JOURNAL OF SCHOOL HEALTH

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RESEARCH ARTICLE

High School Students' Experiences of Bullying and Victimization and the Association With School Health Center Use

CATHERINE LEWIS, MPH, MSW[a] JULIANNA DEARDORFF, PhD[b] MAUREEN LAHIFF, PhD[c] SAMIRA SOLEIMANPOUR, MPH[d] KIMI SAKASHITA, MPH[e]
CLAIRE D. BRINDIS, DrPH[f]

ABSTRACT

BACKGROUND: Bullying and victimization are ongoing concerns in schools. School health centers (SHCs) are well situated to support affected students because they provide crisis intervention, mental health care, and broader interventions to improve school climate. This study examined the association between urban adolescents' experiences of school-based bullying and victimization and their use of SHCs.

METHODS: Data was analyzed from 2063 high school students in 5 Northern California school districts using the 2009-2010 California Healthy Kids Survey. Chi-square tests and multivariate logistic regression were used to measure associations.

RESULTS: Students who were bullied or victimized at school had significantly higher odds of using the SHCs compared with students who were not, and were also significantly more likely to report confidentiality concerns. The magnitude of associations was largest for Asian/Pacific Islander students, though this was likely due to greater statistical power. African American students reported victimization experiences at approximately the same rate as their peers, but were significantly less likely to indicate they experienced bullying.

CONCLUSIONS: Findings suggest that SHCs may be an important place to address bullying and victimization at school, but confidentiality concerns are barriers that may be more common among bullied and victimized youth.

Keywords: bullying; victimization; urban; school health centers; adolescents; mental health.

Citation: Lewis C, Deardorff J, Lahiff M, Soleimanpour S, Sakashita K, Brindis CD. High school students' experiences of bullying and victimization and the association with school health center use. J Sch Health. 2015; 85: 318-326.

Received on July 8, 2013
Accepted on December 26, 2014

School-based victimization is a serious concern in the United States[1,2] and takes a number of forms. Youth who are victimized at school may be physically assaulted or have their property stolen or damaged (''physically victimized''), be made fun of or have lies or rumors spread about them (''indirectly or verbally victimized''),[3] be sexually harassed,[4] or experience several of these victimization types (''polyvictimized'').[5] Bullying is a specific form of peer victimization[6] in which victimization is intentional, occurs repeatedly, and includes a power imbalance in which a more powerful person or group attacks a less powerful one.[2]

Several studies have examined individual-level and environmental factors that may contribute to school-based victimization. Boys are more likely to be victims of overt victimization than girls,[7] whereas girls are more likely to report experiencing relational victimization and sexual harassment.[8] Race/ethnicity has been identified as a risk factor, but findings have been mixed and much remains to be known.[9,10] Victimization also has been associated with students' gender identity and sexual orientation. In general, adolescents who identify as gay, lesbian, bisexual, or transgender (GLBT) are at higher risk for being bullied and victimized.[11,12] Additionally, a school's climate

[a]Graduate Student, (catherine.r.lewis@gmail.com), School of Social Welfare, University of California, 50 University Hall, #7360 Berkeley, CA 94720-7360.
[b]Associate Professor, (jdeardorff@berkeley.edu), School of Public Health, University of California, 50 University Hall, #7360 Berkeley, CA 94720-7360.
[c]Lecturer, (lahiff@berkeley.edu), School of Public Health, University of California, 307 Haviland Hall, Berkeley, CA 94720-7360.

and other environmental characteristics are associated with its rates of victimization.[13,14]

Victimization is associated with negative outcomes for students' mental, physical, and social well-being, with students who experience multiple forms of victimization being at greater risk for poor outcomes compared with those who experience just one form.[4] Victimization is associated with depression and other psychological problems,[3] as well as physical health problems;[15] victimized youth also report lower school connectedness.[16] These particular stressors on GLBT-identified youth have been associated with school dropout, mental health problems, and suicide.[17,18]

School health centers (SHCs) are uniquely situated to be an integral part of a school's approach to addressing victimization because of their location and role in the school.[19,20] SHCs are typically located on the school campus and offer preventive, routine, and acute care, such as first aid, health education, primary care, and reproductive and mental health services. They are effective in reaching adolescents who would not otherwise have access to or utilize appropriate medical and mental health care[21,22] and may provide crisis intervention, ongoing psychological counseling, and violence prevention education.[19,20] SHC services have been shown to improve youth mental health outcomes.[23] However, despite the growing numbers of SHCs and the national interest in reducing school victimization, scarce literature has documented the rates of utilization of SHCs by youth who experience bullying and other forms of victimization at school. Furthermore, despite research on SHCs' ability to reduce students' barriers to accessing needed health and mental health services,[21,22,24,25] confidentiality concerns still remain as a barrier for some students.[26,27]

