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LGB and Questioning Students in Schools: The Moderating Effects of Homophobic Bullying and School Climate on Negative Outcomes

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Abstract

Lesbian, gay, and bisexual students (LGB) and those questioning their sexual orientation are often at great risk for negative outcomes like depression, suicidality, drug use, and school difficulties (Elliot and Kilpatrick, How to Stop Bullying, A KIDSCAPE Guide to Training, 1994; Mufoz-Plaza et al., High Sch J 85:52–63, 2002; Treadway and Yoakam, J School Health 62(7):352–357, 1992). This study examined how school contextual factors such as homophobic victimization and school climate influence negative outcomes in LGB and questioning middle school students. Participants were 7,376 7th and 8th grade students from a large Midwestern county (50.7% Female, 72.7% White, 7.7% Biracial, 6.9% Black, 5.2% Asian, 3.7% His-panic, and 2.2% reported "other"). LGB and sexually questioning youth were more likely to report high levels of bullying, homophobic victimization, and various negative outcomes than heterosexual youth. Students who were questioning their sexual orientation reported the most bullying, the most homophobic victimization, the most drug use, the most feelings of depression and suicidality, and more truancy than either heterosexual or LGB students. A positive school climate and a lack of homophobic victimization moderated the differences among sexual orientation status and outcomes. Results indicate that schools have the ability to lessen negative outcomes for LGB and sexually questioning students through creating positive climates and reducing homophobic teasing.

Keywords

Introduction

Bronfenbrenner's (1977, 1979) social—ecological frame-work suggests the influence of the environment is essential to understanding both the child and to creating effective change for that individual. One of the most salient and influential environments for children is the school (Eccles et al. 1993). School contextual factors have been linked to children's mental health, achievement, self-concept, and a child's ability to form social relationships (Baker et al. 2001; Ringeisen et al. 2003). If a classroom does not fit the needs of the children within it, research has shown that academic and social difficulties may follow (Eccles et al. 1993).

Unfortunately, many school districts, administrators, and teachers are unsupportive of the needs of their lesbian, gay, bisexual (LGB) and questioning students (Lipkin 2002). Multiple nationwide and regional surveys have confirmed that LGB youth experience homophobic harassment frequently by their peers and sometimes school staff. In a survey of LGB students in New York schools, 70% reported being harassed because of their sexual orientation or gender identity, and of these, 59% reported that school personal were both present during this harassment and did not assist them (Advocates for Children, Inc. 2005). The stress of having to come to terms with their own sexuality in early adolescence while simultaneously negotiating their school environment's heterosexism and homophobia may place many LGB and questioning students at-risk for depression, suicidality, drug use, and school problems (Elliot and Kilpatrick 1994; Mufoz-Plaza et al. 2002; Treadway and Yoakam 1992).

Although there is a lack of research outlining the prevalence of various negative outcomes in LGB youth, there are far fewer studies examining what factors protect LGB youth and what factors harm youth. As school is an influential environment for adolescents, this study will examine how school contextual factors such as school climate and homophobic victimization impact not only LGB but also heterosexual and questioning students.

The transition from elementary to middle school is often challenging for many students, but LGB and transgender students appear to experience an exceptionally difficult time adjusting. For most adolescents, middle school is a time when bullying behavior increases. In a nationwide survey of 6th through 10th graders, 24.2% reported being bullied once or twice, 8.5% reported being bullied some times, and 8.4% reported being bullied at least on a weekly basis (Nansel et al. 2001). Bullying occurs even more frequently among LGB, and transgender youth in American schools. A recent nationwide survey of LGB youth reported that nearly 40% indicated experiencing physical harassment at least once because of their sexual orientation and 64.3% reported feeling unsafe at their school because of their sexual orientation (Kosciw 2004). In addition, Rivers (2001) reported that 82% of a LGB student sample reported being targets of name-calling with a majority of it being homophobic in nature and 60% reported being assaulted. Although some consider bullying and harassment to be a right of passage, negative consequences are evident in victims of bullying. It has been widely reported that students who experience bullying frequently have an increased risk of anxiety and depression (Baldry and Winkel 2004; Kumpulainen et al. 2001; Rigby 2000).

Even in the absence of direct homophobic victimization, a child might experience increased anxiety, depression, and isolation in schools where anti-gay language pervades. Approximately 91.4% of a LGB middle school and high school student sample reported that they *sometimes* or *frequently* heard homophobic remarks in school such as "faggot," "dyke," or "queer." Of these students, 99.4% said they heard remarks from students and 39.2% heard remarks from faculty or school staff (Kosciw and Diaz 2006). The immense presence of anti-gay language in schools suggests that most school environments are unsupportive of LGB and questioning students, which may lead to an elevation of negative outcomes for these youth because of increased internalized homophobia.

The middle school years are also a time when students are discovering their sexual identity. In a study of gay youth by Dubé and Savin-Williams (1999), children in their study became aware of their sexual orientation at the age of 10 years old. Other studies report that lesbian, gay, and bisexual youth become aware of their same-sex attraction between 10- and 12-years of age, with females reporting awareness at a slightly later age (D'Augelli et al. 2008; D'Augelli and Hershberger 1993). These figures are consistent with studies that have traced LGB students' first feelings of being 'different' back to early adolescence (Bell et al. 1981; Savin-Williams and Lenhart 1990).

