use Disorders for Sexual Minorities

Over the last 10-15 years, hypotheses examining gay-related stress and sexual minority identity development have become the primary foci of researchers' attempts to explain increased substance use and psychopathology among sexual minority youth. According to the gay-related stress hypothesis, growing up in a stigmatizing, heterosexist society, leads to an increase in SUDs and other psychological disorders among sexual minorities due to the increased amount of stress and discrimination that sexual minorities face as a result of their sexual minority status (Rosario, Schrimshaw, Hunter, & Gwadz, 2002). The process of developing a sexual minority identity has also been associated with periods of time where an individual is at risk for experiencing problematic substance use (see Rosario et al., 2001, for review).

Rosario et al. (2004) explored both the gay related stress hypothesis and the sexual minority identity development hypothesis, along with the childhood sexual abuse hypothesis (where childhood sexual abuse is hypothesized to be indicative of later SUDs, see Hughes & Eliason, 2002, for review) in an attempt to find support for one of the three specific hypotheses. Rosario and colleagues found little support for the childhood sexual abuse and gay-related stress hypotheses; however, their findings did support the sexual minority identity development hypothesis. The authors found that the initial involvement in gay-related activities for sexual minority youth was associated with increased substance use, yet with continued participation in these activities, an overall decrease in substance use occurred over time. The authors concluded that because involvement in the sexual minority community often involves activities centered in bars where alcohol and other drugs may be available, it would not be uncommon for initial involvement in gay related activities to lead to short term increases in substance use.

Support for the idea that gay-related stress is predictive of varying psychopathologies has also been consistently found in the literature (see DiPlacido, 1998; Meyer, 1995), and more specifically, this hypothesis may be highly applicable for explaining the development of depressive disorders among sexual minority individuals (Lewis, Valerian, Griffin, & Krowinski, 2003). In examining the gay-related stress hypothesis, Rostosky, Owens, Zimmerman, and Riggle (2003) evaluated the associations between sexual minority status, substance use, and school belonging among rural high school students. Compared to their heterosexual peers, sexual minority adolescents reported significantly higher rates of alcohol use and also reported significantly lower levels of school belonging. When combining and analyzing their entire sample, the researchers found that students who reported decreased school belonging were more likely to use alcohol and marijuana. In this instance, decreased school belonging may be a potential risk factor for developing problematic substance use. One does not need to be a sexual minority to experience decreased school belonging, yet bullying and at-school victimization have been reported to be more common among sexual minority youth when compared to their heterosexual peers (Swearer, Turner, Givens, & Pollack, 2008).

A better understanding of the associations between decreased school belonging, at-school victimization, and substance use for sexual minority youth is paramount in understanding how to reduce the amount of gay-related stress these youth experience. Research conducted by Bontempo and D'Augelli (2002) examined the associations between victimization at school and health risk behaviors in high school students. Results of this study again found sexual minority youth to be at-risk for experiencing significantly higher rates of substance use compared to their heterosexual counterparts. Also, sexual minority youth reported experiencing significantly higher amounts of at-school victimization when compared to their heterosexual peers. A third finding indicated that at-school victimization was associated with each of the following: skipping school, drinking, smoking, using marijuana and cocaine, engaging in sexually risky behavior, and attempting suicide. The study identified the potential risk factor of at-school victimization, which in turn was found to be associated with other health risk behaviors. Because Rostosky et al. (2003) did not assess at-school victimization, the finding of decreased school belonging being associated with increased substance use may actually be rooted in a pathway where at-school victimization mediates the relationship between school belonging and increased substance use. Evidence of mediation in this instance would be consistent with the findings reported by Williams and colleagues (2005).

Aside from victimization at school, other types of victimization in the form of physical and sexual abuse are, unfortunately, too commonly experienced by sexual minority youth. Using a community sample of 36,000 7-12 grade students, Saewyc, Bearinger, Heinz, Blum, and Resnick (1998) reported that approximately 17% of sexual minority youth had been victims of sexual abuse, while 18% were victims of physical abuse. Using a sample of 206 lesbian and bisexual females, D'Augelli (2003) reported that 42% of participants feared verbal abuse at home and 15% feared physical abuse at home.

Recruiting participants from college lesbian, gay, bisexual, and transgender student groups, Robohm, Litzenberger, and Pearlman (2003) found that 37.9% of 18-23 year old sexual minority women reported a history of childhood sexual abuse (CSA). Furthermore, Robohm and colleagues found that sexual minority women with a history of CSA were more likely to experience a number of emotional and behavioral challenges including anxiety, attempted suicide, unsafe sex, and problematic substance use. Similar results have been reported for sexual minority males (see Lenderking, Wold, Mayer, Goldstein, Losina, & Seage, 1997; or Neisen & Sandall, 1990).

Any researcher interested in examining the role of at-school victimization in the development of problematic substance use and emotional distress must consider the effects of physical, sexual, and emotional abuse, given the possible similarities among the psychopathological manifestations of these types of victimization. Yet, at-school victimization is likely to have a direct effect on school belonging specifically, which has implications for the development of problematic substance use and emotional distress which are different from the implications of physical, emotional or sexual abuse in childhood. In other words, at-school victimization and childhood abuse can both result in the same outcome, but the pathways to that outcome are qualitatively different. These differences can therefore influence other aspects of an individual's life in a distinctly unique fashion. Understanding and considering the different experiences of sexual minority and heterosexual youth with respect to victimization, and at-school victimization in particular, is likely to be extremely important in understanding the development of psychological disorders among sexual minority youth. A greater understanding of the etiology of these disorders will provide direction for prevention and intervention efforts.

Overall, support for both the gay-related stress hypothesis and the sexual minority identity development hypothesis is based upon demographic characteristics of samples and the operationalizations of the two hypotheses (Rosario et. al., 2002). Building on the support for the gay-related stress hypothesis and the sexual minority identity development hypothesis, other researchers have investigated the role that attraction plays in the development of SUDs and psychopathology among sexual minority youth.

Two recent studies have noted differences between sexual minority youth with same-sex attractions and those who have both-sex attractions. The first study conducted by Russell, Driscoll, and Truong (2002) found sexual minority youth with both-sex attractions (a classification which would include bisexual youth) to be at an increased risk for drinking alone, and for using marijuana and other drugs more frequently, when compared with their same-sex attracted peers. The authors of this study questioned whether researchers reporting elevated rates of substance use among sexual minority youth may have overlooked the possibility that a majority of the variability between sexual minority and heterosexual youth could be attributed to youth with both-sex attractions.

The second study conducted by Moon, Fornili, and O'Briant (2007) found that youth who reported both-sex attractions were more likely to report increased drug use, increased drug use during sexual activity, and increased suicide attempts when compared to youth with only same-sex attractions. Although evidence obviously supports the conclusion that youth who report both-sex attractions are at increased risk for engaging in unhealthy behaviors when compared to same-sex attracted peers, this conclusion should be made with caution, because neither study examined the stability of the both-sex attracted label.

Moon and colleagues (2007) argued that this increase in risk for engaging in unhealthy behaviors may be due to both-sex attracted youth being attracted to experimentation, which can account for both increased sexual activity and substance use. They also speculated that this increase is due to an increased pressure to conform to societal norms for both-sex attracted youth. They argued that for both-sex attracted youth, societal norms favor the adoption of a heterosexual identity over the adoption of a homosexual identity, and the adoption of a homosexual identity over a bisexual identity. The combination of societal pressures and a proclivity for experimentation is then thought to leave both-sex attracted youth at an increased risk for engaging in self destructive behaviors when they are compared to same-sex and opposite-sex attracted peers.

Again, these studies failed to assess the later self identification (in terms of sexual orientation) of youth within the both-sex attracted group, and therefore, the authors may be side-stepping the fact that some, if not many, of these adolescents are engaging in both-sex behaviors in response to the challenges of coming out as gay or lesbian. This rationale is supported by findings from Espelage, Aragon, Birkett, and Koenig (2008), who reported that students questioning their sexual orientation reported increased substance use and depressive symptoms when compared to their sexual minority (whose identities were more solidified) and heterosexual peers. By not assessing the identified sexual orientation of both-sex attracted youth (who might be more commonly labeled as bisexual) as they transition into adulthood, it becomes difficult to disentangle their experiences from those of gay and lesbian youth. Because youth who are questioning their sexual orientation are more likely to use alcohol and drugs (Espelage et al., 2008) and are more likely to be categorized as both-sex attracted, bisexual youth (who would also be labeled as both-sex attracted) who navigate the coming out process without engaging in these health risk behaviors may be inadvertently stigmatized for engaging in health risk behaviors. These unhealthy behaviors, in the long run, may be better attributed to gay, lesbian, or even heterosexual youth who are experimenting and/or experiencing difficulty with identity formation.

Regardless of the operational definitions used to classify sexual minority youth, it is clear that the period of time where an individual begins to develop a sexual minority identity within a generally heterosexist and homophobic society can also be a period of time where the individual is at-risk for developing problematic substance use behaviors and other psychopathologies.

Sexual Minority Youth and the Schools

Gay-straight alliances are usually student led, school-based clubs or organizations whose goals typically involve improving the school climate for sexual minority youth and educating the school community about sexual minority issues (GLSEN, 2007). According to information obtained from the Gay and Lesbian Student Education Network (GLSEN), since 1988, when the first GSA was founded in Massachusetts, the number of registered GSAs in the nation has grown to more than 3,000. The rapid proliferation of GSAs in the nation, especially over the past 10 years, has highlighted the need and interest for specific groups for sexual minority youth (Griffin, Lee, Waugh, & Beyer, 2005). There is a limited amount of research available with regard to the impact that GSAs have on individual members (Lee, 2002). In an attempt to fill in the gaps in the research, GLSEN has highlighted three key findings that depict the positive benefits GSAs can provide sexual minority youth.

First, the presence of GSAs in schools may contribute to a safer atmosphere for sexual minority youth by sending a message that hate speech and victimization of sexual minority youth will not be tolerated (GLSEN, 2007). This finding is supported by research conducted by Szalacha (2003) who found that students attending a school with a GSA were less likely to hear homophobic comments in school, when compared to peers not attending a school with a GSA. Also, sexual minority youth attending schools with a GSA were less likely to report feeling unsafe at school (Kosciw & Diaz, 2006). Finally, more than 50% of secondary school teachers in a national sample stated that GSAs help to create and promote a safer school climate for sexual minority youth (Russell, McGuire, Laub, & Manke, 2006).

Second, by having a GSA in a school, the school may be viewed as a place where sexual minority youth feel they belong and are supported (GLSEN, 2007). Research conducted by Kosciw and Diaz (2006) found that sexual minority youth attending schools with a GSA are less likely to miss school due to concerns for their physical safety when compared to peers attending a school without a GSA.

Finally, GSAs may help sexual minority youth identify school teachers and staff who are supportive, which is shown to positively impact the academic achievement and experiences of sexual minority youth in school (GLSEN, 2007). Sexual minority youth attending a school with a GSA were more likely to report having supportive school teachers and staff members; moreover, these youth were also more likely to report higher GPAs, and a greater sense of belonging to their schools when compared to sexual minority youth who were not attending a school with a GSA (Kosciw & Diaz, 2006; and Szalacha, 2003).

Researchers have also examined the roles that GSAs play in different schools. Griffin and colleagues (2005) identified four roles that GSAs played across 22 schools using qualitative, quantitative, and observational methodology. The first role identified was that of a counseling and support group for sexual minority students. This group did not meet in the open, but rather in the school guidance counselor's office during activity periods. The primary focus of this group was to provide individual counseling and psychological support for sexual minority students. The second role that GSAs were found to play was that of providing a "safe space." This involved raising public awareness about sexual minority issues through public announcements or through posters in school hallways. Schools in which the GSA was found to play the "safe space" role may have had groups which were only open to sexual minority students or they may have had groups which were open to all students, regardless of sexual orientation. The third role GSAs were found to play in schools was that of a visible group whose primary focus was on education and awareness regarding sexual minority concerns. These groups typically focused on sexual minority students and their friends as being the primary group members. Also, this third type of GSA often engaged in activities outside of school (field trips, movie nights, etc.) and may also have had an activist flair. Finally, the fourth role GSAs were found to play in schools was that of a broader systemic effort to educate and raise awareness in the school system. In these instances, the GSAs were not acting as the primary or sole mechanism for addressing and advocating for sexual minority youth. Typically the goal of this broader effort was to address training and sensitivity needs throughout the school system, to build community connections, and to sponsor school and community events such as National Day of Silence, or Day of Dialogue. Because Griffin et al. (2005) looked only at GSAs in the state of Massachusetts, where the Department of Education has worked to create awareness and trainings for schools, the fourth role that GSAs played in schools was often found in conjunction with the "safe space" GSA role.

Goodenow and colleagues (2006) examined the effect that GSAs have on sexual minority students' school experiences and general well being. After the investigators controlled for demographic and school characteristics, sexual minority youth attending schools with a GSA reported significantly higher feelings of safety at school. Sexual minority youth attending a school with a GSA were also less likely to experience victimization and to have had a past-year suicide attempt when compared to their sexual minority peers attending schools without a GSA. Other factors such as non-GSA peer support groups, availability of counseling services, and anti-bullying policies were also related to lower rates of victimization and suicidality among sexual minority youth. This study is one of the first to document a common factor, the GSA, which offsets some of the risks related to at-school victimization and decreased school belonging reported among sexual minority youth.

Sexual minority youth attending ethnically diverse schools, larger schools, and schools with a lower socioeconomic status among students, reported fewer experiences of at-school victimization and suicide attempts (Goodenow et al., 2006). This may suggest that sexual minority students in these schools were able to blend in with their peers and were less likely to be singled out based upon their sexual minority status. Further research is needed to assess the positive benefits of GSAs outside the state of Massachusetts, which is commonly considered to be a more liberal state. Understanding the potential protectiveness for GSAs in areas which are less accepting is important in generalizing their potential for serving as a protective factor for sexual minority youth.

Since GSAs are linked to decreases in victimization for sexual minority youth (Goodenow et al., 2006), researchers must now investigate whether GSAs have an effect on substance use behaviors and development of psychopathology for this population. If attending a school with a GSA leads to decreases in problematic substance use and psychopathology, a better understanding of the associations among school belonging, at-school victimization, problematic substance use, and psychopathology will be needed to determine the mechanisms by which GSAs offset risk. For example, if the association between decreased school belonging and problematic substance use is mediated by at-school victimization, then the roles that GSAs play in schools might be molded to emphasize reducing victimization in order to increase the overall protectiveness of GSAs. Additionally, if at-school victimization is reduced by attending a school with a GSA, which thereby decreases substance use among sexual minority youth, researchers must examine the possible similarities and differences between sexual minority and heterosexual youth with respect to their substance use behaviors and mental health concerns.

Lee (2002) pointed out that GSAs are important because they offer support to sexual minority youth, but they can also be of benefit to heterosexual youth. GSAs may provide a space where heterosexual youth can become educated about sexual minority issues, and they may also provide support to children of same-sex parents. In the end, the presence of a GSA in a school would likely benefit not only sexual minority youth, but change the entire system in such a way that the school climate improves for all individuals.

A similar example of a program which attempts to improve a systemic climate for sexual minorities involves a program called Safe Zone. According to Poynter and Tubbs (2007), Safe Zone programs have been implemented in colleges and universities across the nation in order to visibly provide support and improve the environment for sexual minority students. This is often accomplished by providing stickers, buttons, or signs which can be placed in locations across campuses to identify that location as a safe space for sexual minorities. Additionally, Safe Zone programs may directly or indirectly lead to the development of a system heterosexual allies who support their sexual minority counterparts (Poynter and Tubbs).

Overall, Safe Zone programs are intended to improve the college or university climate without requiring individuals to be members of a group or attend regular meetings beyond an initial training process (Evans, 2002). An ethnographic evaluation conducted by Evans reported that a Safe Zone program at Iowa State University resulted in an increased visibility and awareness of sexual minority people and the challenges they face, as well as increased support from the heterosexual community. Sexual minority students at Iowa State University reported feeling safer and more validated on campus as a result of the Safe Zone project.

Using the research related to Safe Zone projects where the mere presence of support for sexual minorities has the power to improve the campus climate, it would not be outlandish to suspect that the presence of a GSA can have a similar effect for sexual minorities in high school. The power of a high school GSA to improve the lives of sexual minority youth is therefore predicted to lie in the mere presence of the GSA, rather than with specific membership; however, it is possible, and perhaps likely, that membership may have its own unique and additional benefits which deserve attention that cannot be provided herein.

