

School Environment and the Mental Health of Sexual Minority Youths: A Study Among Dutch Young Adolescents

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Shocking reports appear in the press with some regularity about the bullying of adolescents who are gay or lesbian or who are perceived as such, sometimes resulting in suicide attempts and even actual suicides.^{1–3} Such reports draw attention to the role of schools: what can schools do to protect sexual minority youths?

Studies conducted in various countries have shown that sexual minority youths are at disproportionate risk for several negative health outcomes, including victimization, witnessing and perpetrating violence, substance use, sexual risk behaviors, and suicide ideation and attempts.^{4–9} A recent Dutch study of younger adolescents (13- to 15-year-olds) showed that those experiencing same-sex attractions had significantly higher levels of depression and lower self-esteem than did their peers not experiencing same-sex attractions.¹⁰

Sexual minority youths come of age in a society that is often hostile to their interests and needs. Increased health problems in these youths are usually understood as a consequence of discrimination by peers and family. Victimization in high school has been shown to be positively associated with mental health and traumatic stress symptoms in sexual minority youths.¹¹ In a survey of Illinois middle school students, being the target of homophobic verbal harassment was associated with higher levels of anxiety and depression, personal distress, and a lower sense of school belonging among boys and higher levels of withdrawal among girls.¹²

Homophobic bullying by classmates can start at an early age, as suggested by the April 2009 suicides of 2 boys, both 11 years old, in Massachusetts and Georgia, each bullied at school for being perceived as gay.¹² In a study involving a community-based sample of self-identified lesbian, gay, and bisexual youths (aged 15–19 years) who were interviewed about their lifetime experiences of sexual orientation victimization, the mean ages at which verbal victimization began were 11.4 years for male participants and 14.4 years for female

Objectives. We examined whether structural elements of the school environment, in particular cultural pluralism and consistency and clarity of school rules and expectations of students, could mitigate the risk for mental health problems among young sexual minority adolescents.

Methods. Data were collected in 2008 by means of a computer-based questionnaire completed at school by 513 young Dutch adolescents (12–15 years old) during regular class times. Eleven percent of these students, who were enrolled in 8 different schools, reported having at least some feelings of same-sex attraction.

Results. Adolescents with same-sex attractions in schools where rules and expectations were experienced as less consistent and clear reported significantly more mental health problems than their peers with no same-sex attractions in the same schools. Such differences were absent in schools where rules and expectations were experienced as more consistent and clear. There were no such effects of cultural pluralism.

Conclusions. Our results suggest that schools with consistent and clear rules and expectations mitigate the risk for mental health problems among students with same-sex attractions and underscore the importance of structural measures for the health of sexual minority youth. (*Am J Public Health.* 2010;100:1696–1700. doi:10.2105/AJPH.2009.183095)

participants.¹³ The corresponding mean ages at which physical victimization began were 13.1 years and 14.2 years.¹³ School was reported as the setting for 72% of first experiences with verbal victimization and 56% of first experiences with physical victimization.¹³

A few studies suggest that structural factors may affect how young people feel at school. In one investigation, students who reported having a Gay–Straight Alliance (GSA) at school, knowing where to go for information and support related to sexual orientation and gender identity, and having lesbian, gay, bisexual, and transgender (LGBT) issues included in their school curriculum were more likely to report feeling safe at school than were those who did not have these resources.¹⁴

Another study showed that sexual minority students in schools that have a comprehensive harassment policy (i.e., specifying sexual orientation or gender identity and expression) are less frequently verbally harassed and hear fewer homophobic remarks than students in schools with no policy or a policy not

specifically inclusive of LGBT people; students reported that school personnel were also more likely to intervene upon hearing homophobic remarks in these schools.¹⁵ Feeling safe at school seems to be a protective factor for sexual minority youths. In one study, feeling safe at school attenuated the association between sexual orientation and suicidal ideation and attempts.¹⁶

Further support for the importance of structural factors comes from a cross-sectional study that compared rates of victimization and suicidality among sexual minority adolescents in schools with and without GSAs and other school programs.¹⁷ Using data from the Massachusetts Youth Risk Behavior Survey and controlling for student demographic characteristics and school characteristics, Goodenow et al. showed that sexual minority youths in Massachusetts schools with GSAs were less than half as likely as those in other schools to report dating violence, being threatened or injured at school, or skipping school as a result of fear; in addition, they were less than one third as likely to report multiple suicide attempts in the past year.

Goodenow et al. also found that peer support groups other than GSAs, nonacademic counseling, school antibullying policies, a student judiciary, staff training on sexual harassment, and peer tutoring systems were associated with lower rates of victimization and suicidality among sexual minority students. Sexual minority youths from schools where there was a perception that school staff could be approached about a problem were less likely to report multiple suicide attempts, and those from schools where antibullying policies were in place were less likely to report single or multiple suicide attempts.

