

Bullying and Quality of Life in Youths Perceived as Gay, Lesbian, or Bisexual in Washington State, 2010

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Being victimized by bullying is highly prevalent in school-aged youths, especially during middle school.¹⁻³ In 2008, 29% of all 8th graders in Washington State reported being bullied in the past month.⁴ Being bullied has been linked to risky physical health behaviors, depression and mental illness, and poorer quality of life (QOL).^{1,5-7} Moreover, being bullied is a marker for serious violent, aggressive, and retaliatory behavior.^{8,9} Recent incidents of youths committing suicide after being bullied or harassed have drawn strong media and political attention, including from President Obama.¹⁰

Several studies have examined specific targets of bullying, finding youths perceived as gay, lesbian, bisexual, or transgendered particularly vulnerable.^{11,12} Being part of a sexual minority group in a heterosexually-normative environment carries its own risks of poor health, unhealthy behavior, and impaired QOL because of stigmatization and social mistreatment.^{11,13-16} Middle and high school years are when many youths establish their sexual identities and are most vulnerable to bullying. Accordingly, this is a critical period in which bullying because of perceived sexual orientation (PSO) should be properly quantified and examined. Several of the recent high-profile youth suicides have been as a result of harassment because of PSO, thus underscoring the critical importance of these issues.^{17,18}

Assessing domains of youth QOL in relation to whether students have experienced bullying because of PSO might help to identify specific areas to address in interventions. Moreover, knowing the prevalence of bullying because of PSO as well as the extent of depressive symptoms present in different demographic subgroups is useful for policy makers and organizations interested in monitoring and evaluating prevention efforts.

We report bivariate and multivariate analyses examining the association between self-reported bullying because of PSO and QOL among middle and high school students in

Objectives. We examined the association between perceived sexual orientation (PSO), bullying, and quality of life (QOL) among US adolescents.

Methods. We analyzed data from the 2010 Washington State Healthy Youth Survey collected in public school grades 8, 10, and 12 (n = 27 752). Bullying status was characterized as never bullied, bullied because of PSO, or bullied for other reasons. Survey-weighted regression examined differences in QOL, depressed mood, and consideration of suicide by bullying status.

Results. Among male students, 14%, 11%, and 9% reported being bullied because of PSO in 8th, 10th, and 12th grades, respectively; and among female students, 11%, 10%, and 6%. In all gender and grade strata, being bullied because of PSO was associated with lower QOL scores and increased the odds of depressed mood or consideration of suicide. Moreover, the magnitudes of these associations were greater than for being bullied for other reasons.

Conclusions. Bullying because of PSO is widely prevalent and significantly affects several facets of youth QOL. Bully-prevention or harm-reduction programs must address bullying because of PSO. (*Am J Public Health.* 2013;103:1255-1261. doi:10.2105/AJPH.2012.301101)

Washington State, and we extend the literature by addressing these associations in a large population-based sample. Our findings help inform the need for intervention and suggest useful Healthy People 2020 priorities for collecting and monitoring information about bullying because of PSO.

METHODS

In this cross-sectional cohort study, we analyzed 2010 Washington State Healthy Youth Survey (HYS) data collected from public school 8–12 grades (n = 27 752). Since 2002, the HYS has been administered in English to youths in Washington State classrooms in October of every other year. The HYS uses a clustered sampling design in which schools are randomly selected and all students in participating schools are invited to complete the survey. For 8th, 10th, and 12th grades, respectively, the 2010 response rates were 90%, 85%, and 81% for eligible school participation, (% of schools that participated) and 77%, 67% and 53% for student participation (% of students who participated within participating schools).⁴ Before the survey is

administered, students are informed that their answers will remain anonymous.

Students were excluded from the study sample if they had missing data for the primary independent variable (< 1%) or dependent variables interest. For the 3 study outcomes, the analysis sample sizes were 24 949 (QOL), 26 542 (depressed mood), and 26 523 (consideration of suicide).

Variables

Independent Variable. Since 2006, the HYS has asked youths about bullying because of PSO. The primary independent variable was a binary measure derived from the survey question: “In the past 30 days, how often were you bullied, harassed, or intimidated at school or on your way to or from school because someone thought you were gay, lesbian or bisexual (whether you are or are not)?” Responses to this question were coded as “0 = no days” and “1 = 1 or more days.” Hereafter, this variable is called “bullying because of PSO.”