To date, no known studies have specifically examined the association between school bullying or victimization and SHC use. Only 1 study of an inner-city junior high school examined the link between experiencing violence and SHC use; students who used the SHC were more likely to have been a victim of assault and were also more likely to have witnessed an assault in their lifetime.[28] The purpose of this study is to address the gap in the literature on rates of utilization of SHCs by youth who experience bullying and other forms of victimization at school. Given the potential role of SHCs for preventing, identifying, and treating victimized students in the school setting, this study examines whether bullied and victimized youth are accessing SHC services and whether there are issues impeding these students' use of these services. These analyses hold implications for the development and enhancement of SHCs' roles in supporting victimized youth, who could benefit from earlier, confidential school-based interventions, as well as tailored support services in a client-centered and familiar setting.

METHODS

Participants

This study examines a convenience sample of 9th and 11th grade students attending 14 public schools in 5 Northern California school districts during the 2009-2010 school year. Approximately 40% of students (N = 2063 of 5078) completing the 2009-2010 California Healthy Kids Survey (CHKS) were included in the final study sample. The most common reason for exclusion was failing to answer all of the questions required for the analyses; students were excluded for not answering questions about whether or not they used their SHC (N = 1629), bullying and victimization (N = 789), and for not identifying their sex (N = 46) or ethnicity (N = 95). A small number of additional students (N = 198) were excluded because they gave inconsistent response patterns, provided implausible reports of drug use, said they had used a fictitious drug, and/or failed to assent that they had answered survey questions honestly. Finally, 258 students were excluded because they were from racial/ethnic groups that had low numbers, such as Native Americans. Racial/ethnic groups included in these analyses were Asian/Pacific Islander (API), Hispanic, African American, and White students.

Instrument

The CHKS is a statewide, cross-sectional survey, similar to the Youth Risk Behavior Survey (YRBS) developed and administered by the Centers for Disease Control and Prevention's Youth Risk Behavior

[d]Senior Researcher, (samira.soleimanpour@ucsf.edu), Philip R. Lee Institute for Health Policy Studies, University of California, 3333 California Street, Suite 265, San Francisco, CA 94143.

[e]Associate Director, (kimi.sakashita@acgov.org), School & Community Health Services, Center for Healthy Schools and Communities, Alameda County Health Care Services Agency, 1000 San Leandro Blvd., Suite 325, San Leandro, CA 94577.

[f]Director, (claire.brindis@ucsf.edu), Philip R. Lee Institute for Health Policy Studies, University of California, 3333 California Street, Suite 265, San Francisco, CA 94143; Professor, Pediatrics & Health Policy University of California, 3333 California Street, Suite 265, San Francisco, CA 94143.

Address correspondence to: Catherine Lewis, Graduate Student, (catherine.r.lewis@gmail.com), School of Social Welfare, University of California, 50 University Hall, #7360 Berkeley, CA 94720-7360.

Collection of the School Health Center module data was supported through funding from the Alameda County Health Care Services Agency. The development of this document was supported in part by grants U45MC 00002 & U45MC 00023 of the Maternal and Child Health Bureau (MCHB), Health Services and Resources Administration, US Department of Health and Human Services, grant award number T32MH019545-21 of the National Institute of Mental Health, National Institutes of Health (NIH), and support from the Jean R. Schaefer endowed fellowship.

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Table 1. **Measurement and Classification of Harassment, Victimization, and Bullying**

Question	
CHKS Harassment/ Victimization Index Questions by Type	Type of Victimization Measured
In the past 12 months on school property, have you . . .	
1. Been pushed, shoved, slapped, hit, or kicked by someone who wasn't just kidding around? (y/n)	Physical victimization
2. Been afraid of being beaten up? (y/n)	Physical victimization
3. Had property stolen or deliberately damaged? (y/n)	Physical victimization
4. Been made fun of for the way you looked or talked? (y/n)	Verbal victimization
5. Had mean rumors or lies spread about you? (y/n)	Indirect victimization
6. Had sexual jokes, comments, or gestures made to you? (y/n)	Sexual harassment
Classification of Victimization and Bullying	
Response to Harassment/Victimization Index questions	Classification
1. Responded "yes" to 4 or more of the above Harassment/Victimization Index questions	Polyvictimized
2. Responded "yes" to all Harassment/Victimization Index questions about physical victimization (#1-3 above)	Physically victimized
3. Responded "yes" to Harassment/Victimization Index questions #4 and #5	Indirectly and verbally victimized
4. Reported that sexual jokes, comments, or gestures (Harassment/ Victimization Index question #6) were made 4 or more times	Sexually harassed
Response to bullying questions	
5. Reported at least 1 instance of any type of bullying, as defined: *During the past 12 months, how many times on school property were you harassed or bullied for any of the following reasons? [You were bullied if repeatedly shoved, hit, threatened, called mean names, teased in a way you didn't like, or had other unpleasant things done to you. It is not bullying when 2 students of about the same strength quarrel or fight.]*	Bullied
6. Reported being bullied due to actual or perceived sexual orientation 4 or more times	Bullied for sexual orientation

CHKS, California Healthy Kids Survey; y, yes; n, no.

