LGBT students and allies participating in a school-based support program: School performance, connectedness, and perceptions of school climate

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Abstract

Lesbian, gay, bisexual and transgender (LGBT) youth are frequently thought to be at-risk in terms of school achievement and socio-emotional variables such as connection to school. Recent research has demonstrated potential of school-based interventions to improve outcomes for LGBT youth. This study compared achievement and school connectedness for a group of high school students participating in a school-based support program for LGBT youth and allies with a group of their peers. Results indicated that no significant differences between groups were found in terms of GPA, attendance rate, or school connectedness. Furthermore, significant differences based upon frequency of participation in program activities were not observed. These results stand in contrast to the majority of previous research. Focus group data indicated that students continue to experience verbal harassment at school, but that they value the support they receive from Gay-Straight Alliance meetings and participants.

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Chapter 1: Rationale for Study

An emerging field of research has demonstrated that school-based interventions are related to school climate variables and to student achievement measures for students who identify as lesbian, gay, bisexual or transgender (LGBT) (Kosciw, 2004; Kosciw & Cullen, 2002; Szalacha, 2003). Data suggest that the existence of Gay-Straight Alliances (GSAs), supportive adults in schools, and staff development around LGBT issues are related to positive outcomes for LGBT youth (Garcia-Alonso, 2004; Jordan, Vaughan, & Woodworth, 1997; Kosciw, 2004; Kosciw & Cullen, 2002; Lee, 2001; Malinsky, 1997; Murdock & Bolch, 2005; Russell, Seif, & Truong, 2001; Szalacha, 2003). Although these studies have not examined the reason for intervention effectiveness, social support theory and research suggest that students benefit from school-based interventions at least in part due to the social support from peers and staff to whom they are exposed. Researchers have reported relationships among social support and school adjustment outcomes, clinical adjustment, and personal adjustment for students in general (Demaray & Malecki, 2002; Malecki & Demaray, 2003). Recently, studies have found benefits to social support and contact with other LGBT students for sexual minority youth (Ueno, 2005; Vincke & van Heeringen, 2004; Williams, Connolly, Pepler & Craig, 2005).

The current study measures school achievement, attendance, and sense of school membership in an urban district in the Midwest that supports one of the nation's only school-based support programs for LGBT youth. Out for Equity (OFE) is a program that serves LGBT youth, allied peers, and school communities. Students involved in this study all have access to OFE support services within their schools. Services include GSAs, support groups, and after school recreational and educational activities. In

addition, OFE provides broader services such as staff development across the district and classroom lesson materials for inclusion of LGBT issues within the curriculum.

This study provides valuable data about the status of a group of LGBT students, allies, and comparison students who attend school in the district that supports this program. The program is unique, and therefore the school experiences of its participants are unique. Although descriptive in nature, it is hoped that data about these students' achievement, attendance, and sense of school membership will provide information in contrast to the national picture that often shows LGBT students having a difficult time in the school environment. Additional qualitative data will help to more completely describe OFE participants' perspectives of safety and support in their schools.

Chapter 2: Review of Literature

Adolescents face numerous challenges during a time of rapid development, rising peer influence, and identify formation (Ryan & Futterman, 1998). Among adolescents, several subgroups emerge, one of which includes sexual minority youth. This group includes youth whose sexual orientation is anything other than exclusively heterosexual, and may include aspects of attraction, behavior, and identity (American Academy of Pediatrics, American Counseling Association, American Association of School Administrators, American Federation of Teachers, American Psychological Association et al.,1999). Therefore, any student who identifies as lesbian, gay, bisexual or transgender (LGBT), who has engaged in same-sex behavior, or who has experienced same-sex attraction may be considered sexual minority youth.

Unfortunately, school experiences for sexual minority youth frequently include direct and indirect harassment, bullying, belittlement, and even violent attacks (Bontempo & D'Augelli, 2002; Jordan, Vaughan, & Woodworth, 1997; Kosciw, 2004; Malinksy, 1997). However, school personnel should ensure that all students, including sexual minority youth, have equal access to education and mental health services (National Association of School Psychologists, 2004). In order to provide equal access, schools may need to provide direct support services, social opportunities, and school climate improvements that increase safety and comfort for sexual minority youth. School climate is particularly important because questioning and undisclosed LGBT youth may not be identified for services, but require support nonetheless. Many LGBT youth may not ask for help due to fear of being harassed or hurt (American Academy of Pediatrics et

al., 1999). Therefore, directing school-based services solely at students who identify as openly LGBT serves only a fraction of those potentially in need.

The problems faced by LGBT students in schools are well-documented (Bontempo & D'Augelli, 2002; Busseri, Willoughby, Chalmers, & Bogaert, 2006; Goodenow, Szalacha, & Westheimer, 2006; Jordan et al., 1997; Kosciw, 2004; Kosciw & Cullen, 2002; Malinksy, 1997). School-based interventions have only recently gained attention as a point of discussion. Several interventions have been proposed, but few have been empirically validated. According to Ellis (2001), educational innovations should be supported by three levels of research: theory (Level I), empirical research (Level II), and program evaluation (Level III). This model helps to define what is meant by "research-based" interventions, and can be applied to any educational innovation. Level I establishes a theoretical basis for the innovations currently in place in schools. This level illustrates the groundwork from which educational innovations are developed. In the case of this review, "theory" is loosely defined to include research that established the need for intervention with LGBT youth, rather than a true theoretical model. Empirical evidence of effective implementation in applied settings (schools) is represented by Level II. These studies describe what results emerge when the innovation (i.e. interventions to improve outcomes for LGBT youth) are implemented in schools. Finally, Level III research includes large-scale implementation of interventions. This research should include several sites of implementation, and in the case that one person or group developed an innovation, Level III research helps to document that the intervention maintains its effectiveness when removed from the developer. This review is organized around these levels and examines the extent to which school-based interventions for

LGBT youth fulfill the criteria set forth by Ellis. The majority of this review was published in a peer reviewed journal as a review of school-based interventions for LGBT students (Hansen, 2007).

Level I: Theoretical Base

Level I research establishes a theoretical basis for the innovations currently in place in schools (Ellis, 2001). Research that falls into this category relevant to LGBT youth details what is known about risk factors, identity development, and challenges in the school setting.

Researchers and practitioners have established that the needs of LGBT students justify service provision. These needs and experiences may provide insight for intervention development. One may draw the conclusion that research in the areas of LGBT identity formation, social support theory, isolation, and the impact of a hostile climate suggests that LGBT youth will benefit from interpersonal, social, and climate interventions. That is, observations of and empirical research on the experiences of LGBT youth in schools, and the negative or positive outcomes associated with specific components helped to build the base upon which to develop interventions.

Risk Factors for LGBT Youth

The National Longitudinal Adolescent Health Study (also referred to as the Add Health study) provided valuable information about the perceptions and experiences of LGBT youth (Resnick et al., 1997). Results of this study suggested that youth who reported an attraction to people of the same sex also reported higher level of depression and alcohol abuse than their peers (Resnick et al., 1997). In particular, 9^{th} – 12^{th} grade students who had experienced same-sex attraction or behavior tended to have more

emotional distress and were considered to have a risk factor for poor emotional health (Resnick et al., 1997). Moreover, in a survey of lesbian and bisexual females, several respondents reported stories of isolation from friends, loneliness, and even suicide attempts (Malinsky, 1997). A more recent study found that the mean score for psychological well-being was significantly lower in groups of bisexual, mostly heterosexual, and same-sex attracted youth than in a group of exclusively heterosexual youth (Busseri et al., 2006).

Suicidal ideation, attempts, and rates are frequently mentioned in discussions of LGBT risk factors (Garofalo, Wolf, Wissow, Woods & Goodman, 1999; Gup, 1998; Macgillivray, 2000; Savin-Williams, 1994), but a note of caution is warranted. When referring to an elevated suicide rate in the LGBT youth community, researchers and readers should exercise caution in interpreting publicized rates. In estimating the true number of successful suicides, it is often difficult to determine the factors that played a role in causing the person to act, and even more difficult to determine sexual orientation for those who are not openly gay, lesbian, bisexual, transgender or questioning. According to the National Institute of Mental Health, there are no national statistics for suicide rates among LGBT persons, due to the fact that sexual orientation is a personal characteristic that people can, and often do, choose to hide due to uncertainty or fear (National Institute of Mental Health, 1999). Therefore, reporting suicide attempts and ideation rather than actual suicide rate is easier to interpret with confidence.

Several studies on this topic clearly indicate that LGBT youth are at greater risk for attempting suicide than are heterosexual youth (Garofalo et al., 1999; Gup, 1998; Macgillivray, 2000; Savin-Williams, 1994). The rate of suicide attempts for youth in the

United States in 2003 was approximately 8.5% (National Center for Chronic Disease Prevention and Health Promotion, 2003). Unfortunately, two reviews of research found that studies on LGBT youth reported a 20%-40% suicide attempt rate (Gup, 1998; Savin-Williams, 1994). This rate was supported by another study, which reported that 35.3% (N = 12) of the sample of LGBT youth had attempted suicide, and that 47.1% (N = 16) had considered it (Jordan et al., 1997). Other recent studies indicated that gay and lesbian teenagers may be three times as likely to attempt suicide as heterosexual teens, and that gay teenagers may account for 30% of all teen suicides (MacGillivray, 2000), sometimes with close to 10% attempting suicide in a one-month span (Garofalo et al., 1999). Overall, it appears that psychological stress is elevated and suicide attempts are most frequent when youth first identify as LGBT to themselves or after coming out to others (Savin-Williams, 1994).

Identity Formation

The process of sexual orientation identity formation is one that varies by individual. Although models of development have been proposed, it is important to note that some adolescents may move through the process at a faster pace than others, that factors such as ethnicity and support systems may impact development, and that some steps may not be completed during adolescence, if ever (Ryan & Futterman, 1998). Furthermore, confusion during the identify formation process is normal, and also varies by individual. One well-known approach proposed a four-stage model of lesbian/gay identity development (Troiden, 1989). The steps of this model include a period of sensitization in which the child sees him or herself as being "different," a period of identity formation during which youth become aware of same-sex attraction, identity

assumption during mid- to late adolescence or adulthood when individuals begin to self-identify and disclose their orientation ("come out") to other LGBT people, and finally, the stage of commitment, in which youth incorporate sexual identity into all aspects of their life (Troiden, 1989).

One point of particular importance emerges from this identity development model. Due to the fact that the first two stages take place before youth disclose their identity to others, sexual minority youth must pass through half of the stages before they become visible to others. That is, they deal with much of the process of coming to terms with sexual identity without the explicit support of family members, peers, or school personnel because they have not made their struggle known. It is clear that school-based support must attend to the broader climate in addition to providing direct support for those who require it. An updated model for identity development would be beneficial. As political and social climates have changed, it is possible that youth experience the awareness and divulging of their sexual orientation differently than in the past.