Hypotheses

Using the gay-related stress hypothesis, as outlined by Rosario and colleagues (2002), it is predicted that the presence of a high school GSA will provide positive benefits for sexual minority youth by decreasing at-school victimization. In turn, sexual minority youth will exhibit more positive mental health and report more positive school experiences due to the reduction of gay-related stress in their everyday lives.

The following abbreviations will be used to describe the grouping variables in this study:

HET = Heterosexual youth.

GSA+ = Sexual minority youth who are attending or have previously attended a high school with a GSA.

GSA- = Sexual minority youth who are NOT attending or have NOT previously attended a high with a GSA.

The following hypotheses are predicted: first, significant differences will exist between sexual minority youth and heterosexual youth when examining general psychopathology, problematic substance use, and high school experiences. Second, significant differences will exist between HET, GSA+ and GSA- youth with respect to general psychopathology, problematic substance use, and high school experiences. Third, it is predicted that GSA- youth will report more negative outcomes related to general psychopathology, problematic substance use, and high school experiences when compared to their HET and GSA+ peers.

Chapter II

METHODS

Participants

For this study, sexual minority participants were recruited from college and university student groups for sexual minority students in the United States. Student groups were contacted via e-mail and asked to forward a recruitment e-mail (see Appendix N) to their members. These groups were also encouraged to post the study's information on any social networking websites such as facebook or myspace. The student groups were asked to blind carbon copy the researcher on any recruitment e-mail sent to their members so the total number of universities participating in the study could be tracked. Heterosexual participants were recruited from the Psychology 100 subject pool at The University of Montana.

Sample Size Determination

The variability in effect sizes for this area of research is quite large. For example, the effect size reported in Rostosky et al. (2003) for examining sexual minority and heterosexual youth's quantity of alcohol use was $d = 0.189$, while Bontempo and D'Augelli (2002) reported an effect size of $d = 0.80$ for a similar measure of alcohol use. Given the variability of research findings in this one area alone, and the fact that this study is looking across problematic substance use, psychopathology, and school experiences, predicting a total sample size needed to obtain adequate power to detect significant differences was incredibly difficult. Goodenow et al. (2006) were able to detect significant differences between GSA+ and GSA- youth using a sample of $n = 202$. With the recruitment strategy outlined above and the variability in effect sizes reported in the literature, our goal was to collect data from as many participants as possible, with the hope of having 75 participants in each of the three groups, resulting in a total sample size of 225.

Measures

Demographics. Information related to age, gender, sexual orientation, ethnicity, relationship/marital status, education, employment, high school grade point average (GPA) and school and community characteristics was collected using a demographics questionnaire (see appendix A). School and community characteristic questions focused on the presence or absence of a school-based GSA and/or community gay center, along with the utilization of these resources. If a participant attended a school with a GSA, the role of that GSA was also determined. Questions also asked participants if they have/had supportive/gay-friendly adults in their schools and communities. Finally, participants were asked to rate the climate of their school and community with respect to safety and acceptance of sexual minority individuals.

Victimization. A revised version of the Olweus' Bullying and Victimization Scale (Olweus, 1994) was used to assess victimization (see Appendix B). Items were revised so they could be answered retrospectively, and to allow participants to indicate whether they felt specific acts of victimization were related to their sexual orientation.

General Psychopathology. The Beck Depression Inventory-II (BDI-II; Beck, Steer, Ball, & Ranieri, 1996) was used to assess depressive symptoms (see Appendix C). The Brief Symptom Inventory (BSI; Derogatis & Melisartos, 1983; Derogatis, 1993) was used to measure general forms of psychopathology (see Appendix D).

Substance Use. The Alcohol Use Disorders Identification Test, (AUDIT; Saunders, Aasland, Babor, de la Fuente, & Grant, 1993) was used to measure past 30 day substance use patterns and problems associated with substance use (see Appendix E). A brief questionnaire which asked participants about their age of initiation for alcohol and other substance use, and about current typical drinking patterns and patterns during their senior year of high school, was also used to assess substance use behaviors (See Appendix F).

School Belonging. To measure school belonging, four items from Rostosky, et al. (2003), plus one additional item, were used (see Appendix G). These items measured school belonging using a 5 point Likert scale where participants indicated their degree of agreement or disagreement. These items were: "I was happy to be at school;" "I felt safe at school;" "The teachers at my school treated me fairly;" "I felt like I fit in at school;" and the additional item, "I attended or was involved in some kind of school related activity or school function."

Additional Measures. Two additional measures were administered to all participants. The first was The Childhood Trauma Questionnaire Short Form (CTQ-SF; Bernstein et al. 2003), which was used to assess childhood abuse (see Appendix H). This measure yields scores for physical, emotional, and sexual abuse, as well as a total abuse score. This measure was included so that childhood abuse could be considered as a possible covariate for the analyses. A second measure was included to examine participants' religiosity (see Appendix I) which could be used in future studies to examine the impact that religiosity has on health risk behaviors.

Two additional measures, The Index of Attitudes Towards Homosexuals (IAH, Hudson & Ricketts, 1980) and The Self Report of Behavior Scale Revised (Roderick, McCammon, Long, & Allred, 1998) (see appendices J and K respectively), were included to examine heterosexual youths' attitudes and behaviors directed towards sexual minority individuals. Data from these measures may be analyzed to determine possible effects of attending a high school with a GSA on heterosexual youth.

For sexual minority youth, the Outness Inventory (Mohr & Fassinger, 2000) was modified in order to examine participants' current levels of outness and their outness in high school (see appendix L). The outness inventory was added to be a possible covariate; however, because it only applies to sexual minority youth, its utility as a covariate was minimal for the present study. Future research could examine the possible effects outness has on our dependent variables of interest. Finally, an additional set of qualitative questions asked sexual minority participants about their experiences in developing a sexual minority identity, substance use, and about their high school experiences (see appendix M).

Procedure

Sexual minority participants who decided to take part in the study clicked a hyperlink in the recruitment e-mail which took them to the informed consent page. They read the informed consent and electronically gave their consent to participate in the study. Participants then completed the survey, which took approximately 20-30 minutes. After completing the survey, participants were debriefed and given additional information about the aims of the study and provided with more information about resources they could use, should they be experiencing any distress related (or perhaps unrelated) to their participation. Participants were also given the option of contacting the researcher if they had any questions or if they were interested in the results of the study. At the end of the debriefing form, another link was provided so that participants could enter their e-mail address into a separate database and be considered for a drawing to win one of ten, ten dollar gift cards.

Analyses

Hypothesis 1. To determine if significant differences existed between sexual minority and heterosexual youth with respect to high school experiences, substance use behaviors, and general psychopathology, a total of seven individual analyses of covariance (ANCOVA) were calculated. These analyses examined the results from: The modified Olweus Bullying and Victimization Scale, the school belonging questionnaire, and participants' high school GPAs (school experiences); the AUDIT and age of drug use initiation questionnaires (substance use behaviors); and the BDI-II and BSI (general psychopathology).

Hypothesis 2. To determine if significant differences existed between GSA+, GSA-, and HET youth with respect to high school experiences, substance use behaviors, and general psychopathology, a total of seven individual analyses of covariance (ANCOVA) were calculated. These analyses examined the results from: The modified Olweus Bullying and Victimization Scale, the school belonging questionnaire, and participants high school GPA (school experiences); the AUDIT and age of drug use initiation questionnaires (substance use behaviors); and the BDI-II and BSI (general psychopathology).

Hypothesis 3. Using the seven ANCOVAs calculated in hypothesis two, least significant differences (LSD) were calculated to test for significant differences between each of the three groups to determine if GSA- youth reported significantly more negative outcomes related to their high school experiences, substance use behaviors, and general psychopathology.

Determining Covariates. In order to select the covariates for each individual ANCOVA, a correlation matrix using participant age, age of first consensual sexual experience, years of education, CTQ-SF scores, and each dependent variable of interest was calculated. Individual analyses of variance (ANOVA) were calculated for each dependent variable using gender (dichotomously classified with transgender individuals' gender *identities* used as their gender) and the self-reported population of the town where a participant attended high school as the independent variables.

Chapter III

RESULTS

Group means and standard deviations for the potential continuous covariates of age, age of first consensual sexual experience, number of years of education, and CTQ-SF are displayed in Table 1.1. Group means and standard deviations for each dependent variable are displayed in Table 1.2, while Table 1.3 provides a basic overview of the results of this study. Finally, Cronbach's alpha was calculated for each measure corresponding to a multi-item dependent variable: .844 (school belonging), .688 (Victimization), .824 (AUDIT), .904 (BDI-II), and .964 (BSI).

Sample Characteristics

A total of 252 17-20 year old participants (M = 19.11, sd = .765) were recruited between April and July, 2009. The sample consisted of 103 heterosexual participants and four sexual minority participants who were recruited from the Psychology 100 Subject Pool at The University of Montana. An additional 145 sexual minority participants were recruited from 59 college and university sexual minority student groups across the United States. Of the sexual minority sample, 56 (37.5%) identified themselves as bisexual, 84 (56.5%) identified as being gay, lesbian, or homosexual, and nine (6%) individuals were classified as "other" with respect to their sexual orientation. Eighty-two sexual minority participants indicated that they attended a high school with a GSA, while 67 indicated that they had not.

The overall sample consisted of 89 (35.3%) participants who identified as male, while 153 (60.7%) participants identified themselves as female. Two individuals (.8%)

identified as being transgender (female to male) while eight (3.2%) individuals selected "other" as their option for gender.

The majority of participants (n = 196; 77.8%) in this study identified themselves as Caucasian or European American. African American participants made up the next largest racial group (n = 16; 6.3%) followed by Asian Americans (n = 9; 3.6%), Hispanic or Mexican Americans (n = 8; 3.2%) and Native Americans (n = 2; .8%). The remaining participants (n = 20; 7.9%) identified their racial background as other. Additional demographic information related to ethnicity and the population of the town where subjects attended high school are broken down by sexual majority/minority status and located in Tables 2.1 and 2.2 respectively.

Covariate Determination

Tables 3.1 through 3.7 display the correlation matrices used to determine the covariates for each of the ANCOVAs. For each dependent variable, two one-way ANOVAs were calculated using a dichotomous gender classification and the population of the city or town where a participant attended high school as independent variables.

School Experiences Variables. Age and CTQ-SF scores were used as covariates for the ANCOVAs calculated on school belonging (see Table 3.1). Age, education, and CTQ-SF scores were all found to have statistically significant negative correlations with school belonging. Because age and education were both found to have statistically significant positive correlations with one another, indicating that they would both likely account for similar variability in an ANCOVA, age was selected as a covariate over education because of its stronger correlation to school belonging. No significant differences in school belonging were found to exist across levels of population $F(5, 250) = .470$, $p > .05$ or gender $F(1, 241) = 3.194$, $p > .05$.

The number of years of education that participants had received and CTQ-SF scores were both significantly correlated with at-school victimization (see Table 3.2). No significant differences in at-school victimization were found to exist across levels of population $F(5, 246) = .742$, $p > .05$ or gender $F(1, 237) = 1.773$, $p > .05$. Education and CTQ-SF scores were used as covariates for the ANCOVAs calculated on this dependent variable. The only variable with a significant correlation with GPA was CTQ-SF scores which were negatively correlated with participants' high school GPA (see Table 3.3). Again, no differences in GPA were found for gender $F(1, 240) = 3.105$, $p > .05$, or population $F(5, 249) = .425$, $p > .05$.

Substance Use Variables. With regards to problematic alcohol use, neither age, age of first consensual sexual experience, education, or CTQ-SF were correlated with participants' AUDIT scores (see Table 3.4). However, a significant gender difference was found for AUDIT total scores $F(1, 240) = 4.55$, $p = .034$, but no significant differences were found across levels of population, $F(5, 249) = 1.86$, $p > .05$. In an attempt to account for geographic variability in problematic alcohol use, each participant was coded into a risk category based upon data collected by the Youth Risk Behavior Surveillance System (YRBSS; Eaton et al., 2007). The YRBSS is a nation-wide, school based, survey which attempts to track health risk behaviors among adolescents. Using the data from the YRBSS, a state risk variable was calculated for each state simply by imputing the percentage of young adults sampled from each state who indicated that they had engaged in binge drinking behavior (consumed five or more drinks of alcohol, within a couple of hours, at least once) over the past 30 days. For states where this data was not available (n = 4 represented in this study), the overall percentage of participants in the United States who reported binge drinking over the past thirty day was used. When this state risk variable was correlated with total AUDIT scores, a significant correlation of $r = .144$ was found. Therefore, for ANCOVAs where AUDIT scores were used as the dependent variable, the state risk variable and gender were used as covariates.

The age at which participants first engaged in consensual sex was significantly and positively correlated with the age at which participants first used an illegal drug, while CTQ-SF scores were significantly and negatively correlated with this dependant variable (see Table 3.5). No differences in the age of initiation of drug use were found for gender $F(1, 148) = .064$, $p > .05$, or population, $F(5, 153) = .754$, $p > .05$.

General Psychopathology. Education level and CTQ-SF scores were both positively correlated with participants' scores on the BSI and BDI-II (see Figures 3.6 and 3.7 respectively). There were no significant differences with respect to gender, $F(1, 237) = .151$, $p > .05$, or population, $F(5, 246) = .901$, $p > .05$, on the BSI, and also no significant gender, $F(1, 237) = .046$, $p > .05$, or population, $F(5, 247) = .267$, $p > .05$, differences on the BDI-II. Therefore, for ANCOVAs where BSI or BDI-II scores were used as the dependent variable, education and CTQ-SF scores were used as covariates.

Hypothesis 1

Overall, results for the first hypothesis, which predicts that significant differences will exist between heterosexual and sexual minority youth with respect to school experiences, substance use, and general psychopathology, support rejecting the null.

Significant differences on each dependent variable were detected between heterosexual and sexual minority participants as outlined below.

School Experiences. As predicted, significant differences were found between sexual minority youth and heterosexual youth with respect to school belonging. Sexual minority youth reported significantly less school belonging compared to heterosexual youth when controlling for the effects of age and CTQ-SF scores, $F(3, 244) = 6.25$, $p = .013$, $\eta_p^2 = .025$. The overall adjusted R squared for the model was .123, with both age, $F(3, 244) = 15.88$, $p < .001$, $\eta_p^2 = .062$, and CTQ-SF scores, $F(3, 244) = 9.744$, $p = .002$, $\eta_p^2 = .039$, serving as significant predictors of school belonging in the model.

Next, sexual minority youth reported experiencing significantly more at-school victimization compared to heterosexual youth when controlling for the effects of education and CTQ-SF scores, $F(3, 242) = 13.20$, $p < .001$, $\eta_p^2 = .053$. The overall adjusted R squared for this model was .268. Years of education, $F(3, 242) = 7.69$, $p = .006$, $\eta_p^2 = .031$, and CTQ-SF scores, $F(3, 242) = 48.11$, $p < .001$, $\eta_p^2 = .168$, were also significant predictors of at-school victimization.

Last, sexual minority youth reported significantly higher high school GPAs compared to their heterosexual peers when controlling for the effects of CTQ-SF scores, $F(2, 243) = 12.22$, $p = .001$, $\eta_p^2 = .048$. The overall adjusted R squared for this model was .062, while CTQ-SF scores also served as a significant predictor of high school GPA, $F(2, 243) = 9.26$, $p = .003$, $\eta_p^2 = .037$.

Substance Use. Significant differences existed between sexual minority and heterosexual youth when examining total AUDIT scores and the age of drug use initiation. For total AUDIT scores, sexual minority youth reported significantly lower scores compared to their heterosexual peers, while controlling for the effects of gender and state risk, $F(3, 235) = 21.28$, $p < .001$, $\eta_p^2 = .084$. The overall adjusted R squared for this model was .107. Gender also served as a significant predictor of total AUDIT scores, $F(3, 235) = 4.85$, $p = .029$, $\eta_p^2 = .021$, while the state risk variable was not a significant predictor in the model, $F(3, 235) = .660$, $p > .05$.

For the age of drug use initiation, sexual minority youth reported significantly later ages compared to heterosexual youth while controlling for the effects of CTQ-SF scores and the age at which participants first had consensual sex, $F(3, 130) = 17.73$, $p < .001$, $\eta_p^2 = .123$. The overall adjusted R squared for this model was .191. Both CTQ-SF scores, ($F(3, 130) = 8.70$, $p = .004$; $\eta_p^2 = .065$), and age of first consensual sexual experience, ($F(3, 130) = 7.64$, $p = .007$, $\eta_p^2 = .057$), were also significant predictors of the age at which participants first used drugs.

