

EXTRACURRICULAR ACTIVITY AND SOCIAL JUSTICE INVOLVEMENT OF
SEXUAL MINORITY YOUTH

by

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DEDICATION

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ABSTRACT

Sexual minority youth (i.e., youth who identify as lesbian, gay, bisexual, queer, or who report same-sex attractions) disproportionately experience negative mental health and academic outcomes. Yet, few studies have examined positive youth development for this population. The goal of these three manuscripts is to add new information about positive developmental contexts for sexual minority youth in order to generate ideas for intervention and prevention. More specifically, the focus of these three manuscripts is on school-based extracurricular activity involvement of sexual minority youth.

Manuscript one presents results from the *National Longitudinal Study of Adolescent Health* that compare sexual minority and heterosexual youth involvement in school-based extracurricular activities. Results documented that sexual minority youth are involved in school-based extracurricular activities at the same frequency as their heterosexual peers. For all youth, there was a small, but positive association between extracurricular activity involvement and school connectedness. School connectedness was associated with better mental health (i.e., higher self-esteem and lower depression), and these associations were stronger for sexual minority youth.

Manuscript two presents results from the *Preventing School Harassment Study* that examine lesbian, gay, bisexual, and queer (LGBQ) youth involvement in Gay-Straight Alliances (GSAs). GSAs are extracurricular clubs that are tailored to the needs of LGBQ youth. This study examined the concurrent associations among GSA presence, GSA membership, and participation in GSA-related social justice activities, with victimization based on sexual orientation and school-based and civic outcomes. GSA presence and participation in GSA-related social justice activities were positively associated with school belongingness and grade-point average (GPA),

and GSA membership was associated with greater school belongingness. Results suggested, however, that the positive benefits of GSA presence and social justice involvement dissipate at high levels of school victimization.

Manuscript three extends findings from manuscript two by examining the associations among GSA presence, GSA membership, perceived GSA effectiveness, and young adult well-being. The study utilized the *Family Acceptance Project* and found that the presence of a GSA, membership in a GSA, and GSA effectiveness differentially predicted LGBT young adult well-being. In some cases, these three facets of GSAs buffered the negative effect of LGBT-specific school victimization.

CHAPTER I. INTRODUCTION

Sexual minority adolescents (defined broadly to include youth who identify as lesbian, gay, bisexual, or queer, as well as youth who report same-gender attractions) experience disparate rates of negative health outcomes that range from psychosocial maladjustment (e.g., depression; Herek & Garnets, 2007; Remafedi, 2008) to behavioral problems (e.g., substance abuse; Marshal et al., 2008; suicidality; Haas et al., 2011) to poor academic outcomes (e.g., grade-point average; Pearson, Muller, & Wilkinson, 2007). Similar to research on how context influences development and well-being in the general adolescent population (Smetana, Campione-Barr, & Metzger, 2006), information about contextual experiences are useful for explaining why and how sexual minority youth experience these disparate outcomes. Further, empirical examinations of context can help to explain how vulnerable youth, such as sexual minorities, experience resilience, or positive youth development.

Schools are a primary context where adolescents spend a large proportion of their time. Yet these contexts are often dangerous and unsafe places for sexual minority youth. Research over the past 20 years has documented that sexual minority youth are at heightened risk for school victimization (e.g., Birkitt, Espelage, & Koenig, 2009; Kosciw, Greytak, Diaz, & Bartkiewicz, 2010; O'Shaughnessy, Russell, Heck, Calhoun, & Laub, 2004; Williams, Connolly, Pepler, & Craig, 2003). Further, studies have documented that sexual minority youth characterize their schools as unsafe learning environments (e.g., Kosciw et al., 2010; O'Shaughnessy et al., 2004). These negative school experiences have been linked to both short- and long-term poor mental health outcomes (e.g., Bontempo & D'Augelli, 2002; Russell, Ryan, Toomey, Diaz, & Sanchez, 2011; Toomey, Ryan, Diaz, Card, & Russell, 2010). Yet, school-based experiences that are associated with well-being for sexual minority youth remain underdocumented.

One potential school-based context that should be linked to positive well-being for sexual minority youth is involvement in extracurricular activities. The general adolescent literature has consistently documented positive associations between involvement in school-based extracurricular activities and well-being (e.g., Balsano, 2005; Barber, Eccles, & Stone, 2001). Nonetheless, these studies have not focused on the experiences of sexual minority adolescents. Because sexual minority youth frequently experience victimization at school, involvement in school-based extracurricular activities may provide an opportunity for these youth to feel more connected to their school, which in turn may be associated with better mental health for this vulnerable population. Further, the links between involvement and well-being may be stronger for sexual minority youth because this may be the only school-based context that provides them with physical safety and supportive relationships with peers and adult mentors.

An emerging literature specific to sexual minority adolescents is beginning to document sexual minority and heterosexual youth involvement in Gay-Straight Alliances (GSAs). GSAs are school-based, student-led clubs that provide a safe place for sexual minority youth in schools (e.g., Goodenow, Szalcha, & Westheimer, 2006). Research has documented several protective benefits of the presence of GSAs for sexual minority adolescents, such as less victimization based on sexual orientation (e.g., Kosciw et al., 2010), less suicidality (Goodenow et al., 2006), and higher self-reported safety at school (e.g., Walls, Kane, & Wisneski, 2010). To date, however, this research has not examined whether or not GSA presence and/or membership can buffer the negative association between school victimization and well-being.

There are three main goals of this dissertation: 1) to compare the mean level of involvement in school-based extracurricular activities and the longitudinal associations among involvement, school connectedness, and mental health between sexual minority and

heterosexual youth using a nationally representative sample of adolescents; 2) to examine the short- and long-term direct associations of GSA presence and GSA membership with academic outcomes and well-being for sexual minority youth ; and, 3) to examine whether or not GSA presence or GSA membership can buffer the negative association between victimization based on sexual orientation and short- and long-term academic outcomes and well-being for sexual minority youth.

Overview of Manuscripts

This dissertation consists of three studies of sexual minority youth involvement in school-based extracurricular activities that are in line with these three goals. The first study examines the prevalence of sexual minority youth involvement in school-based extracurricular activities and the longitudinal associations between involvement, school connectedness, and mental health. The second and third studies build on the first study by examining one specific school-based extracurricular activity that is tailored to meet the needs of sexual minority adolescents. These two studies focus on sexual minority youth involvement in Gay-Straight Alliances (GSAs). Specifically, the second study examines concurrent associations in adolescence among GSA presence, GSA membership, and involvement in GSA-related social justice activities with school belongingness, grade-point average, personal school safety, and plans for future civic engagement. The third study builds on the second study by examining the associations between adolescent GSA presence, GSA membership, and perceived GSA effectiveness with young adult psychosocial well-being (i.e., depression, self-esteem, social support, suicidality, substance abuse, and educational attainment). The second and third studies examine whether or not these different facets of GSAs have the power to buffer the negative associations between school

victimization based on sexual orientation and short- and long-term academic outcomes, behavioral risk, and mental health.

CHAPTER II. MANUSCRIPT I.
EXTRACURRICULAR ACTIVITY INVOLVEMENT AND SCHOOL CONNECTEDNESS
OF SEXUAL MINORITY YOUTH: ASSOCIATIONS WITH
DEPRESSION AND SELF-ESTEEM

Russell B. Toomey

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Introduction

Sexual minority youth experience disparate rates of poor academic outcomes (e.g., Eisenberg & Resnick, 2006; Kosciw, Greytak, Diaz, & Bartkiewicz, 2010; O'Shaughnessy, Russell, Heck, Calhoun, & Laub, 2004; Pearson, Muller, & Wilkinson, 2007), negative psychosocial well-being (e.g., Haas et al., 2011; Remafedi, 2008; Russell, 2006), and are at risk for negative school-based experiences, such as school victimization based on sexual orientation (e.g., Kosciw et al., 2010). Yet, few studies have systematically examined possible protective factors or positive development for sexual minority youth despite several calls in the literature (e.g., Eisenberg, & Resnick, 2006; Russell, 2003; Scourfield, Roen, & McDermott, 2008). Research with general adolescent samples has consistently demonstrated that school-based extracurricular activities provide positive developmental benefits; that is, participation is associated with both short- and long-term psychosocial well-being and academic achievement (e.g., Barber, Eccles, & Stone, 2001; Fredericks & Eccles, 2006). Nonetheless, these findings lack information about the potential benefits of extracurricular activity participation for sexual minority youth. This study is the first to systematically examine the associations between school-based extracurricular activity involvement that is not tailored to the needs of sexual minority

youth (e.g., Gay-Straight Alliances; Goodenow, Szalacha, & Westheimer, 2006) and mental health for sexual minority adolescents.

One potential mechanism that helps explain why extracurricular activity involvement is associated with positive developmental outcomes and well-being is that activity participation increases levels of school connectedness, the perception that one belongs to or is a valued member of one's school (e.g., Libbey, 2004). Previous research has documented a strong association between extracurricular activity involvement and school connectedness (e.g., Bonny, Britto, Klostermann, Hornung, & Slap, 2000; Thompson, Iachan, Overpeck, Ross, & Gross, 2006). Further, previous research has shown that school connectedness is associated with a myriad of positive psychosocial and academic outcomes (e.g., Barber & Olson, 1997; Hawkins, 1997; Klem & Connell, 2004). Nonetheless, these associations have not been systematically examined for sexual minority youth, and importantly, research has documented that these youth report lower levels of school connectedness than their heterosexual peers (e.g., Galliher, Rostosky, & Hughes, 2004; Murdock & Bolch, 2005; Pearson et al., 2007; Poteat & Espelage, 2007).

Involvement in school-based extracurricular activities may provide a context for sexual minority youth to experience greater levels of school connectedness, which in turn may be associated with better mental health for this vulnerable population. Research that examines the processes by which positive mental health is achieved is critical for informing intervention and preventions and for fostering resiliency among sexual minority adolescents. Beyond examining the associations between school-based extracurricular activities and mental health, this study will also examine the associations between extracurricular activity participation and school connectedness, and between school connectedness and mental health.

In the following sections, we first review the literature on school experiences and well-being for sexual minority youth. We then review literature that documents associations among school-based extracurricular activity involvement, school connectedness, and well-being for the general adolescent population. We end with an empirical example, using secondary data from the *National Longitudinal Study of Adolescent Health* (the Add Health study), that examines the longitudinal associations among school-based extracurricular activity involvement, school connectedness, and well-being for sexual minority youth compared to heterosexual youth.

School Experiences and Well-Being of Sexual Minority Youth

Several studies over the past 20 years have documented that sexual minority youth experience high levels of school victimization (e.g., Almeida, Johnson, Corliss, Molnar & Azrael, 2009; Berlan, Corliss, Field, Goodman, & Austin, 2007; Birkitt, Espelage, & Koenig, 2009; Bontempo & D'Augelli, 2002; Bos, Sandfort, de Bruyn & Hakvoort, 2008; Busseri, Willoughby, Chalmers, & Bogaert, 2008; Saewyc, Singh, Reis, & Flynn, 2000; Saewyc et al., 2007; Williams, Connolly, Pepler, & Craig, 2003). A 2009 study of lesbian, gay, bisexual, and transgender youth documented that nearly 85% of these students experienced verbal harassment at school, 40% experienced physical harassment, and nearly 20% experienced physical assault (Kosciw et al., 2010). Studies have also consistently documented significant associations between school victimization and negative mental health for these youth (e.g., Almeida et al., 2009; Bontempo & D'Augelli, 2002; Hershberger & D'Augelli, 1995; Russell, Ryan, Toomey, Diaz, & Sanchez, 2011; Swearer, Turner, Givens, & Pollack, 2008). Further a recent study documented that the experience of school victimization based on sexual orientation largely accounted for the link between adolescent gender nonconformity and young adult depression and life satisfaction (Toomey, Ryan, Diaz, Card, & Russell, 2010).

Health disparities for sexual minority youth examined in previous studies have included both mental health (e.g., depression, anxiety, post-traumatic stress disorder, self-esteem; Remafedi, 2008) and behavioral health (e.g., substance use, risky sexual behavior, self-harm, suicidality; Haas et al., 2011; Marshal et al., 2008; Remafedi, 2008). Studies have also found that sexual minority youth disproportionately report negative school-based outcomes (e.g., grade-point average, school safety; Eisenberg & Resnick, 2006; Kosciw et al., 2010; O'Shaughnessy et al., 2004; Pearson et al., 2007). For the purposes of the current study, the key outcomes considered further include depression and self-esteem.

Depression. Sexual minority youth experience higher rates of depression than their heterosexual counterparts (e.g., Russell & Joyner, 2001). In the Add Health study, same-sex attractions positively predicted depression among adolescent girls, and both-sex attractions among adolescent boys significantly predicted depression (Russell, 2006). Previous studies have attempted to explain these high rates by examining sexual minority youths' experiences with stigma, victimization, and rejection. Sexual minority youth who experience bias-related victimization at school are more likely to experience depression and anxiety compared to youth who do not report being victimized (Poteat & Espelage, 2007; Williams, Connolly, Pepler, & Craig, 2005). Likewise, youth who experience rejection from their family members are more likely to report depression (Ryan, Huebner, Diaz, & Sanchez, 2009).

Self-esteem. Similar to research findings on depression, an association between sexual minority status and self-esteem has been documented (Garofalo, Wolf, Kessel, Palfrey, & DuRant, 1998; Grossman & Kerner, 1998; Russell, 2006). In the Add Health study, same- and both-sex attractions among females were negatively predictive of self-esteem in adolescence

(Russell, 2006). Similarly, Garofalo and colleagues (1998) found that sexual minority adolescents reported lower levels self-esteem as compared to heterosexual adolescents.

Participation in School-Based Extracurricular Activities

Participation in school-based extracurricular activities provides youth with opportunities to create social connections with peers, adult mentors, and with the larger community. Structured activities (e.g., school-based extracurricular activities) typically contain one or more of the following features that help to promote positive development and mental health among adolescents: physical and psychological safety, structure, supportive relationships, opportunities to belong, positive social norms, support for efficacy and mattering, opportunities for skill building, and integration of family, school, and community efforts (Eccles & Gootman, 2002). These features provide opportunities to modify adolescent exposure to risk factors, such as victimization or rejection. However, studies that focus on youth involvement in school-based extracurricular activities have not focused on diverse populations (Balsano, 2005; Russell, 2002; Sanchez-Jankowski, 2002; Sherrod, Flanagan, & Youniss, 2002). Levels of involvement in these extracurricular activities may differ for diverse populations because of their lack of access to culturally-sensitive activities and mentors (e.g., Villarruel, Montero-Sieburth, Dunbar, Outley, 2005). A focus on extracurricular activity participation by diverse populations is important because it would provide opportunities to adapt existing programs to be more sensitive to the needs of these populations, which could result in increased participation and enhanced developmental and health outcomes of these youth.

Benefits of adolescent engagement. Researchers consistently find an association between adolescent engagement in school-based extracurricular activities and concurrent psychosocial adjustment (Balsano, 2005). For example, Barber and colleagues (2001) found that

adolescents who were involved in school-based extracurricular activities reported less depression and higher self-esteem than their noninvolved counterparts. Further, Feldman and Matjasko (2005) reviewed several findings that involvement in school-based extracurricular activities is associated with well-being.

Adolescent participation in school-based extracurricular activities also has lasting implications. Researchers have demonstrated that adolescent participation in school-based extracurricular activities is associated with young adult psychosocial well-being (Barber et al., 2001). Specifically, one study found that participation in adolescent school-based extracurricular activities was linked to higher self-esteem in young adulthood (Barber et al., 2001). These associations, however, have only been examined within predominately heterosexual samples; therefore, this study seeks to examine these associations for sexual minority youth.