Unfortunately, LGBT youth may commonly perceive their support network of family and friends to be tenuous or nonexistent (Martin, 1992; Zera, 1992). In the process of identity formation and coming out, LGBT youth are faced with the fear and sometimes reality that their family and friends will react negatively to their sexual orientation, perhaps even rejecting them altogether (D'Augelli & Hershberger, 1993; Remafedi, 1987). Positive identity development requires access to supportive peers and adults, accurate information, and connection to a community in which acceptance and validation are provided (Ryan & Futterman, 1998).

Social Support

Social support is related to several school-related and interpersonal outcomes. Support from people in schools may be related to students' attitudes toward school and teachers one year later (Demaray, Malecki, Davidson, Hodgson, & Rebus, 2005). Levels of social support can be strongly related to school maladjustment (Demaray & Malecki, 2002). In addition to social support research, recent studies of extracurricular activity involvement have found that participation may be linked to achievement, attitude toward school, and personal adjustment (Darling, 2005; Eccles, Barber, Stone & Hunt, 2003; Mahoney, Cairns, & Farmer, 2003). It appears that engaging in structured activities that promote social relationships with peers can support academic achievement and adjustment for LGBT youth.

In terms of effects on mental health and interpersonal relationships, general classmate support has been shown to be related to lower anxiety, social stress, depression, sense of inadequacy and higher interpersonal relations and self-esteem, suggesting that time to interact with classmates in a positive way is protective for LGBT youth (Demaray et al., 2005). Use of data from the Add Health study supported these results, finding that LGBT students who were closely attached to parents, friends, and school were likely to experience lower psychological distress (Ueno, 2005). Total number of friends reported by youth was negatively associated with psychological distress, and this benefit was stronger for sexual minorities than for heterosexual youth (Ueno, 2005). Social support through friends, best friends, and mothers can reduce the psychological harm linked to problems at school and eliminates significance between externalizing and depressive symptoms (Ueno, 2005; Williams, Connoly, Pepler, & Craig, 2005).

Exposure to and relationships with other sexual minority youth may also be valuable. A qualitative study of LGBT young adults indicated that connection to the community and to sexual minority adults was important in their lives (Nesmith, Burton, & Cosgrove, 1999). Attending a gay and lesbian holiday camp led to higher levels of confidant support, self esteem, and satisfaction with gay and lesbian friendships, and lower helplessness and depression for gay and lesbian youth (Vincke & van Heeringen, 2004). Connection to the LGBT community may be described as a catalyst for developing a social network for many youth who had previously felt isolated and detached (Nesmith, Burton, & Cosgrove, 1999).

Risks and Vulnerabilities Related to School Experiences

A critical understanding must be reached that psychosocial risks and vulnerabilities experienced by LGBT students are not characteristics of their sexual orientation, per se but instead are due to negative interactions with peers, adults, and even society as a whole. Victimization is frequent and often takes place in schools and other community settings. Effects include depression, anxiety, fear, low self-esteem, and self blame, along with somatic symptoms and even Post Traumatic Stress Disorder (Ryan & Futterman, 1998). LGBT people who have integrated a positive identity show better psychological adjustment, greater satisfaction, and higher self-concept, with lower rates of depression or stress than LGBT people in conflict with identity (Ryan & Futterman, 1998). The risks generally associated with LGBT youth are best thought of in this context. In designing interventions to serve LGBT youth, the focus should rest on the school experiences that can help or hinder their development.

Effect of isolation. An often-cited risk factor associated with sexual minority status is social isolation and mental health problems (Bontempo & D'Augelli, 2002; Goodenow et al., 2006; Malinsky, 1997; Resnick et al., 1997; Ryan & Futterman, 1998). Students who identify as LGBT may feel lonely and ostracized at school and in broader communities. This can interact with other factors to contribute to low self-esteem, depression, and even suicidal ideation and attempts (Resnick et al., 1997). With adolescence comes an increasingly strong reliance on friendship and peer support (Savin-Williams, 1994). Unfortunately, that support may not be available for a large proportion of LGBT youth (Malinsky, 1997; Savin-Williams, 1994). Research stemming from interviews with and surveys of LGBT youth cite several examples of the isolation and loneliness experienced by these students in the schools (Malinsky, 1997; Resnick et al., 1997). One review of research found that LGBT youth across studies rate peers as extremely important in their lives, but that isolation from peers is common for up to 95% of these youth (Gup, 1998).

Interviews with teen and young-adult lesbian and bisexual women yielded a strong theme of social alienation, drifting away from friends, and loneliness (Malinsky, 1997). A review of research of stressors in the lives of LGBT youth indicated that peer harassment and peer relationships in general are linked to feelings of emotional isolation and separation, and that these feelings may be some of the most difficult issues for youth to overcome (Savin-Williams, 1994). Additional research has found that perceived student prejudice is associated with emotional distress, and that school connectedness is associated with lower levels of emotional distress and suicidal involvement for students in general (Resnick et al., 1997).

Overall, it appears that the combination of harassment and victimization at school and in society, along with attempting to come to terms with or hiding one's identity results in a heightened level of risk for LGBT youth. These findings support the assertion that social isolation and marginalization in the school environment are harmful for LGBT students. Taken together, this body of research supports the need for psychosocial support for LGBT students in schools. Interventions such as Gay/Straight Alliances and support groups might serve to link LGBT youth with other students, providing needed peer interactions and emotional support.

Effect of a hostile climate. Hiding one's sexual orientation and/or coping with orientation-based victimization are correlated with substance abuse, suicide, depression, and high-risk behavior (Ryan & Futterman, 1998). Events that occur during the school day - experiencing verbal harassment, hearing homophobic speech, or being bullied - exacerbate the challenges of developing a healthy personal identity. Negative feelings about being gay, lesbian, or bisexual are positively correlated with hearing teachers' (r = .358) or peers' (r = .373) homophobic speech (Jordan et al., 1997). Furthermore, when teachers do not discipline such derogatory language by students, higher levels of negative feelings (r = -.462) were reported (Jordan et al., 1997). Students who perceive their high schools' climates to be more positive also report more positive feelings about sexual orientation, higher self esteem, less stigmatization, more social integration with heterosexual peers, and greater openness with families about orientation (Elze, 2003). In the opposite direction, students who perceive greater stigmatization and a negative community environment, coupled with gay-related stressful events and victimization at school and in the community, were likely to have internalizing problems (Elze, 2002).

An examination of the effects of school victimization experiences (i.e., verbal harassment, bullying, physical assault) on risk behaviors revealed that LGBT adolescents reporting low victimization were similar in reported risk behaviors to heterosexual adolescents with low victimization. Of youth reporting high victimization, LGBT youth were significantly more likely than heterosexual peers to have engaged in other risk behaviors such as sexual risk, truancy due to fear, and suicide attempts (Bontempo & D'Augelli, 2002). Thus, the combination of sexual minority status and victimization had a synergistic effect on risk behaviors. Youth who experience victimization, interpersonal problems at school, and arguments with parents reported higher levels of psychological distress than their peers (Ueno, 2005). Another study indicated that the relationship between externalizing problems and sexual orientation was mediated by victimization (Williams et al., 2005).

LGBT students may face additional struggles because negative school experiences affect school achievement. The Gay, Lesbian and Straight Education Network's (GLSEN) 2003 National School Climate survey found that verbal and physical harassment, physical assault, and property damage are linked to lower grade point averages for LGBT youth (Kosciw, 2004). In addition, one study that examined risk and protective factors for LGB (transgender students were not included) youth found that supportive friends and parents could not mediate the harmful effect of a negative school climate (Murdock & Bloch, 2005). Even after for controlling for prior achievement, student perception of LGB-based exclusion explained 10% of variance in grade point average (Murdock & Bloch, 2005). Similarly, Remafedi (1987) found that 53% of a sample of gay and lesbian adolescents experienced a drop in their grades and 28%

dropped out of school. In contrast, 20% of that sample experienced an improvement in grades (Remafedi, 1987). Online interviews with lesbian and bisexual young women resulted in another divergent result, and revealed that the majority excelled in school, and of twenty-seven participants, only four reported having difficulty concentrating on school work (Malinsky, 1997).

The key to untangling the achievement questions may be in examining harassment and victimization rather than sexual orientation. As demonstrated in large-scale studies examining both sexual orientation and victimization, evidence suggests that being both gender minority and a victim of verbal or physical harassment leads to worse outcomes than either status alone (Bontempo & D'Augelli, 2002; Kosciw, 2004). When victimization is left out of the equation and students who have or have not experienced negative school experiences are all in one group, sexual minority students appear to perform at similar levels to their heterosexual peers (Russell, Seif, & Trong, 2001). It appears that school climate issues may affect grade point averages either positively or negatively, although more often, poor climate is associated with lower grades (Remafedi, 1987). However, the potential for harm is hard to dispute, and although some students may become "overachievers," others will struggle and possibly even drop out.

In addition to potentially hampered achievement while in high school, LGBT students were twice as likely as the student population as a whole to indicate that they do not plan to pursue post-secondary education (Kosciw, 2004). The desire to extend one's education appears to be linked to victimization, as LGBT students who reported a low level of victimization also reported rates of intention to pursue post-secondary education at rates comparable to the general student population (Kosciw, 2004).

These findings point to the importance of social support and school climate in improving the school experiences and achievement of LGBT youth. Issues affecting the individual in terms of self-esteem and emotions are supported by theories of self-concept. In such theories, self-concept may be described as a multi-dimensional construct that is affected by the individual and the environment (Bear, Minke, Griffin & Deemer, 1997). In addition, school climate research has linked a positive school climate with positive outcomes in achievement, self-concept, and absences, among others (Lehr & Christenson, 2002). The constructs that appear most salient for LGBT students in terms of school climate are caring and sensitivity, equity and fairness, student interpersonal relations, and student teacher relations (Haynes, Emmons, & Ben-Avie, 1997).

Ideas about how to address the needs of LGBT students circulate throughout the literature. A few specific interventions have been widely recommended. Developing school policies to protect sexual minority youth, starting gay-straight alliances, providing psychosocial support for LGBT students, providing staff development in LGBT issues, and incorporating sexual minority issues into the curriculum appear to round out the school-based interventions most often cited in the literature. Research on the harmful effects of a hostile school climate and social isolation supports the claims that the suggested interventions would improve school experiences for LGBT youth. Although research on the efficacy of these interventions is somewhat sparse, available results are presented herein.

Level II: Proven Effectiveness

Level II research expands on the observation and experiences of theory by implementing innovations in applied classroom settings. This type of research employs

experimental control in a real-life situation to determine the utility of implementation of a particular innovation (Ellis, 2001). Studies documented in this section are smaller in scale when compared to the research reviewed in Level III.

School Policies

It appears that nearly all resources aimed at ending homophobic harassment in the schools agree on one tactic: establish a clear and explicit written policy that forbids harassment in the school (Boland, 2002; Holzhauer, 1993; Horowitz & Loehnig, 2003; Macgillivray, 2002; Schneider & Owens, 2000; Szalacha, 2003). As many of these resources point out, anti-harassment policies without publicity and administrator support are not likely to produce change. As documented by the American Association of University Women (AAUW), policies alone do not appear to reduce harassment in schools (American Association of University Women, 2001). Although awareness of policies against sexual harassment has increased dramatically since 1993, reported frequency of being harassed has not changed (American Association of University Women, 2001). Nonetheless, a well-publicized school policy protecting the rights of all students may be a valuable component of a LGBT-supportive environment. Although suggestions to implement anti-harassment policies inclusive of LGBT students abound, a review of literature uncovered no research examining implementation of policies in applied settings.