Surveillance System (YRBSS), with a California focus. It is developed and administered by WestEd and Duerr Evaluation Resources, under a contract from the California Department of Education, Healthy Kids Program Office.[29] Items for the survey measures were derived from the national YRBS and West Ed's California Student Survey, both of which are used widely nationally and in California to assess youth's risk and resilience factors. The YRBS has been validated previously, and psychometric research has found several CHKS scales to be robust and reliable for use among secondary students.[30] All participating California high schools were given the CHKS Core Module, which includes questions about students' experiences with bullying and victimization at school. Participants in this study's schools were additionally asked to complete a CHKS Supplemental Module, developed by researchers at the University of California, San Francisco, Philip R. Lee Institute for Health Policy Studies, for their evaluation of the Alameda County Center for Healthy Schools and Communities. This Center, established by the Alameda County Health Care Services Agency, supports the development and sustainability of SHCs in Alameda County, California. The CHKS Supplemental Module asked about students' perceptions of and utilization of their schools' SHC.

Procedure

The survey was administered to a convenience sample of classrooms of teachers who were either assigned or volunteered to administer the survey to their students. Passive parental consent was required for high school students to participate; under passive consent procedures, parents/guardians inform the school only if they do not want their children to participate in a study (opt out). Only students present on the day of the administration participated.

Measures

Student responses about specific forms of school-based bullying and victimization constructed the independent variables in these analyses. Table 1 illustrates which survey questions were used to create each measure of bullying and victimization. The process for defining victimization was as follows: we selected 6 questions, referred to here as the ''Harassment/Victimization Index,'' and employed past precedent[3,8] to classify each question in the Index as addressing student experiences of physical victimization, verbal victimization, indirect victimization, or sexual harassment. We then grouped related Harassment/Victimization Index questions together to create 4 variables: indirect and verbal victimization, physical victimization, sexual harassment, and polyvictimization. Students who had experienced bullying were defined as follows: ''bullied students'' were those who answered that any type of bullying had occurred 1 or more times, whereas students ''bullied for sexual orientation'' were those who reported being bullied 4 or more times due to their actual or perceived sexual orientation.

The outcomes of interest were whether students had used their school's SHC, and whether they had experienced barriers to SHC use. These analyses

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defined SHC ''users'' as students who indicated that they had used the SHC or any of their school's SHC services. Barriers to SHC use were assessed with the question: ''Are any of the following reasons why you have NOT used the SHC?'' Response choices included ''I was afraid my parent/guardian(s) or other students would find out,'' ''I didn't need any services,'' and ''I didn't know there was a SHC.''

Data Analysis

Chi-squared tests of significance were used to analyze differences between SHC users and nonusers. Multivariate logistic regression analysis identified whether victimization and bullying were associated with SHC use or whether they were associated with not using the SHC. Significant interaction and evidence of possible effect modification was found with grade, sex, and race/ethnicity; thus, the analyses were performed while stratifying for these factors. As a result, sample size and statistical power for the White subgroup were low and data are excluded from interpretations. In the logistic regression modeling, the standard errors were adjusted to account for any correlations between students at the same school site. Stata 12 was used for these analyses.[31]

RESULTS

Table 2 illustrates characteristics of the final study sample. Over half of the sample (55%; N = 1142) was in the ninth grade, and 57% (N = 1166) were girls. Eleventh graders were more likely to have ever used the SHC than ninth graders (48% vs 30%) and to report not using the SHC because they were afraid of someone finding out (19% vs 12%). Girls were slightly more likely to use the SHC (40% vs 36%). There was almost no sex difference in students reporting being afraid to use the SHC.

API students are overrepresented, and African American and Hispanic/Latino students are underrepresented in these analyses because, compared with the overall population of the schools in the study,[32] a disproportionately large number of API students completed the survey. The final sample was made up of 43% API (N = 878), compared with a population of 25% API students in the studied schools; 35% Hispanic, any race (N = 710), compared with 28% schoolwide; 15% African American (N = 304), compared with 24% school-wide; and 8% White adolescents (N = 171), compared with 13% in the studied schools.

SHC use varied by both race/ethnicity and grade (Table 2). African American students were most likely to use the SHC (52%), and API youth least likely (30%). White and African American students were also the most likely to report not having used the SHC because they were afraid others would find out (27% and 18%, respectively), compared with Hispanic/Latino (15%) and API (11%) students.