To address other types of bullying we created a binary measure that identified students who answered “no days” (reference group) to the question about bullying because

of PSO status, but answered “one or more days” to a question about general bullying. The question about general bullying was phrased as follows: “A student is being bullied when another student, or group of students, say or do nasty or unpleasant things to him or her. It is also bullying when a student is teased repeatedly in a way he or she finds offensive. It is not considered bullying when 2 students of about the same strength argue or fight. In the last 30 days, how often have you been bullied?” Students answering “no days” to both bullying questions were considered not to have been bullied.

Dependent Variables. QOL was measured with the Youth QOL Instrument–Healthy Youth Survey Version (YQOL–HYS) a 6-item scale derived from the longer 41-item Research Version.¹⁹ Each item was rated on an 11-point scale from 0 (not at all true) to 10 (completely true): “I feel I am getting along with my parents or guardians”; “I look forward to the future”; “I feel good about myself”; “I am satisfied with the way my life is now”; “I feel alone in my life”; “Compared with others my age, my life is much worse or much better.” One item, “I feel alone in my life,” was reverse-coded to ensure that all higher scores reflected higher QOL. Each YQOL–HYS item was transformed to a *t*-score on a scale of 0 to 100 and the mean of the *t*-scores was calculated to create a continuous youth QOL measure on a scale from 0 to 100 (YQOL–HYS score; Cronbach $\alpha = 0.82$).⁴

A binary measure of depressed mood was derived from the question “During the past 12 months, did you ever feel so sad or hopeless almost every day for 2 weeks or more in a row that you stopped doing some usual activities?” (yes, no = reference). Finally, students who answered “yes” to the following question were coded as having considered suicide (yes, no): “During the past 12 months, did you ever seriously consider attempting suicide?”

Covariates. All regression models were adjusted for covariates that might confound relationships between bullying and the outcomes including: gender (male, female = reference), grade (8th, 10th, 12th = reference) and race/ethnicity (White, Non-Hispanic White = reference, Non-Hispanic Black, Hispanic, Asian, Other or Unknown). The only available measure of family socioeconomic status in the HYS,

maternal education (college or higher, less than college, missing), was also included in the models.

Statistical Analyses

All analyses were conducted with Stata version 11 (StataCorp LP, College Station, TX) survey routines to adjust the standard errors for the complex survey design. Each outcome was compared for youths who reported any bullying because of PSO, bullying for other reasons, and no bullying. Unadjusted regression models of the study outcomes were estimated with the categorical bullying variable (because of PSO, other, none) included. Partial F-tests were used to assess the significance of the estimates between the 2 bullying variables. Statistical significance was set at $P \leq .05$.

Survey weighted multivariable regression was used to test associations between bullying and the 3 outcomes. Partial F-tests were used to test effect modification of associations between bullying and each outcome by gender and grade.

RESULTS

We found effect modification by both gender and grade. Accordingly, stratified results are reported. The proportions of male students who reported they had been bullied “one or more times” because of PSO were 14%, 11%, and 9% in 8th, 10th and 12th grades, respectively; among female students, the corresponding proportions were 11%, 10% and 6% (Table 1). In all gender and grade strata, as many or more students reported they had been bullied for other reasons. Approximately half of the study sample reported Non-Hispanic White race/ethnicity and approximately half had mothers with college education or higher. The racial/ethnic and socioeconomic distribution based on maternal education by bullied status differed significantly by grade and gender (Table 1).

In all gender and grade strata, there was a clear dose response with the lowest mean QOL scores (total and individual items) reported by those bullied because of PSO, followed by those bullied for other reasons, and those never bullied (Table 2). Similarly, for both sexes in all grades, a higher proportion reported depressed mood or consideration of

suicide if they had been bullied because of PSO, followed by those bullied for other reasons, and those never bullied (Table 2). Among those bullied because of PSO, female students had lower QOL scores and a higher proportion reported depressed mood or consideration of suicide compared with male students. Among male students bullied because of PSO, QOL scores tended to decrease by grade, and the proportion reporting depressed mood or consideration of suicide increased by grade. By contrast, among female students bullied because of PSO, QOL scores increased (or remained the same) and the proportion reporting depressed mood or consideration of suicide decreased (or remained the same) by grade (Table 2).