Gay/Straight Alliances

Another proposed intervention is to allow and to support the formation of Gay/Straight Alliances (GSAs; Boland, 2002). GSAs are typically student-run after-school clubs through which sexual minority students can find peer support, belonging,

and an avenue to make positive changes in their school (Horowitz & Loehnig, 2003). As the name implies, GSAs are open to all students, regardless of sexual orientation, who are interested in challenging anti-gay or heterosexist bias and harassment in schools.

One study investigated the effectiveness of GSAs in a school setting and found that participants believed that participation in the GSA improved their academic performance, facilitated better relationships with adults and peers, helped them develop a sense of pride in who they were, increased feelings of school belonging and identification, and decreased harassment (Lee, 2001). While no actual improvement in grades was observed following the initiation of the GSA, improved relationships with peers and adults as well as feelings of safety, pride, and belonging were positive outcomes (Lee, 2001). Moreover, qualitative research suggests that GSAs empowered participants and allowed students to become more open and comfortable with their sexual orientation (Garcia-Alonso, 2004). An additional study that considered school-based intervention research found that the presence of LGBT-oriented clubs or groups (GSAs or politically-oriented) was strongly correlated ($r = .801$) with increased discussion of sexual minority issues in classrooms (Jordan et al., 1997). It should be noted that these studies involved no experimental or statistical control, relying on reports of participants as the primary outcome measure.

Staff Development and Behavior

In studies that surveyed LGBT adolescents and solicited their recommendations and ideas about how to improve schools, a clear message emerged. Students who experienced sexual minority status in high schools asked that teachers and other staff speak out. Students call for staff intervention when other students use homophobic

language, and for open discussion of LGBT people and issues in classrooms (Jordan et al., 1997; Malinsky, 1997). Although students may hear peers using derogatory language daily, they witness teachers correcting this behavior less than once per month (Jordan et al., 1997; Kosciw, 2004; Kosciw & Cullen, 2002). No studies emerged in this review of literature to support the applied implementation of staff development in improving school climate and experiences of LGBT youth. However, several studies support the notion that existence of supportive staff members is related to positive outcomes for LGBT youth (Jordan et al., 1997; Kosciw, 2004; Kosciw & Cullen, 2002; Murdock & Bolch, 2005; Russell, Seif, & Truong, 2001). Research that investigates outcomes for students as a result of training for support staff is needed.

The studies reviewed in this section document the results of interventions implemented in isolated settings with small groups of students. What follows is an exploration into broader implementation of school-based interventions supporting LGBT youth.

Level III: Consistent and Widespread Implementation

Widespread implementation is demonstrated in one published study (Szlacha, 2003). It should be noted that other large-scale programs exist and provide services for LGBT youth. Unfortunately, no published research is available to support the efficacy of these programs. The Massachusetts Safe Schools Program for LGBT students conducted a statewide study of the impact of GSA, school policy, and staff development interventions on student outcomes (Szalacha, 2003). This study used a stratified random sample of thirty-three schools that had implemented recommendations of a statewide commission. Results indicated that GSAs were the most potent forces for institutional

change. First, a high percentage of students (90%) were aware of a GSAs presence in their school, compared to far fewer being aware of school policies or staff training. In addition, a higher percentage of students could identify a faculty or staff member who was supportive of LGBT students. Furthermore, students were more comfortable referring a friend questioning sexuality issues to talk to a counselor, and fewer students heard homophobic language daily in schools with a GSA vs. without one (Szalacha, 2003). Another study based upon the Massachusetts database found that the presence of a GSA or other support group was significantly associated with greater safety for sexual minority youth (Goodenow et al., 2006). Specifically, sexual minority students in schools with support groups were less likely to report dating violence, incidents of victimization at school, skipping school due to fear, or multiple recent suicide attempts (Goodenow et al., 2006).

Another set of national school climate studies have collected data to suggest that GSAs are related to positive outcomes for students (Kosciw, 2004; Kosciw & Cullen, 2002). While cross-sectional in nature, these studies provide evidence of relationships between school supports and student outcomes in a national sample. Reported school experiences of LGBT students nationwide indicated that youth in schools that had a GSA felt safer than students in schools without a GSA (Kosciw, 2004; Kosciw & Cullen, 2002). Those who could identify at least one supportive faculty or staff member had higher average GPAs and higher post-secondary aspirations (Kosciw, 2004) and were more likely to report that they felt as if they belonged in school (Kosciw & Cullen, 2002). More youth in schools without policies (or without evident policies) reported that they had missed classes or days of school for safety reasons than youth in schools with evident

policies about harassment (Kosciw, 2004). Youth were also more likely to report victimization events to teachers or school staff if they believed their schools had a policy regarding such behaviors (Kosciw, 2004).

Conclusion

Although little published research exists to support school-based interventions for LGBT youth, the outlook for future research is promising. A clear need exists for interventions to support LGBT students and to improve the school sexual diversity climate. Students need social and psychological support. In addition, support from school staff and interventions on behalf of these students is beneficial, but research suggests that staff members often do not intervene and frequently do not have any training to encourage change (Macgillivray, 2000; Mudrey-Camino, 2002).

Promising data on GSAs, school policies and staff development exists in the literature. GSAs are the most researched, and appear to produce the strongest results at this point. Research on the interaction of school climate and victimization with sexual orientation demonstrates the potential effect of school environment (Bontempo & D'Augelli, 2002; Jordan et al., 1997; Kosciw, 2004; Murdock & Bloch, 2005). The strength of this association demands more attention in intervention research. Interventions that reduce homophobic speech and harassment, increase support systems, and improve the overall climate for LGBT youth must be examined.

Implications for School Psychologists

The importance of understanding LGBT issues and how to support the social, emotional, and academic needs of these students fall within the domains of *School psychology: A blueprint for training and practice, III* (National Association of School

Psychologists, 2006). School psychologists must develop diversity awareness and culturally sensitive practice, which includes understanding the needs and experiences of students of different sexual and gender orientations. In addition, the *Blueprint* describes the importance of promoting wellness, social skills, mental health and life competencies in the schools. Furthermore, NASP's *Position Statement on GLBTQ Youth* (2006; GLBTQ includes Gay, Lesbian, Bisexual, Transgender, and Questioning) calls school psychologists to develop knowledge, educate school staff, promote a healthy school environment, and provide intervention when necessary in meeting the needs of GLBTQ students. School psychologists must work to promote healthy school environments for all students in order to optimize learning and to prepare young people for adult life.

Clearly, the research base for school-based supports of LGBT students is in early stages of development. Much progress has been made in linking school factors with social, academic, behavioral, and psychological outcomes for LGBT youth. We know that supportive staff can make a difference for these students. We know that lack of intervention when homophobic speech is used alienates youth. We also know that existence of support services in the form of GSAs and school policies appear to facilitate favorable outcomes for LGBT students. Overall, we know that there is hope. Schools are beginning to implement services that are hypothesized to help LGBT students successfully participate and feel safe in schools. LGBT students will benefit from school-based interventions when they are appropriately and effectively applied. It is up to school and research communities to investigate just which interventions will be effective, and for whom they are appropriate.

Chapter 3: Study Design and Methods

Current Study

To this point, research on LGBT students has not focused specifically on the influence of interventions on school connectedness, individual achievement, and engagement in school when compared to a group of comparison peers. Furthermore, much of the data that exist about the effectiveness of Gay-Straight Alliances (GSA) and other interventions are one-dimensional in that they reflect existence of an intervention in a given school, and the related outcome. In this study, I seek to examine academic success and school connectedness in a large group of LGBT students in a unique school district that provides services for this group. This is a descriptive study of student perceptions and academic outcomes of LGBT youth, allies (e.g., students who identify as heterosexual but support LGBT people or events), and a comparison group of high school students.

This study asks the following research questions:

1) How do LGBT students, their allies, and a comparison group differ in achievement, attendance, and school connectedness in an urban school district that sponsors a LGBT support program?

2) Are individual interventions (GSA, support groups, recreational opportunities) related to grades, attendance, credit, and school connectedness for LGBT youth?

3) How do Out For Equity participants perceive safety and support available in their high schools?

The hypothesis for Question 1 is that students will differ on measures of achievement, connectedness, and behavioral engagement based upon their group membership (LGBT, ally, or comparison). LGBT students are frequently thought to be at high risk in these areas, and it is hypothesized that they will demonstrate lower achievement, attendance and connectedness than their comparison peers. The hypothesis for Question 2 is that school-based supports will be positively related to academic outcomes and school connectedness. Students who have high levels of participation in Out for Equity (OFE) activities should also have high levels of school connectedness, attendance, and achievement compared to their less-frequently participating peers.

Question 3 explores student perceptions of their school environments through focus groups. The hypothesis is that students will identify support systems available, as well as risk factors or sources of harassment and victimization in their schools. These results will be used to interpret the data collected for Questions 1 and 2.

Out for Equity Program Description

Out for Equity (OFE) is a district-supported program that provides services for LGBT youth and their allies in the St. Paul Public Schools. It is one of very few such programs (2-5 estimated) in the nation. Funding for this program comes from grants and the school district. Founded in 1994 and adopted into the district budget in 1997, OFE provides staff training, technical support, curriculum, and direct student support in the form of GSA, support groups, recreational opportunities, and after-school academic programming. Specifically, services include a GSA in every high school, a Friday night recreation center for LGBT youth and their allies, and a program center for gatherings and education on a regular basis. Services are expanding to include middle schools as

well, and staff development is provided as requested in elementary through high schools both inside and outside of the district.

Over the years, OFE staff members have conducted assessments of Best Practice implementation as well as risk factors for their students. These assessments have included school climate measures, student and staff surveys, focus groups, student reports of risk and protective factors, and review of academic outcomes. The existence of this program suggests that LGBT students and allies in St. Paul Public Schools have access to social support in ways that many students across the country do not.

Method

Participants

Participants were sampled from the Saint Paul Public Schools (SPPS). Participants were initially recruited from two sources, and numbers vary by dependent variable. The total sample consisted of 291 Out for Equity students and 374 comparison group students. Not all students provided survey and achievement data, however. See Table 1 for a summary of the number of students in each subgroup. The group of students completing surveys about school connectedness was recruited through activities provided by OFE and through their homerooms in SPPS high schools (comparison group). The comparison group was recruited as a convenience cluster sample from five homerooms in SPPS high schools. A total of 155 comparison students completed surveys. OFE staff members invited GSA, recreation center, and R2YC (Rosie's Rainbow Youth Center; after-school social and academic programming facility) participants to fill out surveys as a part of a program evaluation during the winter and spring of 2006. Students completed the surveys on a convenience basis, at one of the three activities listed above. All students who

participated in services were invited to complete a survey about their experiences at school. The number of students who declined to participate was not recorded. A total of 89 OFE students completed surveys. Students who participated in OFE services were divided into LGBT (n = 51) and Ally (n = 38) groups based upon self-reported sexual orientation.