Sexual minority youth engagement in extracurricular activities. Information about the involvement of sexual minority youth in school-based extracurricular is lacking, yet participation in these activities may help buffer their negative school experiences and provide pathways to positive developmental and health outcomes. In a conceptual model of youth engagement, Flanagan (2004) suggests that youth participation in structured activities allows for the development of a collective identity. Similarly, Meyer (2003) suggests that collective identities are one way that sexual minority individuals cope with social stigma and negative experiences. An example of sexual minority-specific involvement in school-based extracurricular activities includes Gay-Straight Alliances (GSAs), Project 10, or similar clubs. GSAs are student-led, school-based clubs that provide a safe place for sexual minority students (Goodenow, Szalacha, & Westheimer, 2006; O'Shaughnessy et al., 2004). Research suggests that the presence of a GSA serves as a protective factor for sexual minority students, such that

sexual minority students who report that their school has a GSA tend to report greater school safety and well-being (Goodenow et al., 2006; Lee, 2002; O'Shaughnessy et al., 2004). This study extends these findings by exploring sexual minority youth engagement in more general, school-based extracurricular activities to examine whether or not they have direct links to mental health.

The Current Study

This is the first study to systematically examine sexual minority adolescent involvement in school-based extracurricular activities that are not tailored to the needs of this population (e.g., Gay-Straight Alliances). Two main research questions are examined:

1. Is the frequency of sexual minority adolescent participation in school-based extracurricular activities similar to or different from heterosexual adolescents?
2. Do the associations among extracurricular activity involvement, school connectedness, and mental health (i.e., depression and self-esteem) differ for sexual minority adolescents compared to their heterosexual peers?

Methods

Study Design and Sample

We utilized *The National Longitudinal Study of Adolescent Health* (the Add Health study) to explore our two research questions. The Add Health study is a nationally representative sample of adolescents who were in grades 7 through 12 at the beginning of the study (Harris, Halpern, Entzel, Tabor, Bearman, & Udry, 2008). The Add Health study is a comprehensive survey of adolescence that includes information about families, schools, peers, neighborhoods, communities, friendships, and romantic relationships. Information about sensitive topics in adolescence was collected in the in-home interviews through the use of Audio-CASI (audio

computer-aided self-interview). This method allowed adolescents to enter their responses into a laptop computer after they listened to the questions through earphones; it reduces the potential of outsider influence on adolescent responses to sensitive questions (Turner, Ku, Rogers, Lindberg, Pleck, & Sonenstein, 1998).

The Add Health study utilized a clustered sampling design that included all high schools and their feeder schools in North America. Over 90,000 adolescents in grades 7 through 12 completed the in-school survey between September of 1994 and April of 1995. Of those youth, more than 12,000 adolescents make up the core sample that completed the in-home interview at Wave 1. In addition to the core sample, Chinese, Cuban, and Puerto Rican adolescents, and Black adolescents from families in which one parent had a college degree were oversampled. Along with a saturation sample that included adolescents from 16 schools (i.e., all students in each of the 16 schools were selected for in-home interviews) and a genetic sample (i.e., sibling pairs were included in study), the total sample size for Wave 1 includes over 20,000 adolescents. These interviews took place between April and December of 1995. From April to August of 1996, participants were re-interviewed at Wave 2 of the study. Adolescents who were in 12th grade at Wave 1 data collection and an oversampled disabled population were not included in Wave 2, which limited the sample size to 14,738 adolescents.

The analytic sample size for this study was limited to include only participants who completed the in-school survey and were interviewed at Waves 1 and 2 and who were not missing data on any study variable. Thus, the analytic sample included a total of 6,823 adolescents. Of these adolescents, 574 (8.4%) were sexual minorities and 6,249 (91.6%) were heterosexual. The average age of the sample at Wave 1 was 15.3 years ($SD = 1.5$). The sample was evenly divided between female ($n = 3,741$; 54.8%) and male ($n = 3,082$; 45.2%) adolescents.

Further, the sample was racially and ethnically diverse: 18.8% identified as non-Latino Black, 14.1% as Latino, 7.2% as non-Latino Asian, 0.7% as non-Latino Native American, and 59.3% as non-Latino White. Further, 7.6% of the participants were immigrants to the United States. On average, parents of the adolescents in the study reported 14.2 years of education ($SD = 2.8$).

Measures

Sexual orientation. Participants were asked about romantic attractions to males and to females, separately, in all Waves of the Add Health study beginning in Wave 1. In Wave 1, participants were asked: “Have you ever had a romantic attraction to a female?” and “Have you ever had a romantic attraction to a male?” (0 = no, 1 = yes). In Wave 2, participants were asked about romantic attractions to both males and females since the time of the last interview. For the purposes of this study, participants who responded positively in either Wave 1 or 2 that they had ever had a romantic attraction to a person of the same-sex were categorized as sexual minorities ($n = 574$; 8.4%). This identification process is similar to methods utilized in previous research (e.g., Russell & Joyner, 2001; Russell, 2006)

Involvement in school-based extracurricular activities. Adolescents were asked about their participation in 33 school clubs, organization, and teams at school, on the in-school survey. The extracurricular activities included on the survey incorporated a range of activities including academic clubs (e.g., French Club, Debate Team, Science Club), sports (e.g., Soccer, Football, Wrestling), performance arts (e.g., Band, Drama Club, Chorus or Choir), and school-related clubs (e.g., Newspaper, Student Council, Yearbook). For the purposes of this study, a continuous measure of participation was created (i.e., a sum score which ranged from 0 to 33 activities).

School connectedness. A five-item measure of school connectedness was utilized in the Add Health study. Information about this scale is available elsewhere (e.g., Bonny et al., 2000;

McNeely & Falci, 2004; Sieving et al., 2001). Each item of the scale was measured on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). For use in structural equation modeling, three parcels were created to balance items with high and low factor loadings (Little, Cunningham, Shahar, & Widaman, 2002).

Depression. An adapted version of the 20-item Center for Epidemiologic Studies-Depression Scale (CES-D; Crockett, Randall, Shen, Russell, & Driscoll, 2005; Radloff, 1977, 1991) was used to measure depression at Waves 1 and 2. Items from the four subscales of the CES-D were parceled into four manifest variables used as the structure for the latent construct of depression (i.e., facet-representative parceling; Little et al, 2002).

Self-esteem. An adapted 6-item version of the Rosenberg Self-Esteem Scale (Crockett et al., 2005; Rosenberg, 1979) was used in both in-home waves of the Add Health study. Three parcels were created to balance items with high and low factor loadings for use in structural equation modeling (Little et al., 2002).

Overview of Analysis

We examined our two research questions using structural equation modeling (SEM), and all models were estimated in MPLUS. We began with a multi-group model to explore whether our constructs had equivalent (i.e., invariant) structure and meaning across participant sexual orientation and time (Little, Card, Slegers, & Ledford, 2007). To explore our first research question about whether sexual minorities participated in school-based extracurricular activities at similar or different levels than heterosexual adolescents, we examined latent mean differences in a multi-group confirmatory factor analysis (CFA) model. To explore our second research question about whether or not the associations among our study constructs differed by sexual minority status, we examined the latent correlations and structural differences in a multi-group

CFA model. All analyses utilized statistical techniques to account for the complex sample design of the Add Health study (Chantala & Tabor, 1999). In examining all model fit tests, we used standard measures of practical fit: root mean square error of approximation (RMSEA), comparative fit index (CFI), and the Tucker-Lewis index (TFI). For nested models, we examined whether or not the differences in chi-square test statistics were significant.

Results

Initial Confirmatory Factor Analysis Results

Table 1 displays the correlations, means, and standard deviations of all latent constructs by sexual orientation. Before comparing latent parameters, such as means or correlations, among discrete subpopulations, one must establish measurement equivalence (e.g., Little et al., 2007). We simultaneously tested measurement equivalence across time and across sexual orientation groups with three separate tests: configural, weak, and strong invariance models (Little et al., 2007). These initial tests established that the measurement of our latent constructs was equivalent across time and across sexual minority status (see Table 2). Because measurement invariance was established, we were able to proceed to examine the equivalence of latent means, variances, and correlations across sexual orientation.

Research Question 1: Mean-Level Differences by Sexual Orientation

The overall test that examined whether or not latent means could be equated across sexual orientation subgroups was significant (see Table 3), suggesting that one or more of the latent means differed. As a follow-up to this test, we explored whether or not the differences existed across time or by group. Both of these tests revealed that there were significant mean-level differences across constructs by time and by group.

We conducted a series of follow-up models by group and time to examine which latent construct's means significantly differed. To conduct this test, all latent means were initially freed and one-by-one the latent means either across time or group were equated. If the chi-square difference test was significant, we concluded that this latent mean should be freed; whereas if the chi-square difference test was not significant, we concluded that this mean could be equated. We began with an examination of mean differences across time. The only significant mean level difference across time was for self-esteem ($\Delta\chi^2(\Delta df = 2) = 13.562, p < .01$), such that participants reported higher self-esteem at Wave 2 (straight $M = 3.39$; sexual minority $M = 3.20$) than at Wave 1 (straight $M = 3.25$; sexual minority $M = 3.02$).

We then examined mean differences across groups and found several differences in latent means across sexual orientation. There was not a significant difference between sexual minority and heterosexual adolescents on the mean level of extracurricular activity participation ($d = -.09$). However, sexual minority and heterosexual adolescents differed on all other latent constructs. Compared to heterosexual youth, sexual minority youth reported less school connectedness at Wave 1 ($d = -.22$) and Wave 2 ($d = -.33$). Further, sexual minority youth reported lower self-esteem at both Wave 1 ($d = -.23$) and Wave 2 ($d = -.21$), and higher depression at both Wave 1 ($d = .30$) and Wave 2 ($d = .33$).

Research Question 2: Moderation of Associations by Sexual Orientation

To examine whether or not the longitudinal associations differed by sexual orientation, we examined the latent variances and covariances. The initial test of homogeneity of variances and covariances suggested that there were one or more significant differences between groups (see Table 3). Follow-up analyses suggested that there were significant differences across time and between groups.

Using phantom constructs (e.g., Little et al, 2007), we tested the equality of latent correlations across sexual orientation. Several differences were documented across time and between groups. First, all three correlations that were present at more than one time point in the model were not able to be constrained (i.e., the correlations between school connectedness and depression, school connectedness and self-esteem, and depression and self-esteem). The standardized estimates for these differences are presented in Figure 1.

Further, several between group differences in correlations were documented. In general, the associations between constructs were stronger for sexual minority youth compared to heterosexual youth. First, sexual minority and heterosexual adolescents differed in the correlation between extracurricular activity involvement at Wave 1 and depression at Wave 1 ($\Delta\chi^2(\Delta df= 1) = 3.936, p < .05$). Second, the association between school connectedness at Wave 1 and self-esteem at Wave 1 significantly differed by sexual orientation ($\Delta\chi^2(\Delta df= 1) = 5.755, p < .05$). Third, the association between school connectedness at Wave 1 and depression at Wave 1 significantly differed by sexual orientation ($\Delta\chi^2(\Delta df= 1) = 10.269, p < .005$). These differences also existed longitudinally, such that the associations between school connectedness at Wave 1 and self-esteem at Wave 2 ($\Delta\chi^2(\Delta df= 1) = 4.913, p < .05$) and depression at Wave 2 ($\Delta\chi^2(\Delta df= 1) = 3.98, p < .05$) were stronger for sexual minority adolescents. Finally, the association between depression at Wave 1 and school connectedness at Wave 2 differed by sexual orientation, such that the association was stronger for heterosexual compared to sexual minority adolescents ($\Delta\chi^2(\Delta df= 1) = 4.402, p < .05$).

Final Model

A final multi-group model is shown in Figure 1. The model achieved acceptable fit: $\chi^2 (df = 379) = 2088.522, p < .001, RMSEA = .036, CFI = .947, TLI = .941$. In sum, there were small

positive correlations between school-based extracurricular activity involvement and concurrent school connectedness ($r = .18$) and self-esteem ($r = .11$). Further, involvement in extracurricular activities was negatively associated with depression at Wave 1; however, this association differed by sexual orientation (sexual minorities: $r = -.12$; heterosexuals: $r = -.07$). After controlling for these initial associations, involvement in extracurricular activities did not predict changes in connectedness, depression, or self-esteem at Wave 2. Importantly, school connectedness was also associated with concurrent depression and self-esteem; however, these associations differed by sexual orientation. Moderate to large concurrent associations existed between school connectedness and self-esteem (sexual minorities: $r = .60$; heterosexuals: $r = .44$) and depression (sexual minorities: $r = -.56$; heterosexuals: $r = -.37$). Further, while the associations between school connectedness at Wave 1 and changes in depression ($\beta = -.03$) and self-esteem ($\beta = .03$) at Wave 2 were negligible for heterosexual adolescents, there were small associations between these constructs (depression: $\beta = -.13$; self-esteem: $\beta = .18$) for sexual minority adolescents.

Discussion

This study was the first to examine school-based extracurricular activity participation for sexual minority adolescents. We found that sexual minority and heterosexual adolescents did not differ on their levels of participation in school-based extracurricular activities. In the context of other research that suggests that sexual minority adolescents experience high levels of school victimization (e.g., Kosciw et al., 2010), some may speculate that these negative school experiences may inhibit their participation in school-based activities. Yet, our finding suggests that similar to heterosexual youth, extracurricular activities may be a ripe context to explore positive youth development in schools for sexual minority youth. In fact, we did find small

concurrent correlations between extracurricular activity involvement and self-esteem and depression for all of the adolescents in this study; however, relationships between involvement and subsequent mental health were not found. Importantly, we documented that extracurricular activity involvement was positively associated with concurrent school connectedness; further, school connectedness was associated with better mental health, especially for sexual minority adolescents.

This study demonstrates that when sexual minority adolescents feel connected to their schools they experience less depression and higher self-esteem. This finding is particularly important given the large body of literature that documents that sexual minority youth disproportionately report high levels of depression (e.g., Russell, 2006) and low levels of self-esteem (e.g., Russell, 2006). In fact, these results suggest that one area for intervention and prevention work that focuses on reducing mental health disparities for sexual minority adolescents could include a focus on fostering school connectedness.

But, what predicts greater school connectedness? Extracurricular activities may be one way in which students feel more connected to their schools; however, this association was small and was only documented cross-sectionally in this study. Taken together, these findings warrant future studies to explore individual and contextual features that are related to school connectedness for all students, specifically for sexual minority adolescents. Findings from general adolescent studies have documented that school connectedness is clearly linked with several contextual characteristics of schools and classrooms. For instance, McNeely, Nonnemaker, & Blum (2002) found that small school size and classroom management techniques were related to greater school connectedness. Further, other studies have documented that students who experience peer victimization and/or rejection are likely to report less

connections to their schools (e.g., Eccles, et al., 1993). Thus, previous research suggests that when students feel safe in their school environments, have positive adult relationships at school (e.g., teacher-child relationships), and are able to learn in a positive environment, they also report greater connections to their school. But, does this differ for sexual minority adolescents? That is, do sexual minority students need individual-level and contextual-level supports that are specific to their sexual orientation in order to feel more connected to their schools?

To date, one study has explicitly studied the links between school-based supports that are associated with school connectedness for sexual minority students. In that study, Diaz, Kosciw, and Greytak (2010) found that when LGBT students have access to supportive staff and Gay-Straight Alliances (GSAs; or other student clubs for LGBT students), and when their school has an inclusive anti-bullying or harassment policy, they report higher levels of school connectedness. These findings are parallel to other research that has documented that LGBT students report greater school safety and less homophobic victimization in schools that have enumerated school policies that include sexual orientation as a protected category, GSAs or similar clubs, accessible information and support about LGBT issues and people, inclusive curriculum, and teachers who intervene in bias-motivated harassment (e.g., O'Shaughnessy et al., 2004). Taken together, these findings suggest that in order for sexual minority students to feel connected to their schools, they may need to be in school environments that have identifiable and accessible supports that are specific to issues of sexual orientation.