Building on existing knowledge, we explored whether a protective school climate offsets negative health outcomes among young adolescents. In particular, we hypothesized that when schools support cultural pluralism and have consistent and clear rules and expectations, the relationship between same-sex attraction and mental health will be attenuated.

METHODS

Data were collected in 2008 at 8 secondary schools in Amsterdam, the Netherlands. These schools are members of the VIOS (*Veiligheid In en Om School*, or Safety In and Around School) initiative and were approached through the initiative. VIOS is a network of 72 secondary schools in Amsterdam exploring ways to improve safety in and around the school environment for students in general. Schools participating in the study differed in their general orientation (prevocational, general, and preacademic). In total, 518 high school students took part in the study. Only students in years 1, 2, and 3 (age range: 12–15 years) were invited to participate.

Procedure

To obtain consent from parents, the board of each school sent a letter to all parents containing information about the date and purpose (school safety and students with same-sex attractions) of the study. The letter made clear to parents that students' participation in the study was voluntary. If parents did not want their child to participate, they could indicate this by returning the letter. Seven parents refused to allow their child to participate.

Data were gathered during regular class times by means of a questionnaire administered via a computer (or, in the few cases in which computers were not available, on paper) in the presence of one of the authors (Marijke Metselaar) and one of the respective school's instructors. Students were reminded of the voluntary nature and confidentiality of their participation. Seating in the classrooms was arranged as if students were taking an individual exam; this arrangement, meant to prevent cheating, created sufficient privacy.

Measures

Sexual attraction was assessed with the question "Do you feel sexually attracted to someone of your own sex?" (1=very often, 5=never), which has been used successfully in previous research on homosexual youths in the Netherlands.^{10,18} Participants who reported never having been attracted to someone of the same sex were grouped in the no same-sex attraction category, and those who felt "very often," "often," "frequently," or "sometimes" sexually attracted to someone of the same sex were grouped in the same-sex attraction category.

Mental health was assessed with items from a shortened version of the Brief Symptom Inventory^{18–20} asking about the occurrence of 24 symptoms in the preceding week. Items were rated on a 5-point scale ranging from 1 (not at all) to 5 (extremely; $\alpha=0.93$), and mean scores were used as an overall indicator of mental health problems.

We used 2 subscales from the student version of the Inventory of School Climate²¹ to assess support for cultural pluralism (e.g., "Your teachers show that they think it is important for students of different races and cultures at your school to get along with each other") and consistency and clarity of rules and expectations (e.g., "Students understand what will happen to them if they break a rule"); each subscale consisted of 4 items. Internal consistencies were 0.63 and 0.84, respectively.

To explore whether participants' ratings of support for cultural pluralism and consistency and clarity of rules at their schools were a reflection of actual differences between schools or were due to random variation, we conducted univariate analyses of covariance with schools as the independent factor, participants' ratings of school climate as dependent

variables, and gender, age, ethnicity, and social desirability as covariates to control for between-subject differences related to perceptions of school climate. These analyses indicated significant differences between schools (cultural pluralism: $F_{7, 467}=3.00$; $P<.01$; $\eta^2=0.04$; consistency and clarity of rules: $F_{7, 467}=4.07$; $P<.001$; $\eta^2=0.06$). Inspection of the schools' mean scores indicated that these results were not the effect of 1 or 2 outliers; the schools' mean scores were evenly distributed. In summary, the assessment of school climate based on students' self-reports suggests that the participants' scores reflected real differences between schools.

We used a social desirability scale with a true–false response format to assess participants' tendency to provide socially desirable responses.²² The internal consistency of this scale was 0.86. A similar measure of social desirability has been used elsewhere with LGB youth.²³

Data Analysis

Multiple regression analyses were conducted to test the hypothesis that school culture has a moderating effect on the relationship between same-sex attraction and mental health. Only participants with valid data on all relevant variables were included in the analyses; missing data primarily resulted from girls with no same-sex attractions for whom no mental health scores were available. Independent variables were gender, same-sex attraction, support for cultural pluralism, and consistency and clarity of rules and expectations, along with the interactions of same-sex attraction with gender, support for cultural pluralism, and consistency and clarity of rules. Age and social desirability were included as control variables. All analyses were conducted with SPSS version 16.0 (SPSS Inc, Chicago, IL).