A total of 272 students made up the OFE group for achievement and attendance data, with 219 students composing the comparison sample. Numbers for individual variables differed due to varying availability of data. Attendance percentage and GPA, for example, are not available at every grade for every student, due to students being at various grade levels at the time of data collection. Numbers also vary because, as noted, additional achievement data for the OFE group were collected after survey administration had already occurred. Because sexual orientation was a survey question but is not included in general enrollment data, this variable is unknown for much of the OFE group. Therefore, when results are presented in terms of LGBT and allied groups, the numbers are smaller than the total OFE group.

Focus group data were collected from OFE participants only (no comparison group). A total of seventeen students from four schools took part in the focus groups. These students were informed that focus groups would take place on a given day, and then chose to attend their GSA meeting on that day in order to participate.

Demographics. Achievement data were collected for students in a variety of grades. The comparison group data were collected during students' senior year at the choice of the program director. This was done to assure the most data possible from each student. In terms of ethnic make-up, comparative data between OFE and comparison groups were

available for the connectedness survey sample only. Demographic data were available for the OFE students providing achievement data, but not for comparison students who provided achievement data. In the connectedness survey sample, the comparison group differed from the OFE group in proportion of Asian and white students. In fact, the OFE group did not include any Asian students, while the comparison group was composed of 39.5% (n = 60) students who identified as Asian. The comparison group appears to be more representative of the district as a whole, which translates to a higher percentage of Asian students and a lower percentage of white students when compared to the OFE group. The majority of OFE participants are white. These data suggest that white students participate in OFE services at a higher rate than would be expected given their proportion in the general student population in the district. See Tables 2 and 3 for demographic information for both groups.

Focus groups included students from four schools. Follow-up surveys recorded students' self-reported demographic information. Seventeen students participated in focus groups, with sixteen completing demographic surveys. The group consisted of students in grades 9-12. A total of one (6%) 9th grade, five (31%) 10th grade, seven (44%) 11th grade, and three (19%) 12th grade students participated. They reported their sexual orientations as straight (44%, n = 7), bisexual (31%, n = 5), and gay or lesbian (25%, n= 4). Students listed their gender as well, and the group consisted of male (44%, n = 7), female (50%, n = 8), and transgender (6%, n = 1) students. As in the survey data, the majority of the focus group participants were white (69%, n = 11). The following racial groups were also represented: Native American (13%; n = 2), Bi-racial, Asian, and African American (each 6%, n = 1).

Because district staff administered the surveys to all students, consent was obtained with permission of school principals as part of a general consent families sign at beginning of the year. All data are part of enrollment, Best Practice service monitoring, or board-approved grant requested information. This study was approved by the district research review board as well as the Institutional Review Board of the University of Minnesota.

Measures

Research questions 1 and 2 were answered with results of student surveys and cumulative academic records collected by OFE staff. In order to collect data for student achievement (credits, GPA) and attendance, a list of all students who participated in OFE services from the years 2003-2006 was created through sign-in forms for GSA, support group, or recreation center during this time span. The student identification numbers of these students were used to acquire achievement data from existing school records. The archival data for grade point average, attendance, and credits earned were collected by district staff members.

A comparison group was drawn from the district database by choosing a group representative of district averages in gender, race, and school. Additional data for OFE students were collected after the connectedness surveys were administered, in order to ensure that the OFE sample included students with both surveys and achievement data on file. Comparison data were not drawn from the same students for both datasets. That is, the comparison sample for achievement data did not include students who had completed surveys. This is due to the fact that comparison survey data were collected completely anonymously without identification to match with achievement data. Anonymity was a

condition of data collection.

In order to investigate the relationship between level of involvement in the program and outcomes, an OFE staff member rated participating students on whether they attend OFE events regularly, sporadically, or rarely. During the process of rating, an additional category was added, resulting in four possible participation levels. These data were used to answer Question 2.

School connectedness was measured at one point in time (present). The *Psychological Sense of School Membership* (PSSM) scale by Carol Goodenow (1993) was used to measure connectedness. This scale is composed of 18 items rated on a scale from 1-5, with 1 corresponding with "not at all true" and 5 corresponding with "completely true". Questions are related to feelings of connectedness to teachers, students, and school in general. Studies have found the mean score for urban middle school students to be 3.09-3.11 with a standard deviation of .61-.7 (Goodenow, 1993) and for high school students 3.37 with a standard deviation of .64 (Hagborg, 1994). Female students typically report higher school connectedness than do male students (mean of 3.52 vs. 3.31 for high school students; Hagborg, 1994). Internal consistency reliability ranges from .803 (Goodenow, 1993) to .88 (Hagborg, 1994). Construct validity investigations found no significant differences based upon racial minority status or special education participation, except when a particular racial group was predominant in a school, in which case members of that group reported higher senses of school membership (Goodenow, 1993). Suburban students rated by their teachers to have low or high social standing produced predicted low and high school membership scores (Goodenow, 1993). The entire PSSM can be found in Appendix A

School achievement was measured by grade point average (GPA) on a four-point scale. Grades were collected at the end of each school year for grades 7-12. An additional measure of achievement was credit accrual during high school. Credit data consisted of a credit achievement percentage calculated by dividing total credits attempted by total credits earned. Finally, attendance rates were calculated by dividing the total days present by the total days enrolled for each school year, grades 7-12.

Student perceptions of school safety and climate were gathered through focus groups. Focus group data were collected during GSA meetings at four high schools. Students were informed in advance that the focus groups would be conducted, and given the choice to participate. A complete list of questions asked during focus groups can be found in Appendix B.

Analyses

Quantitative data were analyzed using one-way and mixed model analyses of variance (ANOVA) comparisons. A one-way ANOVA was used to examine the intergroup differences of LGBT, ally, and comparison students on the variables of school connectedness and percentage of credits earned. Grade point average and attendance percentage were considered repeated measures (collected during multiple school years) and were analyzed with mixed model ANOVAs using year in school as a within-subject variable and group membership as a between-groups variable. Post-hoc comparisons were used to determine differences between individual groups (LGBT vs. ally, ally vs. comparison, LGBT vs. comparison), when appropriate. In addition, mixed model ANOVAs were used to measure the differences among OFE students on the variables

listed above, with the between-groups variable (four levels) being the rated frequency of their participation in OFE activities.

Chapter 4: Results

How do LGBT students, their allies, and a comparison group differ in achievement, attendance, and school connectedness in an urban school district that sponsors a LGBT support program?

The first research question investigated between-group differences in achievement (percentage of credits earned, grade point average), attendance, and sense of school membership. The quantitative data for credits and PSSM scale scores were analyzed by using a one-way Analyses of Variance (ANOVA) to examine differences between groups. Because attendance rate and grade point average were repeated measures collected at the end of each school year, these variables were analyzed using a factorial ANOVA with year in school as the within-persons factor and group membership as the between-groups factor.

Credits. Percentage of attempted credits earned were compared among the three groups through two tests. Due to the small number of OFE students who indicated their sexual orientation, the entire group (OFE) was compared with the comparison group in one analysis, followed by a separate analysis of differences among comparison, allied, and LGBT students within the OFE group. The first analysis was included in order to utilize the data from the large number of OFE students who have not indicated their sexual orientation.

First, a means comparison between all OFE students and the comparison group was conducted using a one-way ANOVA measuring differences between OFE and comparison students. Follow up effect size analyses were also conducted, yielding small effect sizes in both cases. This analysis yielded a marginally significant difference, such

that OFE students earned a total of 84.6% of credits attempted, whereas comparison students earned 87.5% of credits attempted $F(1, 467) = 3.109$, $p = .079$, $r = .081$ Next, LGBT and allied students who had indicated their orientation were compared with one another and to the comparison group in another one-way ANOVA. No significant difference emerged, $F(2, 269) = 1.497$, $p = .226$, $r = .105$. Complete results are presented in Table 4.

Attendance. Next, historical attendance percentages were collected for all students in the sample from their 7th grade through 11th grade years. No 12th grade attendance was collected for the comparison group or 12th grade OFE group participants due to the fact that the data for this study were collected before the end of the school year, which is when the yearly attendance rate is calculated. These data were analyzed with a 2 (group: OFE, comparison) X 5 (school year) mixed-model ANOVA. Attendance rate was compared within subjects for each year in school (7th-11th grade, 5 levels of the variable) and between subjects according to group membership (2 levels: OFE or comparison). Mauchly's test indicated that the assumption of sphericity had been violated for the main effect of year in school, $\chi^2 (9) = 166.356$, $p < .001$. Therefore, degrees of freedom were corrected using Greenhouse-Geisser estimates of sphericity ($\varepsilon = .791$). Results indicated a significant main effect for year in school, $F (3.164, 705.624) = 6.350$, $p < .001$ contrasts between each year in school with the year immediately preceding and following it indicated that the main differences emerged between 10th and 11th grades [$F (1, 223) = 4.170$, $p = .042$] and between 7th and 8th grades [$F (1, 223) = 4.167$, $p = .042$]. An examination of the data suggests that attendance rate drops for both groups in 8th and 11th grades. No significant interaction between group and year in school emerged, $F (3.164,$

705.624) = .202, p = .904. Group membership did not produce a significant main effect on attendance rate, F (1, 223) = .366, p = .546, r = .040. Therefore, whereas year in school appears to be related to attendance rate, OFE and comparison group students do not differ significantly on this variable. The pattern of attendance rates may be seen in Figure 1.

Grade point averages. In order to examine differences in mean GPA across years and between groups, a 2 (group: OFE, comparison) X 5 (school year: 8th – 12th grade) mixed-model ANOVA was executed, with year in school the within-subjects variable (5 levels: 8th, 9th, 10th, 11th, and 12th grade), and group membership (2 levels: OFE and comparison) the between-subjects variable. Again, Mauchly's test indicated that the assumption of sphericity had been violated [χ^2 (5) = 211.048, $p < .001$]; therefore degrees of freedom were corrected using Greenhouse-Geisser estimates of sphericity (ε = .53). Results indicated a main effect for year in school, F (2.437, 214.449) = 8.952, $p < .001$. Contrasts indicated a significant difference between 9th grade and 8th grade GPA, F (1,88) = 14.987, $p< .001$. An examination of a plot of scores indicates that 8th grade GPA is higher than high school GPAs for both groups. A pictorial representation of these data can be seen in Figure 2. No significant main effect for group membership was found, F (1, 88) = 1.770, p = .187.