Limitations

This study has several limitations. First, our measure of sexual orientation was limited to reports of same-sex romantic attractions. The Add Health study did not measure sexual identity (e.g., gay, lesbian, bisexual) during the adolescence, and others have found important differences

in mental health among those who identify as a sexual minority versus those who report same-sex attractions (e.g., Zhao, Montoro, Igartua, & Thombs, 2010). However, as others have argued, romantic attractions may be a more appropriate indicator of sexual orientation in adolescence given that the participants in our study may have not yet labeled themselves as LGB (e.g., Pearson et al., 2007). A second limitation to our study is that we relied on a single indicator of involvement in school-based extracurricular activities. Given that others have documented important differences in well-being by categorizing the type of extracurricular activity (e.g., sports versus academic clubs), future studies should examine whether types of activity involvement differentially predict school connectedness and mental health. This may be particularly salient for sexual minority youth given that male-dominated school-based sports are a known context where homophobia is enacted and played out (e.g., Pascoe, 2007). A third limitation of the study is that the data were collected in the mid-1990s, when Gay-Straight Alliances (GSAs) were newly being created in schools across the country. For contemporary sexual minority youth, the associations between extracurricular activity involvement and school connectedness might be stronger for sexual minority students, especially if one considers diversity-focused clubs, such as GSAs.

Conclusions

Despite these limitations, this study adds new information about sexual minority youth involvement in school-based extracurricular activities and potential pathways to positive development for this vulnerable population. Specifically, we found that sexual minority youth are just as involved in school-based extracurricular activities as their heterosexual peers. Further, although small in nature, we documented an association between extracurricular activity involvement and school connectedness. Finally, we found important differences in the

associations among school connectedness and better mental health by sexual orientation, such that these associations were stronger for sexual minority than heterosexual youth.

In sum, these findings are arguably a starting point for future intervention and prevention efforts to identify means by which sexual minority youth are more connected to their schools, and in turn, experience fewer mental health problems. Future research is critically needed in order to identify tangible changes that school personnel and students can make to increase students' connections to their schools. For instance, schools may adopt an inclusive anti-harassment policy that includes sexual orientation and gender identity and expression (e.g., O'Shaughnessy et al., 2004) or provide trainings to teachers on how to best support sexual minority students. Future research, however, is needed to examine the longitudinal associations between these school policies and practices and school connectedness of students.

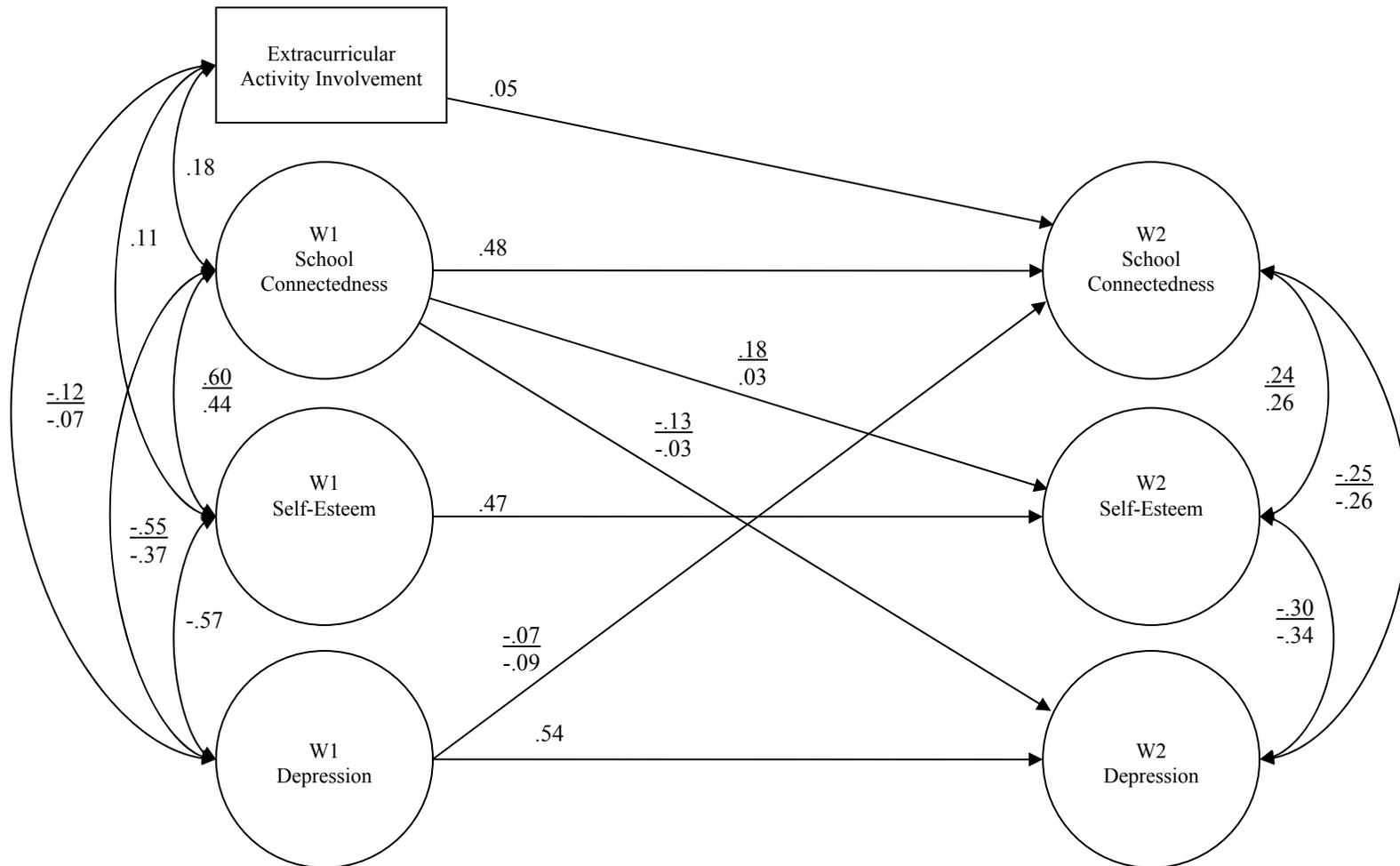


Figure 1. *Structural Model with Phantom Variables Showing Standardized Estimates*

Note. Non-significant paths are not shown for clarity of presentation. When sexual minority and heterosexual adolescent parameters differed, sexual minority youth estimates are provided above the line and heterosexual youth estimates are provided below the line.

Table 1

Latent Correlations, Means, and Standard Deviations by Sexual Orientation

Variable	1	2	3	4	5	6	7	Mean (SD)
1. W1 Extracurricular Activity Involvement	---	.21	-.15	.14	.13	-.08	.12	2.24 (1.00)
2. W1 School Connectedness	.19	---	-.60	.63	.57	-.45	.48	2.71 (1.00)
3. W1 Depression	-.08	-.41	---	-.67	-.42	.65	-.49	0.67 (1.10)
4.W1 Self-esteem	.12	.48	-.60	---	.38	-.47	.67	3.02 (1.00)
5. W2 School Connectedness	.18	.64	-.36	.39	---	-.51	-.47	2.60 (0.94)
6. W2 Depression	-.08	-.31	.67	-.42	-.45	---	-.57	0.70 (1.00)
7.W2 Self-esteem	.08	.33	-.40	.59	.43	-.53	---	3.20 (1.11)
<i>Mean (SD)</i>	2.33 (1.00)	2.98 (1.00)	0.36 (1.00)	3.25 (1.00)	2.90 (1.04)	0.38 (0.97)	3.39 (1.02)	

Note. Correlations for sexual minorities are presented above the diagonal and correlations for heterosexuals are presented below the diagonal. Means and standard deviations for sexual minorities are presented on the right side of the table, where means and standard deviations for heterosexuals are presented on the bottom of the table. SD = standard deviation.

Table 2

Multi-Group Comparisons to Establish Measurement Invariance

Model	χ^2	<i>df</i>	<i>p</i>	RMSEA	TLI	CFI	Constraint Tenable
Configural Invariance	1647.449	318	< .001	.035	.945	.958	---
Weak Invariance	1643.813	343	< .001	.033	.950	.959	Yes
Strong Invariance	1712.636	364	< .001	.033	.951	.958	Yes

Table 3

Tests of Equivalence of Latent Covariances, Variances, Correlations, and Means

Model	χ^2	<i>df</i>	<i>p</i>	$\Delta \chi^2$	Δdf	<i>p</i>	Constraint Tenable
Homogeneity of Variances / Covariances	1873.436	397	< .001	160.8	33	< .001	No
Time	1922.204	375	< .001	209.568	11	< .001	No
Group	1826.519	391	< .001	113.883	27	< .001	No
Equality of Variances	1802.60	373	< .001	89.964	9	< .001	No
Time	1873.315	369	< .001	160.679	5	< .001	No
Group	1802.621	370	< .001	89.985	6	< .001	No
Equality of Correlations	1933.791	390	< .001	221.155	26	< .001	No
Time	2286.199	378	< .001	573.563	14	< .001	No
Group	1909.312	387	< .001	196.676	23	< .001	No
Equality of Means	1935.147	388	< .001	222.511	24	< .001	No
Time	1908.754	384	< .001	196.118	20	< .001	No
Group	1823.139	381	< .001	110.503	17	< .001	No

CHAPTER III. MANUSCRIPT II.

GAY-STRAIGHT ALLIANCES, SOCIAL JUSTICE INVOLVEMENT, AND SCHOOL
VICTIMIZATION OF LESBIAN, GAY, BISEXUAL, AND QUEER YOUTH:
IMPLICATIONS FOR SCHOOL WELL-BEING AND FUTURE CIVIC ENGAGEMENT

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Introduction

Lesbian, gay, bisexual, queer (LGBQ) and sexual minority (e.g., individuals who report same-sex attractions) youth are known to be a population that is disproportionately at risk for a myriad of poor health (e.g., Haas et al., 2011; Remafedi, 2008) and academic outcomes (e.g., Pearson, Muller, & Wilkinson, 2007; Russell, Seif, & Truong, 2001). In the past two decades, researchers have theorized and empirically documented that this heightened risk is partially due to experiences of stigma and discrimination (e.g., Herek & Garnets, 2007; Meyer, 1995, 2003). Stigma and discrimination towards LGBQ individuals can be experienced at all levels of an individual's ecological system, spanning from the microsystem (e.g., families or schools; e.g., Kosciw, Greytak, Diaz, & Bartkiewicz, 2010; Ryan, Huebner, Diaz, & Sanchez, 2009) to the macrosystem (e.g., political systems or cultural values and beliefs; e.g., Russell, Bohan, McCarroll, & Smith, 2010). Research has documented that schools are a primary setting where LGBQ youth experience homophobia and bias-motivated violence (e.g., Kosciw et al., 2010). Nonetheless, research on school experiences of LGBQ youth has largely focused on experiences of victimization, while only a few studies have explored the positive developmental experiences of LGBQ youth in this context.

One major exception to the sole focus on negative school experiences of LGBTQ youth is the research on Gay-Straight Alliances (GSAs). GSAs are school-based, student-led clubs that provide safe spaces for LGBTQ youth and their straight allies (e.g., Goodenow, Szalacha, & Westheimer, 2006; Human Rights Watch, 2001; O'Shaughnessy, Russell, Heck, Calhoun, & Laub, 2004). Research has documented several protective benefits of the presence of GSAs for LGBTQ youth. For example, the presence of a GSA was associated with less victimization based on sexual orientation (Kosciw, Greytak, Diaz, & Bartkiewicz, 2010), less suicidality (Goodenow et al., 2006; Walls, Freedenthal, & Wisneski, 2008), and higher levels of self-reported safety at school (e.g., O'Shaughnessy et al., 2004; Szalacha, 2003; Walls, Kane, & Wisneski, 2010).

Beyond the presence of a GSA, research has also documented that youth participation in GSAs is associated with a myriad of positive developmental outcomes, such as higher academic achievement and greater personal comfort with one's sexual orientation (Lee, 2002). GSAs also offer the potential for student participants to feel empowered and to enact personal agency (Russell, Muraco, Subramaniam, & Laub, 2009). This finding is parallel to research from the general adolescent literature that suggests that adolescents who are engaged in student-directed advocacy organizations and activities at school report greater levels of self-efficacy and are more involved in their greater community (e.g., Flanagan, 2004). The research findings on associations among GSA participation and positive outcomes, however, have not been consistent. For example, Walls and colleagues (2010) found a significant positive association between GSA membership and grade-point average, but did not find significant associations between GSA membership and school safety, school absence, weapon carrying, or school victimization.

While research has documented the associations among GSA presence and participation with mental health and academic outcomes, the associations between involvement in specific

activities related to GSA membership and mental health and academic outcomes have not yet been explored. For instance, the links among engagement in GSA-related social justice activities (e.g., attending a political rally related to LGBTQ issues) and health and academic outcomes have not yet been examined. Yet, previous research has documented that GSA members frequently engage in these types of activities with their GSAs (e.g., Russell, Toomey, Crockett, & Laub, 2010).

In this study, we explored the associations between involvement in GSA-related social justice activities and academic and civic outcomes for LGBTQ youth. We also examined whether or not GSA presence, membership, or social justice engagement had the power to buffer the associations between school victimization based on sexual orientation and academic and civic outcomes for LGBTQ youth. This research is critical for documenting the importance of the availability of GSAs and social justice activities for LGBTQ youth, as well as for understanding potential pathways to positive youth development for this vulnerable population. In the following sections, we first briefly review the literature on LGBTQ youth experiences in schools. We then review the literature on GSAs and the available literature on youth involvement in social justice activities. We end with analyses from the *Preventing School Harassment Study* that explore the associations among GSA presence, GSA membership, involvement in GSA-related social justice activities, victimization based on sexual orientation, and academic and civic outcomes for LGBTQ youth.

The School Environment for LGBTQ Youth

There is little disagreement that LGBTQ youth experience alarmingly high rates of school victimization. A national study of LGBTQ youth found that nearly 85% of these students experience verbal harassment, 53% experience cyber harassment, 40% experience physical

harassment, and nearly 20% experience physical assault (Kosciw et al., 2010). Several studies of LGBQ youth have found similarly high levels of school victimization (e.g., Bontempo & D'Augelli, 2002; Human Rights Watch, 2001; Poteat, Aragon, Espelage, & Koenig, 2009; Williams, Connolly, Pepler, & Craig, 2003). This research is further validated by other findings that homophobic attitudes and values are prevalent in adolescent peer groups (Horn & Nucci, 2006; Poteat, Espelage, & Green, 2007).

In the context of these high reports of victimization based on sexual orientation and homophobic school climates, one may question whether or not LGBQ students also experience negative school-based outcomes, such as school safety, academic achievement, or school belongingness. In fact, findings suggest that LGBQ students experience lower levels of school safety than their heterosexual peers (e.g., O'Shaughnessy et al., 2004). In studies of LGBQ youth, researchers have found that nearly 60% of students report feeling unsafe in their schools because of their sexual orientation and 40% because of their gender expression (e.g., Kosciw et al., 2010).

In addition to perceptions of school safety, research has also documented that LGBQ youth who experience high amounts of victimization based on sexual orientation also report lower grade-point averages and fewer feelings of school belongingness (e.g., Kosciw et al., 2010). Additionally, using the National Longitudinal Study of Adolescent Health, researchers documented that same-sex attracted youth that experienced school harassment reported lower grade-point averages (Russell et al., 2001). LGBQ students also tend to report lower levels of school belonging than heterosexual students (e.g., Murdock & Bolch, 2005; Poteat & Espelage, 2007). Further, harassment based on sexual orientation is directly related to lower levels of school belongingness for LGB students (e.g., Diaz, Kosciw, & Greytak, 2010). The published

research to date, however, has only utilized cross-sectional designs and therefore longitudinal research is needed to explicate conclusions about directionality. However, this research creates a starting point to address possible mechanisms to reduce these academic disparities by documenting that LGBQ youth are at risk for these negative outcomes because of their experiences of school harassment based on sexual orientation.