In multivariable models controlled for race/ethnicity and socioeconomic status, being bullied because of PSO compared with never being bullied was associated with lower QOL scores, and higher odds of reporting depressed mood or consideration of suicide among male students (Table 3) and among female students (Table 4) in all grades. Similar associations were observed in all grade and gender strata for those bullied for other reasons compared with not bullied. However, in all cases the magnitudes of the estimates associated with being bullied for other reasons were significantly less than the estimates associated with being bullied because of PSO. This observed change in the magnitude of the estimates suggests confounding in the analyses.

DISCUSSION

We found the impact of bullying because of PSO to be substantial and significant on youth QOL. Moreover, the magnitude of the effects of bullying because of PSO exceeds that attributed to bullying for other reasons. These results highlight the importance of focusing on bullying because of PSO in bullying prevention programs and their evaluations.

Our results indicate a differential prevalence of sexual minority-related bullying and depression-related symptoms by gender. A previous study demonstrated similar differences in the association between the use of discriminatory language regarding sexual orientation and bullying in schools. Male students tended to use sexually discriminatory language

TABLE 1—Sociodemographic Characteristics of Youths by Gender, Grade, and Bullied Status: 2010 Washington State Healthy Youth Survey

	8th Grade			10th Grade			12th Grade				
	Total, % (95% CI)	Bullied Because of PSO, % (95% CI)	Bullied for Other Reasons, % (95% CI)	Total, % (95% CI)	Bullied Because of PSO, % (95% CI)	Bullied for Other Reasons, % (95% CI)	Total, % (95% CI)	Bullied Because of PSO, % (95% CI)	Bullied for Other Reasons, % (95% CI)		
Overall for males	14 (13, 15)	18 (16, 19)	18 (16, 19)	68 (66, 79)	11 (10, 12)	14 (13, 15)	75 (73, 77)	9 (8, 10)	9 (8, 10)	82 (80, 83)	<.01
Race/ethnicity											
White, Non-Hispanic	53 (50, 56)	53 (48, 58)	49 (43, 54)	45 (40, 50)	52 (45, 58)	60 (54, 64)	54 (49, 58)	54 (47, 59)	58 (51, 65)	60 (56, 64)	<.01
Non-Hispanic Black	5 (4, 5)	4 (3, 6)	3 (2, 5)	5 (4, 6)	6 (4, 7)	3 (1, 4)	5 (4, 7)	8 (5, 11)	5 (3, 7)	4 (3, 5)	
Hispanic	17 (15, 20)	11 (7, 15)	17 (11, 22)	21 (16, 26)	18 (12, 24)	16 (11, 20)	18 (14, 23)	14 (8, 18)	17 (12, 22)	15 (11, 19)	
Asian	6 (5, 7)	7 (4, 10)	7 (4, 10)	7 (5, 9)	4 (2, 6)	6 (4, 8)	6 (5, 8)	7 (4, 10)	7 (4, 10)	6 (5, 8)	
Other or unknown	19 (17, 20)	25 (21, 28)	24 (21, 28)	22 (20, 24)	20 (17, 24)	15 (13, 19)	17 (16, 19)	17 (14, 22)	13 (10, 16)	15 (13, 16)	.4
Maternal education											
< college	38 (36, 40)	30 (30, 37)	31 (27, 35)	33 (30, 37)	38 (33, 43)	33 (29, 38)	36 (34, 39)	40 (36, 45)	37 (34, 39)	36 (32, 43)	.27
≥ college	46 (44, 48)	46 (42, 51)	45 (40, 50)	42 (37, 45)	48 (43, 53)	52 (46, 57)	48 (44, 53)	49 (44, 54)	55 (49, 61)	54 (49, 61)	
Missing	16 (15, 17)	24 (21, 27)	24 (21, 28)	25 (23, 28)	14 (11, 17)	15 (13, 18)	16 (14, 17)	11 (8, 14)	8 (5, 11)	10 (9, 12)	
Overall for females	11 (10, 12)	25 (23, 26)	25 (23, 26)	65 (63, 67)	10 (9, 11)	18 (17, 19)	72 (71, 74)	6 (5, 6)	15 (13, 16)	80 (78, 81)	<.01
Race/ethnicity											
Non-Hispanic White	53 (50, 56)	44 (38, 50)	49 (42, 54)	48 (42, 54)	51 (45, 56)	59 (54, 64)	54 (49, 59)	59 (53, 65)	59 (53, 64)	58 (53, 63)	<.01
Non-Hispanic Black	4 (3, 4)	5 (3, 7)	4 (2, 5)	4 (3, 5)	4 (2, 5)	2 (1, 3)	3 (2, 4)	5 (2, 9)	4 (2, 6)	3 (2, 4)	
Hispanic	18 (15, 20)	19 (13, 24)	21 (14, 27)	18 (13, 24)	15 (11, 19)	15 (10, 21)	18 (13, 23)	8 (5, 14)	15 (10, 20)	17 (12, 22)	
Asian	7 (6, 8)	6 (3, 8)	7 (5, 9)	8 (6, 10)	6 (4, 8)	5 (3, 7)	8 (6, 10)	7 (3, 10)	7 (5, 9)	7 (5, 9)	
Other or unknown	18 (18, 20)	26 (23, 31)	19 (18, 23)	22 (19, 24)	24 (21, 28)	19 (16, 21)	17 (15, 18)	21 (16, 24)	15 (12, 18)	15 (13, 16)	.31
Maternal education											
< college	38 (36, 40)	42 (36, 48)	35 (32, 39)	32 (28, 36)	40 (36, 45)	38 (34, 41)	36 (33, 40)	40 (34, 46)	36 (32, 40)	40 (36, 43)	.18
≥ college	48 (46, 50)	37 (32, 42)	42 (37, 46)	46 (42, 51)	48 (44, 51)	51 (47, 55)	51 (47, 55)	52 (46, 58)	54 (50, 59)	52 (48, 56)	
Missing	14 (13, 15)	21 (17, 24)	23 (20, 26)	22 (20, 24)	12 (10, 15)	11 (9, 13)	13 (12, 15)	8 (4, 11)	10 (7, 12)	8 (7, 9)	