Table 2. **Characteristics of the Final Study Sample**

	Number of Students	% of Final Sample	% Used SHC	% Afraid to Use SHC
Race/Ethnicity				
Asian/Pacific Islander	878	43	30	11
Hispanic/Latino	710	34	41	15
African American	304	15	52	18
White	171	8	42	27
Grade				
Ninth	1142	55	30	12
Eleventh	921	45	48	19
Sex				
Boys	897	43	36	14
Girls	1166	57	40	16

SHC, school health center.

Rates of physical, verbal and indirect victimization, sexual harassment, polyvictimization, and bullying also varied for students of different grades, sexes, and race/ethnicities (Table 3). Girls were more likely to experience indirect victimization and sexual harassment, and boys were more likely to report the combination of being afraid of being beaten up, being pushed, slapped, hit or kicked, and having property deliberately damaged or stolen.

Ninth graders were more likely than 11th graders to report experiencing all types of harassment and victimization, except for sexual harassment, for which there was no significant difference by grade. They were also more likely to experience polyvictimization and bullying ($p < .001$).

The reported experiences of African American students varied from that of Hispanic/Latino and API students. African Americans reported lower rates of fear and bullying, but similar rates of specific forms of harassment and victimization. Slightly more than 1 in 10 adolescents (13% of African American students) reported being afraid of being beaten up compared with 18% of Hispanic/Latino students and 25% of API students; 27% of African American students reported being bullied, compared with 30% of Hispanic/Latino students, and 34% of API students. There were no differences across race/ethnic groups in students' experiences of being pushed, shoved, slapped, hit, or kicked. African American students were more likely to report repeated sexual harassment, and to report experiencing a combination of verbal and relational victimization.

Table 4 illustrates associations between bullying, victimization, and SHC use stratified by grade, sex, and race/ethnicity. API students in the ninth grade were more likely to use the SHC if they had been physically victimized (odds ratio [OR] = 2.08

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Table 3. **Demographic Differences in Bullying, Harassment, and Victimization**

	Race/Ethnicity					Sex			Grade		
	API (%)	Hispanic (%)	AA (%)	White (%)	p-Value	M (%)	F (%)	p-Value	9 (%)	11 (%)	p-Value
Harassment/Victimization Index											
1. Pushed, shoved . . . . (physical victimization)	25	24	25	24	.88	26	22	.09	28	20	<.001*
2. Afraid of being beaten up (physical victimization)	25	18	13	26	<.001**	21	21	.649	23	18	<.001*
3. Property stolen or damaged (physical victimization)	27	23	24	33	.041*	28	24	.056	29	22	<.001*
4. Made fun of . . . (verbal victimization)	40	36	38	51	.004*	38	40	.476	42	36	<.001*
5. Mean rumors spread . . . (indirect victimization)	34	38	37	42	.196	30	41	<.001**	38	34	.083
6. Sexual jokes or gestures . . . (sexual harassment)	49	48	51	63	.003*	41	57	<.001**	51	48	.176
Additional measures of victimization											
Polyvictimized	24	19	19	32	.001*	20	24	.093	26	18	<.001**
Physically victimized	7	5	4	7	.099	7	5	.160	7	4	<.001**
Indirectly and verbally victimized	24	21	24	32	.007*	21	26	.001*	25	22	.020*
Sexually harassed	23	24	28	35	.004*	21	28	<.001**	25	26	.520
Bullied	34	30	27	38	.033*	30	34	.057	37	25	<.001**
Bullied for sexual orientation	10	7	9	9	.165	9	8	.545	10	6	.002*

*p < .05; **p < .001.
AA, African American; API, Asian/Pacific Islander; M, male; F, female.

girls), polyvictimized (OR = 1.25 boys), indirectly and verbally victimized (OR = 1.40 girls) or bullied due to their sexual orientation (OR = 2.52 boys), when they were compared with students who had not been victimized. Eleventh grade Hispanic/Latino females were more likely to use the SHC if they were sexually harassed (OR = 1.59). Eleventh grade API girls (OR = 2.52) and African American girls (OR = 3.39) were both significantly more likely to use the SHC if they reported polyvictimization.

Students who reported being bullied and victimized also reported that they had not used the SHC because they were afraid their parent/guardian(s) or other students would find out. Table 5 illustrates that this trend occurred across almost all bullying and victimization categories for API students (OR = 1.83-8.67) and Hispanic/Latino students (OR = 1.66-11.43), and significant results were also found for physically victimized African American students (OR = 3.7 for ninth grade boys) and bullied students (OR = 4.74 for ninth grade girls).