A large difference in GPA between middle school and high school is reasonable to expect, and an additional analysis of high school grades only (excluding 8th grade GPA) was conducted. In order to examine GPA scores across high school, GPA was examined at each year (9th, 10th, 11th, 12th) as a within-subjects variable in a 2 X 4 mixed-model ANOVA, with the between-groups variable being group membership (OFE vs.

comparison). No significant difference between means was found for the main effect of year in school, F (1.593, 229.333) =.781, p = .433 (Greenhouse-Geisser correction used). Similarly, the main effect of group membership (OFE vs. comparison) was not significant, F (1, 144) = 2.602, p = .109, r = .133. There was a significant interaction effect between grade level and group membership F (1.593, 229.333) = 4.105, p = .026. This indicates that GPA at different grade levels varied between OFE and comparison groups. To break down this interaction, contrasts were performed comparing each year in school to the year prior for both groups. Results indicated a significant interaction between group and grade between 10th and 11th grades and between 11th and 12th grades (10th to 11th grade, F (1, 144) = 4.89, p = .030; 11th to 12th grade, F (1, 144) = 4.591, p = .034). The interaction graph suggests that OFE students show a somewhat greater increase in GPA than comparison students between 10th and 11th grades, and continue to increase their GPAs somewhat until 12th grade, while the comparison group drops a bit in 12th grade. It is important to note, however, that the OFE group produced lower mean GPAs at each grade level. These results can be seen in Figure 2, when 8th grade scores are ignored.

School membership. School connectedness was measured with The Psychological Sense of School Membership Scale (PSSM). Total scores for the PSSM were compared with an ANOVA with group membership (LGBT, ally, comparison) as the factor. LGBT, ally, and comparison students were compared in one analysis. Results indicated no significant mean difference among groups for Total Score, F (2, 242) = 2.214, p = .111, r = .134. Because racial demographic data were available for both groups, these results were also analyzed via a one-way ANOVA with race as the factor (5 levels: Asian, Black

Hispanic, Multiracial, and White; no Asian students in OFE sample). Results indicated no significant differences among racial groups for the OFE students [F (3, 80) = 1.737, p = .166] or the comparison students [F (4, 147) = 1.210, p = .309].

Results of an exploratory factor analysis (principal component analysis) indicate that this is a primarily unidimensional scale. Multiple factors can be extracted, although the point of inflection on the scree plot indicates a one-factor solution (see Figure 3). According to Stevens (1992, as cited in Field, 2005), for sample sizes of greater than 200 (n = 242) the point of inflection is a fairly reliable criterion for factor selection. The Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) and Bartlett's Test of Sphericity (KMO = .865; $\chi^2(153) = 1605.22$, $p < .001$) indicate that the sample size and sphericity are acceptable. In addition, a reliability analysis indicated high internal consistency reliability (α = .88). Due to the one-factor solution, reliability, and non-significant differences between groups, no additional analyses were conducted.

Are individual interventions (GSA, support groups, recreational opportunities) related to grades, attendance, credits, and school connectedness for LGBT youth?

In order to answer the second research question of whether individual interventions were related to grades, attendance, credits, and school connectedness for LGBT youth, students were compared by differences in their level of participation in OFE activities. The sample for this question included only those students who had participated in OFE (LGBT and allies) and no comparison students. A program staff member who has the most access to the entire student group sorted students into categories based upon their degree of participation. Three categories were defined initially and were given numeric values, with 1 corresponding with "I have never heard

of this person," 2 corresponding with "Participated a few times," and 3 corresponding with "He/she was a regular participant." As the staff member rated the students, a fourth group emerged. These students were viewed as leaders in the program who were different from others categorized as being regular participants. Overall, 23.5% (n = 56) of students were unfamiliar to the staff member ("I have never heard of this person"), 34.5% (n = 82) participated in OFE activities a few times, 37.4% (n = 89) were regular participants, and 4.6% (n = 11) were identified as leaders in the program.

A one-way ANOVA using participation category as the factor (never heard of the person, participated a few times, regular participant, and leader in the program) was used to analyze differences in the dependent variables of percentage of credits earned and PSSM score. There were no significant differences in percentage of credits earned, F (3, 232) = .994, p = .396, r = .113. School connectedness did not vary by level of participation in OFE activities for the full scale score, F (3, 46) = .069; p = .976, r = .067.

In order to examine differences in GPA and attendance rate across years, mixed-model ANOVAs were conducted. In the first analysis, each year of high school was used as a within-subjects variable, with the between-groups variable being level of participation (4 levels). Mauchly's Test again indicated that the assumption of sphericity had been violated (χ^2 = 187.765, p < .001) and the Greenhouse-Geisser correction was used (ε = .474). A 4 (participation level: "never heard of the person," "participated a few times," "regular participant," "leader in OFE") X 4 (grade: 9^{th}-12^{th}) mixed-model ANOVA examining within-person effects for GPA across years revealed a significant main effect for year in school for OFE group members, F (1.422, 118.048) = 5.709, p = .01). Contrasts indicate that the changes in GPA from 10^{th} to 11^{th} grade and from 11^{th} to

12th grade were significant (10th to 11th F (1, 83) = 8.797, p = .004; 11th to 12th F (1, 83) = 5.050; p = .027). The overall trend was for GPA to rise each year, with greater gains between 10th and 12th grades than between 9th and 10th. No significant interaction effects (grade by participation level) or main effects for participation level were observed (grade x participation F (4.267, 118.048) = .931, p = .453; participation level F (3, 83) = 1.233, p = .303). As shown in Figure 4, differences between groups were observed, but not at a significant level.

A 4 (participation level: "never heard of the person," "participated a few times," "regular participant," "leader in OFE activities") X 5 (grade level: 7th-11th) mixed-model ANOVA was conducted to examine differences in attendance rates across years from 7th through 11th grades and among levels of participation. Mauchly's test again indicated that the assumption of sphericity had been violated for the main effect of attendance ($\chi^2(9)$ = 53.894, $p < .001$). Degrees of freedom were corrected using Greenhouse-Geisser estimates of sphericity (ε = .728). No significant main or interaction effects were found when analyzing attendance rates across years and groups. The main effect of grade level on attendance percentage was not significant, F (2.912, 145.578) = .506, p = .673. Interaction effects between participation level and year in school were also non-significant, F (8.735, 145.578) = .422, p = .918. Similarly, the between-groups variable of group membership did not have a significant effect on attendance rate, F (3, 50) = .516, p = .516. In summary, level of participation in OFE activities does not seem to be significantly related to either attendance rate or to GPA.

Based upon these analyses, group membership (OFE, comparison) and participation level in OFE activities did not produce significant main effects on the

dependent variables of GPA, attendance rate, and sense of school connectedness. Marginally significant differences were seen between groups for mean percentage of credits earned.

How do Out For Equity participants perceive safety and support available in their high schools?

Finally, seventeen OFE participants from four schools participated in focus groups during the usual meeting time for their GSA (one focus group per school). Questions referred to perceptions of safety and support for LGBT students in their high schools. Focus groups were digitally recorded and transcribed. Responses were analyzed by identifying themes in responses to each question. Each focus group transcript was read by the researcher and responses to each question were recorded. Responses were then grouped according to theme, as identified by the researcher. Results are presented by question. The number referred to after response categories indicates the number of individual students whose responses corresponded to each theme. The number of schools represented in each response category is also reported.

Which groups of people are least safe at this school? The most common response to this question was that no particular group was perceived as particularly unsafe in a school, but that it depended on the situation as to who was unsafe (n = 5, 3 schools). Some specific groups that were mentioned were closeted people (i.e., those who are not open about their sexual orientation, n = 2, 1 school), African-American boys (n = 2, 1 school), LGBT youth (n = 1), and nerds (n = 1). However, when asked the follow-up questions of whether it was safe for LGBT students and whether it was safe to be open

about homo- or bisexuality in schools, the majority of responses indicated concerns about safety (n = 6, 3 schools).

In three of four focus groups, students stated that the school environment was not a safe place to be out (i.e., to be open about homo- or bi-sexuality, n = 6). For example, one student said,

> I'll hear it. "Oh, there's that queer, there's that fag." I'll hear it, and I'll just walk away, because I'm used to it. I'm not saying you have to get used to it, but after awhile, after you're in a group of people who enjoy making fun of each other, enjoy making it a game, trust me, you get used to it… before I came out, I was severely closeted and situations would come up where I either used words like that, or I could just be out. And I did not feel comfortable with being out. So I've used words like that against people. And I've said things and done things that I seriously regret…And I knew what I was doing, the whole time. I knew my decision going to be: either I call this guy a fag, or I'm gonna [sic] be out. It's going to be over for me. And my life is going to be in danger.

Another student added,

> I have a hard time gauging whether or not as a whole things have gotten better or worse. Most of my classes are IB (International Baccalaureate) classes, so I'm pretty secluded from the greater portion of the school community, but I still hear my fair share of slurs, and in general the terrible things that people say about each other. I do have like the fear of you know, if I come out to this person, will they not be my friend anymore? And, you know, what will happen if people in my class see like a pride pin or something? It's always there, and I have friends who

> are totally comfortable with just being out, loud and proud. But, I don't have that comfort, and I think I have good reasons.

A student from another school added, "I think physically, nobody would beat you up because you're gay but I think if you openly say you're gay at this school you're gonna [sic] get tormented sooner or later."

Although the response occurring most frequently was that school was not a totally safe place to be open about homosexuality, the next most frequent response was that the climate was indeed safe for LGBT students (n = 3, 2 schools). It should be noted that all three students sharing this perspective openly identified as allies rather than LGBT. As one student stated,

> It's gotten a lot better. I mean I'm not actually any of those, I'm straight, but I'm big into the community so I'd have to say in the beginning of the year we had some incidents, but after they were addressed I think…because of us and more people saying that they're bi, more people had to care. You find out your best friend's bi, what are you going to do? You know?

Students also identified characteristics of being out at school or about the school environment that were not explicitly a "yes" or "no" answer to whether school was a safe place for LGBT students. Three students mentioned that although homophobic speech was common in schools, it was not directed at anyone in particular and therefore not harmful (2 schools). Another three participants stated that students may not be out at school, but it was probably more due to personal issues than to school variables (2 schools). Two participants agreed that transgender students were likely to be unsafe at school (1 school), and another two said that it depends on the situation whether a LGBT

student is accepted at school (1 school). Finally, two students expressed concern that coming out could result in losing friends (1 school).

In describing what safety means to them, students described emotional safety rather than physical safety. One person stated that freedom from homophobic speech defined safety, and five (2 schools) said that safety was being able to be yourself. Finally, when asked how many students were out at their schools, students unanimously responded that only a few LGBT students were visible (n = 7, 4 schools). In one focus group, students shared concern about the low numbers, saying,

Student 1: "I see the people who come regularly and I know in a school of 2200 people that this can't be it."

Student 2: "We can't be the only gay people."

Student 1: "Right, that worries me."

How likely are students and staff to intervene when homophobia occurs? At least one student from each school said that teachers usually intervene when they hear homophobic speech (n = 6). Still, many students said that teachers either ignore (n = 5, 2 schools) or can't hear (n = 3, 1 school) the majority of the negative language that is used. Most students seemed united in saying that their peers will not speak up when they hear homophobic speech (n = 8, all schools represented). Several students said that they or other GSA members would speak up (n = 5, 2 schools) or that they knew of some individuals who would intervene when such language was used (n = 3, 2 schools).