Note. CI = confidence interval; PSO = perceived sexual orientation. Data were analyzed for students who completed forms with quality of life, depressed mood, and considered suicide items. The sample sizes were as follows: females, 8th grade, n = 4113, 10th grade, n = 5379, and 12th grade, n = 4270; and males, 8th grade, n = 3803, 10th grade, n = 4852, and 12th grade, n = 4125.

TABLE 2—Youth Quality of Life by Gender, Grade, and Bullied Status: 2010 Washington State Healthy Youth Survey

	8th Grade ^a			10th Grade ^b			12th Grade ^c		
	Bullied Because of PSO, Mean (95% CI)	Bullied for Other Reasons, Mean (95% CI)	Not Bullied, Mean (95% CI)	Bullied Because of PSO, Mean (95% CI)	Bullied for Other Reasons, Mean (95% CI)	Not Bullied, Mean (95% CI)	Bullied Because of PSO, Mean (95% CI)	Bullied for Other Reasons, Mean (95% CI)	Not Bullied, Mean (95% CI)
YQOL-HYS^d	69.1 (66.8, 71.3)	75.1 (73.3, 76.9)	83.9 (83.1, 84.6)	59.9 (57.3, 62.4)	70.2 (68.3, 72.1)	79.7 (79.0, 80.5)	57.4 (54.9, 60.0)	69.3 (66.9, 71.8)	76.7 (76.0, 77.5)
Individual items									
Get along with parents or guardians	70.2 (67.4, 73.0)	75.5 (73.3, 77.8)	81.7 (80.7, 82.8)	56.5 (53.3, 59.7)	71.4 (68.8, 74.0)	78.6 (77.5, 79.7)	55.5 (51.9, 59.1)	68.7 (68.5, 70.8)	75.3 (74.3, 76.3)
Look forward to the future	75.7 (72.8, 78.7)	81.4 (79.4, 83.4)	85.7 (84.7, 86.6)	68.4 (65.3, 71.5)	77.7 (75.5, 80.0)	83.4 (82.5, 84.2)	62.2 (68.4, 66.1)	76.0 (73.1, 78.9)	83.0 (81.0, 83.2)
Feel good about myself	68.8 (66.0, 71.6)	75.9 (73.7, 78.1)	86.3 (85.4, 87.2)	59.8 (56.6, 62.9)	69.7 (67.5, 71.8)	81.8 (81.0, 82.7)	57.1 (63.7, 60.5)	70.5 (67.5, 73.4)	79.2 (78.4, 80.0)
Satisfied with the way my life is now	61.9 (58.9, 65.0)	71.4 (68.6, 74.3)	80.5 (79.4, 81.6)	53.3 (49.8, 56.8)	64.2 (61.8, 66.6)	74.8 (73.7, 75.9)	51.6 (48.2, 55.0)	63.1 (60.1, 66.2)	71.0 (69.9, 72.2)
I feel alone in my life ^e	67.6 (64.8, 70.4)	70.4 (67.6, 73.2)	83.8 (82.6, 85.0)	60.9 (57.9, 63.8)	67.2 (64.9, 69.5)	79.4 (78.3, 80.5)	60.6 (57.5, 63.7)	68.1 (64.3, 71.9)	75.5 (74.5, 76.4)
Compared with others my life is better	60.8 (57.7, 63.8)	65.3 (63.1, 67.5)	70.3 (69.1, 71.4)	55.8 (52.8, 58.8)	63.1 (60.8, 65.4)	69.7 (68.5, 70.8)	55.0 (52.1, 57.8)	63.2 (60.5, 65.9)	69.0 (68.0, 70.0)