General Psychopathology. For both the BSI and BDI-II, sexual minority youth reported significantly higher scores compared to heterosexual youth, when controlling for the effects of education and CTQ-SF scores. For the BSI, sexual minority/majority status was a significant predictor, $F(3, 241) = 8.31$, $p = .004$; $\eta_p^2 = .034$, along with education, $F(3, 241) = 5.97$, $p = .015$, $\eta_p^2 = .025$, and CTQ-SF scores, $F(3,241) = 22.80$, $p <.001$, $\eta_p^2 = .088$. For the BDI-II, sexual minority/majority status was also a significant predictor, $F(3, 242) = 6.39$, $p = .012$, $\eta_p^2 = .026$, along with CTQ-SF scores, $F(3, 242) = 24.76$, $p <.001$, $\eta_p^2 = .094$; however, education, $F(3,242) = 3.45$, $p >.05$, was not significant in the model. The overall adjusted R squared for the BSI model was .163 and the adjusted R squared for the BDI-II model was .149.

Hypothesis 2

Overall, results for the second hypothesis, which predicts that significant differences will exist between HET, GSA+ and GSA- youth with respect to school experiences, substance use, and general psychopathology, also supports a rejection of the null. Significant differences on each dependent variable were detected using grouping variables consisting of HET, GSA+, and GSA-. General results of each analysis are discussed below.

School Experiences. When controlling for the effects of age and CTQ-SF scores, significant differences were found between HET, GSA+ and GSA- youth with respect to school belonging, $F(4, 244) = 7.88$, $p < .001$, $\eta_p^2 = .062$. The overall adjusted R squared for this model was .152 with both age, ($F(4, 244) = 12.83$, $p < .001$, $\eta_p^2 = .051$), and CTQ-SF scores, ($F(4,244) = 9.45$, $p = .002$, $\eta_p^2 = .038$), serving as significant predictors of school belonging.

Next, significant differences also existed between HET, GSA+, and GSA- youth in reports of at-school victimization, $F(4, 242) = 9.39$, $p < .001$, $\eta_p^2 = .073$, when controlling for the effects of education level, ($F(4, 242) = 7.96$, $p = .005$, $\eta_p^2 = .032$), and CTQ-SF scores, ($F(4, 242) = 48.17$, $p < .001$, $\eta_p^2 = .169$), which were both significant in the model. The overall adjusted R squared for this model was .281.

Last, with respect to high school GPA, a significant difference, $F(3, 243) = 6.15$, $p = .002$, $\eta_p^2 = .049$, was detected between GSA+, GSA-, and HET youth when controlling for the effects of CTQ-SF scores, which were also a significant predictor of high school GPA, $F(3, 243) = 9.15$, $p = .003$, $\eta_p^2 = .037$. The overall adjusted R squared for this model was .059.

Substance Use. Significant differences existed between GSA+, GSA- and HET youth when examining total AUDIT scores and controlling for the effects of gender and state risk, $F(4, 235) = 13.54$, $p < .001$, $\eta_p^2 = .105$. The overall adjusted R squared for this model was .124. Gender was also a significant predictor of total AUDIT scores in the model, $F(4, 235) = 4.00$, $p = .047$, $\eta_p^2 = .017$, while the state risk variable was not significant in the model, $F(4, 235) = .647$, $p > .05$.

For the age of drug use initiation, significant differences were detected between GSA+, GSA- and HET youth while controlling for the effects of CTQ-SF scores and the age at which participants first had consensual sex, $F(4, 130) = 8.91$, $p < .001$, $\eta_p^2 = .125$. The overall adjusted R squared for this model was .186. Both CTQ-SF scores, $F(4, 130) = 8.16$, $p = .005$; $\eta_p^2 = .061$, and age of first consensual sexual experience, $F(4, 130) = 7.07$, $p = .009$, $\eta_p^2 = .054$, were also significant predictors of the age at which participants first used drugs.

General Psychopathology. When controlling for the effects of education and CTQ-SF scores on the BSI, significant differences were detected between GSA+, GSA-, and HET youth, $F(4, 241) = 7.99$, $p <.001$, $\eta_p^2 = .063$. The overall adjusted R squared for this model was .185. Both education, $F(4, 241) = 6.41$, $p = .012$, $\eta_p^2 = .026$, and CTQ-SF scores, $F(4, 241) = 22.38$, $p < .001$, $\eta_p^2 = .087$ were also significant predictors of BSI scores.

With respect to BDI-II scores, significant differences were also detected between GSA+, GSA-, and HET youth when controlling for the effects of education and CTQ-SF scores, $F(4, 242) = 6.40$, $p = .002$, $\eta_p^2 = .051$. The overall adjusted R squared for this model was .168. CTQ-SF scores were also significant, $F(4, 242) = 24.53$, $p < .001$, $\eta_p^2 =$

.094, while education was not a significant predictor of BDI-II scores, $F(4, 242) = 3.65$, $p > .05$.

Hypothesis 3

Hypothesis three extends hypothesis two by predicting that the estimated marginal mean scores for GSA- youth will be significantly different from GSA+ and HET youth within the context of the covariates in each analysis. Furthermore, directionality is predicted to the extent that it is expected that GSA- youth's scores will represent a more negative outcome compared to the scores of GSA+ and HET youth. The results partially support a rejection of the null hypothesis and are discussed in terms of directionality and comparisons between GSA- and HET groups and GSA- and GSA+ groups using the least significant difference post-hoc analysis. This post-hoc analysis was selected because it does not correct for multiple comparisons, which is consistent with a-priori hypothesis testing; however, it appears that if a correction for multiple comparisons were to be made, each significant finding below would remain significant.

School Experiences. Figure 1 displays the estimated marginal means for school belonging within each grouping variable. Planned comparisons, using the least significant difference and adjusting for the effects of age and CTQ-SF scores, found that GSA- youth ($M = 18.47$, $SE = .544$) reported significantly lower scores compared to both GSA+ ($M = 20.69$, $SE = .487$) and HET youth ($M = 21.20$, $SE = .448$). The magnitude of the differences in the means between the GSA- and GSA+ (mean difference = -2.228, $p = .003$, CI: -3.667 to -.789) and the GSA- and HET youth (mean difference = 2.731, $p < .001$, CI: -4.133 to -1.328) was significant in both comparisons.

The estimated marginal means for at-school victimization within each grouping variable are displayed in Figure 2. Planned comparisons using the least significant difference and adjusting for the effects of education and CTQ-SF scores found that GSA-youth ($M = 16.74$, $SE = .378$) reported significantly higher at-school victimization scores compared to both GSA+ ($M = 15.57$, $SE = .341$) and HET youth ($M = 14.59$, $SE = .314$). The magnitude of the differences in the means between the GSA- and GSA+ (mean difference = 1.167, $p = .022$, CI: .171 to 2.163) and the GSA- and HET youth (mean difference = 2.151, $p < .001$, CI: 1.172 to 3.130) was significant in both comparisons.

Figure 3 displays the estimated marginal means for high school GPA within each grouping variable. The results of the planned comparisons for high school GPA using the least significant difference and adjusting for the effects of CTQ-SF scores found that GSA- youth ($M = 3.638$, $SE = .048$) reported significantly higher scores compared HET youth ($M = 3.471$, $SE = .040$), and a significant difference was not detected between GSA- and GSA+ youth ($M = 3.659$, $SE = .043$). The magnitude of the difference in the means between GSA- and HET youth (mean difference = .167, $p = .008$, CI: .044 to .290) was significant. Overall, the findings for high school GPA are not congruent with the directionality proposed in hypothesis three.

Substance Use. Figure 4 displays the estimated marginal means for AUDIT total scores for each of the three grouping variables. Planned comparisons using the least significant difference and adjusting for the effects of gender and state risk found that GSA- youth ($M = 6.130$, $SE = .680$) reported significantly higher AUDIT scores compared to GSA+ youth ($M = 4.098$, $SD = .605$). In contrast to the directionality predicted in hypothesis three, GSA- youth reported lower scores compared to HET youth

(M = 8.659, SD = .559). The magnitude of the difference (mean difference = 2.032, p = .021, CI: .307 to 3.756) between GSA- and GSA+ youth was significant which partially supports the third hypothesis.

Figure 5 displays the estimated marginal means for age of initiation of substance use for each grouping variable. Planned comparisons using the least significant difference and adjusting for the effects of CTQ-SF scores and the age of first consensual sexual experience found that GSA- youth (M = 16.889, SE = .256) reported a later age of drug use initiation compared to HET youth (M = 15.694, SE = .239). This is again in contrast to the directionality that is predicted in hypothesis three. Finally, there was no significant difference between GSA- and GSA+ youth (M = 17.055, SE = .257) which also fails to support the prediction made in hypothesis three.

General Psychopathology. Figure 6 displays the estimated marginal means for BSI scores for each grouping variable. Planned comparisons using the least significant difference and adjusting for the effects of education and CTQ-SF scores found that GSA- youth (M = 42.760, SE = 3.325) reported significantly higher scores compared to both GSA+ (M = 30.558, SE = 3.036) and HET youth (M = 25.435, SE = 2.791) (see Figure 1.6). The magnitude of the differences in the means between the GSA- and GSA+ (mean difference = 12.202, p = .007, CI: 3.385 to 21.019) and the GSA- and HET youth (mean difference = 17.325, p <.001, CI: 8.675 to 25.974) was significant in both comparisons.

Last, the estimated marginal means of BDI-II scores for each grouping variable are displayed in Figure 7. Potential differences in BDI-II scores were evaluated using the least significant difference comparison while adjusting for the effects of education and CTQ-SF scores. Once again, GSA- youth (M 14.027, SE = 1.130) reported significantly higher scores compared to both GSA+ (M = 10.233, SE = 1.025) and HET youth (M = 8.777, SE = .948). The magnitude of the differences in means between the GSA- and GSA+ (mean difference = 3.794, p = .013, CI: .808 to 6.780) and HET youth (mean difference = 5.249, p = .001, CI: 2.310 to 8.188) was significant in both comparisons.

Secondary Analyses

Secondary analyses were conducted to explore the possible impact that attending a high school with a GSA has on heterosexual youth's attitudes and behaviors toward homosexuals. Attitudes were assessed using the IAH, while negative behaviors, such as verbal and physical abuse directed toward homosexuals, were assessed using the Self Report of Behavior Scale Revised.

Covariate Determination. Again, an ANCOVA design was used to examine the attitudes and behaviors towards homosexuals were more positive in heterosexual youth who attended a high school with a GSA. To determine the covariates for these analyses, a correlation matrix (see Table 3.8) which included age, age of first consensual sexual experience, education, Self Report of Behavior Scale Revised total scores and IAH total scores, was constructed. None of the continuous demographic variables were significantly correlated with either of the dependent variables of interest. However, a significant gender difference was found for both measures.

On the IAH, female participants (M = 63.08, sd = 18.78) endorsed significantly more positive attitudes towards homosexuals compared to male participants (M = 72.20, sd = 20.41) $F(1, 99) = 5.28$, $p = .024$. Female participants (M = 21.63, sd = 2.80) also reported significantly more positive behaviors directed towards homosexuals compared to male participants (M = 25.73, sd = 9.56) $F(1, 97) = 9.66$, $p = .002$. Significant behavioral $F(5, 97) = .179$, $p > .05$ and attitudinal differences $F(5, 99) = 1.59$, $p > .05$ were not found across levels of population.

Attitudinal and Behavioral Results for Heterosexual Participants. With gender as the lone covariate, two ANCOVAs were carried out to determine if behavioral and attitudinal differences existed between heterosexual youth who attended a high school with a GSA and those who did not. The first analysis revealed a significant difference on the IAH between heterosexual youth who attended a high school with a GSA ($M = 60.25$, $sd = 16.79$) and those who did not ($M = 69.09$, $sd = 20.70$), $F(1, 95) = 6.32$, $p = .014$, $\eta_p^2 = .062$. The overall adjusted R squared for the model was .096, with gender also serving as a significant predictor of IAH scores, $F(1, 95) = 7.96$, $p = .006$, $\eta_p^2 = .077$. The second analysis revealed a significant difference on the Self Report of Behavior Scale Revised between heterosexual youth who attended a high school with a GSA ($M = 21.75$, $sd = 1.94$) and those who did not ($M = 23.97$, $sd = 7.87$), $F(1, 94) = 4.29$, $p = .041$, $\eta_p^2 = .044$. The overall adjusted R squared for this model was .110, and again, gender was also a significant predictor, $F(1, 94) = 11.44$, $p = .001$, $\eta_p^2 = .108$.

Chapter IV

DISCUSSION

The results of this study support rejecting the null hypothesis for hypothesis one which predicts that significant differences will exist between sexual minority and heterosexual youth with respect to school experiences, substance use, and psychopathology. The results also support rejecting the null hypothesis for the second hypothesis which predicts that significant differences will exist between HET, GSA+, and GSA- youth with respect to school experiences, substance use, and psychopathology. Finally, the results provide partial support for the third hypothesis which predicts that GSA- youth will have more negative outcomes related to school experiences, substance use, and psychopathology when compared to their GSA+ and HET peers.

In relation to the first hypothesis, the results suggest that sexual minority youth, in general, are at-risk for experiencing decreased school belonging and increased experiences of at-school victimization and other general forms of psychopathology, when they are compared to their heterosexual peers. This finding is consistent with the previous research conducted by Bontempo and D'Augelli (2002), Rostosky and colleagues (2003), and Williams et al. (2005). However, in this sample, sexual minority youth, compared to heterosexual youth, had more positive outcomes related to their alcohol use, age of drug use initiation, and high school GPA, which is not consistent with the body of research examining differences between heterosexual and sexual minority youth.

Possible explanations for this inconsistency include the differential sampling methods used in this study, which resulted in the heterosexual sample being limited to students in Psychology 100 classes at The University of Montana, while the sexual minority sample was recruited from sexual minority student groups at colleges and universities across the nation. This could have easily impacted the GPA variable because many of the universities where sexual minority youth were recruited from were likely to have more stringent admission requirements compared to The University of Montana. Additionally, epidemiological data from the Substance Abuse and Mental Health Services Agency (SAMHSA, 2008) indicates that Region Five of Montana, which includes Flathead, Lake, Lincoln, Mineral, Missoula, Ravalli, and Sanders counties, is estimated to have the highest prevalence of past month illicit drug use of any substate region in the United States. Furthermore, according to the same SAMHSA data, Montana ranks fourth in the nation for past month illicit drug use among persons 12 or older. This epidemiological data helps to place the ages of drug use initiation reported by the HET sample in context, and further highlights the importance of recruiting a geographically diverse heterosexual sample for this study.

However, additional confounds are not limited to just the heterosexual sample obtained in this study. The sexual minority sample that was recruited may not be as representative of the sexual minority population within the 17-20 year old demographic as was initially thought. This could be due to the challenges and stressors associated with being a sexual minority, which are consistently linked to increases in psychopathology and problematic substance use in the literature (see Hughes and Eliason, 2002 for review). For example, it is possible that sexual minority youth who experience the highest levels of at-school victimization and lowest levels of school belonging never graduate from high school, and thus it is unlikely that they would have been recruited to take part in this study. Had these individuals been included in the sexual minority sample, and had the heterosexual sample been recruited from more than one university, these results could likely be very different.

At the same time, the previous explanation does not account for the fact that the sexual minority youth in the sample reported significantly greater amounts of general psychopathology and depressive symptomatology. An additional explanation comes from research examining the internalizing/externalizing psychopathology distinction. Research conducted by Finn et al. (2009) highlights the covarying nature of externalizing psychopathologies. The authors argue that externalizing pathologies are best represented by a single latent variable which can predict reduced cognitive functioning (made up of reduced working memory capacity, short term memory store, general intelligence, and conditional associative learning). Their findings suggest that the reduced cognitive capacity found among externalizing disorders is better associated with the covariance found among the lifetime prevalence of externalizing symptomatology, compared to the covariance found among a single diagnostic criterion. These findings are in line with Kruger, Markon, Patrick, and Iacono (2005) who also argue for the dimensional classification of externalizing disorders. Overall, a dimensional classification of alcohol dependence and problematic drinking would capture the similarities found in the categorical description of alcohol dependence, but would also be representative of the diversity found amongst externalizing disorders (Finn et al., 2009; Kruger et al., 2005) and thereby possibly explain the two (or more) underlying mechanisms which result in differences between internalizing and externalizing disorders. This would also explain why the sexual minority youth in the sample reported significantly more internalizing problems compared to the heterosexual youth, while also partially explaining the increase in externalizing problems and lower high school GPAs that were found in the heterosexual sample. This reasoning would then predict that if measures of antisocial behaviors and anxiety had been included in the study, heterosexual participants would have scored significantly higher on the measure of antisocial behaviors, while sexual minorities would have scored significantly higher on the anxiety measure.