To date, little empirical information is available that documents potential pathways for LGBQ youth to overcome negative school experiences, such as victimization based on sexual orientation. Research that does examine positive development for LGBQ youth is largely based on five school-level policies and safe school strategies: sexual orientation and gender expression inclusive anti-harassment policies, teacher intervention in bias-motivated harassment, student access to LGBQ inclusive information and support, LGBQ-inclusive curriculum, and GSAs in schools (e.g., O'Shaughnessy et al., 2004). These policies and safe school strategies are positively associated with school safety and less bias-motivated harassment for LGBQ youth (e.g., O'Shaughnessy et al., 2004; Russell & McGuire, 2008). Yet, with the exception of GSAs, these strategies are all implemented and enforced at the school- or district- level. GSAs, on the other hand, are usually created by students (Griffin & Ouellett, 2003). Student engagement to help create safer school climates, whether that includes lobbying for these safe school policies and strategies or creating a GSA, is likely to also have positive influences on individual student school-based outcomes. Further, literature on general adolescent peer relationships suggests that positive interpersonal relationships, such as reciprocated best friendships, can buffer the negative effects of victimization (e.g., Hodges, Bovin, Vitaro, & Bukowski, 1999). Given that GSAs are a school-based context where these types of interpersonal relationships are formed and solidified, GSAs might also be capable of buffering the negative link between victimization and well-being.

The presence of a GSA is associated with a myriad of positive student outcomes (e.g., Goodenow et al., 2006; Kosciw et al., 2010; O'Shaughnessy et al., 2004; Szalacha, 2003; Walls et al., 2010). Further, membership and involvement in GSAs is associated with several positive outcomes, as well. For example, GSA membership is associated with greater self-efficacy and more openness about one's sexual orientation to others (e.g., Kosciw et al., 2010; Russell et al., 2009). In fact, it may be the case the associations between school victimization based on sexual orientation and school-based outcomes differ for students based on whether their school has a GSA or student membership in that GSA. To date, we are not aware of any study that has explored the potential for GSA presence or membership to moderate the associations among victimization based on sexual orientation and school-based outcomes.

Social Justice Participation by LGBTQ Youth

Social justice activities are pathways for youth to become involved in the civic and educational institutions that affect their lives. Conceptually, adolescent engagement in social justice activities should be linked with positive youth development and future civic participation because this type of engagement should build adolescent capacity to develop pride in one's identity, develop authenticity and empowerment, and create change in adult-dominated power structures (e.g., Ginwright & Cammarota, 2002; Ginwright & James, 2002; Zeldin, Camino, & Calvert, 2007). However, there is limited empirical information available about the associations among involvement in social justice activities and developmental outcomes and future civic engagement (e.g., voting).

In a conceptual model of youth engagement, Flanagan (2004) suggests that youth participation in structured activities allows for the development of a collective identity. Similarly, Meyer (2003) suggests that collective identities are one way that LGBTQ individuals

cope with social stigma and homophobic experiences. Thus, it is plausible that LGBQ youth involvement in GSA-related social justice activities will help LGBQ students to build a sense of collective identity, which should in turn help them cope with stigma and discrimination, such as school victimization based on sexual orientation. Further, participation in these types of activities may be related to future civic engagement, such as voting or future participation in LGBQ-related social justice activities. For instance, researchers have found significant associations between adolescent activity involvement (e.g., school-based extracurricular activities) and young adult civic engagement (e.g., voting) (e.g., McFarland & Thomas, 2006; Youniss & Yates, 1997; Zaff, Malanchuck, & Eccles, 2008). In one study of LGBQ youth, Russell and colleagues (2010) documented that youth who were involved in social justice activities through their GSAs also reported plans for future social justice and civic engagement (e.g., 62% planned to vote, 48% planned to contact their legislator). Nonetheless, this study only included students who were involved in their GSAs and who were active participants in GSA-related social justice activities; there was no comparison group available to examine the unique associations between GSA presence, GSA membership, and social justice involvement.

Current Study

The goal of this study is to examine the associations among GSA presence, LGBQ youth involvement in GSAs, LGBQ youth involvement in GSA-related social justice activities, their experiences of school victimization based on sexual orientation, and a myriad school and civic outcomes. This study will test two main research questions:

(1) What are the direct associations among GSA presence, GSA membership, and participation in GSA-related social justice activities and school safety, school belongingness, grade-point average, and future civic engagement for LGBQ youth?

(2) Does the presence of a GSA, membership in a GSA, or participation in GSA-related social justice activities moderate the associations among school victimization based on sexual orientation and school-based outcomes and future civic engagement for LGBQ youth?

Methods

Sample and Procedures

We used data from the *Preventing School Harassment (PSH) Study*, a survey designed to explore student experiences with bias-motivated school harassment, school climate, school policies and practices, and academic outcomes (O'Shaughnessy et al., 2004). The target population for the study included lesbian, gay, bisexual, queer (LGBQ), and transgender youth and their straight allies. Participants were recruited through high school Gay-Straight Alliances (GSAs), LGBQ community-based youth groups, and LGBQ community centers in California. The PSH survey was administered in the Fall of 2008 and included over 1,500 California-based LGBQ and straight middle and high school students. The survey was administered in both paper and online formats.

The analytic sample for this study was limited to the 230 LGBQ-identified youth who resided in California and who were enrolled in middle or high school. Students included in this subsample were located in 83 different California-based middle and high schools, with a range of 1 to 28 students per school. Of the 230 youth, 58.70% identified as female, 35.65% as male, and 5.65% as transgender/genderqueer. The sample was ethnically diverse: 47.39% were White, non-Latino/a, 21.74% were Latino/a, 19.13% were multi-ethnic/racial, 6.09% were Black, non-Latino/a, and 5.65% were Asian, non-Latino/a. Students were in grades 7 through 12 ($M = 10.51$, $SD = 1.19$) and were ages 12 to 19 years ($M = 15.69$, $SD = 1.39$).

Measures

GSA presence, GSA membership, and social justice involvement. Participants responded to four items about their involvement in school-based, LGBTQ student-led clubs and social justice activities. First, participants reported whether or not their school had a Gay-Straight Alliance, Project 10, or similar club (0 = no, 1 = yes). As a follow-up to that question, participants were asked if they were or have been a member of that club (0 = no, 1 = yes). All participants were then asked three questions about involvement in GSA-related social justice activities. The three items included: “Wrote an email or letter to your legislator about LGBTQ [lesbian, gay, bisexual, transgender, and queer] issues,” “Attended LGBTQ political rallies or marches,” and “Visited or called your legislative representatives to discuss LGBTQ issues” (0 = no, 1 = yes). A sum score was created to examine overall involvement in GSA-related social justice activities ($M = 0.60$, $SD = 0.89$).

Experience of school victimization based on sexual orientation. The California Healthy Kids Survey measure of “harassment causes: hate-related behavior” which includes reports of harassment based on race/ethnicity, gender, religion, sexual orientation, and disability (California Healthy Kids Survey, 2010) was utilized in the PSH survey. One item measured student experiences of school victimization based on sexual orientation: “During the past 12 months, how many times on school property were you harassed or bullied because you are gay, lesbian, or bisexual or someone thought you were?” (0 = 0 times to 3 = 4 or more times; $M = 1.40$, $SD = 1.18$).

School-based well-being. Three school-related outcomes were assessed: personal safety at school, school belongingness, and self-reported grade-point average. Participants responded to one item that assessed personal safety at school: “I feel safe at my school” (1 = strongly disagree

to 4 = strongly agree; $M = 2.64$, $SD = 0.87$). Participants responded to four items that measured feelings of school belongingness: “I feel like I am part of my school”, “I do things at my school that make a difference”, “I do interesting activities at school”, and “At school, I help decide things like class activities or rules” (1 = strongly disagree to 4 = strongly agree). These four items were averaged to create a scale, which demonstrated acceptable reliability ($\alpha = .81$; $M = 2.68$, $SD = 0.63$). Finally, self-reported grade-point average was assessed by one item: “During the past 12 months, how would you describe the grades you received in school?” (0 = mostly F’s to 4 = mostly A’s; $M = 2.83$, $SD = 1.10$).

Plans to vote in the future. In addition to school-related outcomes, students were asked one question that assessed plans to vote in the future: “I plan to vote in the next election, as soon as I turn 18” (1 = strongly disagree to 4 = strongly agree; $M = 3.64$, $SD = 0.67$).

Plan of Analysis

Prior to analyses, we used PROC MI in SAS to impute all missing data (Graham, Cumsille, & Elek-Fisk, 2003). This method was chosen in order to maximize statistical power and to minimize exclusion of participants due to missing data (Graham et al., 2003). We begin with descriptive analyses that document students’ access to and involvement in their school’s GSA. We then use multilevel modeling techniques to analyze our hypotheses about the association among GSA predictors and school-based outcomes because students were nested within schools. Multilevel modeling techniques are necessary because traditional regression techniques assume independence of data points, an assumption which is not met because several participants are enrolled in the same schools (Singer, 1998).

For each outcome, we examine six regression models. The first model examines the direct association of GSA presence, over and above school victimization based on sexual

orientation, with each respective outcome. The second model examines the interaction between GSA presence and victimization based on sexual orientation on the outcomes to examine whether or not GSA presence can buffer the negative associations among victimization and our outcomes. The third model examines the associations among GSA membership, over and above school victimization based on sexual orientation, and each respective outcome. The fourth model then examines the interaction between GSA membership and school victimization on the outcomes of interest to examine whether GSA membership can buffer the negative associations among victimization and our outcomes. The fifth model examines the unique association between GSA-related social justice activity participation and each respective outcome, over and above school victimization based on sexual orientation. Finally, the sixth model explores the interaction between GSA-related social justice activity participation and school victimization on each outcome to examine whether or not participation can buffer the negative associations between victimization and our outcomes. We controlled for the following four sociodemographic and methodological characteristics in each model: grade in school, paper versus online format (1=online format), gender (females as reference group), and ethnicity (White as reference group).

Results

First we present descriptive information (e.g., frequencies) about and tests of demographic differences (i.e., gender, age, ethnicity, and school grade) on GSA presence, GSA membership, and GSA-related social justice activity involvement. The majority (74.35%) of participants reported that their school had a GSA or similar club. Male and female participants were more likely than transgender participants to report that their school had a GSA ($\chi^2(df=2) = 11.20, p < .01$). There were no other significant findings that suggested demographic

characteristic (i.e., ethnicity, age, school grade) differences on whether a school had a GSA or not. The majority of survey participants (67.83%) reported current or past membership in their school's GSA. In this sample, there were no significant demographic differences associated with GSA membership.

Finally, we examined the three GSA-related social justice activity involvement items and report the nuanced findings here because of the novelty of this piece of the study. Of the 230 LGBQ youth, 32 (13.91%) reported that they wrote an email or letter to their legislator about LGBTQ issues; 33 (14.35%) reported that they visited or called their legislative representative to discuss LGBTQ issues, and; 74 (32.17%) reported that they attended a political rally or march that was related to LGBTQ issues. The majority of participants did not participate in any of the three activities ($n=140$, 60.87%), whereas 55 (23.91%) participated in one activity, 21 (9.13%) participated in two activities, and 14 (6.09%) participated in three activities. Thus, the mean level of GSA-related social justice activity participation was relatively minimal ($M = 0.60$, $SD = 0.89$). The only demographic difference that emerged for social justice activity involvement was age ($r = .14$, $p < .05$), suggesting that older participants were more involved in GSA-related social justice activities than younger participants. Next, we present findings from multiple regression models that examine the associations among GSA presence, GSA membership, GSA-related social justice activity involvement and school safety, school belongingness, grade-point average, and future plans for civic engagement.

Research Question 1: What are the direct associations among GSA presence, GSA membership, and participation in GSA-related social justice activities with school safety, school belongingness, grade-point averages, and future civic engagement for LGBQ youth?

The presence of a GSA at school was positively associated with school belongingness and grade-point average (see Table 1). Awareness of a GSA, however, was not associated with personal school safety or plans to vote in the future. GSA membership was only associated with school belongingness (Table 1). Finally, involvement in GSA-related social justice activities was positively associated with school belongingness and grade-point average (see Table 1), but was not significantly associated with personal school safety or plans to vote in the future.

Research Question 2: Does the presence of a GSA, membership in a GSA, or participation in GSA-related social justice activities moderate the associations among school victimization based on sexual orientation and school-based outcomes and future civic engagement for LGBTQ youth?

The presence of a GSA significantly moderated the associations between school victimization based on sexual orientation and three out of the four outcomes: personal school safety, grade-point average, and future plans to vote. As shown in Figure 1a, at low levels of school victimization, students who were aware that their school had a GSA also reported higher levels of personal safety at school. However, the positive influence of GSA presence dissipated at high levels of school victimization. A similar interaction effect is present between GSA presence and school victimization on grade-point average (see Figure 1b). That is, at low levels of school victimization, students that reported the presence of a GSA also reported higher GPAs than students whose schools did not have GSAs; however, this effect also dissipated at high levels of school victimization.

A different pattern was found for the interaction predicting future plans to vote (see Figure 1c): at low levels of school victimization, there was not a difference between students whose schools had a GSA compared to those who did not report a GSA. However, for students

in schools with GSAs, as levels of school victimization increased so did their plans to vote in the future. Conversely, for students in schools without GSAs, as levels of school victimization increased, plans to vote in the future decreased. Thus, it appears that the presence of a GSA buffers the negative association between school victimization on plans for future civic engagement.

GSA membership did not significantly moderate the negative association between school victimization and personal safety at school, grade-point average, school belongingness, or future plans to vote. There was a significant interaction found between participation in GSA-related social justice activities and school victimization on school belongingness. Similar to the interaction found with GSA presence, at low levels of school victimization, students who participated in GSA-related social justice activities reported higher levels of school belongingness than students not involved in social justice activities (see Figure 2); however, at high levels of school victimization, the benefits of social justice involvement dissipated.

Discussion and Conclusions

This study investigated the potential for three different facets of GSAs to reduce the negative associations among school victimization based on sexual orientation and school and civic-based outcomes. Importantly, this study adds new knowledge about the potential for positive youth development for a population that is known to be disproportionately at risk for negative health and behavioral risk outcomes. We found that above and beyond the negative impact of school victimization based on sexual orientation, the presence of a GSA and involvement in GSA-related social justice activities are positively associated with higher grade-point averages and greater school belongingness. Similar to previous research on GSA membership (e.g., Walls et al., 2010), we did not find consistent associations among GSA

membership and our school-based and civic outcomes; however, we did find a significant association between GSA membership and school belongingness. This finding is not surprising given that engagement in extra-curricular activities is known to be associated with greater connectedness to school (e.g., Feldman & Matjasko, 2005).

Further, we found significant interactions between GSA presence and school victimization and, separately, involvement in social justice activities and school victimization; however, only one of these interactions can be characterized as a buffering effect. That is, the presence of a GSA seems to buffer the negative association between school victimization and future plans to vote, but this buffering effect is not present for school safety or grade-point average for GSA presence. These findings suggest that school administrators cannot accept the creation of GSAs as the final solution for creating safer school environments for LGBQ students; in fact, these findings suggest that even in the context of GSAs, students who experience high amounts of victimization still report lower GPAs and less school safety. This information, albeit limited, is critical as researchers, school personnel, practitioners, and policymakers continue to identify positive school-based influences in the lives of LGBQ youth. Further, these findings point to the critical need to reduce (or even eliminate) school victimization based on sexual orientation.

Notably, this is one of the first studies to explore the importance of GSA-related social justice involvement for LGBQ student safety, academic well-being, and plans for future civic engagement. To date, only one study has readily explored LGBQ youth involvement in social justice activities: in that study, Russell and colleagues (2010) documented that the majority of LGBQ youth who were involved in queer related social justice activities were likely to report plans for future LGBQ-related civic engagement. The current study extends beyond this initial

investigation by documenting that involvement in social justice activities is associated with positive school-based outcomes, specifically school belongingness and grade-point average. Although engagement in social justice activities in this study was not associated with plans for future civic engagement (i.e., plans to vote), future research should continue to investigate this link for LGBQ youth, as several studies document the link between activity involvement and future civic engagement for the general population (McFarland & Thomas, 2006; Youniss & Yates, 1997; Zaff, Malanchuck, & Eccles, 2008).

A consistent finding in this study involved the interactions between our GSA constructs and school victimization based on sexual orientation. We found that GSA presence and involvement in GSA-related social justice activities were particularly beneficial for school-based outcomes at low levels school victimization. However, neither the presence of a GSA or involvement in GSA-related social justice activities were able to successfully buffer the negative impacts of high levels of school victimization based on sexual orientation for LGBQ youth. Importantly, this suggests that research must continue to investigate the processes that place LGBQ youth at heightened risk for school victimization and the policies and programs that significantly reduce this type of victimization.