Depressed mood in the last y, %	35.9 (31.6, 40.2)	23.3 (20.3, 26.4)	12.5 (11.1, 13.9)	41.7 (37.5, 45.9)	31.6 (28.2, 35.0)	16.7 (15.3, 18.0)	39.8 (35.2, 44.4)	29.6 (24.3, 34.8)	17.7 (16.3, 19.0)
Considered suicide in the last y, %	21.7 (18.4, 25.0)	12.9 (10.6, 15.3)	5.5 (4.5, 6.5)	28.9 (24.9, 32.9)	16.8 (14.5, 19.1)	8.8 (7.6, 10.1)	26.2 (22.1, 22.4)	18.2 (14.0, 22.4)	7.6 (6.7, 8.5)
Female students									
YQOL-HYS^d	56.0 (53.5, 58.5)	68.8 (67.3, 70.3)	79.5 (78.5, 80.5)	54.6 (52.7, 56.5)	65.8 (64.5, 67.0)	75.4 (74.7, 76.1)	58.1 (55.4, 76.5)	66.3 (64.9, 67.7)	75.8 (75.1, 76.5)
Individual items									
Get along with parents or guardians	55.1 (52.1, 58.2)	67.8 (65.9, 69.6)	77.4 (76.1, 78.7)	53.2 (50.3, 56.2)	65.7 (63.7, 67.7)	74.1 (73.0, 75.1)	56.0 (52.5, 59.5)	65.0 (62.9, 67.2)	73.6 (72.6, 74.6)
Look forward to the future	67.8 (64.3, 71.3)	80.1 (78.2, 82.0)	85.7 (84.6, 86.8)	67.4 (64.5, 70.3)	79.9 (78.3, 81.5)	85.5 (84.7, 86.3)	73.4 (69.6, 77.3)	82.6 (81.0, 84.2)	86.9 (86.1, 87.7)
Feel good about myself	51.5 (48.2, 54.8)	66.9 (64.9, 68.9)	78.4 (77.2, 79.6)	49.3 (46.4, 52.2)	60.4 (58.5, 62.4)	73.0 (72.1, 73.9)	55.3 (51.5, 59.1)	61.2 (58.8, 63.6)	73.6 (72.7, 74.4)
Satisfied with the way my life is now	49.5 (46.0, 53.0)	62.0 (60.0, 64.1)	75.0 (73.7, 76.3)	47.1 (44.8, 49.5)	59.0 (57.1, 60.9)	70.0 (69.0, 71.1)	50.7 (46.7, 54.8)	58.7 (56.6, 60.9)	69.8 (68.7, 70.9)
I feel alone in my life ^e	55.7 (52.1, 59.3)	66.4 (64.1, 68.8)	80.2 (78.7, 81.6)	55.8 (53.3, 58.4)	63.6 (61.4, 65.8)	73.9 (72.7, 75.0)	54.9 (50.2, 59.5)	63.9 (61.1, 66.7)	74.8 (73.5, 76.0)
Compared with others my life is better	51.4 (48.8, 54.1)	63.0 (61.4, 64.7)	70.7 (69.6, 71.8)	54.8 (52.3, 57.3)	64.0 (62.3, 65.7)	69.9 (69.0, 70.8)	57.5 (54.1, 60.9)	64.0 (61.9, 66.1)	70.9 (70.0, 71.7)
Depressed mood in the last y, %	60.5 (56.4, 64.6)	38.7 (35.4, 41.9)	21.1 (19.2, 22.9)	64.0 (60.0, 68.0)	48.4 (44.9, 51.8)	27.7 (25.8, 29.7)	59.8 (54.4, 65.2)	48.1 (44.1, 52.1)	27.1 (25.3, 28.9)
Considered suicide in the last y, %	45.1 (40.3, 49.8)	22.5 (19.9, 25.2)	10.8 (9.4, 12.2)	44.2 (39.7, 48.7)	26.7 (23.7, 29.7)	14.0 (12.7, 15.2)	37.5 (31.8, 43.1)	25.0 (21.6, 28.5)	11.1 (10.1, 12.1)