Even without taking on an LGB identity, students may begin to experience same-sex attractions during this period or may begin to participate in same-sex sexual behaviors. Multiple population-based studies have reported that youth with bisexual orientations and youth who report questioning their sexual orientation represent a significant amount of the population (Espelage et al. 2008; Garofalo et al. 1998; Russell et al. 2001; Williams et al. 2005). A study utilizing the first nationwide youth sample to collect data on sexual minorities found that .7% of boys reported exclusively same-sex attraction and 6.5% reported being attracted to both sexes, while 1.5% of girls reported exclusive same-sex attraction and 3.8% reported being attracted to both sexes. Despite the larger number of bisexual and questioning youth, little is known about this group, although preliminary studies suggest this group may be most at risk for negative outcomes (D'Augelli et al. 2001; Diamond 2003; Espelage et al. 2008; Hershberger et al. 1997; Russell et al. 2001). Hershberger et al. (1997) found that bisexual students were more likely to have attempted suicide than lesbian or gay students. In a study that included questioning youth, Espelage et al. (2008) found that questioning youth reported a higher prevalence of depression/suicidal feelings, general victimization experiences, and alcohol/marijuana use than LGB and heterosexual students. The literature from gay identity development may be useful in making sense of these findings, as many identity theories suggest that positive interpersonal interactions around gay identity are necessary for personal gay identity acceptance (Cass 1979; Minton and McDonald 1984; Troiden 1989). Questioning youth may have higher rates of negative outcomes because they may be more likely to be embedded in unhealthy, homo phobic environments where an exclusively lesbian or gay orientation may not be supported.

Negative Outcomes in LGB Youth

Numerous studies have focused on the relations between LGB status and high rates of negative psychological and academic outcomes. According to a 2003 survey of Mas

sachusetts high school students, students who identified as gay, lesbian, and bisexual were nearly five times as likely as students who identified as heterosexual to report not attending school because of feeling unsafe (Massachusetts Department of Education 2004). Rivers (2000) reported that 72% of a sample of LGB adults who reported being bullied as children over their sexual orientation were likely to have played sick or were truant in order to avoid abuse at school. Another study reported 40% of their LGB student sample had problems with truancy, and 80% of the LGB youth sampled demonstrated a 'declining school performance' (Elias et al. 1992). LGB students also tend to have more negative school attitudes, more school troubles, and lower GPAs than non-LGB students (Russell et al. 2001). In fact, 30% of LGB students dropped out of school altogether (Elias et al. 1992). Further research is necessary to both examine why students are dropping out and examine how environments like schools can promote resilience in these youth.

Ample research has demonstrated an association between increased depression and suicide among LGB youth. A report conducted by the Secretary's Task Force on Youth Suicide in 1989 reported that gay youth "may comprise up to 30% of completed youth suicides annually" (National Gay and Lesbian Task Force 1989). Although many people have criticized that report for its biased sample populations, more recent studies have confirmed that LGB youth are at an increased risk of suicidal ideation (D'Augelli and Hershberger 1993; Hershberger and D'Augelli 1995; Remafedi et al. 1998). In Remafedi et al. (1998) statewide survey of 7–12th grade students, 28.1% of gay and bisexual males and 20.5% lesbian and bisexual females reported previous suicide attempts. In another study, it was found that 60% of the LGB youth sampled had considered suicide (Hershberger and D'Augelli 1995).

While the national average of people with depression remains at about 4%, LGB youth consistently qualify for depression at a higher rate (Hershberger and D'Augelli 1995; Lock and Steiner 1999; Rivers 2004; Westefeld et al. 2001). A study by D'Augelli and Hershberger (1993) found that a LGB youth sample reported extremely high instances of depression with 41% of males and 28% of females indicating to be very troubled or extremely troubled by depression. It is clear that LGB youth are at greater risk for mental health problems.

Drug use has also been found to be prevalent in the LGB adolescent community (Jordan 2000; Marshal et al. 2008; Rosario et al. 1997; Weinberg et al. 1998). A 1998 study showed that in the previous 3 months, 63% of LGB youth versus 51% of heterosexual youth had used alcohol and 33% of LGB youth versus 22% of heterosexual youth had used marijuana (Weinberg et al. 1998). A more recent meta-analysis of the association between sexual orientation and adolescent substance use found that the average weighted effect size across 18 studies was moderate in size and significantly different from zero (Z = 35.31, p < .01) (Marshal et al. 2008).

The School Environment

School climate has long been shown to impact mental health and behavioral problems (Kasen et al. 1990), self-esteem (Hoge et al. 1990), and academic outcomes (Roeser et al.

1998). Recently, though, studies have begun to link a homophobic school climate to negative behaviors in LGB youth such as suicide (Morrison and L'Heureux 2001), negative psychological adjustment (Uribe and Harbeck 1991), and negative school outcomes (Murdock and Bolch 2005; Advocates for Children, Inc. 2005; Russell et al. 2001; Williams et al. 2005). In a study by Goodenow et al. (2006), the presence of school peer-support groups, the availability of counseling, and anti-bullying policies was associated with less peer victimization and lower rates of suicide attempts. Despite the connection between LGB and questioning student mental health and the school environment, LGB students typically receive little-to-no protection or support from school policies or administration (Beach et al. 1993; Greydanus and Dewdney 1985; Herek et al. 1991). In a national survey of 887 middle school and high school LGB students, 59.9% indicated that their school had a policy or procedure for reporting incidents of in-school harassment or assault (Kosciw and Diaz 2006). In a nationwide survey of state and local laws, only eight states and the Washington District of Columbia were found to have laws protecting students from harassment and dis crimination based on their sexual orientation (GLSEN 2004). Additionally, this report assigned 42 states failing grades for the absence of numerous protective factors including sufficient sexuality education, safe school laws protecting students based on sexual orientation, gay straight alliances in schools, and state and local laws protecting the rights of LGB citizens. It is obvious that more needs to be done at the state and local level to create school environments that are welcoming to LGB and questioning students.