DISCUSSION

This study provides important evidence that adolescents who experience bullying and other forms of victimization at school are more likely to use SHC services, but that they also report greater barriers to SHC use due to concerns about parents/guardians and other students finding out.

Our findings confirm and extend past literature showing demographic variations in victimization by race/ethnicity, grade, and sex.[4] We found that ninth graders were more likely to report all victimization indicators except sexual harassment. Boys were more likely to experience physical victimization and girls more likely to experience indirect victimization and sexual harassment.

A marked strength of this study was that bullying and victimization were assessed in multiple ways. Results demonstrated that different victimization measures have the potential to yield seemingly contradictory results, raising questions about how students of different racial/ethnic and cultural backgrounds report victimization and bullying. For example, African American students reported the same rates of being ''pushed, shoved, slapped, hit, or kicked by someone who was not just kidding around'' as students of other race/ethnicities, but were significantly less likely to report having been afraid of being beaten up than their peers. Additionally, whereas African American students reported approximately the same rates of other harassment and victimization experiences as API and Hispanic students, they were significantly less likely to report being bullied. This is consistent with previous findings that African American students report less bullying than students of other race/ethnicities.[10] However, a similar rate of reports of being physically assaulted ''by someone who was not just kidding around,'' suggest that some African American students might be experiencing physical victimization without reporting fear, or assigning a bullying label. This interpretation should be viewed with caution, as this study did not directly assess students' interpretation of the phrase bullying, and unmeasured factors (such as the force with which these students were pushed, etc.) could provide an alternative explanation as to why African American students were less likely to report being bullied, or afraid. However, the current finding provides a foundation for future studies that examine cultural attributions and experiences across race/ethnicity. More research is needed to untangle

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Table 4. **Odds Ratios for Using the SHC among Victimized Students Versus Other Students**

	9th Grade		11th Grade	
	Boys OR (95% CI)	Girls OR (95% CI)	Boys OR (95% CI)	Girls OR (95% CI)
Asian and Pacific Islanders				
Polyvictimized	1.25 (1.06-1.47)*	1.90 (0.97-3.74)	1.43 (0.69-2.98)	2.52 (1.80-3.53)*
Physical victimized	2.79 (0.97-7.98)	2.08 (1.55-2.79)*	0.64 (0.25-1.64)	1.28 (0.22-7.51)
Indirectly and verbally victimized	1.24 (0.83-1.84)	1.40 (1.02-1.94)*	1.01 (0.59-1.73)	1.28 (0.80-2.05)
Sexually harassed	1.27 (0.94-1.72)	1.29 (0.68-2.46)	0.69 (0.43-1.1)	1.20 (0.78-1.83)
Bullied	0.95 (0.75-1.20)	1.79 (0.90-3.54)	0.81 (0.43-1.50)	1.28 (0.70-2.36)
Bullied for sexual orientation	2.52 (1.54-4.13)*	0.57 (0.29-1.15)	0.64 (0.15-2.81)	0.43 (0.07-2.79)
Hispanic/Latinos				
Polyvictimized	0.98 (0.57-1.67)	1.04 (0.49-2.24)	1.28 (0.54-3.02)	1.27 (0.72-2.25)
Physical victimized	2.48 (0.48-12.78)	1.18 (0.65-2.13)	1.5 (0.70-3.20)	0.31 (0.03-3.61)
Indirectly and verbally victimized	1.07 (0.61-1.88)	0.91 (0.53-1.55)	1.71 (0.68-4.31)	1.29 (0.68-2.44)
Sexually harassed	1.41 (0.66-2.99)	0.94 (0.49-1.81)	0.88 (0.26-2.96)	1.59 (1.01-2.49)*
Bullied	1.44 (0.83-2.51)	1.13 (0.61-2.08)	1 (0.38-2.65)	1.27 (0.79-2.05)
Bullied for sexual orientation	1 (omitted)	1 (omitted)	1.19 (0.07-19.77)	2.61 (0.52-12.96)
African Americans				
Polyvictimized	2 (0.51-7.91)	0.83 (0.22-3.14)	4 (0.54-29.44)	3.39 (1.27-9.00)*
Physical victimization	0.36 (0.16-0.81)	0.40 (0.03-6.51)	1.77 (0.75-4.16)	1 (omitted)
Indirectly and verbally victimized	1.03 (0.22-4.74)	1.62 (0.80-3.25)	1.24 (0.60-2.56)	4.27 (0.97-18.79)
Sexually harassed	1.41 (0.64-3.12)	0.93 (0.41-2.08)	2.11 (0.61-7.25)	2 (0.78-5.12)
Bullied	1.73 (0.43-7.03)	0.52 (0.31-0.86)*	0.65 (0.18-2.30)	1.97 (0.67-5.76)
Bullied for sexual orientation	1 (omitted)	1 (omitted)	1 (omitted)	1 (omitted)

SHC, school health center; OR, odds ratio; CI, confidence interval.
*95% confidence interval does not include 1.