Limitations and Future Directions

One limitation of this research is that the data are cross-sectional; thus, we cannot draw any conclusions about the directionality of the associations between the facets of GSAs and school-based and civic outcomes. Further, the cross-sectional nature of this study design limits our ability to understand the moderating influence of GSAs and social justice involvement on victimization in predicting our outcomes. Longitudinal studies are warranted that examine the

associations among GSA presence, membership, social justice involvement, school victimization, and academic and civic outcomes.

A second limitation of this study is the small sample of LGBTQ youth available for analyses. Our small sample size limits the generalizability of our findings and potentially limited the ability to find significant effects. Potentially, given a larger sample with greater variability on study constructs, we would have found significant associations between participation in GSAs and academic outcomes, as others have found (e.g., Kosciw et al., 2010; Walls et al., 2010). Further, we did not find a significant association between the presence of a GSA and student reports of safety at school. Other studies have identified this link (e.g., O'Shaughnessey et al., 2004), and one potential reason why this finding was not replicated is because of our limited statistical power.

A third limitation of this study was the measurement used to examine school victimization based on sexual orientation, school-based outcomes, and future civic engagement. Many of these constructs were measured with a single item; multi-item measurements are preferable and future research needs to address this limitation. For instance, future plans for civic engagement only captured the participant's plans for voting; however, for LGBTQ youth, future civic engagement could entail plans for attending rallies about LGBTQ legislation, lobbying representatives about LGBTQ rights, or volunteering at an LGBTQ community center. In fact, one might expect that if the current measure of plans for future civic engagement included these items, we might have found a significant relationship between current social justice engagement and future plans for engagement (e.g., Russell et al., 2010). Additionally, school victimization based on sexual orientation was only measured using one item. This is especially limiting given

the large body of literature that documents various forms of aggression that LGBQ youth may experience (e.g., physical, relational, cyber; e.g., Kosciw et al., 2010).

Future research on GSA-related social justice by LGBQ would benefit from examining how multiple forms of diversity (e.g., ethnicity, gender, age) interact to affect involvement and developmental outcomes. Similarly, investigations on GSA-related social justice activity involvement need to examine the process by which LGBQ become involved in these activities in order to understand how to promote and sustain involvement. For instance, does LGBQ youth participation in GSAs and related social justice activities follow the same pattern for achieving civic engagement that has been identified in the general adolescent literature (e.g., participation → connection → expansion to community; e.g., Borden & Serido, 2009)? Or are there important, nuanced differences for this population that need to be identified in order to facilitate appropriate program development and school policy?

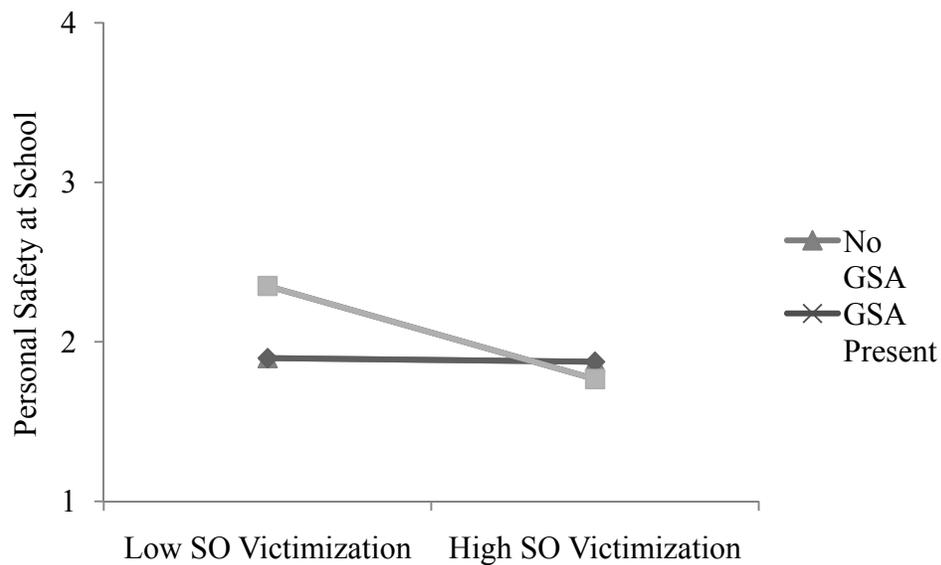
Conclusions

While research on LGBQ youth has increased over the past 30 years, the focus has largely continued to be on risk for this population. This study attempted to provide information about positive structures and activities for LGBQ youth that are situated within the school context. The positive associations between GSA presence and school belongingness and grade-point average, while less novel, are still beneficial in adding to the literature that documents the protective nature of these organizations. Similarly, the findings that involvement in GSA-related social justice activities is positively associated with school belongingness and grade-point average are important for our continued understanding of positive contexts for LGBQ youth. Future studies are needed to provide in-depth understandings of the processes that underlie involvement in these activities and positive development for LGBQ youth.

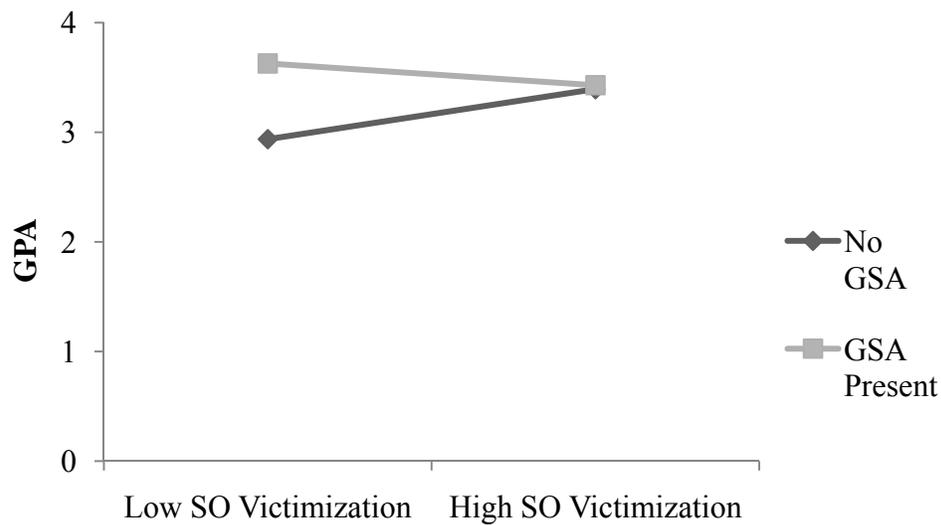
Figure 1.

Interactions Between School Victimization Based on Sexual Orientation and GSA Presence

(a) Outcome: School Safety



(b) Outcome: Grade-Point Average



(c) Outcome: Future Plans to Vote

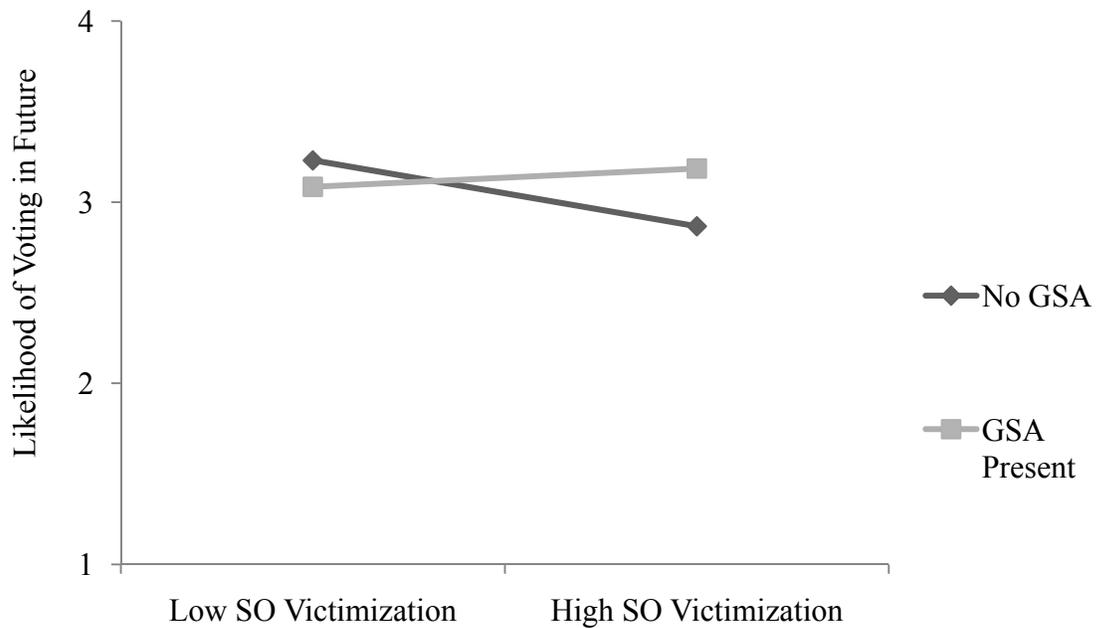


Figure 2.

Interaction Between School Victimization Based on Sexual Orientation and GSA-Related Social Justice Participation

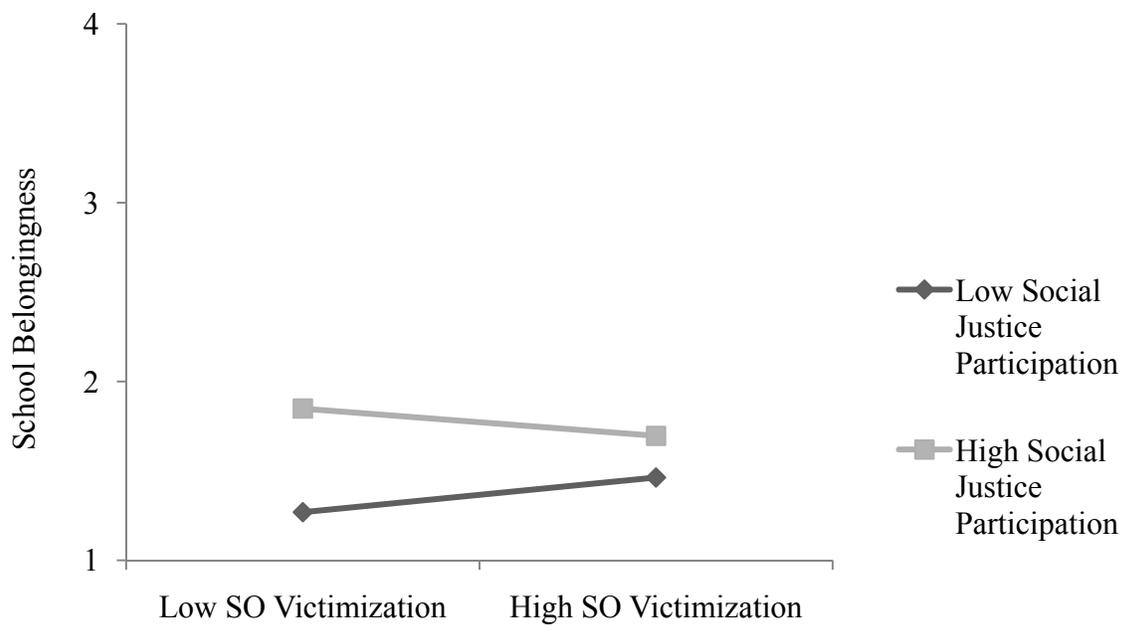


Table 1

Results from the Multilevel Regression of GSA Predictors and School Victimization on School-based and Civic Outcomes

Predictor	b (se)
Outcome: Safety at School	
Model 1:	
GSA presence	.17 (.13)
School victimization	-.18 (.05)***
Model 2: GSA presence x School victimization	
	-.24 (.10)*
Model 3:	
GSA membership	.03 (.12)
School victimization	-.19 (.05)***
Model 4: GSA membership x School victimization	
	-.09 (.10)
Model 5:	
GSA related social justice activities	.01 (.06)
School victimization	-.18 (.05)***
Model 6: GSA related social justice activities x School victimization	
	-.02 (.05)
Outcome: School Belongingness	
Model 1:	
GSA presence	.35 (.09)***
School victimization	.03 (.04)
Model 2: GSA presence x School victimization	
	-.10 (.08)
Model 3:	
GSA membership	.27 (.09)**
School victimization	.01 (.04)
Model 4: GSA membership x School victimization	
	-.11 (.08)
Model 5:	
GSA related social justice activities	.20 (.05)***
School victimization	.01 (.04)
Model 6: GSA related social justice activities x School victimization	
	-.08 (.04)*
Outcome: Grade Point Average	
Model 1:	
GSA presence	.37 (.06)*
School victimization	-.01 (.06)
Model 2: GSA presence x School victimization	
	-.28 (.14)*
Model 3:	
GSA membership	.28 (.16)
School victimization	-.03 (.06)
Model 4: GSA membership x School victimization	
	-.02 (.14)
Model 5:	
GSA related social justice activities	.20 (.08)*
School victimization	-.02 (.06)
Model 6: GSA related social justice activities x School victimization	
	-.06 (.07)

Table 1 (continued)

Outcome: Plans to Vote in Future	
Model 1:	
GSA presence	.08 (.11)
School victimization	-.01 (.04)
Model 2: GSA presence x School victimization	.20 (.09)*
Model 3:	
GSA membership	.07 (.10)
School victimization	-.01 (.04)
Model 4: GSA membership x School victimization	.08 (.09)
Model 5:	
GSA related social justice activities	-.01 (.05)
School victimization	-.01 (.04)
Model 6: GSA related social justice activities x School victimization	-.01 (.04)

Note. *** $p < .001$. ** $p < .01$. * $p < .05$.

CHAPTER IV. MANUSCRIPT III.
HIGH SCHOOL GAY-STRAIGHT ALLIANCES (GSAS) AND YOUNG ADULT
WELL-BEING: AN EXAMINATION OF GSA PRESENCE, PARTICIPATION,
AND EFFECTIVENESS

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Rafael M. Diaz

Introduction

Contemporary lesbian, gay, and bisexual adolescents are known to be disproportionately at risk for experiencing negative psychosocial well-being and health problems. Evidence has been increasing to show disproportionate risk among transgender youth. Specifically, previous research documents that sexual minority (e.g., those who report same-sex attractions or relationships) young people are at greater risk than heterosexuals for suicide ideation and attempts (for review, see Russell, 2003), depression (Russell, 2006), substance use (see Marshal et al., 2008), and lower self-esteem (Russell, 2006). Recent studies using the National Longitudinal Study of Adolescent Health document that the disparate risks reported by this population for suicidality and depression are particularly heightened in the developmental period of adolescence and dissipate in young adulthood for same-sex attracted males (Russell & Toomey, 2010; Ueno, 2010). These findings are of particular importance because they clarify for researchers, policymakers, and individuals working with young people that a

prime opportunity to potentially reduce risk for lesbian, gay, bisexual, and transgender (LGBT) individuals is during adolescence.

Adolescents spend a large portion of their time in the school context. Thus, schools are a potential setting for positive youth development and resiliency. Nonetheless, LGBT adolescents report high rates of verbal and physical school-based victimization (e.g., Human Rights Watch, 2001; Kosciw, Greytak, Diaz, & Bartkiewicz, 2010) and report that their school environments are unsafe (Kosciw et al., 2010; O'Shaughnessy, Russell, Heck, Calhoun, & Laub, 2004; Russell & McGuire, 2008). These negative school experiences have been linked to long-term negative mental health (e.g., Rivers, 2001a) and health outcomes (e.g., Russell, Ryan, Toomey, Diaz, & Sanchez, in press; Toomey, Ryan, Diaz, Card, & Russell, 2010), as well as concurrent academic outcomes (e.g., Kosciw et al., 2010). The disparity in positive school experiences for LGBT young people and the lack of information about positive development for LGBT adolescents necessitates the need for research on specific experiences of LGBT adolescents in positive school-based contexts, such as extracurricular activities. In fact, much like their heterosexual peers, these school-based activities may be a primary setting that fosters positive youth development (e.g., Eccles & Barber, 1999; Eccles, Barber, Stone, & Hunt, 2003; Fredricks & Eccles, 2006; Zaff, Moore, Papillo, & Williams, 2003).