Purpose and Hypotheses

The vast amount of negative outcomes in LGB and questioning youth and the preliminary literature on homophobic school climates require a better understanding of the school environment and its role in either protecting or harming students. The current study examines how school contextual factors such as school climate and homophobic teasing affect drug use, depression/suicidality, and truancy among LGB, sexually questioning, and heterosexual youth.

Based on the limited amount of extant literature and the previous study by Espelage et al. (2008), the following hypotheses were examined in this study. Students who identify as questioning will report more homophobic teasing and more general peer victimization than students who are LGB or heterosexual. Heterosexual students will also report the least amount of homophobic teasing and the least amount of general peer victimization. Students who identify as questioning will also report the most depressive/ suicidal feelings, the most truancy, the most alcohol/marijuana use, and the least positive school climate perceptions. Heterosexual students will report the highest levels of positive school climate, the least amount of depressive/suicidal feelings, the least amount of truancy, and the least amount of alcohol/marijuana use. Finally, it is hypothesized that positive school climate and experiencing homophobic teasing will moderate the association between sexual orientation and negative psychological and behavioral outcomes for questioning and LGB students.

Method

Since 1980, the Dane County Youth Assessment (DCYA) has been administered to 7–12th graders in regular 5-year intervals. The survey assesses the opinions, concerns, attitudes, behaviors, and experiences of youth in order to provide educators, service providers, parents, policy-makers, and funding bodies with information to be used for the planning and development of youth programs and public policies. In the fall of 2004, representatives from all Dane county school districts and funding bodies were invited to provide input on the assessment. Representatives from 14 of the 16 school districts, five funding organizations, and several researchers met over a 3-month period to determine the format and content of the 2005 questionnaire and critically reviewed the survey. Ultimately, 14 school districts, encompassing 27 middle schools and representing 80% of 7–12th grade students in the county, agreed to participate in the assessment. In the fall of 2004, representatives from the participating schools were trained to administer the survey. Completion of the survey was voluntary and anonymous by each student. All families in every district were given opportunities to review the surveys before their student participated in the process. Consent forms were mailed to parents of all registered students by the school district and parents were provided with phone numbers, addresses, and fax numbers to return the form if they did not wish their son/ daughter to participate in the project. Students were also asked to give their written consent by signing their name on the survey coversheet. Students were assured that their answers would remain anonymous, as their name would be converted to a number as soon as the surveys were collected and that no teachers or parents would have access to their answers. All schools had a return rate of 90–95% for the surveys. Those students who elected not to participate or who had consent forms sent back were removed and went to another supervised classroom. The entire procedure lasted approximately 40 minutes.

Participants

Participants included 7,376 7th (n = 3,552) and 8th (n = 3,824) grade students from a large Midwestern county. The sample was 72.7% White, 7.7% Biracial, 6.9% Black, 2% Hmong, 3.7% Hispanic, 3.2% Asian (not Hmong), and 2.2% reported "other." The sample was 50.7% female (n = 3,741) and 49.3% male (n = 3,635). Of the participants, 49.7% (n = 3,646) resided in a large city, 21.8% (n = 1,601) resided in a small city, 18.8% (n = 1,378) resided in a town or village, and 9.8% (n = 715) resided in the country. The survey was administered to all students who chose to participate during the school day. Youth who did not attend school on the day of the survey administration were not surveyed. Also, students who were educated in alternative settings, such as home schools, were not surveyed.

Measures

The 2005 Dane county middle school survey consisted of a wide range of established measures and single item indicators. Single item indicators were used in order to limit the number of survey items and in cases where the construct of interest is captured with one item. The anonymous youth survey consisted of 189 items.

Demographic Variables—Self-reports of sex, grade, and race were elicited to determine demographic characteristics.

Sexual Orientation—In cooperation with the school districts, the following item was approved to assess sexual orientation: "Do you ever feel confused about whether you are lesbian, gay, or bisexual?" The following options appeared after the stem: (a) never confused because I am straight, (b) rarely confused, (c) sometimes confused, (d) a lot confused, (e) always confused, or (f) never confused because I consider myself to be lesbian, gay, or bisexual. Participants who identified as straight (option a) comprised 75.2% (n = 5,549) of the sample, and we refer to this group as heterosexual. Participants who were sometimes, a lot, or always confused about whether they were LGB (options c through e) comprised 4.6% (n = 342) of the sample, and we refer to this group as sexually questioning. Participants who identified as LGB (option f) comprised 10.5% (n = 776) of the sample. Students who chose option b (rarely, 4.3%; n = 318) were not categorized because it was not possible to distinguish if this was because they identified primarily as LGB or as heterosexual. Students who did not respond (5.3%; n = 391) were also not categorized. No significant differences were documented between categorized and uncategorized individuals on the dependent variables or on demographics. Thus, subsequent analyses were conducted with the final sample of 6,667 middle school students.