Table 5. **Odds Ratios for Being Afraid to Use the SHC Among Students Reporting Victimization**

	9th Grade		11th Grade	
	Males	Females	Males	Females
Asian and Pacific Islanders				
Polyvictimized	3.35 (1.44-7.79)*	2.44 (1.03-5.78)*	0.28 (0.10-0.77)	2.92 (0.74-11.60)
Physical victimized	5.88 (1.68-20.61)*	4.10 (2.77-6.08)*	0.48 (0.13-1.78)	8.67 (1.87-40.09)*
Indirectly and verbally victimized	4.70 (1.97-11.18)*	1.83 (1.04-3.23)*	0.48 (0.21-1.16)*	2.76 (1.76-4.35)*
Sexually harassed	4.52 (3.25-6.28)*	1.5 (0.60-3.74)	0.27 (0.13-0.55)	1.68 (0.89-3.19)
Bullied	1.52 (0.75-3.09)	2.14 (1.16-3.97)*	0.51 (0.19-1.35)	2.03 (1.32-3.11)*
Bullied for sexual orientation	0.94 (0.42-2.08)	4.3 (1.34-13.81)*	1 (omitted)	4.44 (2.87-6.85)
Hispanics/Latinos				
Polyvictimized	2.4 (0.74-7.74)	2.29 (1.31-3.98)*	1.94 (0.49-7.76)	2.35 (1.05-5.28)*
Physical victimized	11.43 (3.36-38.88)*	2.64 (0.86-0 8.08)	2.53 (0.22-4.83)	2.58 (0.84-7.97)
Indirectly and verbally victimized	3.12 (0.83-11.70)	2.44 (1.29-4.62)*	2.23 (0.45-11.09)	2.64 (1.02-6.81)*
Sexually harassed	0.58 (0.09-3.56)	2.05 (1.06-3.95)*	0.52 (0.08-3.40)	2.31 (1.27-4.20)*
Bullied	2.49 (0.72-8.57)	1.66 (1.08-2.55)*	1.30 (0.53-3.23)	1.62 (0.62-4.25)
Bullied for sexual orientation	3.10 (1.73-5.57)	1.82 (0.55-5.97)	1 (omitted)	4 (1.20-13.38)
African Americans				
Polyvictimized	10.46 (0.96-113.81)	1.33 (0.48-3.64)	6 (0.56-64.72)	0.70 (0.10-4.73)
Physical victimized	3.7 (2.31-5.93)*	7.83 (0.94-65.11)	11 (0.34-358.72)	1 (omitted)
Indirectly and verbally victimized	5.25 (0.68-40.72)	1.82 (0.57-5.84)	2.8 (0.97-8.13)	3.01 (0.38-23.90)
Sexually harassed	1.37 (0.16-11.97)	0.50 (0.14-1.81)	2.8 (0.70-11.12)	0.64 (0.14-2.85)
Bullied	2.56 (0.33-19.84)	4.74 (1.50-14.95)*	6.15 (0.89-42.71)	1.96 (0.56-6.81)
Bullied for sexual orientation	1 (omitted)	1 (omitted)	1 (omitted)	2.7 (0.20-36.51)

SHC, school health center.
*95% confidence interval does not include 1.

how youth of different cultural backgrounds interpret the concept of bullying to improve understanding of their experiences and perspectives, as well as the types of interventions that they would consider attractive and engaging.

Future research, including a larger sample size of African American students, would be helpful to investigate some tentative results of this study; whereas 24% of the studied schools consisted of African American students in 2009-2010, the African

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American students meeting inclusion criteria for this study consisted of only 15% of the study population. African American students were less likely to complete the survey questions that were required for inclusion in the study sample. Other reasons for the underrepresentation of African Americans in the study sample are unknown, but this may have limited our ability to detect real differences in SHC use by bullied and victimized African American students. For those results that were not statistically significant for African American students and students of other race/ethnicities, almost all of the odds ratios for bullied and victimized students using the SHC remained greater than 1. This suggests that the lack of statistically significant differences in rates of SHC utilization for some groups of bullied and victimized students was most likely a problem of precision and lack of statistical power. Thus, the few odds ratios that were less than 1 were outliers that were most likely due to ''multiple testing,'' type 1 error. Our statistical power limitation was most pronounced among non-API students who were bullied for sexual orientation and 11th grade African American girls who reported all 3 categories of physical victimization; these groups were too low to calculate reliable odds ratios at all. A strength of this study, however, was the large sample of API students. APIs are one of the fastest growing communities in the Unites States and often have been underrepresented in research.[33] This study helps to expand our knowledge of the health needs and service utilization of API youth and how best to provide them with care.