RESULTS

Of the 518 participants, 513 (99.0%) reported whether or not they had experienced same-sex attraction (the 5 participants who did not answer this question were excluded from subsequent analyses). Approximately 11% ($n=57$) of these 513 adolescents reported having experienced same-sex attraction. Same-sex attraction was not significantly more

prevalent among boys or girls: 24 of the 222 boys (10.8%) and 33 of the 291 girls (11.3%) reported feelings of same-sex attraction ($\chi^2=0.04$; $P>.05$).

Demographic characteristics of the sample are shown in Table 1. The average age was 14.02 years (SD=1.07). The ethnic composition of the sample was 55.7% Dutch and 44.3% non-Dutch. Of the participants with a non-Dutch ethnic background, 23.9% were Surinamese, 19.1% were Moroccan, 15.1% were Turkish, and 5.2% were Antillean; ethnic background was not specified for the remaining 36.7% of the non-Dutch sample. More than one third (37.6%) of the participants attended prevocational secondary schools, and 62.4% attended general secondary or preacademic schools. Twenty-nine percent of the participants were first-year students, 30.8% were second-year students, and 40.4% were third-year students.

Same-sex attraction was related to age: participants who reported same-sex attractions were older than those who did not. No significant differences were found in the percentages of participants with same-sex attractions in relation to ethnic background or type of school.

As can be seen in Table 2, gender and sexual attraction were significantly related to mental health. Girls reported more symptoms than

boys; adolescents with feelings of same-sex attraction reported more symptoms than did adolescents without feelings of same-sex attraction.

There was a main effect of support for cultural pluralism on mental health, with students experiencing more support in their school for cultural pluralism reporting lower levels of symptoms (Table 2). The same main effect was found for consistency and clarity of rules, with differences in the same direction.

We also found a significant effect of the interaction between same-sex attraction and consistency and clarity of rules and expectations on mental health. To interpret this interaction effect, we performed a median split on consistency and clarity of rules and expectations (median=3.60). Adolescents with same-sex attractions in schools with low scores on the consistent and clear rules and expectations scale reported significantly more mental health problems than did their peers with no same-sex attractions in the same schools (same-sex attraction: mean=2.35; SD=1.04; no same-sex attraction: mean=1.71; SD=0.58; $F_{1, 259}=27.31$; $P=.001$; $\eta^2=.10$; controlled for social desirability and age). We did not find such differences between adolescents with and without same-sex attraction in schools that were rated more highly with regard to

consistent and clear rules and expectations (same-sex attraction: mean=1.77; SD=0.78; no same-sex attraction: mean=1.63; SD=0.66; $F_{1, 203}=0.80$; $P=.37$; $\eta^2=.00$; controlled for social desirability and age).

DISCUSSION

Our findings suggest that schools where rules and expectations are consistent and clear offset the risk of mental health problems among youths with same-sex attractions. As hypothesized, in the schools identified as having more consistent and clear rules and expectations, adolescents with and without same-sex attraction did not differ in terms of their mental health status. We did find such differences in schools characterized by less consistent and clear rules and expectations; in these schools, adolescents with same-sex attractions reported more mental health problems than adolescents without such attractions.

We did not find support for our hypothesis that support for cultural pluralism at schools would have the same protective effect on adolescents with same-sex attractions. Regardless of feelings of same-sex attraction, support for cultural pluralism and consistency and clarity of rules were both independently related to students' mental health status. Consistent with prior research, adolescents experiencing same-sex attractions in our sample reported more mental health problems than those without experiencing such feelings; also, girls reported more mental health problems than did boys.

Our results are also consistent with research suggesting the protective benefits of school policies and programs that affirm and support sexual minority youths. Much of this research, however, has focused on policies or programs, such as harassment policies or GSAs, that are designed with sexual minority youths in mind and from which self-identified LGB youths may derive different benefits than might those who are not openly LGB. We assessed school climate in a broader way, and our findings suggest that an environment in which diversity is respected more generally and in which rules are clear and fairly applied will benefit adolescents with as well as without same-sex attractions.

TABLE 1—Study Sample Characteristics, by Same-Sex Attraction (SSA): Amsterdam Secondary Schools, 2008

	No SSA	SSA	Overall	χ^2 or F^a	P
Gender, % (No.)				0.04	.85
Male	43.4 (198)	42.1 (24)	43.3 (222)		
Female	56.6 (258)	57.9 (33)	56.7 (291)		
Age, y, Mean (SD)	13.97 (1.07)	14.36 (0.88)	14.02 (1.07)	6.62	.01
Ethnic background, % (No.)				0.01	.91
Dutch	55.7 (239)	54.9 (28)	55.6 (267)		
Non-Dutch	44.3 (190)	45.1 (23)	44.4 (213)		
School type, % (No.)				5.7	.06
Prevocational	36.2 (165)	49.1 (28)	37.6 (193)		
General	8.8 (40)	1.8 (1)	8.0 (41)		
Preacademic	55.0 (251)	49.1 (28)	54.4 (279)		
Class, % (No.)				2.16	.34
First year	29.8 (135)	21.1 (12)	28.8 (147)		
Second year	30.0 (136)	36.8 (21)	30.8 (157)		
Third year	40.2 (182)	42.1 (24)	40.4 (206)		

^aThe χ^2 test was used for all variables except age.