One of the prompts asked students to talk about where this type of speech occurs most often. In each of the groups that responded to this prompt, the unanimous answer was "in the hallways." The total number of responses is difficult to determine because

one group consisting of eight students responded with a loud group response of "the hallways!" The lunchroom and social settings in general were each mentioned by one student as places where homophobic speech occurs. Finally, students in some groups discussed the frequency with which homophobic speech was used. Students across three schools differed in opinion on whether it occurred infrequently (n = 3, 2 schools) or on a regular basis (n = 2, 2 schools). At one school, the experiences of students differed, with one noting frequent homophobic speech and another saying that it happened on occasion. In other cases, there were no dissenting opinions when students said that they heard homophobic speech occasionally (1 school) or regularly (1 school).

How visible are support measures for LGBT students, families, and staff? Three of the groups discussed general visibility and agreed that visibility for support measures overall is low (n = 5). For example, one student stated,

> Well, GSA and just the general support group used to be a lot more visible I think just simply because of things put up in the hallways. But I don't think even half the people in the school know there's a GSA here anymore. And it's really only people who have classes with certain teachers that if a subject comes up that's kind of touchy, will a teacher say, "you can come talk to me about this stuff,"…it doesn't seem like there's a whole lot that people know about.

Many students discussed certain elements of visibility, including posters (n = 5; 3 schools), books in the library (n = 4, 2 schools), incidental discussion in class (n = 3, 3 schools), special events (n = 3, 3 schools), and safe staff stickers (n = 2, 1 school). Others said that events were planned but did not occur (n = 7, 2 schools), they didn't know of any books in the library (n = 6, 2 schools), that posters were torn down (n = 2, 1 school),

and that LGBT issues had not come up in class (n = 1). It appears that overall, participants in GSA are aware of support measures, but do not believe they are visible to the greater school community.

Have you noticed a change in your GSA over the past several months, year? Many students noted a decrease in participation in GSA over the past months or year (n = 5, 3 schools). The students from the school not experiencing a drop in participation stated that numbers fluctuate from week to week (n = 2) and that their organization and cohesiveness as a group had improved since the previous year (n = 3).

In terms of demographics, students described their GSAs in a variety of ways. Some indicated a mixture of different types of students (n = 4, 2 schools). Some participants noted that allied students were not frequent participants (n = 3, 2 schools). Two students from two different schools noted that their GSA is composed of primarily white students, and another two students from one school noted that their GSA actually does not have any students who identify as LGBT or questioning (Q). Finally, students at one school discussed the age of participants, most saying that the group was composed of mostly underclassmen (n = 4) and another noting the lack of freshmen (n = 1).

Two categories of response garnered the highest number of comments for explaining the reason for changes in GSA. First, the controversial nature of GSA in some schools, or stigma associated with attending meetings was seen as a deterrent to participation for some (n = 6, 3 schools). Freshmen and allies were specifically mentioned as being vulnerable to the effects of stigma. Next, many students attributed changes to lack of publicity (n = 6, 3 schools). Students noted that incoming freshmen may not know about GSA, and that posters and announcements with details of meetings

were not common enough. Many participants indicated that students are busy and may not have time to attend GSA (n = 5, 3 schools). One GSA dissolved altogether after meetings were changed from school hours to after school. Finally, two students representing two schools noted that the graduation of seniors had resulted in a change in their groups.

Is there a need for GSA? Students did not debate a variety of responses to this question. When asked if there was a need for GSA, every response was "yes." Participants were also asked to describe the need for the GSA or to discuss why they chose to participate. The most common reason students cited was that GSA was a place to go to talk and "hang out" with people they like (n = 8, 4 schools). For example, one student stated,

> Well I'm straight and all, but I feel that there's a need for GSA because I can come here and I can talk to my friends about stuff that I hear around school and I can talk to those people about anything I really feel is connected to GSA. Like if I hear someone say something about "oh this person's gay," or "this person's a fag," or something, I can come and I can talk to people about that, you know, say that I have a problem with it because even though I'm straight I still feel that people shouldn't say words like that because they don't know how badly the words can hurt somebody in the end. GSA is a good place to just come and let your feelings out and talk to other people.

Another student whose GSA had dissolved added,

> It was nice because, you know, it's not just for gay people and it's not just for straight people. You interact with all kinds of people, you know different groups,

different social standards, different everything and you become friends. And you really realize that you don't have to be separated by the clothes you wear and the music you listen to and whatever…I just miss having it…the people and just talking about stuff. I don't know. I just loved hanging out.

The second most frequent response was that GSA was important because it provided a safe and supportive space for LGBT students and allies (n = 7, 4 schools). Students recognized this as important for themselves and for young students, and indicated that they believed they were helping others by supporting them. Two sample responses from this category are as follows:

Well, yeah, there's a definite need because if this wasn't here, I don't think I would have ever come out. I think I would have stayed in the closet because I was comfortable there for some reason…It was easier for me just to stay in the closet. Less conflict, less problems, less people irritating me to the point of no return, but GSA did help me to come out and help me to understand better about myself and how to be open about it and I feel different.

Okay, so, like ever since the GSA stopped and the support groups during school stopped I've realized that a lot of the GLBT students don't really connect with each other anymore. That connection is lost. I mean, I still love them all as much as I ever did but it's just that connection, the physical like seeing each other is gone… I think that's what is mentally disturbing the GLBT students. Because they don't see each other anymore and they can't get those similar stories with each other.

One exchange between two students illustrates the belief that participants support others by coming to GSA meetings.

Student 1: "Part of why I'm here is because being older than pretty much all the other students who come, I know what it was like for them at their age, to an extent. Because I've already been through it. I know what it feels like to be 14, 15, 16 and gay. I feel like I help it in a way. Like instead of going home and doing the dishes or something for my parents, I'm here helping out other gay people and the odd straight person who walks in."

Student 2: "Doing the dishes for society."

Student 1: "Oh yeah. I'm doing the dishes for the GLBT community."

Another function for GSA is to spread knowledge or change the school environment (n = 4, 3 schools). Students spoke of a desire to end homophobic speech and to increase acceptance of LGBT people in their schools. Finally, two allies indicated that the reason they come to GSA is to show support for their LGBT peers.

Some speculate that you are at the beginning of a new generation. Does this seem to be true? Do you notice significant differences between your peers and high school students four years ago? In three focus groups, students mentioned that homosexuality was more accepted now than in the past (n = 3). Another two students from the remaining school noted that people were more liberal and willing to voice their opinions about issues. Students from one school pointed out that young people are more likely to question their sexuality now than in the past (n =3). Finally, two students perceived that sexuality expression has expanded and become less stereotypical. At one school, two

participants responded to this question by saying that their families were not fully accepting of their sexual orientation.

Overall, focus group participants described a need and appreciation for social connections achieved through GSA. They described ongoing stressors such as harassment and homophobic speech at school, but also reported benefiting from support they provided for and received from other GSA members. Participants voiced concern about the lack of visibility of support services, the homogeneity of GSA, and the number of students still “in the closet” in their schools.

Chapter 5: Discussion

The school-based needs and negative experiences of LGBT youth have long been discussed and documented. A review of literature in the field indicates that LGBT students typically experience victimization at school in the form of verbal harassment and even physical assault (Bontempo & D'Augelli, 2002; Kosciw, 2004). LGBT students are frequently thought to be at risk in terms of attendance, achievement (grades, graduation, and post-graduate aspirations) and feelings of belonging at school (Goodenow, Szalacha, & Westheimer, 2006; Kosciw, 2004; Kosciw & Cullen, 2004). Studies that included both victimization and school outcomes found that risk status arises out of victimization rather than LGBT orientation alone (Bontempo & D'Augelli, 2002; Ueno, 2005; Williams et al., 2005). Recently, researchers have suggested that a new generation of LGBT youth is emerging (Savin-Williams, 2005). It is hoped that today's student experiences more resilience and less victimization than previous studies have suggested.

This study sought to examine the well-being of a group of students participating in a district-sponsored LGBT support program in an urban school district. Previous research suggested that LGBT students would have worse educational outcomes than their comparison peers. Results of the study differed from previous research in that, for the majority of dependent variables, LGBT students were not significantly different from their comparison peers. No significant differences emerged between groups in credits earned or attendance rate. Similarly, when students who participated in OFE were compared based on their level of participation, no significant differences were seen in attendance rate or credit percentage. In terms of GPA, OFE students did not differ significantly from comparison students, and did not differ based upon their participation

level. An interaction effect between year in school and group membership indicated that OFE students tended to improve their GPA over the course of high school while the comparison group showed a gradual decline in grades. The comparison group had higher GPAs throughout high school, but not at a significant level.

Previous studies have shown that LGBT students tend to have lower achievement than their heterosexual peers, which some studies have linked to the level of victimization that LGBT students experience. Although this study did not examine victimization in a quantitative fashion, students spoke of their school experiences in focus groups. It was expected that students might report lower victimization and higher acceptance than previous findings, due to the political climate in the district and the existence and efforts of OFE. Focus group participants, however, also mentioned several experiences of victimization in high schools. Both positive and negative components of life as an LGBT student in St. Paul high schools were shared. LGBT participants said that being open about sexuality was not safe in high schools, and indicated that safety was primarily defined as the ability to express oneself and to be free from harassment. In the face of verbal harassment, focus group participants reported that teachers were likely to respond when they heard homophobic speech, and that some students in their schools would stand up for LGBT students. Widespread student support was not reported. They also shared their experiences of having social support from their friends at gay-straight alliances, however, which may help to balance these negative experiences.

In addition to school achievement outcomes, data were collected to investigate students' sense of connection to school. Again, previous research suggests that LGBT students would be less connected to school than a comparison group of their peers. On

the contrary, differences between OFE and comparison and between LGBT and ally students were nonsignificant. It appears that LGBT students who participate in OFE activities report a level of connection to school similar to that of their allied and comparison peers. In addition, reported school connectedness did not differ when OFE students were compared by their level of participation in OFE activities.

The fact that OFE students report connectedness at the same level that comparison students did is a surprising finding. Current discussion in the field suggests that a new generation of LGBT youth may be emerging. In *The New Gay Teenager*, Ritch Savin-Williams suggests that LGBT youth are more resilient and less burdened by mental health issues than they were years ago (Savin-Williams, 2005). Recent research has suggested that LGBT youth are closer to their heterosexual peers in terms of interpersonal problems and psychological distress than they have been in previous studies (Ueno, 2005). It may be that having a place to belong, such as GSA, as well as the ongoing work of OFE in the public schools, helps to promote a stronger sense of connection for LGBT students.

In talking about their participation in GSA, students expressed appreciation for the social support they received from their peers in the group, and the ability to talk about a variety of issues in a safe place. Students also mentioned the potential of GSA to spread knowledge or to change the school environment. This seems to be related to school connectedness. It seems that if students are interested in changing the environment of their school, they must feel a sense of investment in the school. LGBT and allied students alike reported that GSA was a good place to socialize and to support one another.