The goal of this paper is to examine LGBT young adult's retrospective reports of various facets of their high school's Gay-Straight Alliances (GSAs), a specific school-based extracurricular activity / club that focuses on LGBT students and their heterosexual

allies. In this paper we examine associations of GSA presence, participation, and effectiveness in promoting school safety in adolescence with psychosocial well-being and educational attainment for LGBT young adults. In the next section, we review the literature on GSAs in schools. We then provide our results from an empirical investigation of 245 young adults retrospectively reporting on GSA information during their high school years.

Gay-Straight Alliances: Presence and Membership

Despite the dearth of literature on positive development for LGBT young people, a growing body of research examines the experiences of LGBT adolescents and their straight allies in one specific school-based extracurricular activity: Gay-Straight Alliances (GSAs). GSAs are student-led, school-based clubs that aim to provide a safe place for LGBT students (Goodenow, Szalacha, & Westheimer, 2006; Human Rights Watch, 2001; O'Shaughnessy et al., 2004). In recent decades the number of GSAs in schools has risen dramatically: according to the Gay, Lesbian, and Straight Education Network (GLSEN, 2010), there are over 4,000 GSAs registered in the United States. Previous research has examined the role of GSAs in predicting student outcomes in two ways: the presence of a GSA in a student's school and membership of a student in the school's GSA.

Research suggests that the presence of a GSA can serve as a protective factor for LGBT adolescents, such that LGBT adolescents who report that their school has a GSA tend to report more school safety and greater well-being (Goodenow et al., 2006; Lee, 2002; Kosciw et al., 2010; O'Shaughnessy et al., 2004; Walls, Freedenthal, & Wisneski,

2008; Walls, Kane, & Wisneski, 2010). In a study of over 7,000 LGBT students, Kosciw and colleagues (2010) found that the presence of a GSA was associated with fewer homophobic comments from peers, less victimization related to sexual orientation and gender expression, greater school safety and school connectedness, and more instances of teacher intervention in homophobic harassment. Further, Walls and colleagues (2010) found that the presence of a GSA was associated with greater levels of school safety, fewer reports of missing school due to fear, and greater awareness of a safe adult in the school context. Finally, a few studies have documented that the presence of a GSA is associated with reduced suicide risk for sexual minority youths (Goodenow et al., 2006; Walls et al., 2008).

Beyond whether a school has a GSA or not, research finds that being a member of a GSA is associated with better academic achievement and interpersonal relationships (Lee, 2002; Mayberry, 2006), and more comfort with one's own sexual orientation (Lee, 2002) and personal empowerment (Russell, Muraco, Subramaniam, & Laub, 2009). Walls and colleagues (2010) found that GSA members reported higher grade point averages than nonmembers; however, they found no differences between members and nonmembers on several key outcomes (i.e., school safety, absenteeism, weapon carrying, school harassment). Thus, the presence of a GSA seems to have more of an impact on school climate issues, such as safety at school or victimization levels, whereas membership in a GSA seems to have more impact on person-specific outcomes, such as personal empowerment or academic achievement.

A primary limitation of these studies is that they all examine GSA presence or membership with concurrent adolescent outcomes and thereby do not examine whether the positive influence of GSAs continues into young adulthood. That is, what remains unknown are the associations of high school GSA presence and membership with psychosocial adjustment and educational attainment in young adulthood. In this study, we seek to extend current adolescent-limited findings about the associations among GSA presence and participation and well-being by examining psychosocial and educational outcomes in young adulthood. Our measures of GSA presence and member participation are retrospective which is also a limitation; however, this examination is the first to explore the associations of GSA presence and participation with well-being in young adulthood.

Further, we add to the literature a new construct that explores whether students' perceptions of their GSA's effectiveness in creating safe schools are associated with young adult psychosocial adjustment and educational attainment. Arguably, students' perceptions of the effectiveness of a GSA in creating safer school environments may be more strongly associated with psychosocial and academic outcomes beyond whether a school has a GSA or a student is a member of that GSA. This may be the case because students whose GSAs were effective in creating safer school environments may have experienced more supportive environments and less school victimization and harassment because of their LGBT status.

Current Study: Research Questions

This study examines the following research questions and hypotheses:

1. Does the presence of a GSA in adolescence predict young adult psychosocial well-being and educational attainment? As described above, previous literature suggests links among the presence of a GSA and concurrent student well-being and academic achievement; therefore, we hypothesized that GSA presence during adolescence would also be associated with less depression, fewer suicide attempts and substance abuse related problems, more self-esteem and social support, and higher educational attainment in young adulthood.

1a. Does the presence of a GSA buffer the associations among school victimization and young adult psychosocial well-being and educational attainment? We expected that the presence of a GSA in high school would buffer the associations among school victimization and young adult well-being, such those with GSAs would be protected against the negative effects of victimization.

2. Does GSA membership in adolescence predict young adult psychosocial well-being and educational attainment? The current literature has not thoroughly examined the relationships among GSA membership and psychosocial well-being. However, we hypothesized that GSA membership during adolescence will be positively associated with better psychosocial well-being, greater levels of social support, and higher educational attainment in young adulthood.

2a. Does GSA membership buffer the associations among school victimization and young adult psychosocial well-being and educational attainment? We expected that membership in a high school GSA would buffer the associations among school

victimization and young adult well-being, such that those who belonged to GSAs would be protected against the negative effects of victimization.

3. Does perceived effectiveness of the participant's high school GSA predict young adult psychosocial well-being and educational attainment? While no research has examined the perceived effectiveness of GSAs in promoting safe school environments, because safe school environments are associated with more positive outcomes we hypothesized that participants whose GSAs were more effective in promoting a safe school environment would also report better young adult psychosocial well-being and higher educational attainment.

3a. Does perceived GSA effectiveness buffer the associations among school victimization and young adult psychosocial well-being and educational attainment? We expected that GSA effectiveness would buffer the associations among school victimization and young adult well-being, such those with more effective GSAs would be protected against the negative effects of victimization.

Method

Sample

The *Family Acceptance Project's* young adult survey includes 245 lesbian, gay, bisexual, and transgender (LGBT) young adults (for detailed information about study design and sampling procedures, see Ryan, 2010; Ryan, Huebner, Diaz, & Sanchez, 2009; Toomey et al., 2010). Participants were recruited in venues that LGBT young adults use within 100 miles of the research center in the California Bay Area. Eligibility criteria for study participation included: age (21-25 years), self-identification as LGBT in

adolescence, disclosure of sexual orientation to at least one parent or caregiver in adolescence, and at least part-time residence with at least one parent or caregiver during adolescence. Participants completed the survey in either English or Spanish and could complete the survey in pencil-paper or computer-assisted formats. The university's institutional review board approved the study protocol.

Of the 245 participants, 114 (46.5%) self-identified as male, 110 (44.9%) as female, and 21 (8.6%) as transgender. Approximately 70% of participants self-identified as lesbian or gay, 13% identified as bisexual, and 17% identified as having a different sexual identity (i.e., queer, dyke, or homosexual). The participants were divided equally in terms of ethnicity: 126 (51%) were Latino and 119 (49%) were White, Non-Latino. Nearly 19% ($n=46$) of the sample identified as immigrants to the United States. Family-of-origin socioeconomic status was assessed (1=both parents in unskilled positions or unemployed, 16=both parents in professional positions; $M = 6.75$, $SD = 4.77$), and indicated that the sample came from a diverse range of socioeconomic backgrounds.

Measures

Gay-straight alliance measures. Participants retrospectively reported whether the high school they attended had a GSA or any other school diversity club related to sexual orientation (0=no, 1=yes). If participants answered that that their school did have a GSA or similar club, they were asked two follow-up questions. First, participants reported on their own participation level in their schools' GSAs: "Did you participate in a GSA or any kind of school diversity club related to sexual orientation in high school?" (0=not at all, 1=somewhat, 2=very much, 3=extremely). Because we are primarily

interested in whether or not any GSA participation mattered for young adult well-being, and to stay consistent with methodologies used in previous studies, we dichotomized the choice responses for this item (0= no participation, 1 = any participation). The effectiveness of the school's GSA was assessed by one item: "Did having a GSA or any kind of school diversity club related to sexual orientation in your school improve the school climate (help students feel safer)?" (0=not at all, 1=somewhat, 2=very much, 3=extremely).

Past LGBT-specific school victimization. A sum of 10 items assessed the degree to which participants retrospectively reported on school victimization due to their LGBT status. These items were adapted from the *California Healthy Kids Survey* measure on violence, safety, harassment, and bullying (see, for example, California Healthy Kids Survey, 2010). Sample items include: "During my middle or high school years, while at school, I was made fun of because of my looks or the way I talk. How often did this occur because people knew or assumed you were LGBT?" and "During my middle or high school years, while at school, I was afraid of being beaten up. How often did this occur because people knew or assumed you were LGBT?" (0=never, 1=once or twice, 2=a few times, 3=many times). Preliminary analyses indicated positive skewness on these items; a square root transformation was performed which returned the variables to acceptable ranges ($M = 5.33$, $SD = 4.91$). Reliability of this scale was excellent ($\alpha = .91$).

Young adult psychosocial adjustment. Four indicators of young adult psychosocial adjustment are examined: depression, self-esteem, lifetime suicide attempts, and problems due to substance abuse. Current depression was assessed with the 20-item

Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977, 1991).

Preliminary analyses revealed significant skewness in this variable which was corrected with a square root transformation ($M = 12.41$, $SD = 8.24$). This measure demonstrated excellent reliability in this sample ($\alpha = .94$). The 10-item Rosenberg Self-Esteem Scale (Rosenberg, 1979) was used to assess current self-esteem and demonstrated excellent internal consistency ($\alpha = .88$; $M = 2.80$, $SD = .38$). One item assessed lifetime suicide attempts: “Have you ever, at any point in your life, attempted taking your own life?” (0=no, 1=yes [41%]). Finally, substance-abuse related problems were assessed by four items (e.g., Ryan et al., 2009). Sample items include: “In the past five years, have you lost a job because of your alcohol or drug use?” and “In the past five years, have you passed out or lost consciousness because of your alcohol or drug use?” (0=no, 1=yes). From these four items, a single measure was created to represent “ever” having problems (0=never, 1=ever [56%]).

Young adult social relations. Young adult social support was assessed with the 12-item Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet, & Farley, 1988). Sample items include: “My family really tries to help me” and “I can talk about my problems with my friends” (1=strongly disagree to 5=strongly agree). Items were averaged to create the scale ($M = 3.79$, $SD = .78$). This measure had excellent reliability ($\alpha=.90$).

Adolescent and young adult educational outcomes. Two indicators of adolescent and young adult educational attainment were examined: high school dropout status and college-level educational attainment. Participants were asked two questions

that assessed past and current educational attainment: “What is the highest level of education you have completed?” (1=less than elementary school to 7=post-graduate) and “Are you currently in school?” (0=no, 1=yes). The range of education completed in this sample was from some high school to post-graduate ($M = 4.96$, $SD = .83$). High school dropouts included participants with less than a high school education (0=no [88.6%], 1=yes [11.4%]), and our college-level educational attainment indicator included those with some college to a post-graduate degree (0=no [41.2%], 1=yes [58.8%]).

Plan of Analysis

Missing data was imputed using the expectation maximization (EM) algorithm in PRELIS, a component of LISREL 8.80, prior to conducting the analyses. The total percent of missing data represented in the initial data set was less than 5 percent. Imputation of missing data maximizes the power to detect effects and maximizes sample size available for analyses (Graham, Cumsille, & Elek-Fisk, 2003).

We first utilized basic statistical tests (using chi-square analyses, t-tests, and ANOVAs) that examined demographic differences between participants whose schools had GSAs or similar clubs versus those who reported that their schools did not have this type of club. We also examined demographic differences on reports of GSA participation and effectiveness. We next tested multiple regression models to predict young adult adjustment and social relations based on GSA presence in school, individual-level GSA participation, and GSA effectiveness. Finally, we examined the interaction effects between each of our three GSA predictors with the experience of past LGBT-specific school victimization to examine whether GSAs can buffer the negative experience of

victimization. Interaction terms were created with the mean centered variables to reduce collinearity (Jaccard & Turrisi, 2003). To examine our dichotomous outcomes (suicide attempt, clinical level depression, problems related to substance abuse, high school dropout status, and college-level educational attainment) we used multiple logistic regression. The illustrations of the significant interactions show three levels of LGBT-specific victimization and GSA participation: these three levels correspond to -1 standard deviation below the mean, the mean, and +1 standard deviation above the mean for ease of interpretation.

Models that tested GSA presence included the full sample ($n = 245$) whereas models that examined GSA participation and GSA effectiveness included only the subsample of participants whose schools had a GSA ($n = 86$). In all models, we controlled for sociodemographic characteristic of participants (i.e., gender, sexual orientation, ethnicity, immigration status, socioeconomic status) that have known associations with our outcomes of interest (see Ryan et al., 2009).

Results

Demographic Characteristics of GSA Indicators

Of the 245 participants, 86 (35.10%) reported that their high school had a Gay-Straight Alliance or similar student club. Of those 86 participants, 50% identified as female, 45.35% as male, and 4.65% as transgender. Over half (69.77%) of the participants whose school had a GSA identified as gay or lesbian, 13.95% as bisexual, and 16.28% as queer, dyke, or homosexuals. Over half (54%) of the participants were White, non-Latino, and only 10% were immigrants to the United States. Of these

demographic characteristics, there was only one significant difference between participants whose schools had GSAs compared to those who did not: immigrants were less likely to report that their schools had GSAs than non-immigrants (19.57% vs. 38.69%; χ^2 (df=1) = 6.00, $p < .05$).

GSA participation and effectiveness levels were only evaluated for the 86 students who reported the presence of a GSA in their school. Of the 86 participants that reported GSAs in their schools, 55 (63.95%) reported some level of participation in their GSA. The average level of effectiveness rating of GSAs was low ($M = 1.07$, $SD = .79$). No significant differences were found among GSA participants on demographic characteristics: 50.91% were female, 41.82% were male, and 7.27% were transgender. Most (58.18%) GSA participants identified as gay or lesbian, 23.64% identified with other orientations (queer, dyke, homosexual), and 18.18% identified as bisexual. The majority of GSA participants were White, non-Latino, and only 12.73% identified as immigrants. There were no significant differences between GSA participants and non-participants on family-of-origin SES or past reports of LGBT-specific school victimization. Analyses examined demographic characteristics associated with reports of GSA effectiveness and the only significant association was the correlation between GSA effectiveness and past reports of LGBT-specific school victimization ($r = -0.44$). Thus, participants whose GSAs were more effective in promoting safe school climates reported lower levels of LGBT-specific school victimization.

Research Questions 1 and 1a: GSA Presence and Young Adult Psychosocial Well-Being and Educational Attainment

The presence of a GSA in high school was significantly associated with young adult psychosocial well-being and educational attainment. Specifically, the presence of a GSA was negatively associated with young adult depression and positively associated with young adult self-esteem and social support (Table 1a). Furthermore, the presence of a GSA in school was associated with a greater likelihood of college-level educational attainment (Table 1b). Presence of a GSA was not associated with lifetime suicide attempts, problems due to substance abuse, or high school dropout status (Table 1b). Contrary to our expectations, we found no significant interactions between LGBT-specific school victimization and the presence of a GSA on young adult outcomes.

Research Questions 2 and 2a: GSA Participation and Young Adult Psychosocial Well-Being and Educational Attainment

Of the 86 participants who reported the presence of a GSA in the high school they attended, 55 (64%) reported some level of participation in the GSA. Participating in a high school GSA was associated with fewer problems due to substance abuse (Table 1b). GSA participation was not directly associated with any of the other outcomes tested. However, we did find a significant interaction effect between LGBT-specific school victimization and GSA participation on depression (Table 1a) and suicide attempts (Table 1b).