The results also suggest that when sexual minority youth are divided into GSA+ and GSA- youth, GSA- youth were more at-risk for experiencing decreased school belonging, and increased experiences of at-school victimization and psychopathology, when compared to GSA+ youth and heterosexual youth. These findings are consistent with Goodenow et al. (2006) and extend this line of research by highlighting the potential positive impact that attending a high school with a GSA can have on decreasing experiences of problematic drinking and emotional distress. An additional unexpected finding was the lack of a significant difference between these groups with respect to the age of initiation of substance use. Again, this could be reflective of sampling bias in the sexual minority sample or simply a lack of adequate power to detect a significant difference in this instance.

Implications

There are a number of important implications for the results of this study. These implications involve expanding the knowledge base as it relates to the effects of attending a high school with a GSA for sexual minority and heterosexual youth, furthering theoretical explanations for why sexual minority youth are an at-risk population, and guiding potential school policy decisions in the future.

First, this study is important because it provides some initial measures of GSA effect size for problematic alcohol use and depression, which are often studied within the context of sexual majority/minority status. In this study, the effect sizes measures from the second hypothesis were able to account for 5-12.5% of the variability in outcome within the sample, depending upon the specific dependent variable of interest (see Table 1.3). One of the effect size measures reported, the partial eta squared, is calculated by dividing the sum of squares for the effect of your independent variable (or covariate) by the sum of squares for the effect of your independent variable (or covariate) added to the sum of squares for the error associated for the independent variable (or covariate). This calculation of the partial eta squared explains the amount of the variance accounted for in the data by the independent variable (or covariate). At the same time, this effect size measure is not an inferential statistic that should be used to make broad comparisons of effect size across multiple studies; rather, the adjusted R squared for each model could be used to compare findings from this study with those of other researchers, provided the same covariates are also considered in comparison studies.

In order to better separate the possible benefits of attending a high school from other factors in quasi-experimental designs, more variables will need to be controlled for in future studies. The effect size estimates from hypothesis two provide a baseline which will be beneficial to understanding how experimentally or statistically controlling for additional variables, especially those variables which may better account for a given outcome than a GSA, impacts the effect of attending a high school with a GSA.

A second implication of this research involves a better theoretical understanding of possible mechanisms by which GSAs provide "protection" to sexual minority youth. If sexual minority youth experience increased amounts of at-school victimization, it is likely that the vast majority of victimizers are heterosexual students. The results from the secondary analysis which found heterosexual youth who attended a high school with a GSA to hold significantly more favorable attitudes towards homosexuals while engaging in significantly fewer homophobic behaviors, in part, helps to explain why the GSA+ youth in this sample reported less at-school victimization and more school belonging compared to their GSA- peers.

Although causality cannot be determined, the findings related to heterosexual youth, in addition to the findings from each of the three hypotheses, support the gay-related stress hypothesis as it accounts for the increases in problematic substance use and general forms of psychopathology reported among sexual minorities. In fact, with the numerous findings in this study depicting GSA+ youth having superior outcomes compared to their GSA- peers, and heterosexual youth attending a high school with a GSA as being more tolerant and accepting of their sexual minority peers, determining causality becomes irrelevant if the presence of a high school GSA can be considered a "marker" of an environment which will be conducive for healthy development for sexual minority youth.

With GSA+ youth reporting more positive health behaviors compared to their GSA- peers, it may be possible, with future research involving larger samples and longitudinal designs, to consider attending a school with a GSA a protective factor for sexual minority youth. If this factor is found to decrease the amount of victimization sexual minority youth experience at school, which in turn results in decreased substance use and general forms of psychopathology, then further support will be garnered for the gay-related stress hypothesis. At the same time, if GSAs are found to be a place where sexual minority youth are able to meet other like-minded peers in the absence of alcohol and other drugs, thus reducing problematic substance use among sexual minority youth, support for the sexual minority identity development hypothesis is also possible.

Given the research conducted by Rosario et. al. (2004) which failed to support the gay-related stress hypothesis, and instead supported the minority identity development hypothesis, the results contained herein further the theoretical debate regarding the factors which cause sexual minorities to be at-risk for experiencing emotional distress and engaging in problematic substance use. Once again, the possibility exists that these two hypotheses correctly account for aspects of both the increased amounts of psychopathology which sexual minority youth report (caused in-part by increases in at-school victimization) and the problematic drinking (caused by sexual minority youth meeting peers in settings where alcohol and drugs are readily available). In the end, would it be that much of a surprise if both hypotheses were partially correct?

One final implication of this research involves school policies and administrative attitudes which still prohibit the formation of high school GSAs or GSA-like clubs. Keeping this population in school is imperative in reducing the chances that a sexual minority youth will end up living on the street, and engaging in other health risk behaviors associated with homelessness. If GSAs result in more positive health outcomes and school experiences for sexual minority youth, the argument for the legitimacy of the GSA will be strengthened. Research supporting the claim that GSAs help to promote a healthy school atmosphere will be needed by those in the educational setting, whether they are students, community leaders, or teachers, who are trying to convince school administrations of the need for such groups.

Arguments have been made, some stronger than others, as to why many school officials are leery in allowing a school support group for sexual minority youth to form. For example, administrators may not want to deal with the community ramifications of allowing a GSA to meet in the school setting, or they may be scared that GSAs will only make sexual minority youth more visible targets for acts of hate and violence. In the end, if research shows that GSA+ youth have more positive school experiences and health behaviors, the legitimacy for implementing such a group is validated.

Limitations

As with most research examining sexual minority individuals, there are limitations which prohibit causal determination and broad generalizations. By not randomly assigning sexual minority and heterosexual youth to schools with and without GSAs, causal inferences cannot be made. Even if researchers could randomly assign sexual minority youth to GSA+ or GSA- groups, the community climate (the safety, acceptance, and equality for sexual minority individuals) would need to be evaluated. Some of the benefits detected in this study may stem from living in a community where the climate for sexual minorities is quite positive. These communities may be more likely to have schools with GSAs, compared to communities where the climate for sexual minorities is less than desirable. Overall, the presence of a GSA may be an indicator that a given community is going to be more conducive to healthy development for sexual minority youth.

Additionally, sampling bias is of concern because the heterosexual sample was recruited from the Psychology 100 subject pool at The University of Montana, while the sample of sexual minority youth was recruited from college support groups for sexual minorities. Because the sexual minority sample was recruited from these college support groups, the participants in this group were aware and likely "out" to some degree with regard to their sexual minority status. This limits generalizability because the sampling methods would not capture those individuals who will come out later in life. In addition, individuals who opted not to attend college, along with individuals who dropped out of high school, were not likely to have been represented in the sample.

While both samples lacked diversity with respect to ethnicity, the heterosexual sample was composed of more Caucasian individuals, and individuals who attended high school in smaller cities, when compared to the sexual minority sample. The lack of ethnic diversity in both samples further limits generalization, while the lack of participants growing up in urban areas in the heterosexual sample makes this group a less than ideal heterosexual comparison group.

The retrospective nature of this study does imply some difficulty gauging the accuracy of the self reporting participant. Ideally this study would need to be conducted longitudinally in order to fully understand the affects of attending a school with a GSA on the unique experiences of sexual minority and heterosexual youth as they develop into young adults. At the same time, the sample collected for this study was not far removed from their high school experiences, and the potential for participants to still be in high school while being involved in this study did exist. Additionally, the participants answered the questions related to problematic substance use and general forms of psychopathology with respect to their current functioning; therefore, for the majority of participants, the results from these analyses do not directly reflect problematic drinking and levels of emotional distress while in high school. With the consistency of significant differences between GSA+, GSA- and HET youth, and the more positive outcomes detected in the GSA+ relative to the GSA- youth, the evidence suggests some possible protectiveness for the GSA+ youth exists and extends beyond the high school years.

A final limitation of this study involves the overall sample size, which was large enough to detect significant differences at two and three levels of an independent variable while including one or two covariates in each model. However, had the sample size been larger, additional analyses could have examined whether the aforementioned findings are consistent across levels of gender and across behavioral and affective domains of sexual orientation. A recent study published in the American Journal of Public Health highlights the importance of considering both gender and multiple domains of sexual orientation. The results of this study, which used a sample that was representative of adults age 20 and older living in the general population in the United States, consistently found that identifying oneself as bisexual and having a history of both-sex sexual behaviors were both associated with an increased risk for psychopathology in general, and depression and anxiety in particular, for both men and women (Bostwick, Boyd, Hughes, & McCabe, 2009). The authors of this study cautioned against associating sexual minorities with poorer health outcomes in a general fashion, and instead encouraged researchers studying health risk behavior to examine the various domains of sexual orientation as they relate to health risk behavior for both men and women. Unfortunately, a larger sample size is needed to examine these various domains within the present study.

Future Directions

Research attempting to identify sources of resilience for sexual minority youth has traditionally been neglected. Clearly, the most important question to answer in this line of research is, "Do GSAs really cause sexual minority youth to have more positive school experiences and mental health outcomes?" Again, determining causality in this instance is also nearly impossible due to a lack of random assignment. Instead, perhaps the focus of research should shift from determining causality to identifying and studying "markers" or "indicators" of protectiveness for sexual minority youth.

For example, the results of this study indicate that a high school GSA may be an "indicator" of an environment which will be conducive to healthy development for sexual minority youth. With this indicator identified, researchers can begin to study potential mediators and moderators which interact with the specific indicator to affect an outcome. One such moderator might include the community climate for sexual minorities. The climate for sexual minorities could then be assessed to understand how a positive or negative community climate impacts the substance use behaviors and levels of psychological distress of youth attending (or not attending) a high school with a GSA.

It would be expected that youth who attend high schools with GSAs and reside in communities which are safe and accepting of sexual minorities will have more positive school experiences, less emotional distress, and less problematic substance use, compared to youth who live in communities which are unsafe and not accepting of sexual minorities. Important future findings might come from studying youth who attend a high school with a GSA in communities which are rated as being less safe and accepting. Future studies will need to examine whether high school GSAs remain protective for sexual minority youth, even when they are located in communities which are not LGBT friendly. Larger sample sizes will be needed if researchers wish to control for more variables, and thus be able to statistically control for variables like community climate, which is likely accounting for some of the variance accounted for by the GSA variable in the present study.

If, in larger studies where more statistical control can be obtained, GSAs are found to be related to more positive school experiences and increased mental health, future research in this area must seek to understand the specific mechanisms of GSAs that provide this resilience in order to maximize their potential. Griffin and colleagues' (2005) study examined the different roles that a GSA can take within a given school environment. Future research is needed to determine if perhaps one of these roles includes specific components which result in healthier outcomes for sexual minority youth, or if it is merely the presence of a supportive group for this population which provides some degree of protectiveness to this population.

While quantitative data and sound experimental or correlational research designs can yield important findings, qualitative methodologies can also lead to important discoveries and should not be neglected, especially given the infancy of research in this area. Qualitative designs can provide insights into the unique experiences of sexual minority youth in schools and help researchers to further hypothesize mechanisms of protectiveness offered by high school GSAs. Interview data could be used to help researchers understand the interactions of identity development, substance use, and psychopathology from the perspective of the sexual minority student. For example, researchers could examine the experiences of sexual minority youth who live in various communities with varying degrees of social outlets directed at sexual minorities or sexual minority youth in particular.

Using the youth's perspective, evaluation of the identity development and gay-related stress hypotheses could occur by asking sexual minority youth to describe the mediums they use to meet and associate with peers. Some sexual minority youth will likely have access to social outlets that include gay bars, community centers, or school student groups for sexual minorities, while others will be more limited. Youth could be asked about their experiences coming out and to describe how this process influenced their experiences at school, their involvement in the gay community, and their substance use behaviors. Given that the participants in Rosario et al. (2004) were living in New York City, where they had access to events in the gay community where alcohol and other substances were available, it makes sense that the identity development hypothesis was supported by their data. At the same time, the rural youth in Rostosky et al. (2003) were not as likely to have had regular access to gay events where substances were available, but perhaps they were living in environments where they were more likely to experience gay-related stress in the form of victimization. In both cases, the coming-out period may have been a risky time for sexual minority youth, but risky for very different reasons. To further elucidate the explanatory value and generalizability of each hypothesis, qualitative data, collected appropriately in conjunction with quantitative data, would be extremely beneficial in furthering our understanding of the sources of risk and resilience in the lives of sexual minority youth.

With various methodologies being utilized, future research should also not be limited to youth in the United States. Examining possible sources of resiliency in other countries and cultures could also provide insights into the effects of school-based programs for sexual minorities. For example, if high school GSAs or some derivative thereof exist in other countries where the overall climate for sexual minorities is significantly different from the climate in the United States, additional theoretical insights related to the role of gay-related stress in the development of problematic drinking and psychopathology could be discovered.

At the same time, the spot light of research should not be focused entirely on sexual minority youth. Understanding the effects of attending a high school with a GSA on heterosexual youth will continue to be undoubtedly important. If sexual minority youth are viewed as being at-risk for experiencing at-school victimization, then the question of who are the victimizers, and what effect does attending a school with a GSA have upon them, will require evaluation. For example, does attending a school with a GSA change the attitudes and beliefs of the victimizers, or does it simply force these individual to suppress homophobic attitudes and behaviors in the school setting? One possible method for addressing this question might involve using the Implicit Associations Test (IAT; Greenwald, McGhee, & Schwartz, 1998), to measure heterosexual youth's underlying sentiments toward gay and lesbian people. If heterosexual youth who attended a high school with a GSA are found to have more favorable preferences for sexual minorities when compared to heterosexual youth who did not attend a high school with a GSA, further evidence will be garnered to support considering GSAs as protective factors for sexual minority youth.

In the end, if GSAs are found to be a source of protection for sexual minority youth, future research with this population can, and must, be guided to better maximize this protectiveness while advancing and improving the theories which seek to explain why sexual minority youth are an at-risk population in the first place. Overall, collaboration among activists, students, and scientists alike must occur so that programs which encourage education, awareness, prevention, and intervention in an integrative nature will be developed and implemented to produce positive changes which will better the lives of all youth. Increased efforts are needed to identify protective factors for sexual minority youth and further research focused on GSAs is clearly warranted.