Bullying Victimization—The victimization subscale of the University of Illinois Aggression Scales (Espelage and Holt 2001) was used to assess the occurrence of bullying victimization by peers. This scale is a well-established scale with strong evidence of reliability and construct validity. For all items, students are asked to indicate how often in the past 30 days certain things happened to them. Response options include 0 (*never*), 1 (*1 or 2 times*), 2 (*3 or 4 times*), 3 (*5 or 6 times*), and 4 (*7 or more times*). A principal axis factor analysis of the 18 items with a sample of 422 predominantly white middle school students supported a three-factor solution or three subscales (Espelage and Holt 2001). The victimization emerged as a distinct factor and this subscale contains four items assessing victimization by peers such as *other students called me names and I got hit and pushed by other students*. Higher scores indicate more self-reported victimization. Factor loadings ranged from .55 through .92 for these four items, which accounted for 6% of the variance, and a Cronbach alpha coefficient of .88 was obtained (Espelage and Holt 2001). In the present study, the Cronbach alpha coefficient was .89.

Homophobic Teasing—Homophobic teasing was assessed with one item, "In the past 12 months, have you ever been teased, threatened or harassed about being gay, lesbian or bisexual?" Response options include (0) *never*, (1) *rarely*, (2) *sometimes*, (3) *often*, and (4) *very often*.

Positive School Climate—An eight-item scale assesses how much students feel that they are getting a good education at their school and are respected and cared about by adults at their school. An example item is: *adults in my school care about me and how well I do in school.* Response options range from zero (*strongly agree*) through three (*strongly disagree*). Higher scores indicate a less positive school climate. This scale emerged in an EFA of the 2000 DCYA (Koenig et al. 2005) as distinct from a second scale that assesses race/ethnicity discrimination (not included in this study). A CFA conducted on eight items of the school climate scale indicated a fair fit for these data when considering multiple indexes of fit

(RMSEA = .09; GFI = .95; AGIF = .92; CFI = .95). The coefficient alpha was .78 for the positive school climate subscale.

Drug Use—Data from the 2000 Dane county youth survey were subjected to an EFA and these results were then used to evaluate measurement models using CFA from data collected in 2005. An EFA with maximum likelihood method of extraction and a Varimax rotation was used for this 11-item scale and a three-factor structure fit the data in the CFA. Examination of the scree plot suggested that a majority of the variance was accounted for by the first three factors. Factor 2 was of interest for this study and in the EFA had an eigenvalue of 1.89 and accounted for 16% of the total variance. Factor 2 consists of three items pertaining to the adolescent's use of alcohol and marijuana use and consists of the following items: *On average how often have you used marijuana in the last 12 months?*; *On average how often have you used beer/ wine/wine coolers in the last 12 months?*; *On average how often have you used hard liquor in the last 12 months?* Response options ranged from zero (*not at all*) through five (*daily*). This alcohol/marijuana scale yielded a Cronbach alpha coefficient of . 85 in this study.

Depression and Suicidality—Two items assessed depression/suicidality. Students were asked to report for the last 30 days: *How often have you felt like killing yourself?*; *How often have you been depressed or sad? Response options ranged from (1) never through (4)*all of the time. The greater the total score indicated greater depression/suicidality. A correlation of .48 was found between these two items.

Truancy—One item was asked to assess school truancy. Students were asked to report for the last 30 days: How often have you skipped school? Response options ranged from (1) never through (5) four or more times. Higher scores indicate greater school truancy.

Results

Differences in Demographics Across Sexual Orientation Status

Gender—Males and females did differ across the three sexual orientation groups, $\chi^2(2, n = 6,667) = 38.24$, p < .001. While 13.8% of males identified as LGB, only 9.5% of females identified as LGB. Males were slightly more likely to identify as questioning their sexual orientation, as 5.8% of males indicated they were questioning versus 4.5% of females. Both of these findings are supported by previous literature which indicates that males self-identify as LGB earlier than females. A study by D'Augelli et al. (2008) found that males are aware of same sex attraction earlier than females, at an average of 11.8 vs. 13.0 years. Another study found that males tend to self-label themselves as gay earlier than females, at an average age of 14.9 vs. 15.7 years (D'Augelli 2002). In our sample, nearly all students fell between the ages of 12 and 14, therefore, based on the previous literature, males were expected to identify as LGB at a greater rate than females. Gender was included in the analyses to investigate if an interaction between sexual orientation and sex was present. All results were non-significant, which suggested that gender did not moderate the effects of sexual orientation on the variables of interest in this study.

Race—Students also differed by race across the three sexual ori-entation groups, x^2 (14, n = 6,667) = 80.42, p < .001. While only 10.9% of White youth identified as LGB, 17.1% of Blacks, 15.4% of Native Americans, 14.8% of Hispanics, 13.3% of Multi-racial, 11.3% of Hmong, and 12.1% of Asian (non-Hmong) identified as LGB. A similar pattern emerged in the sexually questioning group, as only 4.1% of White youth identified as questioning while 9.4% of Blacks, 13.8% of Native Americans, 7.8% of Hispanics, 5% of Multi-racial, 9% of Hmong, and 8.2% of Asian (non-Hmong) identified as questioning their sexual orientation. Race was included in the analyses to investigate if an interaction between sexual orientation and race was present. All results were non-significant which suggested that race did not moderate the effects of sexual orientation on the variables of interest in this study. Of note, these figures should be interpreted with caution in some cases the cell sizes were small.

Differences in Experiences Across Sexual Orientation Status

The first set of hypotheses related to the differences among heterosexual, questioning, and LGB across the study outcomes. In order to examine differences across the three sexual orientation status groups, a series of multivariate analyses of variance (MANOVAs) were calculated and significant overall multivariate effects were followed by analyses of variance (ANOVAs). Effect size data are presented to evaluate statistical significance together with *p*-level values given the large sample size. Significant ANOVAs were then followed with Tukey's post hoc comparisons.