Note. CI = confidence interval; PSO = perceived sexual orientation; YQOL-HYS = Youth Quality of Life-Healthy Youth Survey. In all gender and grade strata, unadjusted linear or logistic regression estimates are significant for bullied because of PSO vs not bullied ($P < .01$) and bullied for other reasons vs not bullied ($P < .01$). The difference in the estimates for bullied because of PSO and bullied for other reasons is also statistically significant ($P < .01$).
^aFor 8th grade, the sample sizes were: male, $n = 3431$; female, $n = 3815$; depressed mood: male, $n = 4113$; considered suicide: male, $n = 3800$; female, $n = 4111$.
^bFor 10th grade, the sample sizes were: male, $n = 4537$; female, $n = 5141$; depressed mood: male, $n = 4852$; female, $n = 5379$; considered suicide: male, $n = 4851$; female, $n = 5375$.
^cFor 12th grade, the sample sizes were: male, $n = 3919$; female, $n = 4106$; depressed mood: male, $n = 4125$; female, $n = 4270$; considered suicide: male, $n = 4123$; female, $n = 4263$.
^dThe index score was 0-100.
^eThe data were reverse coded.

TABLE 3—Multivariable Regression Analysis of Youth Quality of Life on Bullied Status of Male Students by Grade: 2010 Washington State Healthy Youth Survey

	8th Grade ^a		10th Grade ^b		12th Grade ^c	
	b (95% CI)	P	b (95% CI)	P	b (95% CI)	P
YQOL-HYS						
Not bullied (Ref)	1.00	...	1.00	...	1.00	...
Bullied because of PSO	-15.02 (-17.33, -12.71)	< .01	-19.81 (-22.28, -17.35)	< .01	-18.86 (-21.24, -16.48)	< .01
Bullied for other reasons	-9.03 (-10.86, -7.22)	< .01	-9.73 (-11.52, -7.95)	< .01	-7.46 (-9.87, -5.06)	< .01
Depressed mood in last y						
Not bullied (Ref)	1.00	...	1.00	...	1.00	...
Bullied because of PSO	4.25 (3.43, 5.26)	< .01	3.56 (2.98, 4.25)	< .01	3.00 (2.41, 3.76)	< .01
Bullied for other reasons	2.22 (1.85, 2.66)	< .01	2.37 (2.02, 2.79)	< .01	1.96 (1.51, 2.54)	< .01
Considered suicide in last y						
Not bullied (Ref)	1.00	...	1.00	...	1.00	...
Bullied because of PSO	4.89 (3.76, 6.37)	< .01	4.13 (3.22, 5.29)	< .01	4.23 (3.23, 5.55)	< .01
Bullied for other reasons	2.55 (2.00, 3.28)	< .01	2.10 (1.71, 2.58)	< .01	2.72 (1.98, 3.75)	< .01

Note. CI = confidence interval; PSO = perceived sexual orientation; YQOL-HYS = Youth Quality of Life-Healthy Youth Survey. QOL was modeled with survey weighted linear regression; depressed mood and considered suicide were modeled with survey weighted logistic regression. All models were adjusted for the complex survey design and controlled for race/ethnicity and maternal education. In all models, the difference in the estimates for bullied because of PSO and bullied for other reasons is statistically significant ($P < .05$). All estimates of bullied because of PSO differ significantly for those of bullied for other reasons ($P < .05$).