The interaction between LGBT school victimization and GSA participation predicting young adult depression suggests that participation in GSAs buffers the effect

of low levels of school victimization on depression (see Figure 1). As shown in Figure 1, being a GSA participant in high school seems to buffer the direct effect of LGBT school victimization on young adult depression at low levels of victimization. However, at high levels of LGBT school victimization, there was no difference between GSA participants and nonparticipants. This suggests that high levels of school victimization eliminate the benefits of GSA participation.

The interaction between LGBT school victimization and GSA participation for young adult suicide attempts was also significant and the pattern across varying levels of LGBT school victimization and participation was similar to the findings for depression. As shown in Figure 2, at low levels of LGBT school victimization, participation in a GSA seems to buffer the risk for suicide attempts in young adulthood. However, at moderate and high levels of LGBT school victimization, GSA participation seems to exacerbate risk for suicide attempts in young adulthood.

Research Questions 3 and 3a: GSA Effectiveness and Young Adult Psychosocial Well-Being and Educational Attainment

GSA effectiveness in promoting school safety for students was significantly associated with fewer problems due to substance abuse and greater college education attainment (Table 1b), and greater social support in young adulthood (Table 1a). There was also a significant interaction between GSA effectiveness and the experience of LGBT-specific victimization predicting later social support: the direct association of LGBT-specific victimization on young adult social support was buffered by the presence of an effective GSA in the school (Figure 3). Individuals that perceived their high school

GSA to be highly effective for improving school safety remained at relatively high levels of young adult social support regardless of the level of LGBT school victimization. However, if individuals perceived their high school GSA to be less effective they reported lower levels of social support in young adulthood as LGBT school victimization increased.

Discussion

Consistent with previous research that documents concurrent associations among GSA presence and psychosocial and academic well-being (e.g., Kosciw et al., 2010; Lee, 2002; Walls et al., 2008, 2010), we found that the presence of a high school GSA was associated with better young adult well-being, greater young adult social support, and more college-level educational attainment. Also consistent with previous research, we did not find that GSA participation was associated with health and academic outcomes (Walls et al., 2010), except for the association with fewer problems related to substance abuse in young adulthood. Finally and as an important addition to the literature, we found that GSA effectiveness was positively associated with young adult social support and college-level educational attainment and negatively associated with depression and problems related to substance abuse.

At low levels of LGBT school victimization, GSA participation seemed to buffer the direct negative effects of victimization on young adult depression, such that participants who were involved in their high school GSA compared to those who were not involved reported significantly lower levels of young adult depression at low levels of LGBT school victimization. Similarly, we found that GSA participation buffered the

direct effect of LGBT school victimization on young adult suicide attempt risk at low levels of LGBT school victimization. Nonetheless, GSA participation was not successful in buffering the direct effects of high levels of LGBT victimization on these negative outcomes, which suggests that more efforts need to be focused on understanding how to reduce LGBT victimization in schools.

There was a significant interaction effect between GSA effectiveness and LGBT school victimization predicting young adult social support, such that at low levels of victimization all participants, regardless of GSA effectiveness, reported approximately the same levels of young adult social support. However, as victimization increases, participants whose GSAs were highly effective remained at the same level of young adult social support, whereas those whose GSAs were less effective decreased in levels of young adult social support.

Our study adds to the current literature by examining young adult well-being and academic attainment. To our knowledge, all previous literature that examined the many facets of GSAs has concentrated only on adolescent outcomes. While our study is limited because of our reliance on retrospective reports of GSA presence, membership, and effectiveness, which is discussed further in the limitation section, we feel that this is an important first step in documenting the lasting benefits of this particular high school extracurricular activity for LGBT young people.

Consistent with previous research, we find that the presence of a GSA seems to be a more salient predictor of well-being than GSA membership (e.g., Walls et al., 2010). It is surprising to find that participation in a GSA does not directly contribute to well-being

and academic attainment in young adulthood, given that prior literature on extracurricular activity involvement finds such connections (e.g., Fredricks & Eccles, 2006). Perhaps for the LGBT adolescent population, the presence of a GSA in school is more important for their well-being because schools with GSAs likely have safer school climates overall. This potential explanation is particularly plausible because of our finding that an effective GSA was also associated with positive well-being and greater educational attainment.

One may question the benefit of GSA participation given our lack of direct findings in support of positive associations with young adult adjustment and academic attainment. However, our limited sample size reduces the statistical power to find results and so our results should be interpreted with caution. It also may be the case that participation in a GSA is less likely to produce beneficial results if the GSA is not effective. As post-hoc analyses, we explored the interactions between GSA participation and GSA effectiveness predicting our outcomes of interest. However, none of these interactions were significant. Thus, in our sample and consistent with previous studies (e.g., Walls et al., 2010), GSA participation seems to be less directly linked to mental health and well-being. Future studies should continue to incorporate measures of empowerment and possibly civic engagement, given that other studies have documented the links between GSA participation and these types of outcomes (e.g., Russell, Muraco, Subramaniam, & Laub, 2009; Russell, Toomey, Crockett, & Laub, 2010). The problematic finding that suicide risk was exacerbated for LGBT youth involved in GSAs who experienced high victimization needs to be explored in future research. Perhaps, this finding suggests that the creation of and membership in GSAs in schools cannot be

accepted by schools as the only solution for creating safer school climates for LGBT youth. In fact, much like previous research suggests, schools need to enact other measures, such as enumerated school policies, to promote school climates that are safe for all students (e.g., Russell & McGuire, 2008).

In sum, we document that the presence of a GSA in high schools seems to facilitate well-being which continues into young adulthood, especially if the GSA is perceived to be effective in promoting safer school climates. We found fewer effects for GSA participation, however, we did find that GSA participation was important for understanding the complex associations between LGBT school victimization on depression and suicide attempts in young adulthood. The lack of significance of findings may be due to our limited sample size in exploring participation and effectiveness, or may also be due to the fact that there are qualitative differences between schools that allow GSAs to exist.

Gay-Straight Alliances and Implications for School Policy

The presence of GSAs in schools is a matter of contemporary public debate, even though the 1984 Federal Equal Access Act mandates that schools receiving federal funding cannot discriminate against student groups. In the recent decade, several schools have denied students the right to assemble Gay-Straight Alliances. For instance, in 2009 students of Yulee High School won a suit against the School Board of Nassau County for barring the formation of a Gay-Straight Alliance in their middle and high schools (ACLU, 2009). Similarly, students won a 2008 case against Okeechobee High School for denying their GSA the right to meet on campus (ACLU, 2008). A detailed history of

legal cases involving GSAs and school districts is available elsewhere (see Berkley, 2004; Lee, 2002).

Our findings suggest that there are several associations between GSA presence and positive well-being for LGBT young people. While we cannot draw conclusions about directionality because the information about high school experiences was retrospective, based on the findings presented here and elsewhere (e.g., Walls et al., 2010) there appear to be positive associations between GSAs and well-being and educational attainment. Our finding that students who were in schools with GSAs were more likely to obtain a college education underscores the potential impact on educational achievement and socioeconomic and occupational status as an adult. In addition, given the heightened attention to suicides of perceived or actual gay and bisexual young men that have been linked to anti-gay harassment at school (e.g., Katz, 2010), our findings point to GSAs as a potential context for reducing this risk – at least at low levels of LGBT school victimization - given the significant interaction between GSA participation and LGBT school victimization predicting young adult suicide attempts. In sum, our findings suggest that school administrators and personnel should be supportive in helping students to form and facilitate GSAs in schools as a potential source of promoting positive development for this underserved population.

Limitations

While this study is important for advancing the knowledge about GSAs and positive contexts for LGBT adolescents, there are several limitations of the study that must be acknowledged. First, the sample size was relatively small, especially when

examining the associations among GSA participation and effectiveness with young adult indicators. Thus, readers should exhibit caution in interpreting the null findings for these constructs. It is plausible that with a larger sample size we would have the statistical power to find significant associations among GSA participation and perceived effectiveness with our young adult outcomes. Future studies need to explore these complex associations using larger, more diverse samples. A second limitation to the study is that the sample is geographically limited to California. Thus, our results are not generalizable beyond this geographic region of the United States. For instance, GSA presence, participation, and perceived effectiveness may have larger positive influences on health and well-being in more rural areas where other avenues of support, such as LGBT community centers, are not available to young people.

Third, our study was retrospective and thus we could not adequately control for adolescent indicators of well-being and academic achievement in our regression models (Frazier, Tix, & Barron, 2004). The participants' reports of young adult well-being may also be biased because they were asked these questions after they reported on LGBT school victimization in adolescence. This order of questions may have prompted more negative responses to young adult indicators of well-being. However, other studies have found that retrospective reports of school victimization remain relatively stable over time and do not influence reports of mental health considerably (Rivers, 2001b). Nonetheless, future studies should examine these associations longitudinally to allow for more direct conclusions about directionally of effects.

A fourth limitation is that the sample of young adults included youth who self-identified as LGBT and were out to their parents as LGBT during adolescence. As such, the representativeness of our sample is also limited to youth who identify as LGBT and who disclose their status to others. Future studies are needed to be able to address the heterogeneity in the larger LGBT population for understanding the unique effects of GSA presence, participation, and effectiveness. A final limitation to this study is the caveat that we do not have information to assess whether the schools that had GSAs were significantly different from the schools that did not have GSAs. Thus, there may be other environmental or contextual indicators that help to explain why young adults who reported that their school had a GSA reported more positive well-being and greater educational attainment compared to their peers who did not attend a school with a GSA. Future studies are needed to disentangle the broader environmental and contextual features of schools and the neighborhoods in which they are nested from the unique associations of GSA presence with young adult well-being and educational attainment.

Conclusions

This study contributes new knowledge about the positive impacts that Gay-Straight Alliances can provide to LGBT young people, an important finding given the dearth of knowledge about positive development for this population. Specifically, we document that GSAs are associated with positive well-being and educational attainment in young adulthood. This finding is particularly important given the sole focus on concurrent adolescent well-being in previous literature. Given the heightened media attention to gay and bisexual young men suicides (for a summary, see Katz, 2010), these

findings document that if schools can effectively minimize school victimization related to LGBT status that there is a potential to also reduce the disparity that exists for this population in suicide risk (Russell, 2003). Finally, this study contributes to the literature by introducing a measure of how effective a GSA was in promoting a safe school climate for LGBT persons. This measure is important for understanding the nuanced differences that may exist in a simple measure of GSA presence: that is, it is likely that some GSAs are more effective than others in promoting safe school climates and challenging the heteronormative culture within a school.

This study builds on prior work by documenting that the existence of a GSA has a positive influence on the lives of LGBT young people. Our findings have implications for school-based personnel in that they provide one avenue through which professionals may offer and support a positive school environment for LGBT young people. Schools should support these school-based clubs given that they offer the potential for positive development and greater educational attainment. The results of this study warrant future research to examine specific facets of GSAs that promote well-being. For instance, an in-depth study of facets of GSAs presented here among several GSAs may provide insight as to what specific attributes of a GSA are associated with effectiveness for improving school climate and later well-being.

Figure 1. *The Moderating Effect of GSA Participation on LGBT-Specific School Victimization Predicting Young Adult Depression*

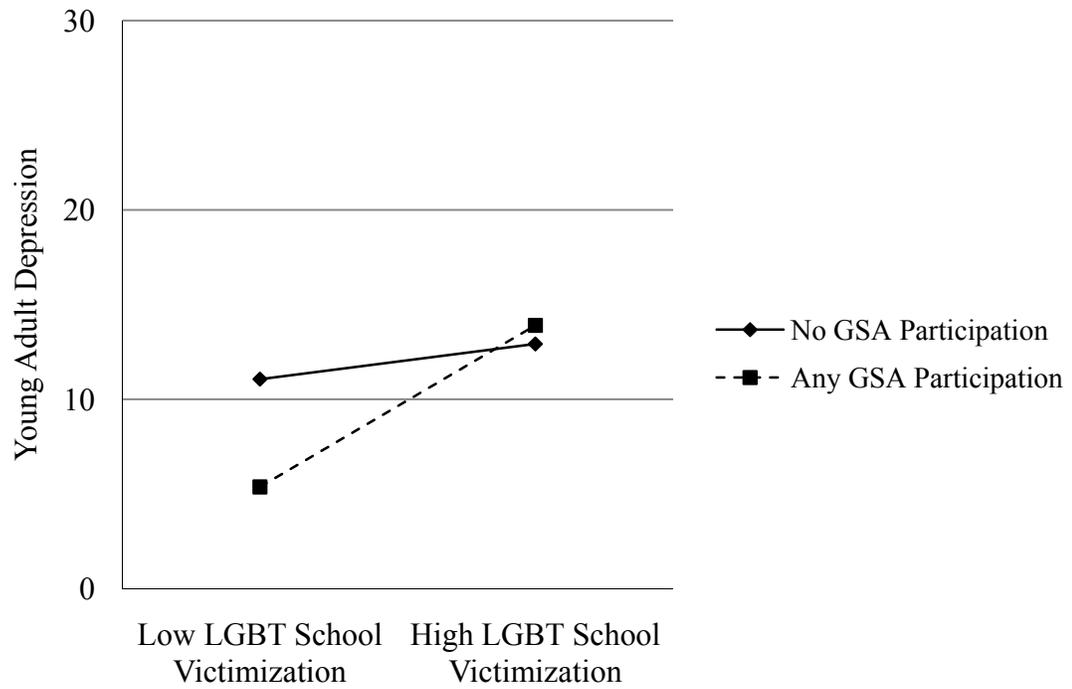


Figure 2. *The Moderating Effect of GSA Participation on LGBT-Specific School Victimization Predicting Young Adult Suicide Attempts*

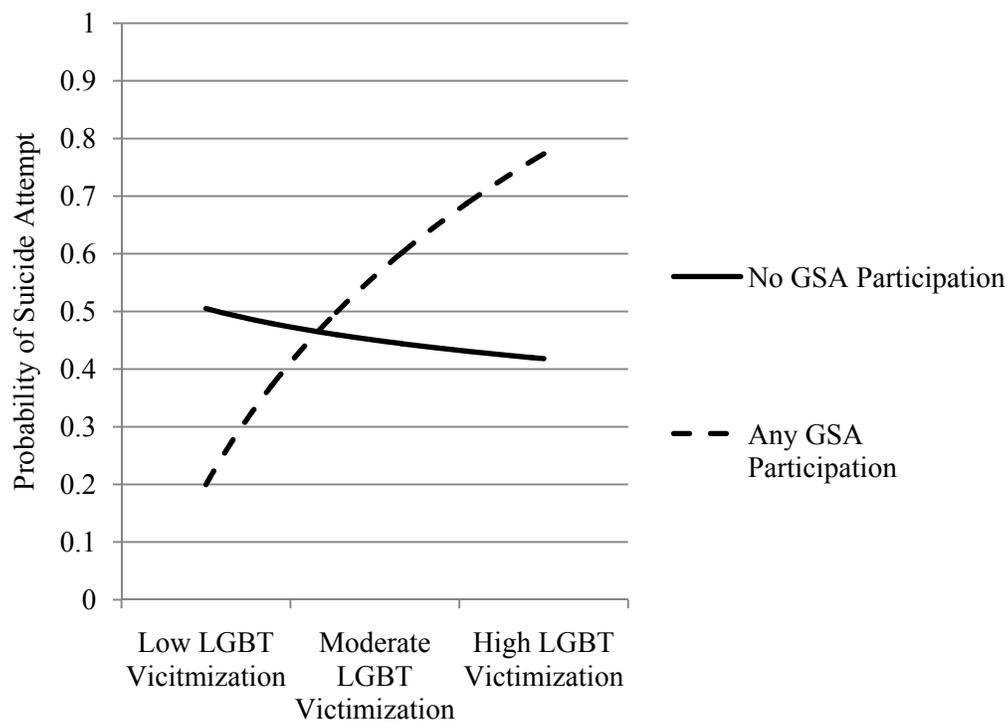


Figure 3. *The Moderating Effect of GSA Effectiveness on LGBT-Specific School Victimization Predicting Young Adult Social Support*