Although many discussed being busy and having difficulty finding time to attend meetings, everyone who responded to this question said that schools needed GSAs.

Student outcomes as a function of participation in the various OFE activities yielded no significant results. This indicates that regardless of whether students participated just a few times, were regular participants, or even leaders in OFE, they tended to have similar mean achievement and connectedness outcomes as a group. This may be due to the fact that students self-select their level of participation in the activities. They may choose to attend activities at the level that they need or want. Alternatively, this may indicate that OFE services are not related to student outcomes. This seems somewhat unlikely, given the overall well-being of the group, but due to the descriptive nature of this study, the possibility cannot be ruled out. It may be that simply the existence of OFE and the services provided by the organization serve as protective factors for LGBT youth. Knowing that there is a place for LGBT students to go for belonging and support may help to promote connection to school and positive academic outcomes. However, given the low visibility of services described by focus group participants, the effect of OFE's existence alone (without considering actual participation in services or activities) is difficult to estimate.

This study did not take into account the contributions of OFE to St. Paul schools other than direct services to youth. As described previously in this report, OFE provides professional development for district staff members as well as consultation and curriculum materials upon request. Systems-based interventions such as climate initiatives, staff development, and policy work take several years to change a school environment. OFE has been in existence for thirteen years, and actively supported by the

St. Paul district for ten years. In that amount of time, it is possible that student effects may be occurring outside of the direct service interventions, and may be related to changes in school culture and climate. That is, students likely benefit from a healthier, more accepting school environment, and this could not be measured by the frequency of their attendance at a GSA meeting or recreation center.

Merits and Limitations

This study examined a large group of LGBT students and allies who participated in a unique school-based support program. Due to the rarity of this type of program and the number of youth who participated, the study provides a valuable description of a relatively well-supported and active group of students compared to previous studies. However, due to the descriptive nature of this study, causal statements cannot be made. As mentioned, students opt to participate in OFE services to the extent that they want or need to. No effort was, or could be, made to control their level of participation. In addition, this study did not include a group of LGBT students *not* receiving support services. This seems to be an inherent limitation in research in this field, however. Students who are "closeted" may not seek support from programs such as OFE. It seems as if it would be unlikely to find a group of LGBT high school students who openly identify as such but are not linked with some sort of support services. Future research might expand on the examination of program effects by collecting data at initial enrollment and at follow-up points in a student's career, in addition to maintaining data on a comparison group. Data regarding the structure and content of GSA meetings might also help to explain what students are seeking by joining these groups and what the groups are actually providing. Qualitative data would help to investigate underlying

reasons for this group's relative well being compared to previous findings. An examination of student perceptions of school climate and the relationship to connectedness and achievement by these groups of students might also help to illuminate the source of outcomes.

Although this study merely provided a snapshot of the academic and social adjustment of a group of LGBT youth, allies, and comparison students, it adds to the suggested image of a stronger, more connected generation of sexuality minority youth than previously seen (Savin-Williams, 2005). The students who participate in OFE report being as connected to school as are their comparison peers. They earn credits, have school attendance rates, and earn grades comparable to their peers.

Future Directions

This study described the status of a group of students with access to a unique school-based support program. Additional studies measuring change over time and in relation to changes in programming would be beneficial. As suggested by existing studies, future research must focus on interventions in the schools that influence outcomes of isolation, academic achievement, and emotional and psychological well-being. In direct interventions of GSAs, support groups, and the like, random assignment may not be possible in most cases due to the low number of students who openly identify as being LGBT, along with the ethical implications of denying services to some students. However, it is not unrealistic to examine pre-post measures of academic achievement, social adjustment, self-concept, or risk behaviors. In addition, in districts or states that implement school-based support services or enact climate initiatives, random assignment may be possible. One sample of schools or classrooms might receive intervention during

the first year of the program, with others to follow in subsequent years in a wait-list design. Whatever the specific design, research on school-based support for LGBT students needs to be expanded in terms of applied research and widespread implementation.

Much has been written about the risks and vulnerability of LGBT youth, and many have suggested possible interventions to support these students (Boland, 2002; Kosciw, 2004; Macgillivray, 2002; Malinsky, 1997; Schneider & Owens, 2002). However, research indicating the outcomes related to each of the suggested interventions remains sparse. The research base for determining what works in school-based interventions for LGBT youth must be developed as a whole. It will be informative to find out not only what works, but *why*. That is, do students seem to benefit from GSA participation because the experience gives them access to a supportive peer group, exposure to LGBT or allied adults, a chance to discuss the issues related to being LGBT or adolescents in general, or some other reason?

In addition, specific subgroups will need to become a focus of investigation. Of the research that currently exists on school-based interventions and experiences, much focuses on urban schools. As evidenced by the Gay, Lesbian, Straight Education Network's (GLSEN) national school climate surveys, issues may vary in content and intensity among locales and geographic regions. Intervention research needs to be sensitive to these differences in exploring effective practices for school settings. In addition, research tends to represent a primarily Caucasian participant group. Although data are most commonly collected in urban schools, the diversity of these schools is not represented in the specific population of LGBT students who have been studied. This

current study is similar to previous research in lack of ethnic diversity. Focus group participants in this study mentioned the lack of ethnic diversity as a concern, and the majority of OFE students were white, which is not representative of the district demographics. It may be that students of color are less likely to be "out" than their white peers. Discussions of identity development in youth who identify as LGBT and also belong to an ethnic minority group suggests that their "double-minority" status complicates their access to support and acceptance in *both* communities, which may lead to lower visibility (Gay, Lesbian, and Straight Education Network, 2003; Ryan & Futterman, 1998). A recent study of self-identified gay, lesbian and bisexual adults found that age of coming out to self and others did not differ significantly between white and ethnic minority groups (Grov, Bimbi, Nanin, & Parsons, 2006). Further investigation into the coming out process, support systems and interventions for minority LGBT students is warranted. Finally, school-based support research for transgender students is also called for, as this group is frequently assumed to be covered by the "LGBT umbrella" but may require unique services for their unique issues. As mentioned in one focus group, transgender students may be at unique risk for victimization and certainly cope with different issues than LGB students may encounter.

Finally, the indirect benefits of programs such as OFE may be important avenues for research. Frequency of participation in OFE activities was not related to achievement or connectedness in this study. However, OFE participants as a group did not differ significantly from comparison peers in most areas, as would be predicted by previous research. It is possible that changes in the school culture contribute to these positive results. Changes in school culture may be related to reduced prejudice as a result of

intergroup contact or to changes in school climate such as less homophobic speech and more intervention by peers or adults when harassment occurs.

Conclusions

Overall, this study indicates that a group of LGBT students and allies who participate with varying degrees in a school-based support program do not differ significantly from a comparison group in terms of achievement or sense of school connectedness. Although non-significant results are typically not sought after by researchers, these outcomes seem encouraging. Studies have repeatedly demonstrated that students who identify as LGBT fare much worse than their comparison peers in terms of achievement and emotional outcomes such as school connectedness. It appears that at least for this group of OFE participants, the playing field has been leveled to some degree.

Out for Equity participants unanimously endorsed the value of attending Gay Straight Alliance meetings, whether to socialize, to make a difference in their schools or to support one another. Nonetheless, although many students shared many positive aspects of school, they also described room for improvement. Even in a district that supports a program such as OFE, verbal harassment is common and students perceive a lack of safety in being open about homosexuality at school.

Additional research about the diverse group of LGBT students in this nation and how they navigate supports and dangers in the school environment over time will be beneficial. Society, school districts, and LGBT youth continue to change. A current picture of the risks as well as the assets of this group of students will help to guide service provision and strength-promotion for youth.

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Table 1

Total Sample Size and Subgroups by Research Question

	OFE		Comparison
Total sample	*n* = 291		*n* = 374
Achievement variables	*n* = 272		*n* = 219
Participation level	*n* = 238		not applicable
Connectedness	*n* = 89		*n* = 155
	LGBT	Ally	
	n = 51	*n* = 38	

Note. The number of cases applied for each analysis varied by available data.

Table 2

Demographic Data for Students Providing Achievement Data

	Out for Equity		Comparison	
	Percent	*n*	Percent	*n*
Grade				
9th	5.9%	15	0%	0
10th	21.5%	55	0%	0
11th	28.5%	73	0%	0
12th	41.8%	107	94.5%	208
Beyond 12th	2.3%	6	5.5%	12
Racial/Ethnic Group				
African American	12.4%	33	unknown	
Asian	4.5%	12	unknown	
Hispanic	8.3%	22	unknown	
Multiracial	6.4%	17	unknown	
Native American	1.6%	4	unknown	
White	66.9%	178	unknown	

Table 3

Racial Demographic Data for Students Providing Connectedness Data

	Out for Equity		Comparison	
	Percent	*n*	Percent	*n*
Racial/Ethnic Group				
African American	5.6%	5	14.5%	22
Asian	0%	0	39.5%	60
Hispanic	8.9%	8	11.8%	18
Multiracial	13.5%	12	7.9%	12
Native American	5.6%	5	0%	0%
White	66%	59	26.3%	40

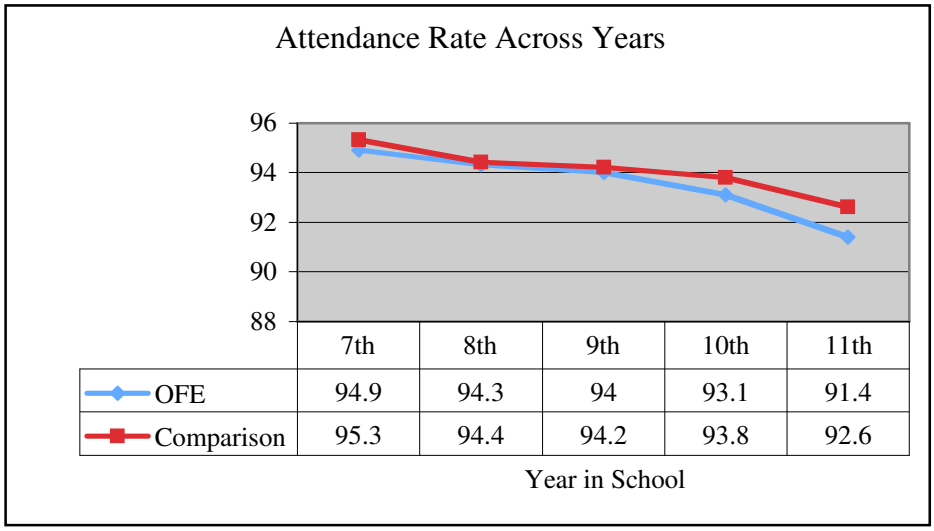
Table 4

Credits Attempted, Earned, and Percent of Credits Earned

	Mean			Standard deviation			Sample size
Group	Attempted	Earned	Percent	Attempted	Earned	Percent	
Out for Equity (whole group)	41.63	35.34	84.58%	17.57	16.82	.18	255
Comparison	42.35	37.6	87.45%	12.59	12.94	.19	210
OFE: LGBT	34.91	29.47	82.65%	18.12	18.16	.20	41
OFE: Ally	29.73	26.02	90.31%	15.60	14.61	.18	21