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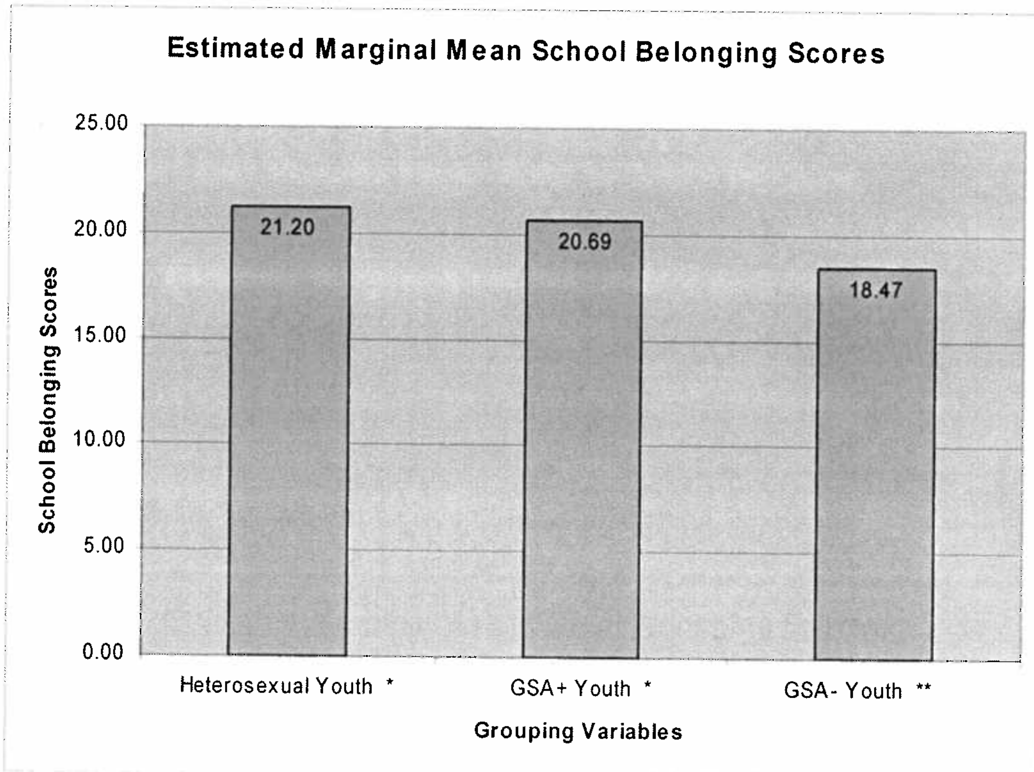
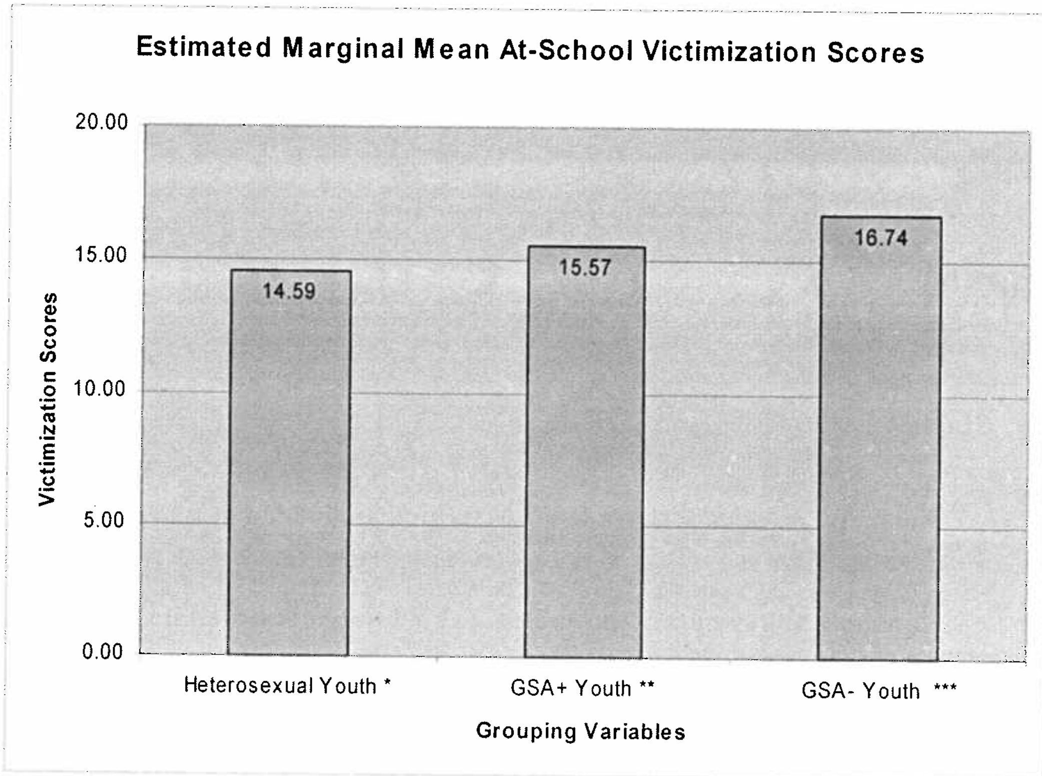
Figures

Figure 1. Bar Graph Depicting Group Means for School Belonging



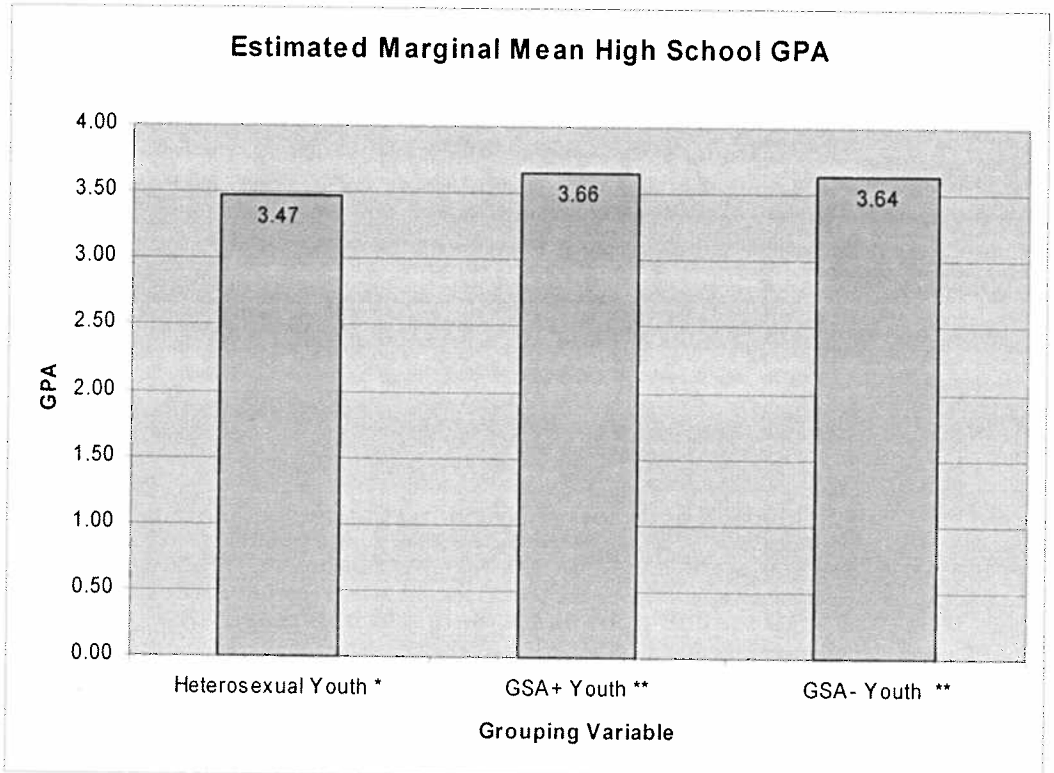
Note. If the number of asterisks differs between two or more groups, a significant difference ($p < .05$) was detected.

Figure 2. Bar Graph Depicting Group Means for At-School Victimization



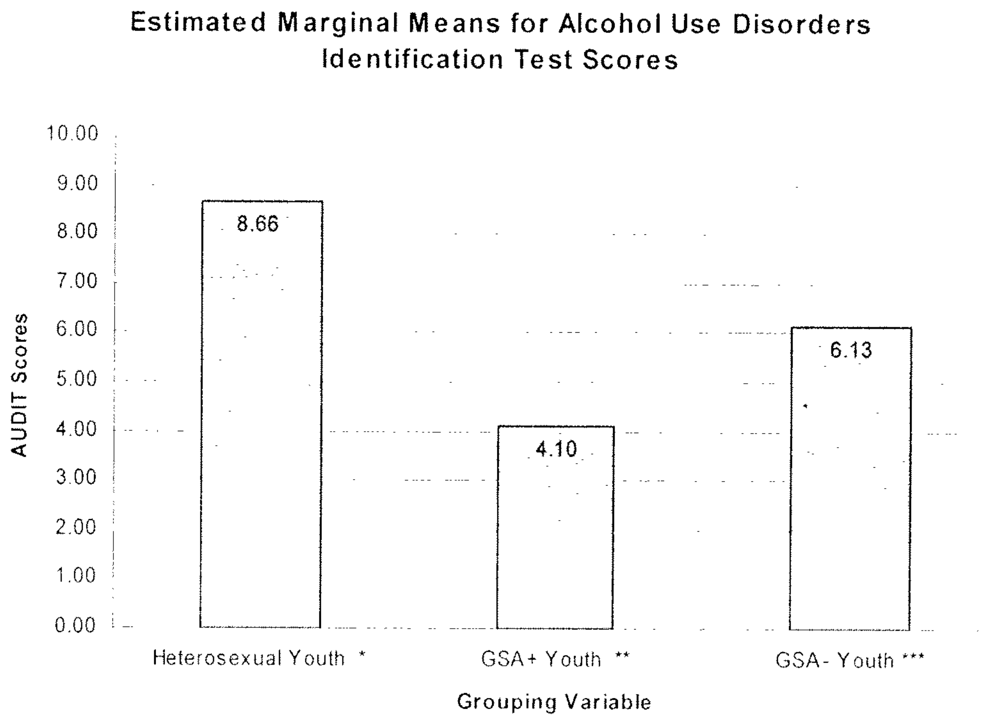
Note. If the number of asterisks differs between two or more groups, a significant difference (p < .05) was detected.

Figure 3. Bar Graph Depicting Group Means for High School GPA



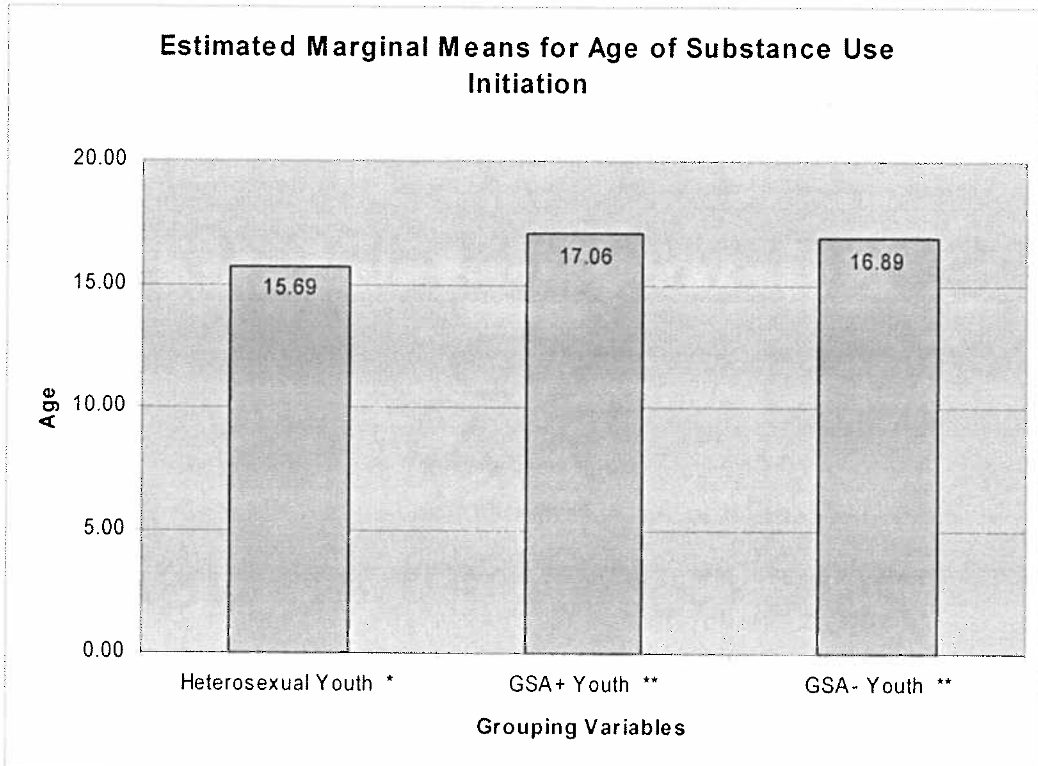
Note. If the number of asterisks differs between two or more groups, a significant difference (p < .05) was detected.

Figure 4. Bar Graph Depicting Group Means for AUDIT Scores



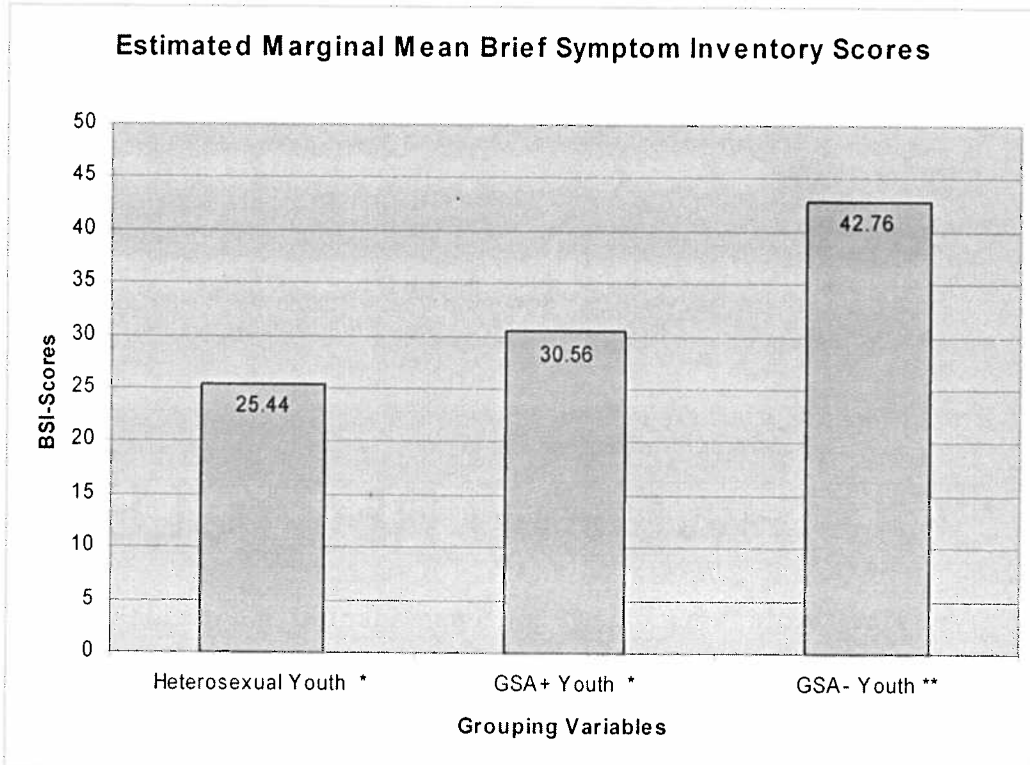
Note. If the number of asterisks differs between two or more groups, a significant difference ($p < .05$) was detected.

Figure 5. Bar Graph Depicting Group Means for Age of Substance Use Initiation



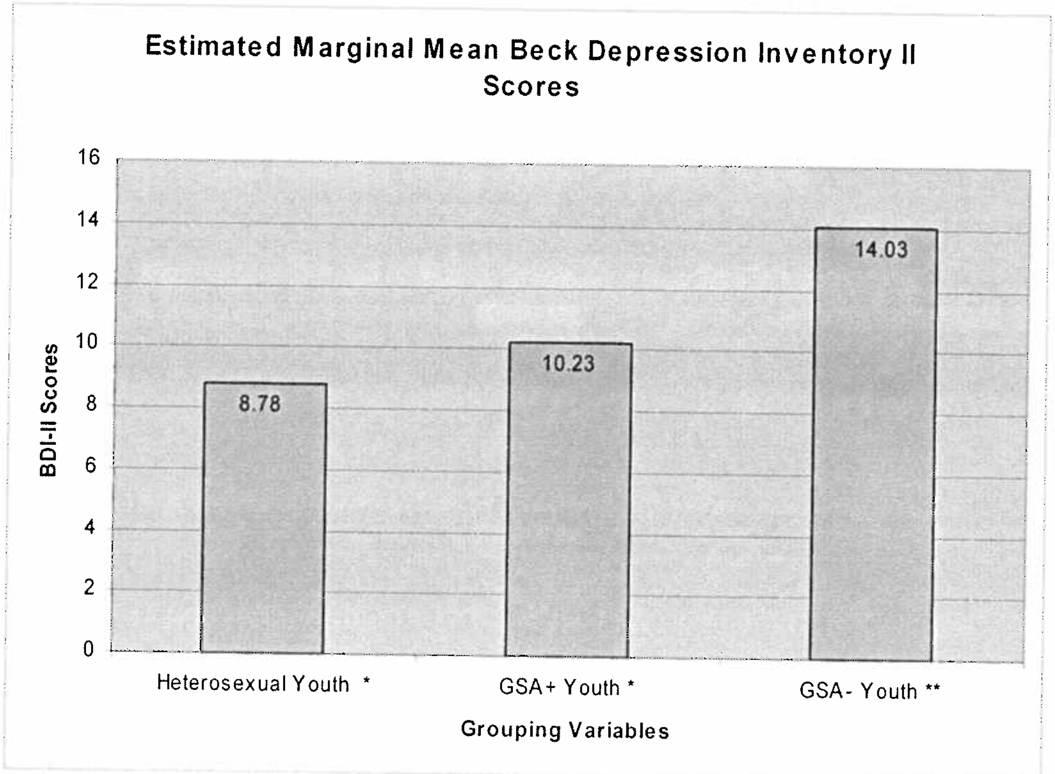
Note. If the number of asterisks differs between two or more groups, a significant difference (p < .05) was detected.