Homophobic Teasing and General Peer Victimization—It was hypothesized that students who identified as questioning their sexual orientation would differ from those students who were heterosexual and those students who identified as gay, lesbian, or bisexual on their experiences of homophobic teasing and general peer victimization. Thus, one MANOVA was conducted with the single homophobic teasing item (i.e., How often are you teased for being gay, homosexual, or bisexual?) and the general peer victimization scale as dependent variables and sexual orientation status as the independent variable. The decision to include the homophobic teasing item and the victimization scale in this MANOVA was based on research that shows general peer victimization is often directed at the targets perceived sexual orientation (Poteat and Espelage 2007). Furthermore, the homophobic teasing item was moderately correlated with the UIUC general victimization scale (r = .41; p < .001). An overall MANOVA effect was found for sexual orientation status (Wilks' $\lambda = .94$, p < .001, $\eta^2 = .03$), and univariate analyses indicated that the groups differed on the homophobic teasing and general victimization experiences (η^2 s = .05, .03). Table 1 indicates that on the homophobic teasing item, all three groups significantly differed from each other with questioning students reporting the most teasing, followed by LGB students, and heterosexual students reporting the least amount of teasing. On the general victimization scale, questioning students reported significantly greater victimization than either LGB or heterosexual students.

Depression/Suicidal Feelings, Alcohol/Marijuana Use, and Truancy—It was then hypothesized that questioning students would report the most depression/suicidal feelings, the most alcohol/marijuana, and more truancy than LGB and heterosexual students. One MANOVA was conducted with the depression/suicidal feelings scale, the alcohol/marijuana

scale, and the truancy item as the dependent variables and the sexual orientation status variable as the independent variable. These three variables were moderately correlated (rs = .28 through .39; ps < .001). An overall MANOVA effect was found for sexual orientation status (Wilks' $\lambda = .90$, p < .001, $\eta^2 = .05$), and univariate analyses indicated that the groups differed on all three outcomes ($\eta^2 = .04$, .06, .05). Table 1 indicates that sexually questioning students reported significantly more depression/suicidal feelings, greater use of alcohol/marijuana, and more truancy than the other two groups. Additionally, LGB students reported more alcohol/marijuana use and more truancy than heterosexual students, but did not report more depression/suicidal feelings.

Positive School Climate—It was then hypothesized that groups might differ on their perceptions of school climate, with questioning students finding the environment the least positive, followed by LGB students, and then heterosexual students. One ANOVA was conducted with the positive school climate scale as a dependent variable and sexual orientation as the independent variable. A significant ANOVA effect was found for sexual orientation status (F = 23.81, p < .001, $\eta^2 = .01$). Table 1 indicates that questioning students reported the lowest levels of positive school climate in comparison to the LGB and heterosexual students. There is no significant difference between the perceptions of school climate for LGB and heterosexual students.

Factors that Moderate the Impact of Sexual Orientation and Other Negative Outcomes

The next set of hypotheses related to homophobic teasing and positive school climate as moderators between sexual orientation status and outcomes. Specifically, it was hypothesized that school climate and homophobic teasing would buffer the association between sexual orientation and depression/suicidal feelings, alcohol/marijuana use, and truancy. Two ANOVAs were calculated for each outcome variable with the categorical variable school climate and the categorical homophobic teasing variable being used as independent variables along with sexual orientation. Tertial splits of the school climate scale and homophobic teasing scale were used to create categorical variables with three levels.

Depression/Suicidality Feelings—In the first ANOVA, depression/suicidal feelings scale was the dependent variable and sexual orientation and school climate were the independent variables. The interaction between sexual orientation and school climate was significant indicating a positive school climate buffered the association between sexual orientation status and high levels of depression/suicidal feelings (see Fig. 1). As can be seen in Fig. 1, questioning students who had the lowest perception of school climate reported that highest level of depression/suicidality feelings, greater than heterosexual or LGB students. What is striking is that depression/suicidal feelings are lowest for all groups when there is a positive climate. Also, across all levels of school climate, there are no significant differences in levels of depression/suicidality between LGB and heterosexual youth. In the second ANOVA, depression/suicidal feelings scale was the dependent variable and sexual orientation and the amount of homophobic teasing experienced were the independent variables. The interaction between sexual orientation and homophobic teasing was again significant indicating that depression/suicidal feelings are moderated by the amount of homophobic teasing students experience (see Fig. 2). As can be seen in Fig. 2, homophobic

teasing shows a moderating influence on depression/suicidal feelings. LGB students who did not experience homophobic teasing reported the lowest depression/suicidality feelings of all student groups, nearly identical to heterosexual students. However, among LGB and questioning students who often experienced high rates of homophobic teasing reported the highest amount of depression/suicidality and questioning students with moderate levels of teasing reported higher rates of depression/suicidality feelings than LGB students who experienced moderate levels of teasing.

Alcohol/Marijuana Use—In the first ANOVA, the alcohol/marijuana use scale was the dependent variable and sexual orientation and school climate were the independent variables. The interaction between sexual orientation and school climate was significant indicating a positive school climate moderated the differences among sexual orientation status and high levels of alcohol/marijuana use (see Fig. 3). As can be seen in Fig. 3, the moderating influence of school climate is evident. LGB and questioning students who reported a positive school climate also report lower levels of alcohol/marijuana use. In fact, LGB students who perceive the school climate to be positive report alcohol/marijuana use equivalent to heterosexual students. In the second ANOVA, sexual orientation and the amount of homophobic teasing experienced were the independent variables. The interaction between the two independent variables was again significant indicating that alcohol/marijuana use is moderated by the amount of homophobic teasing students experience, with more teasing leading to greater use (see Fig. 4). Both LGB and questioning students who often experienced homophobic teasing indicated a dramatically higher rate of alcohol/marijuana use over heterosexual students.