TABLE 2—Results of Multiple Linear Regression Analysis of Self-Reported SSA and School Environment on Mental Health Problems: Amsterdam Secondary School Students, 2008

	b (SE)	B	p
Social desirability	-0.40 (0.10)	-0.17	<.001
Age	0.03 (0.03)	0.04	.36
Gender	0.13 (0.06)	0.10	<.03
SSA	0.32 (0.10)	0.15	<.01
SSA×Age	-0.11 (0.09)	-0.05	.25
SSA×Gender	0.29 (0.19)	-0.07	.13
Support for cultural pluralism	-0.12 (0.05)	-0.10	<.05
Consistency/clarity of rules	-0.10 (0.04)	-0.11	<.05
SSA×Support for Cultural Pluralism	-0.17 (0.15)	-0.06	.27
SSA×Consistency/Clarity of Rules	-0.27 (0.11)	-0.12	<.05
Model statistics			
R ²	0.15		
F	8.24		
Model P value	<.001		

Note. SSA = same-sex attraction.

We used a measure of school climate that is, to our knowledge, unique in the literature on sexual minority youths. Past research has focused on documenting the school experiences of sexual minority youths or linking individual self-reports of victimization at school to mental health outcomes and risk behaviors. Other studies have examined how school policies are correlated with harassment of sexual minority students²⁴ and how social support moderates school performance in sexual minority youths.²⁵ By surveying samples of students from 8 different schools and testing for climate differences between the schools, we were able to link climate differences to different outcomes for youths with same-sex attractions in these schools.

This study involved several limitations. For example, our operationalization of same-sex sexuality may have resulted in a diverse group of sexual minority students, some of whom may not have identified as gay or lesbian at the time of the study (and perhaps never will) and some of whom may have been more attracted to members of the opposite sex than to those of the same sex. Given the age of the adolescents who took part in our study, we believed that our operationalization was the most appropriate. We expect, however, that using this operationalization limited our chances of

finding significant differences. Furthermore, our operationalization of school climate was based not on direct observations but on reports of the participants; the fact that between-school variance was significant, however, supports our interpretation that these self-reports reflected actual differences between schools.

In addition, our study design did not allow for causal statements; although we believe that it is more plausible that perceptions of school climate affect mental health, we cannot rule out the possibility that positive mental health results in a more optimistic evaluation of school climate. The latter interpretation cannot, however, explain the interaction effect of school climate and same-sex attraction on mental health. Finally, the schools that participated in the study were not randomly selected and do not represent all secondary schools in the Netherlands. The relative homogeneity of the schools in this study (i.e., they were all located in Amsterdam and were part of the VIOS initiative) makes the finding of an interaction effect even more compelling. It is, however, unclear whether the same interaction effect would be found for schools that are likely to be more conservative, such as schools in parts of the Netherlands other than Amsterdam or in other countries.

Our findings strongly suggest that, as indicated by others,²⁶ it is of crucial importance to explore how structural factors contribute to health disparities in relation to sexual orientation or how such factors might mitigate these disparities. Furthermore, our findings suggest that although policies focused on adolescents with same-sex attractions might be helpful, these youths might profit from more general measures as well, the same measures that support youths without same-sex attractions. ■

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This article was accepted April 15, 2010.

Contributors

T. G.M. Sandfort, H.M.W. Bos, and M. Metselaar originated the study. T. G.M. Sandfort and K. L. Collier led the writing of the article. Data collection and analysis was conducted by H.M.W. Bos and M. Metselaar in consultation with T. G.M. Sandfort. All of the authors contributed ideas, interpreted findings, and reviewed drafts of the article.

Acknowledgments

Preparation of this article was supported by National Institute of Mental Health (center grant P30-MH43520; A. A. Ehrhardt, principal investigator) to the HIV Center for Clinical and Behavioral Studies, New York State Psychiatric Institute and Columbia University.

Human Participant Protection

Because no intervention was involved, Dutch law did not require informed consent from participants. However, to obtain consent from parents, the board of each school sent a letter to all parents containing information about the date and purpose (school safety and students experiencing same-sex attraction) of the study. The letter made clear to parents that students' participation in the study was voluntary. If parents did not want their child to participate in the study, they could indicate this by returning the letter.

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