Although this study showed some evidence of an association between bullied and victimized students and increased odds of SHC use, it was not possible to determine whether students who were more likely to use the SHC were doing so as a direct result of being bullied or victimized. The data are cross-sectional, so it was also not possible to demonstrate the temporal order of SHC use or victimization. It is additionally important to note that the question about SHC use asked if students had ever used the SHC. This means that the grade-level differences in SHC use may be a simple reflection of the fact that students were asked if they had ever used the SHC, and the 11th graders had more years in which to do so.

Although school-based victimization is often a symptom of larger community problems,[13] schools are key entry points, both for providing medical and mental health services[34] and for providing anti-bullying and violence prevention interventions.[1,35] As previously discussed, SHCs are well situated to address bullying and victimization within schools[19,20] because they have the potential to provide interventions that impact multiple factors related to these experiences, including individual mental health services, therapeutic groups, and broader interventions that improve school climate.[36]

IMPLICATIONS FOR SCHOOL HEALTH

Bullying and victimization are complex challenges for schools. A major implication of this study is that there is a need for school health professionals, such as school nurses, mental health therapists, and social workers, to play a role in identifying youth who have been bullied and victimized and connecting them to services, such as the SHC. SHCs also should provide outreach to youth on the services that are available to them, such as mental health counseling, if they are experiencing bullying or victimization.

Assurances of confidentiality are known to increase an adolescent's disclosure of sensitive information.[37] It is important that SHCs clearly articulate that health information is confidential and what information requires mandated reporting to another organization or to parents, particularly when working with victimized youth who may have suicide ideation. SHCs should clearly post and inform students of their health care rights and responsibilities when using services. There are state SHC organizations and local adolescents groups that develop and print youth friendly language about adolescent confidentiality and rights to health care.[38]

In addition to increasing school staff and students' awareness of bullying and victimization and providing resources to address them, long-term solutions require addressing school climate. Nationally, there are efforts under way to create full-service community schools, where community-based organizations work in partnership with schools to improve student learning, strengthen families, and create healthier communities.[39] Within the community school model, the school and its community partners should consider forming a school climate team that assesses the school environment and develops and implements a plan to reduce and prevent bullying and improve the overall school climate (such strategies are shared at the federal government Stop Bullying page[40]). Furthermore, in partnership with school staff and community partners, SHCs can implement standardized school-wide screenings, which identify students earlier and provide appropriate support services. The range of support services could include mental health counseling, and also youth development groups, such as young women and men's groups, or other groups, for example, through a cultural lens in which the young people identify.

While this study addresses a gap in the literature on SHC use, further research is needed in this area. Future studies may seek to determine the exact reason that bullied and victimized students had higher odds of using their school SHC, to examine specifically whether bullied and victimized students are using

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the mental health services that are available on-site, and to evaluate the efficacy of SHCs (if available) in addressing the problems of bullying and victimization in middle schools and high schools. This study also points to the need to explore the concepts of bullying and victimization further and how to measure them accurately across all cultural backgrounds and from the perspectives of the victims themselves, as well as the perpetrators. This would add to the field's collective knowledge and strategies for addressing bullying and victimization in youth.

Human Subjects Approval Statement

The University of California, San Francisco Committee on Human Research approved all study instruments and methods.