Truancy—In both of these ANOVAs, truancy was used as the dependent variable. In the first ANOVA, sexual orientation and school climate were the independent variables. The interaction between sexual orientation and school climate was significant, indicating a positive school climate might buffer the association between sexual orientation status and high levels of truancy (see Fig. 5). As can be seen in Fig. 5, questioning students in the lowest positive school climate group reported higher truancy rates than both LGB and heterosexual students. However, the moderating influence of school climate is evident. As positive school climate perceptions increase in questioning students, truancy decreases. In the second ANOVA, sexual orientation and the amount of homophobic teasing experienced were the independent variables. The interaction between these variables was again significant indicating that truancy is moderated by the amount of homophobic teasing students experience, with greater homophobic teasing leading to high rates of truancy (see Fig. 6). As can be seen in Fig. 6, LGB and questioning students who reported high rates of homophobic teasing indicated the highest rates of truancy. However, LGB students who report never experiencing homophobic harassment have rates of truancy nearly as low as heterosexual students.

Discussion

This study highlights the significance of school environment for all children and, in particular, LGB and sexually questioning children. The middle school years have a tremendous impact on the social and academic development of adolescents. Middle schools

have the power to either improve psychological functioning of youth or compromise it. This study demonstrates that the high rates of negative outcomes for LGB and questioning students might, in fact, be preventable with a positive school climate and absence of homophobic teasing (D'Augelli 2002; Eccles et al. 1993; Goodenow et al. 2006; Hershberger and D'Augelli 1995; Mufoz-Plaza et al. 2002; Russell et al. 2001). In our study, all children regardless of sexual orientation reported the lowest levels of depression/suicidality, the lowest levels of alcohol/marijuana use, and the lowest levels of truancy when in a positive school climate and when not experiencing homophobic teasing. It is noteworthy how similar LGB student scores are to heterosexual students when in a positive school climate and when not experiencing homo-phobic harassment. This suggests that schools with low homophobic teasing and a positive school climate will drastically reduce the prevalence of negative outcomes in LGB youth.

Beyond demonstrating the importance of the environment on students, this study is unique in its ability to shed light on the psychological and educational issues of questioning students. More research is necessary to understand youth who are questioning their sexual orientation (Williams et al. 2005). In this examination of this population, it was found that questioning youth report higher rates of truancy, depression/suicidality feelings, and alcohol/marijuana use than not only heterosexual students, but LGB students as well. These results suggest that questioning youth are equally or even more important to consider than LGB youth in terms of their higher prevalence rates of negative outcomes. For example, this study found that in both peer victimization and depression/suicidality feelings, LGB youth and heterosexual youth were not significantly different from each other. In both of these measures, however, questioning children scored significantly higher in terms of negative outcomes than either LGB or heterosexual youth. These findings imply that questioning youth may be at a higher risk for negative outcomes than LGB youth.

Although most studies have not specifically considered questioning youth, this study supports the previous research that has indicated that LGB students score higher than heterosexuals on a myriad of negative outcomes such as truancy (Massachusetts Department of Education 2004; Rivers 2000), depression/suicidality (D'Augelli 2002; Elliot and Kilpatrick 1994; Hershberger and D'Augelli 1995; Rivers 2004), and alcohol/drug use (Orenstein 2001; Rosario et al. 1997). This study also confirms the previous research that points to school environment as a moderator of negative outcomes (Goodenow et al. 2006; Russell and McGuire 2008; Russell et al. 2001). And finally, this study confirms Espelage et al. (2008) finding that students questioning their sexual orientation are worse off than LGB students in terms of their scores on various negative outcomes.

One of the strengths of this study is the empirical nature of this investigation, using a large sample of middle school students. Much of the research on LGB adolescents has relied on convenience samples of LGB youth. These convenience samples are typically comprised of youth who self-identify as LGB and/or might be in a community LGB support group. These youth may be predisposed to having greater levels of pathology. By pulling the data from a large health survey, which includes all middle school aged children in the sample, the findings of this study are more reliable. Additionally, the large sample size also allowed a first glimpse at racial minorities who identify as LGB and questioning. It is noteworthy that

in this study racial minorities tended to identify as LGB and questioning at higher rates than White students, although the small sample size of non-white students makes it difficult to interpret this phenomenon. Another methodological strength of the study was its use of a sexual orientation measure that did not force youth into choosing either heterosexual or LGB. Although the sexual orientation measure made it impossible to tease out differences between lesbian, gay, and bisexual youth, the sexual orientation measure did offer the opportunity to examine the individual differences between LGB, heterosexual, and questioning youth. Separating LGB, heterosexual, and questioning youth provides for a much richer analysis of the data. The last strength of this study is its strengths-based approach by exploring potential moderators of these outcomes.

Despite these strengths, it is important to realize that this study is limited in its ability to explain why questioning youth have higher rates than LGB students on these negative outcomes. This is an area in which future research must explore, as this is only a first step. Although this study gives little empirical insight into why this phenomenon is occurring, an interesting hypothesis for future research to consider is that a confirmed LGB identity may buffer negative outcomes. Perhaps a certain amount of social support is given to students with a confirmed identity from those who might be questioning. Questioning youth might not be able to find the same amount of social support as they cannot fully identify with either the LGB youth or the heterosexual youth. Another possible hypothesis to explore is that a certain amount of interpersonal security and maturity is necessary to identify as LGB. Perhaps the youth who identify as LGB are more mature or stable than questioning youth, or come from more supportive environments where they have had the opportunity to fully explore their identity.