^aFor 8th grade, the sample sizes were: male, $n = 3431$, female, $n = 3815$; depressed mood: male, $n = 3803$, female, $n = 4113$; considered suicide: male, $n = 3800$, female, $n = 4111$.

^bFor 10th grade, the sample sizes were: male, $n = 4537$, female, $n = 5141$; depressed mood: male, $n = 4852$, female, $n = 5379$; considered suicide: male, $n = 4851$, female, $n = 5375$.

^cFor 12th grade, the sample sizes were: male, $n = 3919$, female, $n = 4106$; depressed mood: male, $n = 4125$, female, $n = 4270$; considered suicide: male, $n = 4123$, female, $n = 4263$.

for bullying irrespective of their acceptance of gays or lesbians.^{11,20} This finding is supported by the somewhat greater prevalence of bullying because of PSO in male students compared with female students. At the same time, the impact of bullying because of PSO is potentially more devastating for female students. For all 3 outcomes examined, the magnitudes of the associations with bullying because of PSO were greater in female students than in male students.

Similar to anecdotal evidence of recent high-profile youth suicides, male students may be more likely to experience bullying because of PSO, placing those who self-identify as sexual minorities at greater risk of poorer QOL or suicide. By contrast, female students may be more affected by bullying or other harassment overall, leading to a higher prevalence of depression and thoughts of suicide.²¹ Furthermore, low scores on “feeling good about myself” and “feeling alone” reaffirm the need for ongoing efforts like the “It Gets Better Project”—a prominent national program to reach gay, lesbian, bisexual, and transgendered youths and ameliorate depression and suicidal thoughts among these youths during their

adolescent years.²² This project has elicited participation by prominent public officials including members of the federal government.²³ These results highlight the need for support programs to emphasize shared experience. Moreover, our results suggest that, as students get older, it does get better as the prevalence of reported bullying because of PSO decreased by grade in both gender strata. Possibly, as youths develop and mature emotionally and socially, instances of bullying may decrease,^{2,3,24} and experiences of bullying because of PSO may decrease accordingly. These findings underscore the need for early prevention efforts before 10th grade.

A previous study explored the differential reporting of students being bullied by gender and minority status finding African American male and female students, Hispanic male students, and Asian American male students to underreport being bullied when asked to respond to a definition-based question.²¹ Another study suggested that some minority groups may be at particular risk for bullying.²⁵ Further research is recommended to fully explore the prevalence of bullying because of PSO within and between self-reported racial/ethnic groups.

In 2010, the WA State Governor’s Substance Abuse Prevention Advisory Committee set a goal of 90% of students feeling safe in schools for all grades.⁴ More recently, a 2011 bill in the WA State Legislature seeks to establish a work group on preventing bullying in WA youths.²⁶ Introduced in 2010 and effective from 2011 through 2012, New Jersey implemented the Anti-Bullying Bill of Rights Act, which the New York Times called “the toughest legislation against bullying in the nation.”^{27,28}

The Centers for Disease Control have established evidence-based recommendations specifying what schools can do to promote the health and safety of gay, lesbian, or transgendered youths, including creation of “safe spaces,” the creation of gay-straight alliances, training for teachers and staff, and access to community-based providers.²⁹ Similar recommendations have been made by the Gay, Lesbian & Straight Education Network, in addition to those outlined in the literature.^{30,31}

Study strengths include a large population-based sample of youths, specific survey questions that differentiate between bullying because of PSO and bullying for other reasons,

TABLE 4—Multivariable Regression Analysis of Youth Quality of Life on Bullied Status of Female Students by Grade: 2010 Washington State Healthy Youth Survey