Figure 6. Bar Graph Depicting Group Means for BSI Scores



Note. If the number of asterisks differs between two or more groups, a significant difference ($p < .05$) was detected.

Figure 7. Bar Graph Depicting Group Means for BDI-II Scores



Note. If the number of asterisks differs between two or more groups, a significant difference ($p < .05$) was detected.

Tables

Table 1.1

Group Means and Standard Deviations for Potential Covariates

	Heterosexual	Sexual Minority	GSA+	GSA-
Age	19.05 (sd = .719)	19.15 (sd = .795)	19.04 (sd = 0.82)	19.30 (sd = .739)
SexAge	16.58 (sd = 1.38)	16.77 (sd = 2.03)	16.88 (sd = 2.00)	16.63 (sd = 2.07)
Edu	12.96 (sd = 1.05)	13.38 (sd = 0.94)	13.40 (sd = 0.97)	13.34 (sd = 0.91)
CTQ	18.25 (sd = 6.13)	21.22 (sd = 8.31)	20.94 (sd = 8.74)	21.58 (sd = 7.80)

Note. SexAge = Age of first consensual sex; Edu = Education; CTQ = Childhood Trauma Questionnaire- Short Form.

Table 1.2

Group Means and Standard Deviations for Dependent Variables

	Heterosexual	Sexual Minority	GSA+	GSA-
SB	21.46 (sd = 4.44)	19.52 (sd = 4.77)	20.71 (sd = 4.26)	18.05 (sd = 4.98)
Vic	14.13 (sd = 2.96)	16.39 (sd = 3.66)	15.84 (sd = 3.02)	17.08 (sd = 4.25)
GPA	3.49 (sd = 0.37)	3.64 (sd = 0.40)	3.65 (sd = 0.42)	3.62 (sd = 0.38)
AUDIT	8.50 (sd = 6.07)	5.10 (sd = 4.26)	4.14 (sd = 3.55)	6.34 (sd = 4.78)
AOI	15.71 (sd = 1.75)	16.96 (sd = 1.66)	17.17 (sd = 1.60)	16.76 (sd = 1.71)
BSI	22.51 (sd = 21.25)	38.05 (sd = 32.79)	32.23 (sd = 27.84)	45.02 (sd = 36.91)
BDI-II	7.82 (sd = 7.05)	12.58 (sd = 11.15)	10.78 (sd = 10.06)	14.76 (sd = 12.06)

Note. SB = School belonging; Vic = At-school Victimization; GPA = High school grade point average; AUDIT = Alcohol Use Disorders Identification Test; AOI = Age of initiation for drug use; BSI = Brief Symptom Inventory; BDI-II = Beck's Depression Inventory- II.

Table 1.3

Overview of Results for Hypotheses One, Two, and Three

	Hypothesis (Levels of Independent Variable)			
	Hypothesis One (SM / HET)		Hypothesis Two (GSA+ / GSA- / HET)	
Dependent Variable	Significance (p value)	Effect Size (η_p^2)	Significance (p value)	Effect Size (η_p^2)
SB	.013	.025	<.001[a]	.062
Vic	<.001	.053	<.001[a]	.073
GPA	.001	.048	.002	.049
AUDIT	<.001	.084	<.001	.105
AOI	<.001	.123	<.001	.125
BSI	.004	.034	<.001[a]	.063
BDI-II	.012	.026	.002[a]	.051

Note. SB = School belonging; Vic = At-school Victimization; GPA = High school grade point average; AUDIT = Alcohol Use Disorders Identification Test; AOI = Age of initiation for drug use; BSI = Brief Symptom Inventory; BDI-II = Beck's Depression Inventory- II.

[a] Indicates that the estimated marginal means for the HET and GSA+ groups are both significantly different from the GSA- group and are consistent with the directionality proposed in hypothesis three.

Table 2.1

Ethnicity Broken Down by Sexual Majority/Minority Status

	Caucasian	African American	American Indian/Native American	Hispanic	Asian American	Other
Heterosexual	n = 90 (87.4%)	n = 2 (1.9%)	n = 1 (1.0%)	n = 1 (1.0%)	n = 1 (1%)	n = 8 (7.8%)
Sexual Minority	n = 106 (71.6%)	n = 14 (9.5%)	n = 1 (0.7%)	n = 7 (4.7%)	n = 8 (5.4%)	n = 12 (8.1%)

Table 2.2

Population of City where Participants Attended High School Broken Down by Sexual Majority/Minority Status

	Less than 2,500	2,500-4,999	5,000-9,999	10,000-49,999	50,000-250,000	Over 250,000
Heterosexual	n = 14 (13.6%)	n = 16 (15.5%)	n = 7 (6.8%)	n = 21 (20.4%)	n = 33 (32.0%)	n = 12 (11.7%)
Sexual Minority	n = 10 (6.8%)	n = 9 (6.0%)	n = 19 (12.8%)	n = 45 (30.4%)	n = 37 (25.0%)	n = 28 (18.9%)

Table 3.1

Correlation Matrix for School Belonging

	1	2	3	4	5
1. SB	—				
2. Age	.240**	—			
3. SexAge	.031	.176*	—		
4. Edu	.200**	.478**	.038	—	
5. CTQ	.224**	.013	-.036	.113	—

Note. SB = School belonging; SexAge = Age of first consensual sex; Edu = Education; CTQ = Childhood Trauma Questionnaire- Short Form.
**. p < .01.
*. P < .05.

Table 3.2

Correlation Matrix for At-School Victimization

	1	2	3	4	5
1. Vic	—				
2. Age	.101	—			
3. SexAge	-.052	.176*	—		
4. Edu	.239**	.478**	.038	—	
5. CTQ	.449**	.013	-.036	.113	—

Note. Vic = At-school victimization; SexAge = Age of first consensual sex; Edu = Education; CTQ = Childhood Trauma Questionnaire- Short Form.
**. p < .01.
*. P < .05.

Table 3.3

Correlation Matrix for High School GPA

	1	2	3	4	5
1. GPA	—				
2. Age	-.100	—			
3. SexAge	.030	.176*	—		
4. Edu	..058	.478**	.038	—	
5. CTQ	-.151*	.013	-.036	.113	—

Note. GPA = High school grade point average; SexAge = Age of first consensual sex; Edu = Education; CTQ = Childhood Trauma Questionnaire- Short Form.
**. p < .01.
*. P < .05.

Table 3.4

Correlation Matrix for AUDIT Scores

	1	2	3	4	5
1. AUDIT	—				
2. Age	.104	—			
3. SexAge	-.112	.176*	—		
4. Edu	.035	.478**	.038	—	
5. CTQ	-.066	.013	-.036	.113	—

Note. AUDIT = Alcohol Use Disorders Identification Test; SexAge = Age of first consensual sex; Edu = Education; CTQ = Childhood Trauma Questionnaire- Short Form.
**. p < .01.
*. P < .05.

Table 3.5

Correlation Matrix Age of Initiation for Drug Use

	1	2	3	4	5
1. AOI	—				
2. Age	-.020	—			
3. SexAge	.291**	.176*	—		
4. Edu	.095	.478**	.038	—	
5. CTQ	-.165*	.013	-.036	.113	—

Note. AOI = Age of initiation for drug use ; SexAge = Age of first consensual sex; Edu = Education; CTQ = Childhood Trauma Questionnaire- Short Form.
**. p < .01.
*. P < .05.

Table 3.6

Correlation Matrix for BSI Scores

	1	2	3	4	5
1. BSI	—				
2. Age	.069	—			
3. SexAge	.105	.176*	—		
4. Edu	.203**	.478**	.038	—	
5. CTQ	.337**	.013	-.036	.113	—

Note. BSI = Brief Symptom Inventory; SexAge = Age of first consensual sex; Edu = Education; CTQ = Childhood Trauma Questionnaire- Short Form.
**. p < .01.
*. P < .05.

Table 3.7

Correlation Matrix for BDI-II Scores

	1	2	3	4	5
1. BDI-II	—				
2. Age	.051	—			
3. SexAge	.053	.176*	—		
4. Edu	.165**	.478**	.038	—	
5. CTQ	.334**	.013	-.036	.113	—

Note. BDI-II = Beck's Depression Inventory II; SexAge = Age of first consensual sex; Edu = Education; CTQ = Childhood Trauma Questionnaire- Short Form.
**. p < .01.
*. P < .05.

Table 3.8

Correlation Matrix for IAH and Self Report of Behavior Scale- Revised

	1	2	3	4	5
1. IAH	—				
2. SRBS	.564**	—			
3. SexAge	-.099	.011	—		
4. Edu	.104	.087	.081	—	
5. CTQ	-.058	.092	.367**	-.014	—

Note. Vic = At-School Victimization; SexAge = Age of first consensual sex; Edu = Education; CTQ = Childhood Trauma Questionnaire- Short Form.
**. p < .01.
*. P < .05.

Appendix A
Demographics Form

1. Gender
    a. Male
    b. Female
    c. Transgender (Male to Female)
    d. Transgender (Female to Male)
    e. Other

2. Age _____

3. What is your current relationship status?
    a. Married/domestic partner with same sex partner
    b. Married/domestic partner with opposite sex partner
    c. Dating same sex partner(s) only
    d. Dating opposite sex partner(s) only
    e. Dating both same and opposite sex partners
    f. Committed relationship with same sex partner
    g. Committed relationship with opposite sex partner
    h. Single (not currently dating)

4. How would you best describe your ethnic or racial background?
    a. African American/Black
    b. American Indian/Native American
    c. Hispanic/Chicano/Mexican American
    d. Asian American
    e. Caucasian/European American
    f. Other

5. How many people live or lived in the town or city where you attend/attended or completed high school? If there is more than one city where you attended high school, please refer to the city in which you attended high school for the longest period of time.
    a. Less than 2,500
    b. 2,500-4,999
    c. 5,000-9,999
    d. 10,000-49,999
    e. 50,000-250,000
    f. Over 250,000

6. Sexual Orientation
    a. Bisexual
    b. Gay/Lesbian/Homosexual
    c. Straight/Heterosexual
    d. Other

7. Which of the following best describes the way you view your sexual orientation?
    a. Exclusively heterosexual
    b. Predominantly heterosexual, only incidentally homosexual
    c. Predominantly heterosexual, but more than incidentally homosexual
    d. Equally heterosexual and homosexual
    e. Predominantly homosexual, but more than incidentally heterosexual
    f. Predominantly homosexual, only incidentally heterosexual
    g. Exclusively homosexual

8. At what age did you first question whether you might be gay/lesbian/bisexual/transgender? (Please enter 0 if this does not apply to you.)_____

9. At what age did you first notice a sexual attraction to someone of the same sex? (Please enter 0 if this does not apply to you.)_____

10. At what age did you first think of yourself as gay/lesbian/bisexual/transgender? (Please enter 0 if this does not apply to you.)_____

11. At what age did you first tell someone that you were gay/lesbian/bisexual/transgender? (Please enter 0 if you never told anyone.)_____

12. At what age did you first have a romantic relationship with someone of the same sex? (Please enter 0 if this does not apply to you.)_____

13. At what age did you first have a sexual relationship with someone of the same sex? (Please enter 0 if this does not apply to you.)_____

14. At what age did you first have consensual sex with a member of the opposite sex? (Please enter 0 if this does not apply to you.)______

15. At what age did you first have consensual sex with a member of the same sex? (Please enter 0 if this does not apply to you.) _____

16. Did you consider yourself to be "out" to your high school?
    a. Yes
    b. No
    c. Does not apply

17. If you were out in high school, in what year did you come out?
    a. I came out before I entered high school
    b. Freshman
    c. Sophomore
    d. Junior
    e. Senior
    f. Does not apply

18. In the past year, have your sexual partners been:
    a. Only male
    b. Only female
    c. Both male and female
    d. This question does not apply to me

19. In your lifetime, have your sexual partners been:
    a. Only male
    b. Only female
    c. Both male and female
    d. This question does not apply to me

20. In the past year, have you found yourself attracted to:
    a. Only males
    b. Only females
    c. Both males and females
    d. I've not found myself attracted to either males or females

21. In your lifetime, have you found yourself attracted to:
    a. Only males
    b. Only females
    c. Both males and females
    d. I've not found myself attracted to either males or females

22. Have you ever been forced to engage in an unwanted sexual activity?
    a. Yes
    b. No

23. Who was the first person you told you were gay/lesbian/bisexual/transgender?
    a. Straight friend
    b. Gay/lesbian/bisexual/transgender friend
    c. Sister/brother
    d. Father
    e. Mother
    f. Therapist/counselor
    g. Teacher
    h. Other relative
    i. Clergy/chaplain
    j. Other

24. How many years of education have you received (K-12 equals 12 years)? _____

25. What was your high school GPA upon graduation or withdrawal from school? If you have yet to complete high school, what is your current GPA? ______

26. Please think about the high school you attended for the longest period of time. What state were you living in while attending this high school?

    ____

27. What state do you currently reside in? ____________________________

28. Please think about the high school you attended for the longest period of time. What is the longest period of time for which you attend this high school?
    a. One year
    b. Two years
    c. Three years
    d. Four or more years

29. Did this high school have a gay-straight student alliance or some type of a gay or gay-straight student support group?
    a. Yes
    b. No

30. If yes, were you a member of this group?
    a. Yes
    b. No

31. If no, why weren't you a member of this group?________________________________

32. If yes, how would you best describe the goals/aim/direction of this group?
    a. Invisible group focused on counseling with a school guidance counselor.
    b. A "safe space" group focused primarily on providing social support for LGBT students and their friends.
    c. A social and activist/educational group whose focus was on creating and maintaining a tolerant school climate.
    d. A group that was part of a broader effort to educate and raise awareness within the school and community.

33. What percentage (approximately) of this group was made of:
    a. Gay Males _______%
    b. Lesbians _______%
    c. Bisexuals _______%
    d. Transgender Youth _______%
    e. Heterosexuals _______%
    f. Total _______% (Should equal 100)

34. Did your community offer some type of gay youth support group, gay-straight alliance, or LGBT community center?
    a. Yes
    b. No

35. If yes, did you participate in or utilize these resources?
    a. Yes
    b. No

36. Did you have a teacher, staff member, or administrator who was supportive of LGBT students?
    a. Yes
    b. No

37. If yes, how many supportive teachers, staff members, or administrators did you have in your school ___________?

38. Please rate the climate for LGBT youth in your high school
    a. Extremely safe and accepting
    b. Somewhat safe and accepting
    c. Neutral
    d. Somewhat unsafe and not accepting
    e. Extremely unsafe and not accepting

39. Please rate the climate for LGBT youth in your community
    a. Extremely safe and accepting
    b. Somewhat safe and accepting
    c. Neutral
    d. Somewhat unsafe and not accepting
    e. Extremely unsafe and not accepting

40. Do you have a peer, friend, or acquaintance that identified as LGBT who has committed suicide?
    a. Yes
    b. No

41. If yes, how old was this individual when they committed suicide _____?

42. Did this individual attend a high school with a gay-straight alliance, or LGBT support group?
    a. Yes
    b. No
    c. I'm not sure

Appendix B
Modified Olweus' Bullying and Victimization Scale

For the following items please select the statement which most accurately reflects your experiences in high school:

1. In high school I was called mean names, was made fun of, or teased in a hurtful way by other students:
__ This never happened to me in high school
__ This happened rarely, maybe once or twice a year
__ This happened to 2 or 3 times per month
__ This happened on a weekly basis
__ This happened several times each week

Did you feel this experience was related to your sexual orientation?
__ Yes
__ No

2. In high school, I was hit, kicked, pushed, or shoved around:
__ This never happened to me in high school
__ This happened rarely, maybe once or twice a year
__ This happened to 2 or 3 times per month
__ This happened on a weekly basis
__ This happened several times each week

Did you feel this experience was related to your sexual orientation?
__ Yes
__ No

3. In high school, other students told lies, or spread false rumors about me and tried to make others dislike me:
__ This never happened to me in high school
__ This happened rarely, maybe once or twice a year
__ This happened to 2 or 3 times per month
__ This happened on a weekly basis
__ This happened several times each week

Did you feel this experience was related to your sexual orientation?
__ Yes
__ No

4. In high school, I had money or other things taken away from me or damaged:
__ This never happened to me in high school
__ This happened rarely, maybe once or twice a year
__ This happened to 2 or 3 times per month
__ This happened on a weekly basis
__ This happened several times each week

Did you feel this experience was related to your sexual orientation?
__ Yes
__ No

5. In high school, I was threatened or forced to do things I didn't want to do:
__ This never happened to me in high school
__ This happened rarely, maybe once or twice a year
__ This happened to 2 or 3 times per month
__ This happened on a weekly basis
__ This happened several times each week

Did you feel this experience was related to your sexual orientation?
__ Yes
__ No

6. In high school, I experienced hurtful or threatening messages in the form of phone calls, text messages, or over the internet:
__ This never happened to me in high school
__ This happened rarely, maybe once or twice a year
__ This happened to 2 or 3 times per month
__ This happened on a weekly basis
__ This happened several times each week

Did you feel this experience was related to your sexual orientation?
__ Yes
__ No

7. In high school, I experienced physical abuse which required medical attention:
__ This never happened to me in high school
__ This happened rarely, maybe once or twice a year
__ This happened to 2 or 3 times per month
__ This happened on a weekly basis
__ This happened several times each week

Did you feel this experience was related to your sexual orientation?
__ Yes
__ No

8. In high school, I was called mean names, was made fun of, or teased in a hurtful way, by one or more teachers, staff members, or coaches at my school:
__ This never happened to me in high school
__ This happened rarely, maybe once or twice a year
__ This happened to 2 or 3 times per month
__ This happened on a weekly basis
__ This happened several times each week

Did you feel this experience was related to your sexual orientation?
__ Yes
__ No

9. In high school, I was sexually victimized or sexually assaulted:
__ This never happened to me in high school
__ This happened rarely, maybe once or twice a year
__ This happened to 2 or 3 times per month
__ This happened on a weekly basis
__ This happened several times each week

Did you feel this experience was related to your sexual orientation?
__ Yes
__ No

10. In high school, did you hear gay jokes or homophobic comments?
__ This never happened to me in high school
__ This happened rarely, maybe once or twice a year
__ This happened to 2 or 3 times per month
__ This happened on a weekly basis
__ This happened several times each week

Did you feel this experience was related to your sexual orientation?
__ Yes
__ No

Appendix C

Modified Beck Depression Inventory - II

Please select the statement that best describes the way you have been feeling during the past two weeks.