Another weakness of this study is its reliance on individual perceptions of school climate and homophobic teasing. By not aggregating student perceptions by school and conducting multilevel analysis, it is difficult to say if our findings are from a true school-level effect or if there is an underlying construct influencing both perceptions of school climate and various negative outcomes. It is important for future research to utilize multilevel models and more fully explore how characteristics of schools, such as the school climate and homophobic teasing, impact students.

The most important lesson that can be taken from this study is that schools have a responsibility to consider the needs of their sexual minority students. In this study, 15.1% of a sample of nearly 7,000 students identified as either questioning their sexual orientation or LGB. When that much of the student body falls within a population that is experiencing negative outcomes, school administrators have a responsibility to take action.

This study highlights that environmental factors such as positive school climate and low levels of homophobic teasing can reduce the levels of negative outcomes for these youth. Considering these findings, it is suggested that school administrators focus not only on the prevention of bullying among youth, but the prevention of homophobic teasing in particular. Additionally, it is important to address the attitudes that both teachers and students hold toward sexual minorities as well as implement school policies that protect students from homophobic bullying, as these factors may contribute to school climate. These interventions

are necessary as early as middle school as 7–8th graders are clearly dealing with these issues.

Creating a more positive school environment where homophobic teasing is not tolerated is an important intervention that can improve the psychological outcomes for all students and not just those who are LGB or questioning.

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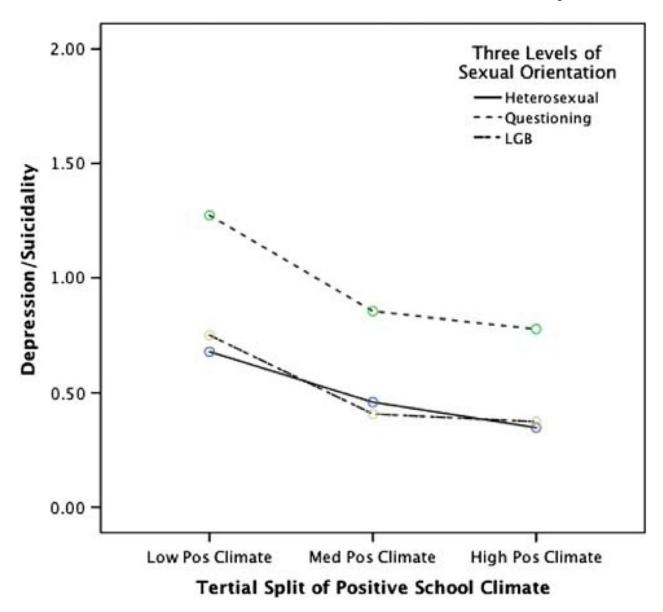


Fig. 1. Moderator effects of positive school climate on the relation between sexual orientation and depression/suicidality

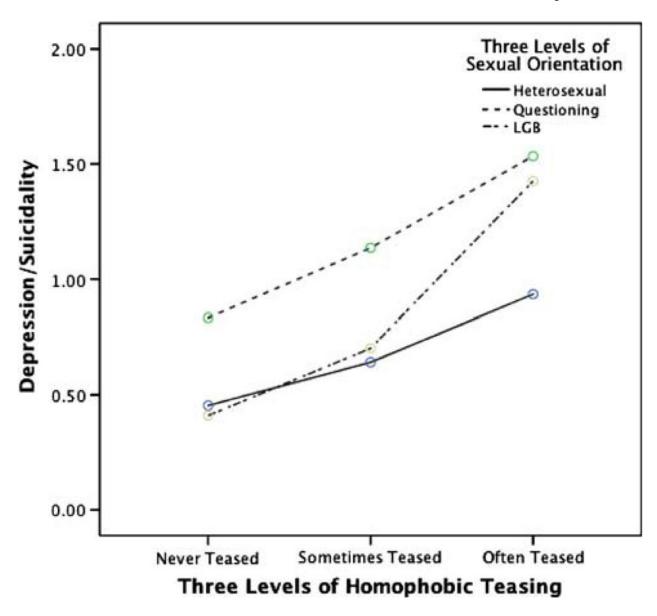


Fig. 2. Moderator effects of homophobic teasing on the relation between sexual orientation and depression/suicidality

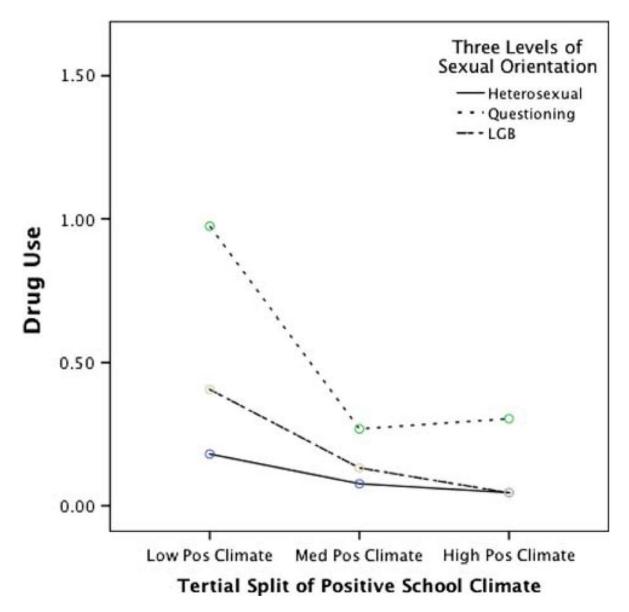


Fig. 3. Moderator effects of positive school climate on the relation between sexual orientation and drug use