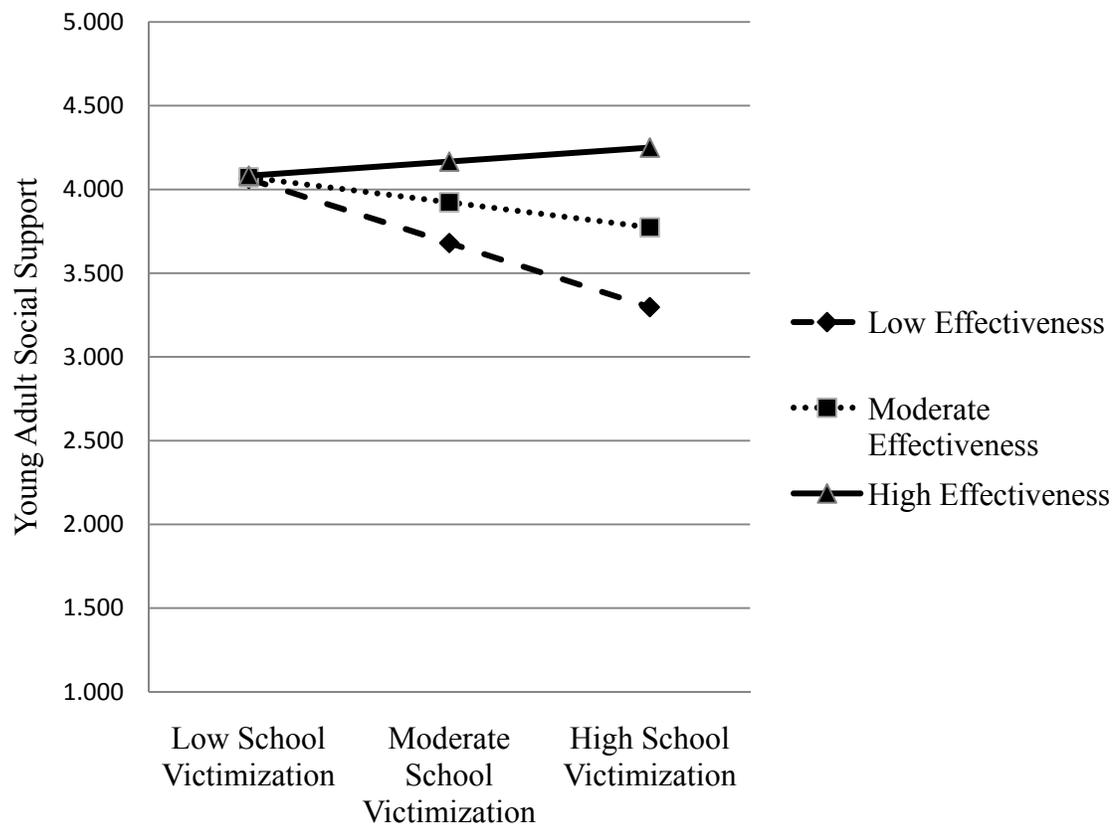


Table 1a. *Young Adult Well-Being and Social Relations as Predicted by GSA Presence, GSA Participation, and GSA Effectiveness*

Outcome 1: Depression	
Model 1: GSA Presence	-2.60 (1.03)*
School Victimization	0.45 (0.11)***
Model 2: Presence x Victimization	0.20 (0.21)
Model 3: GSA Participation	-2.77 (1.69)
School Victimization	0.67 (0.17)***
Model 4: Participation x Victimization	0.67 (0.34)*
Model 5: GSA Effectiveness	-2.06 (1.14) ⁺
School Victimization	0.51 (0.19)**
Model 6: Effectiveness x Victimization	-0.24 (0.22)
Outcome 2: Self-Esteem	
Model 1: GSA Presence	0.10 (0.05)*
School Victimization	-0.01 (0.005)**
Model 2: Presence x Victimization	0.002 (0.01)
Model 3: GSA Participation	0.12 (0.08)
School Victimization	-0.02 (0.01)*
Model 4: Participation x Victimization	-0.02 (0.02)
Model 5: GSA Effectiveness	0.02 (0.05)
School Victimization	-0.02 (0.01) ⁺
Model 6: Effectiveness x Victimization	0.002 (0.01)
Outcome 3: Social Support	
Model 1: GSA Presence	0.21 (0.09)*
School Victimization	-0.04 (0.01)***
Model 2: Presence x Victimization	-0.01 (0.02)
Model 3: GSA Participation	0.21 (0.14)
School Victimization	-0.07 (0.01)***
Model 4: Participation x Victimization	0.01 (0.03)
Model 5: GSA Effectiveness	0.25 (0.09)*
School Victimization	-0.05 (0.02)**
Model 6: Effectiveness x Victimization	0.06 (0.02)***

Note. Unstandardized estimates with standard errors are shown. All analyses control for gender, sexual orientation, ethnicity, immigrant status, and family of origin SES. The sample size for Models 1 and 2 of each outcome is 245 participants and the sample size for Models 4-6 of each outcome is 86 participants. *** $p < .001$. ** $p < .01$. * $p < .05$. ⁺ $p < .10$.

Table 1b. *Adjusted Odds Ratios Predicting Young Adult Well-Being and Educational Outcomes as Predicted by GSA Presence, GSA Participation, and GSA Effectiveness*

Outcome 4: Suicide Attempt	
Model 1: GSA Presence	0.81 (0.44-1.49)
School Victimization	1.19 (1.11-1.27)***
Model 2: Presence x Victimization	1.02 (0.90-1.17)
Model 3: GSA Participation	1.30 (0.41-4.12)
School Victimization	1.18 (1.05-1.32)**
Model 4: Participation x Victimization	1.36 (1.06-1.73)*
Model 5: GSA Effectiveness	0.83 (0.38-1.78)
School Victimization	1.17 (1.03-1.32)*
Model 6: Effectiveness x Victimization	0.93 (0.80-1.09)
Outcome 5: Substance Abuse Problems	
Model 1: GSA Presence	0.65 (0.37-1.14)
School Victimization	1.05 (0.99-1.11)
Model 2: Presence x Victimization	1.06 (0.94-1.19)
Model 3: GSA Participation	0.24 (0.08-0.73)*
School Victimization	1.13 (1.01-1.27)*
Model 4: Participation x Victimization	1.16 (0.93-1.44)
Model 5: GSA Effectiveness	0.54 (0.27-1.10) ⁺
School Victimization	1.07 (0.95-1.20)
Model 6: Effectiveness x Victimization	0.89 (0.76-1.05)
Outcome 6: High School Dropout¹	
Model 1: GSA Presence	0.40 (0.13-1.27)
School Victimization	1.02 (0.94-1.12)
Model 2: Presence x Victimization	1.09 (0.87-1.36)
Model 3: GSA Participation	---
School Victimization	---
Model 4: Participation x Victimization	---
Model 5: GSA Effectiveness	---
School Victimization	---
Model 6: Effectiveness x Victimization	---
Outcome 7: College Education Attainment	
Model 1: GSA Presence	2.15 (1.16-3.98)*
School Victimization	0.95 (0.89-1.01)
Model 2: Presence x Victimization	1.07 (0.95-1.21)
Model 3: GSA Participation	1.80 (0.59-5.51)
School Victimization	0.98 (0.88-1.09)
Model 4: Participation x Victimization	1.00 (.081-1.25)
Model 5: GSA Effectiveness	2.11 (0.89-5.01) ⁺
School Victimization	1.03 (0.91-1.16)
Model 6: Effectiveness x Victimization	0.92 (0.79-1.08)

Note. Logistic regressions included sociodemographic characteristics (gender, sexual orientation, ethnicity, immigration status, socioeconomic status, and past LGBT school victimization). The sample size for Models 1 and 2 of each outcome is 245 participants and the sample size for Models 4-6 of each outcome is 86 participants. *** $p < .001$. ** $p < .01$. * $p < .05$. ⁺ $p < .10$.

¹ The models predicting high school dropout status from GSA participation and GSA effectiveness did not converge because of the low cell sizes.

CHAPTER V. CONCLUSIONS

Summary of Results

The three manuscripts presented in this dissertation focus on explaining positive youth development for sexual minority adolescents through the study of participation in school-based extracurricular activities. Given that sexual minority youth experience disparate rates of negative health (e.g., Haas et al., 2011; Marshal et al., 2008; Remafedi, 2008) and academic outcomes (e.g., Kosciw, Gretyak, Diaz, & Bartkiewicz., 2010; Perason et al., 2007), research is needed that examines potential contexts, interpersonal relationships, or supports that are associated with positive development for this population. Particularly, research is needed that examines school-based positive contexts for sexual minority youth because the school context has been consistently documented to be a negative context for this population (e.g., Kosciw et al., 2010; O'Shaughnessy, Russell, Heck, Calhoun, & Laub, 2004; Pearson, Muller, & Wilkinson, 2007). Yet, there is a void in the school-based literature that examines positive experiences of sexual minority youth.

The manuscripts in this dissertation sought to fill this void by first, examining sexual minority youth participation in general school-based extracurricular activities and the long-term associations among general extracurricular activity participation, school connectedness, and mental health for sexual minority youth and heterosexual youth; second, by examining concurrent and long-term associations between several facets of Gay-Straight Alliances and academic and psychosocial outcomes; and third, by examining whether or not these facets of Gay-Straight Alliances were able to buffer the

negative associations between school victimization based on sexual orientation and academic and psychosocial outcomes.

The first manuscript in this dissertation used data from the *National Longitudinal Study of Adolescent Health*, a nationally representative sample of schools and adolescents. This study compared the longitudinal associations among school-based extracurricular activity involvement, school connectedness, and mental health (i.e., depression and self-esteem). Participants included 574 sexual minority and 6,249 heterosexual adolescents who were in grades 7 through 12 (mean age = 15.25 years). Extracurricular activity involvement was concurrently associated with greater school connectedness, higher self-esteem, and lower depression for both groups. School connectedness was associated with later higher self-esteem and lower depression; importantly, these associations were stronger for sexual minority adolescents.

The second manuscript in this dissertation examined associations among GSA presence, GSA membership, and participation in GSA-related social justice activities, with victimization based on sexual orientation and school-based (i.e., school safety, school belongingness, grade-point average [GPA]) and civic (i.e., plans to vote in future) outcomes. Using data from the *Preventing School Harassment Study*, a survey of 230 LGBQ students in 7th through 12th grades, findings suggest that GSA presence and participation in social justice activities were positively associated with school belongingness and GPA. GSA membership was also positively associated with school belongingness. However, moderation analyses suggested that the positive benefits of

GSA presence and social justice involvement dissipate at high levels of school victimization.

The third manuscript in this dissertation examined the potential for GSAs to promote positive youth development and to reduce associations among LGBT-specific school victimization and negative young adult well-being. The sample included 245 LGBT young adults from the *Family Acceptance Project*, ages 21-25, who retrospectively reported on the presence of a GSA in their high school, their participation in their school's GSA, and their perceptions of whether or not their GSA was efficacious in improving the school climate. Findings revealed that the presence of a GSA, participation in a GSA, and GSA effectiveness differentially predict young adult well-being and in some cases, buffer the negative effect of LGBT-specific school victimization.

Taken together, the results from these three manuscripts suggest that school-based extracurricular activities provide a ripe context to explore positive youth development for sexual minority youth. As documented in the first study, school-based extracurricular activities may be a starting point to understand differences between sexual minority youth and heterosexual youth on school connectedness. Importantly, in that study, connections to school were more strongly related to mental health for sexual minority youth compared to heterosexual youth. This finding suggests that school connectedness may be an important construct for future research to explore, especially research that focuses on school-based interventions and preventions for sexual minority youth.

Moving from an examination of general extracurricular activities to a more specific focus on sexual minority-oriented activity, Gay-Straight Alliances (GSAs), the other two manuscripts in this dissertation consistently documented important links between GSA presence and academic and health outcomes for sexual minority youth. Consistent with prior research (e.g., Walls et al., 2010), however, GSA membership was not consistently predictive of academic and health outcomes. Similar to the first manuscript, these findings suggest that elements of the school context or perceptions about one's school in general may be more relevant than participation in an activity for understanding well-being and academic achievement.

Most research has not examined the effects of school climate – as characterized by school-level reports or aggregated information– that may help to explain differences in experiences of LGBT students. Two recent studies (e.g., Russell & McGuire, 2008; Toomey, McGuire, & Russell, in press) have documented important between-school differences in students' attitudes and perceptions about safety for LGBT and gender nonconforming students. These findings suggest that there are important differences between schools that may account for differing levels of school victimization based on sexual orientation. Future research should examine predictors of these between-school differences to decipher what school-level characteristics could help to explain differences in levels of bias-motivated school victimization, and well-being and academic achievement of LGBT students.

Finally, the last two manuscripts of this dissertation examined whether or not different facets of GSAs had the power to buffer the negative associations between

school victimization based on sexual orientation and well-being. Again, there was a consistent finding across both manuscripts: neither GSA presence nor GSA membership were able to buffer the negative association between high levels of school victimization and well-being. This is problematic because these findings suggest that the current strategies for creating safer school environments for LGBT students do not necessarily buffer the associations between school victimization and psychosocial and academic outcomes for LGBT adolescents who experience high levels bias-motivated victimization. These results suggest that school administrators, policymakers, and researchers should not accept the creation of GSAs or membership in GSAs as final solutions for creating safer school environments for LGBT students. Future research is warranted that examines interventions that successfully reduce bias-related school victimization risk for sexual minority adolescents. Specifically, research is needed that longitudinally examines the creation and implementation of school policies and programs designed to create safer school environments for LGBT students to identify best practices in the implementation phases of these preventative intervention measures.

Conclusions and Implications

Important implications for the lives of sexual minority youth and schools can be derived from the results of this set of manuscripts. Extracurricular activities appear to be a promising context in which to explore positive youth development for sexual minority youth. Future studies, however, should explore sexual minority youth involvement in these activities in greater depth. For instance, the first manuscript did not explore the possibility that intersecting diverse identities (e.g., sexual orientation, race/ethnicity,

social class) may have implications for understanding youth involvement in extracurricular activities and its associations with school connectedness and well-being. Further, future studies need to explore the diversity of activity types (e.g., sports versus academic clubs) that sexual minority youth engage in to fully understand any potential links with well-being. For instance, do sexual minority boys benefit from engaging in sports, only if they also fit masculine gender norms? Do sexual minority females benefit from sports participation, or does participation in this activity type place them at greater risk for victimization because they are more easily targeted by their peers?

Specific to GSAs, the presence of GSAs in schools continues to be a matter of contemporary public debate, even though the 1984 Federal Equal Access Act mandates that schools receiving federal funding cannot discriminate against student groups. The results presented in two of the manuscripts in this dissertation suggest several positive benefits of the presence of a GSA in a student's school. Consistent with the safe schools literature (O'Shaughnessy et al., 2004), the presence of a GSA is one strategy to create schools safer environments for sexual minority students. However, given that the presence of GSAs did not have the power to buffer the negative association between high levels of school victimization and well-being, future research is warranted that continues to document strategies that reduce peer victimization based on sexual orientation.

Further, consistent with prior literature (Walls et al., 2010), the effects of GSA membership were negligible and inconsistent across the last two manuscripts. Future studies are needed to investigate if there are any unique effects – over and above – the presence of a GSA. Plausibly, outcomes that are uniquely associated with GSA

membership were not included in the studies presented here. That is, previous research has documented links between GSA membership and greater self-efficacy and less internalized homophobia (e.g., Lee, 2002; Russell, Muraco, Subramaniam, & Laub, 2009). Thus, future research should attempt to quantitatively examine these types of outcomes in association with GSA membership.

In sum, despite their limitations these three papers advance the field of knowledge on positive youth development for sexual minority youth. The importance of positive school contexts were highlighted in all three studies: when students feel more connected to their schools and are aware of sexual minority-specific supports (e.g., GSAs), they experience better mental health and academic outcomes. Future studies should continue to investigate the facets of these positive, school-based contexts for sexual minority youth and future efforts should be focused on reducing school victimization based on sexual orientation in schools.

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