1. Sadness
    0. I do not feel sad.
    1. I feel sad much of the time.
    2. I am sad all the time.
    3. I am so sad or unhappy that I can't stand it.

2. Pessimism
    0. I am not discouraged about my future.
    1. I feel more discouraged about my future than I used to be.
    2. I do not expect things to work out for me.
    3. I feel my future is hopeless and will only get worse.

3. Past Failure
    0. I do not feel like a failure.
    1. I have failed more than I should have.
    2. As I look back, I see a lot of failures.
    3. I feel I am a total failure as a person.

4. Loss of Pleasure
    0. I get as much pleasure as I ever did from the things I enjoy.
    1. I don't enjoy things as much as I used to.
    2. I get very little pleasure from things I used to enjoy.
    3. I can't get any pleasure from the things I used to enjoy.

5. Guilty Feelings
    0. I don't feel particularly guilty.
    1. I feel guilty over many things I have done or should have done.
    2. I feel quite guilty most of the time.
    3. I feel guilty all the time.

6. Punishment Feelings
    0. I don't feel like I'm being punished.
    1. I feel I may be punished.
    2. I expect to be punished.
    3. I feel I am being punished.

7. Self-Dislike
    0. I feel the same about myself as ever.
    1. I have lost confidence in myself.
    2. I am disappointed in myself.
    3. I dislike myself.

8. Self-Criticalness
   0. I don't criticize or blame myself more than usual.
   1. I am more critical of myself than I used to be.
   2. I criticize myself for all of my faults.
   3. I blame myself for everything bad that happens.

9. Crying
   0. I don't cry anymore than I used to.
   1. I cry more than I used to.
   2. I cry over every little thing.
   3. I feel like crying, but I can't

10. Agitation
   0. I am no more restless or wound up than usual.
   1. I feel more restless or wound up than usual.
   2. I am so restless or agitated that it's hard to stay still.
   3. I am so restless or agitated that I have to keep moving or doing something.

11. Loss of Interest
   0. I have not lost interest in other people or activities
   1. I am less invested in other people or things than before.
   2. I have lost most of my interest in other people or things.
   3. It's hard to get interested in anything.

12. Indecisiveness
   0. I make decisions about as well as ever.
   1. I find it more difficult to make decisions than usual.
   2. I have much greater difficulty in making decisions than I used to.
   3. I have trouble making any decisions.

13. Worthlessness
   0. I do not feel I am worthless
   1. I don't consider myself as worthwhile and useful as I used to.
   2. I feel more worthless as compared to other people.
   3. I feel utterly worthless.

14. Loss of Energy
   0. I have as much energy as ever.
   1. I have less energy than I used to have.
   2. I don't have enough energy to do very much.
   3. I don't have enough energy to do anything.

15. Changes in Sleep Patterns
    0. I have not experienced any change in my sleep pattern.
    1a. I sleep somewhat more than usual.
    1b. I sleep somewhat less than usual.
    2a. I sleep a lot more than usual.
    2b. I sleep a lot less than usual.
    3a. I sleep most of the day
    3b. I wake up 1-2 hours early and can't fall back to sleep

16. Irritability
    0. I am no more irritable than usual.
    1. I am more irritable than usual.
    2. I am much more irritable than usual.
    3. I am irritable all the time.

17. Changes in Appetite
    0. I have not experienced any change in my appetite.
    1a. My appetite is somewhat less than usual.
    1b. My appetite is somewhat greater than usual.
    2a. My appetite is much less than before.
    2b. My appetite is much greater than usual.
    3a. I have no appetite at all.
    3b. I crave food all the time.

18. Concentration Difficulty
    0. I can concentrate as well as ever.
    1. I can't concentrate as well as usual.
    2. It's hard to keep my mind on anything for very long.
    3. I find I can't concentrate on anything.

19. Tiredness or Fatigue
    0. I am no more tired or fatigued than usual.
    1. I get more tired or fatigued more easily than usual.
    2. I am too tired or fatigued to do a lot of the times I used to do.
    3. I am too tired or fatigued to do most of the things I used to do.

20. Loss of Interest in Sex
    0. I have not noticed any recent change in my interest in sex.
    1. I am less interested in sex than I used to be.
    2. I am much less interested in sex now.
    3. I have lost interest in sex completely.

Appendix D
Brief Symptom Inventory

The following is a list of problems and complaints that people sometimes have. For each one, please indicate how much that problem has bothered or distressed you during the **past week, including today**. Please indicate whether each problem has bothered you not at all, a little bit, moderately, quite a bit, or extremely

1. Nervousness or shakiness inside. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

2. Faintness or dizziness. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

3. The idea that someone else can control your thoughts. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

4. Feeling others are to blame for most of your troubles. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

5. Trouble remembering things. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

6. Feeling easily annoyed or irritated. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

7. Pains in heart or chest. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

8. Feeling afraid in open spaces. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

9. Thoughts of ending your life. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

10. Feeling that most people cannot be trusted. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

11. Poor appetite. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

12. Suddenly scared for no reason. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

13. Temper outbursts that you could not control. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

14. Feeling lonely even when you are with people. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

15. Feeling blocked in getting things done. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

16. Feeling lonely. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

17. Feeling blue. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

18. Feeling no interest in things. (Choose one)
- [ ] Not at all
- [ ] A little bit
- [ ] Moderately
- [ ] Quite a bit
- [ ] Extremely

19. Feeling fearful. (Choose one)
- [ ] Not at all
- [ ] A little bit
- [ ] Moderately
- [ ] Quite a bit
- [ ] Extremely

20. Your feelings being easily hurt. (Choose one)
- [ ] Not at all
- [ ] A little bit
- [ ] Moderately
- [ ] Quite a bit
- [ ] Extremely

21. Feeling that people are unfriendly or dislike you. (Choose one)
- [ ] Not at all
- [ ] A little bit
- [ ] Moderately
- [ ] Quite a bit
- [ ] Extremely

22. Feeling inferior to others. (Choose one)
- [ ] Not at all
- [ ] A little bit
- [ ] Moderately
- [ ] Quite a bit
- [ ] Extremely

23. Nausea or upset stomach. (Choose one)
- [ ] Not at all
- [ ] A little bit
- [ ] Moderately
- [ ] Quite a bit
- [ ] Extremely

24. Feeling that you are watched or talked about by others. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

25. Trouble falling asleep. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

26. Having to check and double check what you do. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

27. Difficulty in making decisions. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

28. Feeling afraid to travel on buses, subways, or trains. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

29. Trouble getting your breath. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

30. Hot or cold spells. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

31. Having to avoid certain things, places, or activities because they frighten you. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

32. Your mind going blank. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

33. Numbness or tingling in parts of your body. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

34. The idea that you should be punished for your sins. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

35. Feeling hopeless about the future. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

36. Trouble concentrating. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

37. Feeling weak in parts of your body. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

38. Feeling tense or keyed up. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

39. Thoughts of death or dying. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

40. Having urges to beat, injure, or harm someone. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

41. Having urges to break or smash things. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

42. Feeling very self-conscious with others. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

43. Feeling uneasy in crowds. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

44. Never feeling close to another person. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

45. Spells of terror or panic. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

46. Getting into frequent arguments. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

47. Feeling nervous when you are left alone. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

48. Others not giving you proper credit for your achievements. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

49. Feeling so restless you could not sit still. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

50. Feelings of worthlessness. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

51. Feeling that people will take advantage of you if you let them. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

52. Feelings of guilt. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

53. The idea that something is wrong with your mind. (Choose one)
- ☐ Not at all
- ☐ A little bit
- ☐ Moderately
- ☐ Quite a bit
- ☐ Extremely

Appendix E

Alcohol Use Disorders Identification Test

Please answer the following questions with respect to your current alcohol use.
Consider a “drink” to be a 12oz. can or bottle of beer, a 4oz. glass of wine, a wine cooler, one cocktail, or a shot (1.25oz.) of hard liquor (like gin or vodka).

1. How often do you have a drink containing alcohol?
__ Never
__ Monthly or less
__ 2-4 times a month
__ 2-3 times a week
__ 4 or more times a week

2. How many drinks containing alcohol do you have on a typical day when you are drinking?
__ 1 or 2
__ 3 or 4
__ 5 or 6
__ 7 to 9
__ 10 or more

3. How often do you have six or more drinks on one occasion?
__ Never
__ Less than monthly
__ Monthly
__ Weekly
__ Daily or almost daily

4. How often during the last year have you found that you were not able to stop drinking once you started?
__ Never
__ Less than monthly
__ Monthly
__ Weekly
__ Daily or almost daily

5. How often during the last year have you failed to do what was normally expected of you because of drinking?
__ Never
__ Less than monthly
__ Monthly
__ Weekly
__ Daily or almost daily

6. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?
__ Never
__ Less than monthly
__ Monthly
__ Weekly
__ Daily or almost daily

7. How often during the last year have you had a feeling of guilt or remorse after drinking?
__ Never
__ Less than monthly
__ Monthly
__ Weekly
__ Daily or almost daily

8. How often during the last year have you been unable to remember what happened the night before because of your drinking?
__ Never
__ Less than monthly
__ Monthly
__ Weekly
__ Daily or almost daily

9. Have you or someone else been injured because of your drinking?
__ No
__ Yes, but not in the last year
__ Yes, during the last year

10. Has a relative, friend, doctor, or other health care worker been concerned about your drinking, or suggested you cut down?
__ No
__ Yes, but not in the last year
__ Yes during the last year

Appendix F

Age of Initiation for Substance Use

Alcohol Use

1. How old were you the first time you drank alcohol (more than just a sip)? Please enter 0 if you have never had more than a sip of alcohol. _____

2. How old were you the first time you had an entire drink (1-12oz. beer, one glass of wine, on shot of liquor, or one mixed drink)? _____

3. How old were you the first time you got drunk (drinking to the point where you were giddy, silly, impaired, or sick)? _____

4. What is the greatest number of drinks ever consumed on one occasion? _____ How old were you at that time? _____

Drug Use

1. How old were you the first time you ever used any type of drug (only count illegal drugs, or the misuse of prescription medication)? Please enter 0 if you have never used drugs. _____

2. What drug did you take your very first time (please don't consider caffeine, alcohol or cigarettes/nicotine as a drug for this question)?

   ____

Current Alcohol Use

1. Please think back over the previous six months. On an average week do you typically drink alcohol on… (check all that apply):

   a. Monday
   b. Tuesday
   c. Wednesday
   d. Thursday
   e. Friday
   f. Saturday
   g. Sunday

2. Thinking about the last six months, please indicate how many drinks (again consider one drink to equal one-12 ounce can of beer, one-six ounce glass of wine, or one shot (1.5 ounces) of liquor) you would have on an average:

   a. Monday _____
   b. Tuesday_____
   c. Wednesday_____
   d. Thursday_____
   e. Friday_____
   f. Saturday_____
   g. Sunday_____

3. In the last 30 days, how many times did you have 5 or more drinks on one occasion? _____

4. I believe that the amount of alcohol consumed among students at my college or university is _________ compared to students at a typical college or university. *If this question does not apply to you, please select "f"*

   a. significantly less
   b. slightly less
   c. about the same
   d. slightly more
   e. significantly more
   f. does not apply

5. I believe that the amount of alcohol I consume is _________ compared to students at my college or university. *If this question does not apply to you, please select "f"*

   a. significantly less
   b. slightly less
   c. about the same
   d. slightly more
   e. significantly more
   f. does not apply

High School Alcohol Use

6. Please think back to your senior year of high school. On an average week, did you typically drink alcohol on… (check all that apply):

    a. Monday
    b. Tuesday
    c. Wednesday
    d. Thursday
    e. Friday
    f. Saturday
    g. Sunday

7. Still thinking back to your senior year of high school, please indicate how many drinks (again consider one drink to equal one-12 ounce can of beer, one-six ounce glass of wine, or one shot (1.5 ounces) of liquor) you would have on an average:

    a. Monday _____
    b. Tuesday_____
    c. Wednesday_____
    d. Thursday_____
    e. Friday_____
    f. Saturday_____
    g. Sunday______

8. In an average month during your senior year of high school, how many times did you have 5 or more drinks on one occasion? _____

9. I believe that the amount of alcohol consumed <u>among students at my high school</u> was _________ compared to students <u>at a typical high school</u>.

    a. significantly less
    b. slightly less
    c. about the same
    d. slightly more
    e. significantly more

10. I believe that the amount of alcohol <u>I consumed</u> in high school was _________ compared to students at <u>my high school</u>.

    a. significantly less
    b. slightly less
    c. about the same
    d. slightly more
    e. significantly more

Appendix G

School Belonging

Please respond to the following statements using the following scale from 1-5:
1. Strongly Disagree
2. Somewhat Disagree
3. Neither Agree nor Disagree
4. Somewhat Agree
5. Strongly Agree

---

1. I was happy to be at school

   ______

2. I felt safe at school

   ______

3. The teachers at my school treated me fairly

   ______

4. I felt like I fit in at school

   ______

5. I attended or was involved in some kind of school related activity or school function

   ______

Appendix H

Childhood Trauma Questionnaire Short Form

Family Environment Questionnaire

These questions ask about some of your experiences growing up as a child and a teenager. For each question, circle the number that best describes how you feel. Although some of the questions are of a personal nature, please try to answer as honestly as you can. Your answers will be kept confidential.

When I was growing up…	**Never true**	**Rarely true**	**Sometimes true**	**Often true**	**Very often true**
1. I didn't have enough to eat.	1	2	3	4	5
2. I knew that there was someone to take care of me and protect me.	1	2	3	4	5
3. People in my family called me things like "stupid," "lazy," or "ugly."	1	2	3	4	5
4. My parents were too drunk or high to take care of the family.	1	2	3	4	5
5. There was someone in my family who helped me to feel important or special.	1	2	3	4	5
6. I had to wear dirty clothes.	1	2	3	4	5
7. I felt loved.	1	2	3	4	5
8. I thought that my parents wished I had never been born.	1	2	3	4	5
9. I got hit so hard by someone in my family that I had to see a doctor or go to the hospital.	1	2	3	4	5
10. There was nothing I wanted to change about my family.	1	2	3	4	5
11. People in my family hit me so hard that it left me with bruises or marks.	1	2	3	4	5
12. I was punished with a belt, a board, a cord, or some other hard object.	1	2	3	4	5
13. People in my family looked out for each other.	1	2	3	4	5
14. People in my family said hurtful or insulting things to me.	1	2	3	4	5
15. I believe that I was physically abused.	1	2	3	4	5
16. I had the perfect childhood.	1	2	3	4	5
17. I got hit or beaten so badly that it was noticed by someone like a teacher, neighbor, or doctor.	1	2	3	4	5
18. I felt that someone in my family hated me.	1	2	3	4	5
19. People in my family felt close to each other.	1	2	3	4	5
20. Someone tried to touch me in a sexual way, or tried to make me touch them.	1	2	3	4	5
21. Someone threatened to hurt me or tell lies about me unless I did something sexual with them.	1	2	3	4	5
22. I had the best family in the world.	1	2	3	4	5
23. Someone tried to make me do sexual things or watch sexual things.	1	2	3	4	5
24. Someone molested me.	1	2	3	4	5
25. I believe that I was emotionally abused.	1	2	3	4	5
26. There was someone to take me to the doctor if I needed it.	1	2	3	4	5
27. I believe that I was sexually abused.	1	2	3	4	5

Appendix I
Religion Questions

The following set of questions will be asking about your religious affiliations.