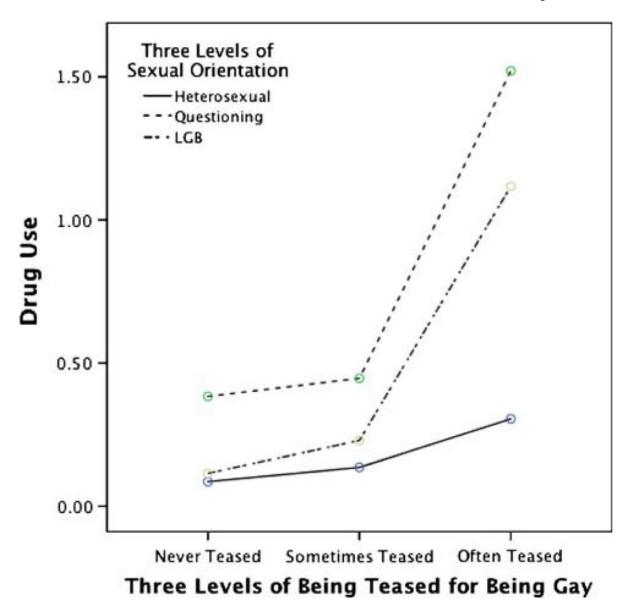


Fig. 4. Moderator effects of homophobic teasing on the relation between sexual orientation and drug use

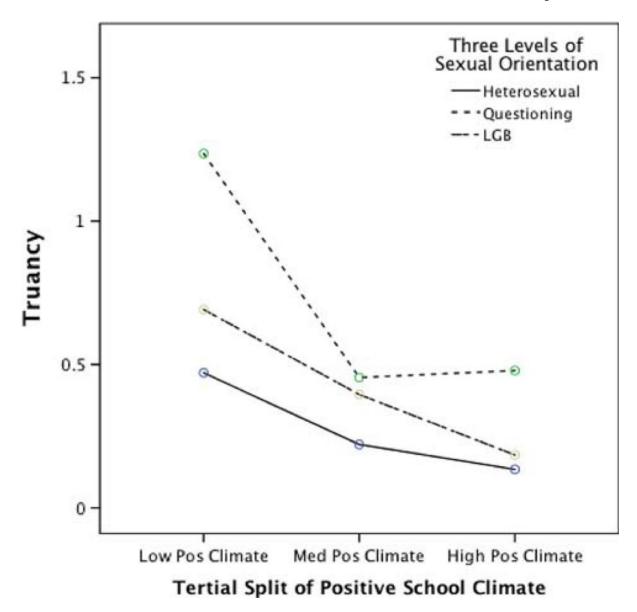


Fig. 5. Moderator effects of positive school climate on the relation between sexual orientation and truancy

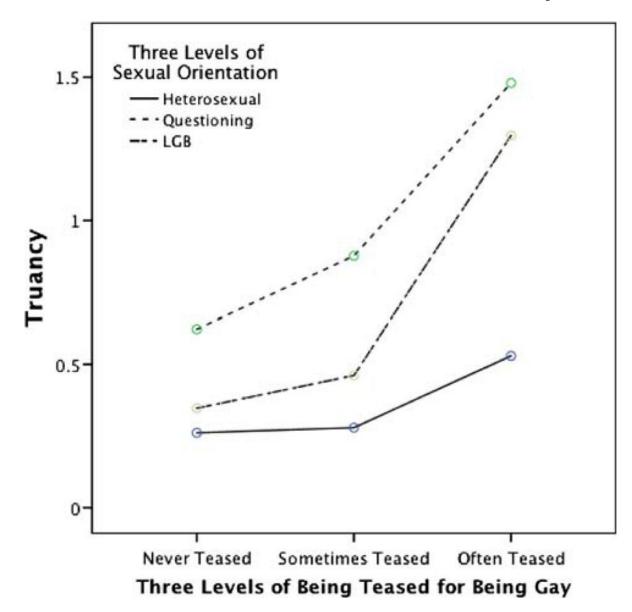


Fig. 6. Moderator effects of homophobic teasing on the relation between sexual orientation and truancy

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Table 1

Sexual orientation group differences on study measures

Variables	Straight $(n = 5,379)$	5,379)	Questioning $(n = 329)$	(n = 329)	Gay/lesbian bi	Gay/lesbian bisexual $(n = 749)$	ANOVA	ı
	M	SD	M	SD	M	SD	\boldsymbol{F}	μ
Homophobic teasing	.28 ^{a,b}	.75	1.16^{ac}	1.51	.45 ^{b,c}	1.03	179.21 * .05	.05
Peer victimization	.61	88.	1.29^{ac}	1.35	.64°	86:	84.41*	.03
Depression/suicidal feelings	.49 ^a	.63	1.06^{ac}	1.00	.52°	.71	116.63*	.04
Alcohol/marijuana	$.10^{a,b}$.34	.64 ^{ac}	1.26	$.20^{b,c}$	89:	206.66*	90.
Truancy	.28 ^{a,b}	.75	1.18^{ac}	1.52	.45 <i>b.c</i>	1.03	182.70*	.05
School climate	1.98 ^a	.78	1.70^{ac}	.80	1.92°	.56	23.81* .01	.01

b Means for straight and gay/lesbian/bisexual are significantly different, $p{<\!\!\!<}01$

 $^{^{}C}$ Means for questioning and gay/lesbian/homosexual are significantly different, $p{<}.01$

^{*} p<.01