	8th Grade ^a		10th Grade ^b		12th Grade ^c	
	b (95% CI)	P	b (95% CI)	P	b (95% CI)	P
YQOL-HYS						
Not bullied (Ref)	1.00	...	1.00	...	1.00	...
Bullied because of PSO	-22.8 (-25.33, -20.27)	<.01	-20.57 (-22.58, -18.56)	<.01	-17.36 (-20.12, -14.59)	<.01
Bullied for other reasons	-10.42 (-12.06, -8.78)	<.01	-9.72 (-11.05, -8.39)	<.01	-9.49 (-11.12, -7.86)	<.01
Depressed mood in last y						
Not bullied (Ref)	1.00	...	1.00	...	1.00	...
Bullied because of PSO	5.59 (4.54, 6.88)	<.01	4.63 (3.84, 5.58)	<.01	4.04 (3.19, 5.11)	<.01
Bullied for other reasons	2.36 (2.04, 2.74)	<.01	2.50 (2.15, 2.92)	<.01	2.55 (2.15, 3.02)	<.01
Considered suicide in last y						
Not bullied (Ref)	1.00	...	1.00	...	1.00	...
Bullied because of PSO	6.63 (5.27, 8.33)	<.01	4.81 (3.83, 6.04)	<.01	4.81 (3.83, 6.03)	<.01
Bullied for other reasons	2.37 (1.96, 2.87)	<.01	2.25 (1.87, 2.71)	<.01	2.25 (1.87, 2.71)	<.01

Note. CI = confidence interval; PSO = perceived sexual orientation; YQOL-HYS = Youth Quality of Life-Healthy Youth Survey. QOL was modeled with survey weighted linear regression; depressed mood and considered suicide were modeled with survey weighted logistic regression. All models were adjusted for the complex survey design and controlled for race/ethnicity and maternal education. In all models, the difference in the estimates for bullied because of PSO and bullied for other reasons is statistically significant ($P < .05$). All estimates of bullied because of PSO differ significantly for those of bullied for other reasons ($P < .05$).

^aFor 8th grade, the sample sizes were: male, $n = 3431$, female, $n = 3815$; depressed mood: male, $n = 3803$, female, $n = 4113$; considered suicide: male, $n = 3800$, female, $n = 4111$.

^bFor 10th grade, the sample sizes were: male, $n = 4537$, female, $n = 5141$; depressed mood: male, $n = 4852$, female, $n = 5379$; considered suicide: male, $n = 4851$, female, $n = 5375$.

^cFor 12th grade, the sample sizes were: male, $n = 3919$, female, $n = 4106$; depressed mood: male, $n = 4125$, female, $n = 4270$; considered suicide: male, $n = 4123$, female, $n = 4263$.

and data that reflect the important perspective of the victims of bullying. We measured self-report of bullying because of perceived (as opposed to actual) sexual orientation. Youths who self-identify as sexual minorities, as well as those who do not but are perceived in this manner, may be victims of this type of bullying. Both groups are of interest when assessing the effects of sexual minority-directed bullying.

Several limitations must also be considered when interpreting the results. First, because all of the study data are self-reported, we do not know to what extent youths overreport or underreport experiences of bullying. However, recall bias of the experience of being bullied is unlikely because this event is considered to be highly salient to youths. Also, some youths may choose not to report experiences of bullying because of PSO because of stigma or fear of retaliation. Second, our study measure of bullying because of PSO may serve as a proxy for other related factors that contribute to youth QOL. For instance, youths who report that they experience bullying because of PSO may also be struggling with their sexual orientation in general and may possibly be worrying about “coming out” or being “outed” to their peers or family. Because the HYS did not

include a measure of self-reported sexual orientation, we could not disentangle these effects. Third, these data are only generalizable for 8th, 10th, and 12th grade students in Washington State and may not be applicable to students in other states where the prevalence of bullying because of PSO and the level of bullying prevention efforts may differ. The cross-sectional nature of the survey did not allow for assessment of temporal relationships. Finally, the response rates for schools in the survey were adequate, but for students the response rate decreased to a little more than 50% for 12th graders. Nonetheless, the results were consistent across gender and grade.

Our findings demonstrate the large and broad potential negative impact on youth QOL of bullying because of PSO. Bully-prevention or harm-reduction programs must address bullying because of PSO. All youths are entitled to safe school environments and support is essential for those who are most vulnerable to being bullied because of PSO. ■

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Contributors

D. L. Patrick led the overall study. D. L. Patrick, T. C. Edwards, and J. Y. Huang conceptualized the study, selected and interpreted the data, and led the analyses. J. F. Bell conducted most of the analyses. N. C. Lazarakis helped with the writing and researched the literature. All authors reviewed article drafts and approved the final submission.

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Human Participant Protection

Because we conducted a secondary data analysis without any person identifiers, institutional review board approval was not required.

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