1. When you were in elementary school, did you attend church?
   - ☐ Yes
   - ☐ No

2. When you were in elementary school, how accepting of LGBT people was your religious group?
   - ☐ Not at all
   - ☐ A little bit
   - ☐ Moderately
   - ☐ Quite a bit
   - ☐ Extremely

3. When you were in elementary school, what religious group did you identify your with? Please specify a specific denomination if applicable ______________________________

4. Do you currently identify with any form of religion?
   - ☐ Yes
   - ☐ No

5. Currently, what religious group do you identify yourself with? Please specify a specific denomination if applicable ______________________________________

6. How accepting of LGBT people is your current religious group?
   - ☐ Not at all
   - ☐ A little bit
   - ☐ Moderately
   - ☐ Quite a bit
   - ☐ Extremely

7. If you no longer identify yourself with your childhood religious group, at what age did this occur? _____

8. If you no longer identify yourself with your childhood religious group, what are the reasons you have for changing your religious affiliation?
____
____
____

9. When you were in elementary school, how often did you attend a church service?

- ☐ Two or more times per week
- ☐ Once a week
- ☐ About twice a month
- ☐ Once a month
- ☐ Once or twice a year
- ☐ Never

10. Currently, how often do you attend a church service?

- ☐ Two or more times per week
- ☐ Once a week
- ☐ About twice a month
- ☐ Once a month
- ☐ Once or twice a year
- ☐ Never

Appendix J

Index of Attitudes Toward Homosexuals (IAH)

The following questions are designed to measure the way you feel about working or associating with homosexuals. There are no right or wrong answers. Answer each item as carefully and as accurately as you can.

1. I would feel comfortable working closely with a male homosexual.
   - ☐ Strongly agree
   - ☐ Agree
   - ☐ Neither agree nor disagree
   - ☐ Disagree
   - ☐ Strongly disagree

2. I would enjoy attending social functions at which homosexuals were present.
   - ☐ Strongly agree
   - ☐ Agree
   - ☐ Neither agree nor disagree
   - ☐ Disagree
   - ☐ Strongly disagree

3. I would feel uncomfortable if I learned that my neighbor was homosexual.
   - ☐ Strongly agree
   - ☐ Agree
   - ☐ Neither agree nor disagree
   - ☐ Disagree
   - ☐ Strongly disagree

4. If a member of my sex made a sexual advance toward me I would feel angry.
   - ☐ Strongly agree
   - ☐ Agree
   - ☐ Neither agree nor disagree
   - ☐ Disagree
   - ☐ Strongly disagree

5. I would feel comfortable knowing that I was attracted to members of my sex.
   - ☐ Strongly agree
   - ☐ Agree
   - ☐ Neither agree nor disagree
   - ☐ Disagree
   - ☐ Strongly disagree

6. I would feel uncomfortable being seen in a gay bar.
   - ☐ Strongly agree
   - ☐ Agree
   - ☐ Neither agree nor disagree
   - ☐ Disagree
   - ☐ Strongly disagree

7. I would feel comfortable if a member of my sex made an advance toward me.
   - ☐ Strongly agree
   - ☐ Agree
   - ☐ Neither agree nor disagree
   - ☐ Disagree
   - ☐ Strongly disagree

8. I would be comfortable if I found myself attracted to a member of my sex.
   - ☐ Strongly agree
   - ☐ Agree
   - ☐ Neither agree nor disagree
   - ☐ Disagree
   - ☐ Strongly disagree

9. I would be disappointed if I learned that my child was a homosexual.
   - ☐ Strongly agree
   - ☐ Agree
   - ☐ Neither agree nor disagree
   - ☐ Disagree
   - ☐ Strongly disagree

10. I would feel nervous being in a group of homosexuals.
    - ☐ Strongly agree
    - ☐ Agree
    - ☐ Neither agree nor disagree
    - ☐ Disagree
    - ☐ Strongly disagree

11. I would feel comfortable knowing that my clergyman was homosexual.
    - ☐ Strongly agree
    - ☐ Agree
    - ☐ Neither agree nor disagree
    - ☐ Disagree
    - ☐ Strongly disagree

12. I would be upset if I learned that my brother or sister was homosexual.
    - ☐ Strongly agree
    - ☐ Agree
    - ☐ Neither agree nor disagree
    - ☐ Disagree
    - ☐ Strongly disagree

13. I would feel that I had failed as a parent if I learned that my child was gay.
    - ☐ Strongly agree
    - ☐ Agree
    - ☐ Neither agree nor disagree
    - ☐ Disagree
    - ☐ Strongly disagree

14. If I saw two men holding hands in public I would feel disgusted.
    - ☐ Strongly agree
    - ☐ Agree
    - ☐ Neither agree nor disagree
    - ☐ Disagree
    - ☐ Strongly disagree

15. If a member of my sex made an advance toward me I would be offended.
    - ☐ Strongly agree
    - ☐ Agree
    - ☐ Neither agree nor disagree
    - ☐ Disagree
    - ☐ Strongly disagree

16. I would feel comfortable if I learned that my daughter's teacher was a lesbian.
    - ☐ Strongly agree
    - ☐ Agree
    - ☐ Neither agree nor disagree
    - ☐ Disagree
    - ☐ Strongly disagree

17. I would feel uncomfortable if I learned that my spouse or partner was attracted to members of his or her sex.
    - ☐ Strongly agree
    - ☐ Agree
    - ☐ Neither agree nor disagree
    - ☐ Disagree
    - ☐ Strongly disagree

18. I would feel at ease talking with a homosexual person at a party.
    - ☐ Strongly agree
    - ☐ Agree
    - ☐ Neither agree nor disagree
    - ☐ Disagree
    - ☐ Strongly disagree

19. I would feel uncomfortable if I learned that my boss was homosexual.
    - ☐ Strongly agree
    - ☐ Agree
    - ☐ Neither agree nor disagree
    - ☐ Disagree
    - ☐ Strongly disagree

20. It would not bother me to walk through a predominantly gay section of town.
    - ☐ Strongly agree
    - ☐ Agree
    - ☐ Neither agree nor disagree
    - ☐ Disagree
    - ☐ Strongly disagree

21. It would disturb me to find out that my doctor was homosexual.
- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly disagree

22. I would feel comfortable if I learned that my best friend of my sex was homosexual.
- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly disagree

23. If a member of my sex made an advance toward me I would feel flattered.
- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly disagree

24. I would feel uncomfortable knowing that my son's male teacher was homosexual.
- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly disagree

25. I would feel comfortable working closely with a female homosexual.
- ☐ Strongly agree
- ☐ Agree
- ☐ Neither agree nor disagree
- ☐ Disagree
- ☐ Strongly disagree

Appendix K

Self Report of Behavior Scale

The following questions are designed to examine your behavior during past encounters with people you thought were homosexual. Rate each of the following self-statements as honestly as possible by choosing the frequency that best describes your behavior.

1. I have spread negative talk about someone because I believed that he or she was gay.
   - ☐ Never
   - ☐ Rarely
   - ☐ Occasionally
   - ☐ Frequently
   - ☐ Always

2. I have participated in playing jokes on someone because I suspected that he or she was gay.
   - ☐ Never
   - ☐ Rarely
   - ☐ Occasionally
   - ☐ Frequently
   - ☐ Always

3. I have changed roommates or rooms because I suspected my roommate to be gay.
   - ☐ Never
   - ☐ Rarely
   - ☐ Occasionally
   - ☐ Frequently
   - ☐ Always

4. I have warned people whom I thought were gay and who were a little too friendly with me to keep away from me.
   - ☐ Never
   - ☐ Rarely
   - ☐ Occasionally
   - ☐ Frequently
   - ☐ Always

5. I have attended anti-gay protests.
   - ☐ Never
   - ☐ Rarely
   - ☐ Occasionally
   - ☐ Frequently
   - ☐ Always

6. I have been rude to someone because I thought that he or she was gay.
   - ☐ Never
   - ☐ Rarely
   - ☐ Occasionally
   - ☐ Frequently
   - ☐ Always

7. I have changed seat locations because I suspected the person sitting next to me was gay.
   - ☐ Never
   - ☐ Rarely
   - ☐ Occasionally
   - ☐ Frequently
   - ☐ Always

8. I have had to force myself to stop from hitting someone because he or she was gay and very near me.
   - ☐ Never
   - ☐ Rarely
   - ☐ Occasionally
   - ☐ Frequently
   - ☐ Always

9. When someone I thought to be gay has walked towards me as if to start a conversation, I have deliberately changed directions and walked away to avoid him or her.
   - ☐ Never
   - ☐ Rarely
   - ☐ Occasionally
   - ☐ Frequently
   - ☐ Always

10. I have stared at a gay person in such a manner as to convey to him or her my disapproval of his or her being too close to me.
    - ☐ Never
    - ☐ Rarely
    - ☐ Occasionally
    - ☐ Frequently
    - ☐ Always

11. I have been with a group in which one (or more) person(s) yelled insulting comments to a gay person or group of gay people.
    - [ ] Never
    - [ ] Rarely
    - [ ] Occasionally
    - [ ] Frequently
    - [ ] Always

12. I have changed my normal behavior in a restroom because a person I believed to be gay was in there at the same time.
    - [ ] Never
    - [ ] Rarely
    - [ ] Occasionally
    - [ ] Frequently
    - [ ] Always

13. When a gay person has "checked" me out, I have threatened him or her.
    - [ ] Never
    - [ ] Rarely
    - [ ] Occasionally
    - [ ] Frequently
    - [ ] Always

14. I have participated in damaging someone's property because he or she was gay.
    - [ ] Never
    - [ ] Rarely
    - [ ] Occasionally
    - [ ] Frequently
    - [ ] Always

15. I have physically hit or pushed someone I thought was gay because he or she brushed his or her body against me when passing by.
    - [ ] Never
    - [ ] Rarely
    - [ ] Occasionally
    - [ ] Frequently
    - [ ] Always

16. Within the past few months, I have told a joke that made fun of gay people.
    - [ ] Never
    - [ ] Rarely
    - [ ] Occasionally
    - [ ] Frequently
    - [ ] Always

17. I have gotten into a physical fight with a gay person because I thought he or she had been making moves on me.
    - [ ] Never
    - [ ] Rarely
    - [ ] Occasionally
    - [ ] Frequently
    - [ ] Always

18. I have refused to work on school and/or work projects with a partner I thought was gay.
    - [ ] Never
    - [ ] Rarely
    - [ ] Occasionally
    - [ ] Frequently
    - [ ] Always

19. I have written graffiti about gay people or homosexuality.
    - [ ] Never
    - [ ] Rarely
    - [ ] Occasionally
    - [ ] Frequently
    - [ ] Always

20. When a gay person has been near me, I have moved away to put more distance between us.
    - [ ] Never
    - [ ] Rarely
    - [ ] Occasionally
    - [ ] Frequently
    - [ ] Always

Appendix L
Modified Outness Inventory

If you are transgender but have never identified as gay, lesbian, or bisexual, please skip any questions that do not apply to you.

Use the following rating scale to indicate how open you are currently about your sexual orientation to the people listed below. Respond to all of the items that are relevant for you, entering 0 for those questions that do not apply.

1 = Person definitely does not know about your sexual orientation status.
2 = Person might know about your sexual orientation status, but it is never talked about.
3 = Person probably knows about your sexual orientation status, but it is never talked about.
4 = Person probably knows about your sexual orientation status, but it is rarely talked about.
5 = Person definitely knows about your sexual orientation status, but it is rarely talked about.
6 = Person definitely knows about your sexual orientation status, and it is sometimes talked about.
7 = Person definitely knows about your sexual orientation status, and it is openly talked about.
0 = Does Not Apply

1. Parents ___
2. Siblings (sisters, brothers) ___
3. Extended family/relatives ___
4. Old heterosexual friends ___
5. Co-workers ___
6. Members of your religious community ___
7. New heterosexual acquaintances ___

Now use the same rating scale to indicate how open you were about your sexual orientation during your senior year of high school with respect to the people listed below. Respond to all of the items that are relevant for you, entering 0 for those questions that do not apply.

1 = Person definitely does not know about your sexual orientation status.
2 = Person might know about your sexual orientation status, but it is never talked about.
3 = Person probably knows about your sexual orientation status, but it is never talked about.
4 = Person probably knows about your sexual orientation status, but it is rarely talked about.
5 = Person definitely knows about your sexual orientation status, but it is rarely talked about.
6 = Person definitely knows about your sexual orientation status, and it is sometimes talked about.
7 = Person definitely knows about your sexual orientation status, and it is openly talked about.
0 = Does Not Apply

1. Parents ___
2. Siblings (sisters, brothers) ___
3. Extended family/relatives) ___
4. Heterosexual friends at school ___
5. Co-workers ___
6. Members of your religious community ___
7. New heterosexual acquaintances ___
8. Teachers at your high school ___
9. Peers at your high school who you weren't necessarily friends with ___

Appendix M
Qualitative Questionnaire

For the following questions please give as many details as possible and feel free to provide specific examples.

1. If you could change something(s) about your community that would have helped you develop your sexual identity in a healthier fashion, what would change?

____

____

2. If you could change something(s) about your family that would have helped you develop your sexual identity in a healthier fashion, what would you change?

____

____

3. If you could change something(s) about your peers that would have helped you develop your sexual identity in a healthier fashion, what would you change?

____

____

4. During your sexual identity development, if you could have had skills or strengths that would have been protective, what would these have been (or what are they now if you still feel you are developing)?

____

____

5. What strengths or insights do you have as a result of facing the challenges of sexual identity development?

____

____

6. If you attended a high school with a GSA, please tell us about your experiences.

____

____

7. Did the coming out process influence your drinking or substance use? If yes, please tell us about this experience.

____

____

Appendix N
Sample Recruitment E-Mail

Dear [college/university group or specific contact],

My name is Nicholas Heck and I am a graduate student at The University of Montana. I'm currently recruiting participants to complete an online survey that is examining the experiences of LGBT (lesbian, gay, bisexual, and transgender) adolescents and young adults. Specifically, this survey is interested in LGBT individuals' experiences in high school, experiences which may have important implications for LGBT development.

I would truly appreciate it if you could help me recruit participants for my study by sending out the message below about the study and the study's URL to your email list or listserv. You could also post this information on social networking pages like myspace or facebook. If you choose not to do so or if you have any questions about the survey, please let me know by emailing me at nicholas.heck@umontana.edu.

If you are able to forward this message on, could you please BCC me on that e-mail just so I can keep track of how many schools end up participating in the study overall?

Thank you for your time,

Nick

Hello:

My name is Nicholas Heck and I am a graduate student at The University of Montana. I'm currently recruiting participants to complete an online survey that is examining the experiences of LGBT (lesbian, gay, bisexual, and transgender) adolescents and young adults. Specifically, this survey is interested in LGBT individuals' experiences in high school. The survey will take anywhere from 30-40 minutes to complete.

The survey is completely anonymous. We will not ask participants to identify themselves or their high school. As an incentive for participating in this survey, participants will be given the opportunity to enter their e-mail address into a drawing where they could win one of ten $10 Amazon.com gift cards. Participants' e-mail addresses will be entered and stored in a separate database from their data.

The survey has been approved by The University of Montana's Institutional Review Board (IRB). A certificate of the approval can be provided if you would like. Also, if you'd like other information about the study, please feel free to contact me at nicholas.heck@umontana.edu.

The URL for the study is http://psychweb.psy.umt.edu/absurveys/nhstudy2/

Thank you in advance for assisting me in this project!

Nicholas Heck,
Graduate Student, Clinical Psychology
The University of Montana