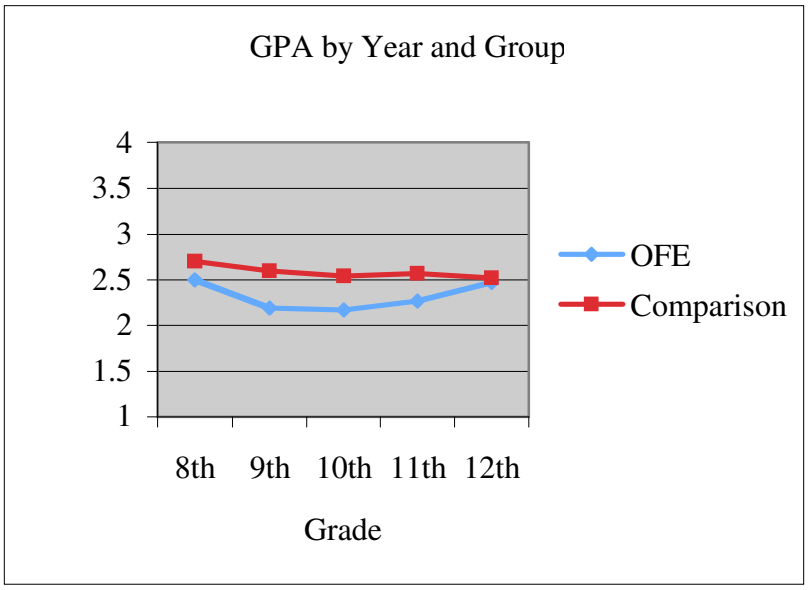
Note. Difference between OFE and comparison groups was marginally significant for percent of credits earned ($p = .079$). Mean differences among LGBT, allied, and comparison students were not significant at $p < .05$.

Figure 1: Attendance rate across years



Note. Main effect for year in school significant at $p < .001$. No interaction effects or main effect for group membership significant at $p < .05$.

Figure 2: Grade point average by year in school and group membership (OFE or comparison)



Note. No significant ($p < .05$) main effect for group membership or year in school for 9th-12th grade. Significant interaction effect for group x year in school ($p = .026$).

Figure 3: Principal Component Analysis of Psychological Sense of School Membership (PSSM) scale

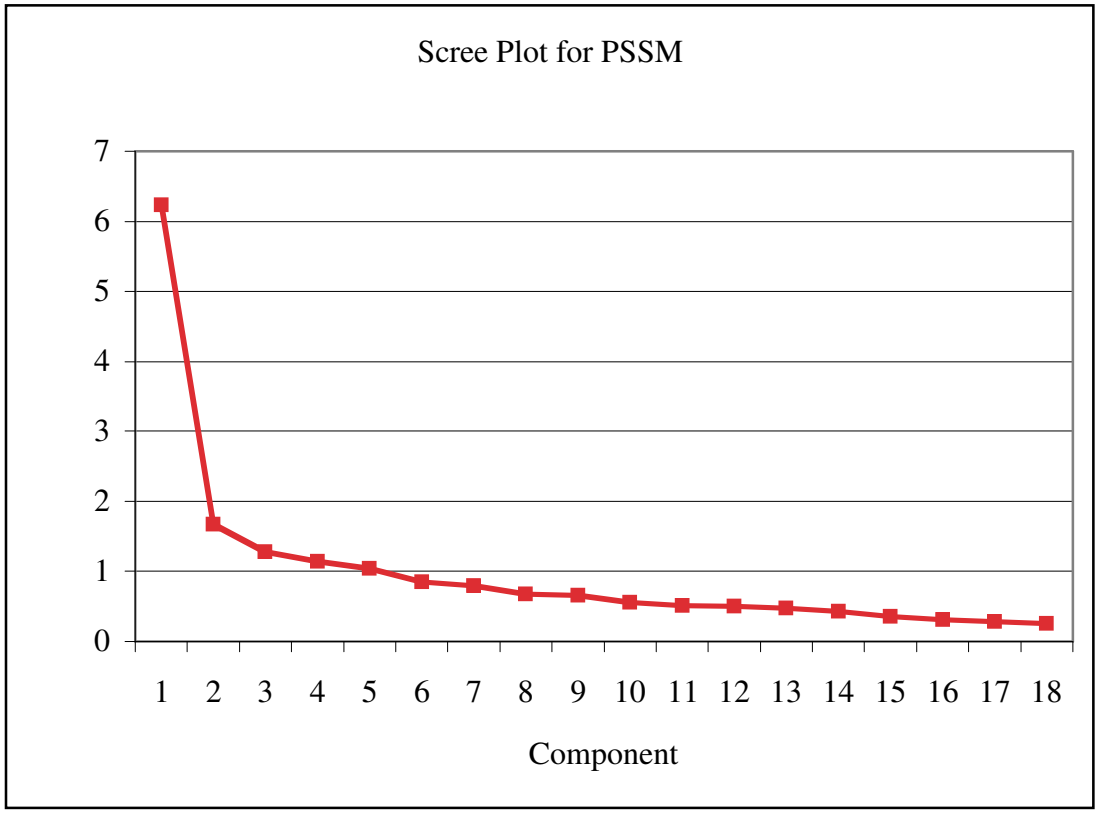
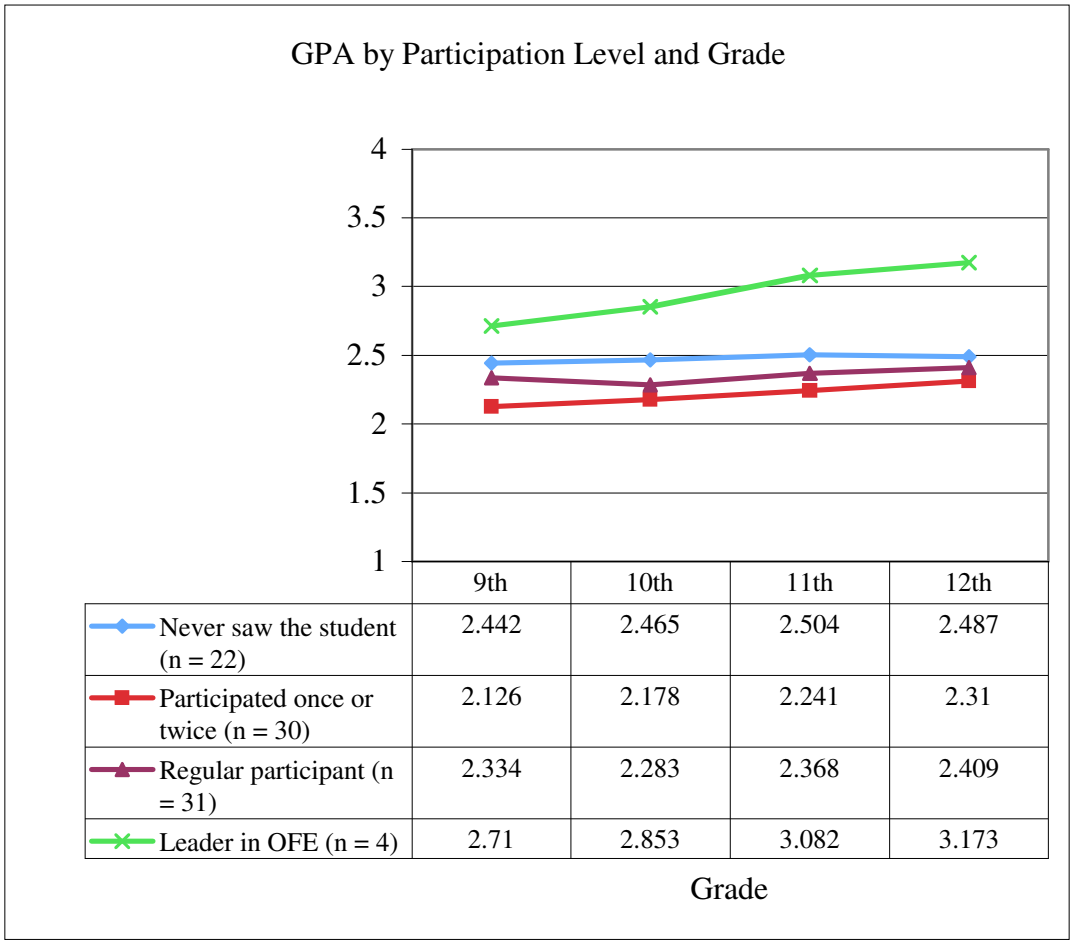


Figure 4: Mean GPA across years by Out for Equity participation level



Note. These differences are not significant at the $p = .05$ level.

Appendix A: Psychological Sense of School Membership scale

		Not at all true				Completely true
1	I feel like a real part of my school.	1	2	3	4	5
2	People here notice when I'm good at something.	1	2	3	4	5
3	It is hard for people like me to be accepted here. (R)	1	2	3	4	5
4	Other students in this school take my opinions seriously.	1	2	3	4	5
5	Most teachers at my school are interested in me.	1	2	3	4	5
6	Sometimes I feel as if I don't belong here. (R)	1	2	3	4	5
7	There's at least one teacher or other adult in this school that I can talk to if I have a problem.	1	2	3	4	5
8	People at this school are friendly to me.	1	2	3	4	5
9	Teachers here are not interested in people like me. (R)	1	2	3	4	5
10	I am included in lots of activities at my school.	1	2	3	4	5
11	I am treated with as much respect as other students	1	2	3	4	5
12	I feel very different from most other students here. (R)	1	2	3	4	5
13	I can really be myself at this school.	1	2	3	4	5
14	The teachers here respect me.	1	2	3	4	5
15	People here know I can do good work.	1	2	3	4	5
16	I wish I were in a different school. (R)	1	2	3	4	5
17	I feel proud of belonging to my school.	1	2	3	4	5
18	Other students here like me the way I am.	1	2	3	4	5

Appendix B: Focus group questions[1]

- Which groups of people are least safe at this school?
    - Probe: Why do you think that is?
- Is it safe for LGBT students at your school?
    - Probes: What is safety? Is it safe to be out? Do you have any sense of how many students are out at your school?
- How likely are students/staff to intervene when homophobia occurs?
    - Probes: In the classroom? Hallways? Cafeteria?
- How visible are support measures for LGBT students, families, and staff? What resources available for LGBT students in your school?
    - Probes: Clubs, support groups, events, lessons, safe staff, books in library.
- Have you noticed a change in your GSA over the past several months, year?
    - Probes: Have the numbers changed? Demographics? What do you think accounts for these changes?
- Is there a need for GSA?
    - Probes: What is the need? Why do you come to GSA? What does it provide for you?
- Some speculate that you are at the beginning of a new generation. Does this seem to be true? Do you notice significant differences between your peers and high school students four years ago?

[1] These questions were developed by the program director in order to inform program improvement efforts. Initial questions developed in closer relationship to this study were abandoned.