REFERENCES

1. Espelage DL, Swearer SM. Research on school bullying and victimization: what have we learned and where do we go from here? *School Psych Rev*. 2003;32(3):365-383.
2. Nansel TR, Overpeck M, Pilla RS, Ruan WJ, Simons-Morton B, Scheidt P. Bullying behaviors among U.S. youth: prevalence and association with psychosocial adjustment. *JAMA*. 2007;285(16):2094-2100.
3. Hawker DSJ, Boulton MJ. Twenty years' research on peer victimization and psychosocial maladjustment: a meta-analytic review of cross-sectional studies. *J Child Psychol Psychiatry*. 2000;41(4):441-455.
4. Felix ED, Furlong MJ, Austin G. A cluster analytic investigation of school violence victimization among diverse students. *J Interpers Violence*. 2009;24(10):1673-1695.
5. Finkelhor D, Ormrod RK, Turner HA. Poly-victimization: a neglected component in child victimization. *Child Abuse Negl*. 2007;31(1):7-26.
6. Greif JL, Furlong MJ. The assessment of school bullying: using theory to inform practice. *J Sch Violence*. 2006;5(3):33-50.
7. Warner BS, Weist MD, Krulak A. Risk factors for school violence. *Urban Educ*. 1999;34(1):52-68.
8. Felix ED, McMahon SD. The role of gender in peer victimization among youth: a study of incidence, interrelations, and social cognitive correlates. *J Sch Violence*. 2007;6(3):27-44.
9. Graham S, Juvonen J. Ethnicity, peer harassment and adjustment in middle school: an exploratory study. *J Early Adolesc*. 2002;22(2):173-199.
10. Spriggs AL, Iannotti RJ, Nansel TR, Haynie DL. Adolescent bullying involvement and perceived family, peer and school relations: commonalities and differences across race/ethnicity. *J Adolesc Health*. 2007;41(3):283-293.
11. Goodenow C, Szalacha L, Westheimer K. School support groups, other school factors, and the safety of sexual minority adolescents. *Psychol Sch*. 2006;43(5):573-589.
12. Ryan C, Rivers I. Lesbian, gay, bisexual and transgender youth-victimization and its correlates in the USA and UK. *Cult Health Sex*. 2003;5(2):103-119.
13. Furlong M, Morrison G. The school in school violence definitions and facts. *J Emot Behav Disord*. 2000;8(2):71-82.
14. Bowen NK, Bowen GL. Effects of crime and violence in neighborhoods and schools on the school behavior and performance of adolescents. *J Adolesc Res*. 1999;14(3):319-342.
15. Fekkes M, Pijpers FIM, Fredriks M, Vogels T, Verloove-Vanhorick SP. Do bullied children get ill, or do ill children get bullied? A prospective cohort study on the relationship between bullying and health-related symptoms. *Pediatrics*. 2006;117(5):1568-1574.
16. Wilson D. The interface of school climate and school connectedness and relationships with aggression and victimization. *J Sch Health*. 2004;74(7):293-299.
17. Coker TR, Austin SB, Schuster MA. The health and health care of lesbian, gay, and bisexual adolescents. *Annu Rev Public Health*. 2010;31:457-477.
18. Savin-Williams RC. Verbal and physical abuse as stressors in the lives of lesbian, gay male, and bisexual youths: associations with school problems, running away, substance abuse, prostitution, and suicide. *J Consult Clin Psychol*. 1994;62(2):261-269.
19. Fiester L, Nathanson SP, Visser L, Martin J. Lessons learned from three violence prevention projects. *J Sch Health*. 1996;66(9):344-346.
20. Perkins H, Montfort C. The impact of violence on adolescents in schools: a case study on the role of school health centers. *Nurs Clin North Am*. 2005;40(4):671-679.
21. Anglin TM, Naylor KE, Kaplan DW. Comprehensive school-based health care: high school students' use of medical, mental health and substance abuse services. *Pediatrics*. 1996;97(3):318-330.
22. Allison MA, Crane LA, Beaty BL, Davidson AJ, Melinkovich P, Kempe A. School-based health centers: improving access and quality of care for low-income adolescents. *Pediatrics*. 2007;120(4):e887-e894.
23. Weist MD, Paskewitz DA, Warner BS, Flaherty LT. Treatment outcome of school-based mental health services for urban teenagers. *Community Ment Health J*. 1996;32(2):149-157.
24. Guo JJ, Wade TJ, Keller KN. Impact of school-based health centers on students with mental health problems. *Public Health Rep*. 2008;123(6):768.
25. Amaral G, Geierstanger S, Soleimanpour S, Brindis C. Mental health characteristics and health-seeking behaviors of adolescent school-based health center users and nonusers. *J Sch Health*. 2011;81(3):138-145.
26. Pastore DR, Juszczak L, Fisher MM, Friedman SB. School-based health center utilization: a survey of users and nonusers. *Arch Pediatr Adolesc Med*. 1998;152(8):763-767.
27. Keyl PM, Hurtado MP, Barber MM, Borton J. School-based health centers: students' access, knowledge, and use of services. *Arch Pediatr Adolesc Med*. 1996;150(2):175-180.
28. Walter H, Vaughan R, Armstrong B, Krakoff R, Tiezzi I, McCarthy J. Characteristics of users and non-users of health clinic in inner-city junior high schools. *J Adolesc Health*. 1996;18(5):344-348.
29. Austin G, Bates S, Duerr M. Guidebook to the California Healthy Kids Survey, Part II: Survey Content Core Module - 2011. Available at: http://chks.wested.org/about. Accessed January 31, 2015.
30. WestEd. The Healthy Kids/School Climate Survey Reader. 2010. Available at: http://chks.wested.org/resources/hksc-surveyreader.pdf. Accessed January 31, 2015.
31. Stata Corporation. *Stata. Version 12*. College Station, TX: Stata Corporation; 2012.
32. California Department of Education (CDE). Enrollment Data by Ethnicity 2009. Available at: http://www.cde.ca.gov/ds/sd/. Accessed January 31, 2015.
33. Sue S, Cheng JKY, Saad CS, Chu JP. Asian American mental health: a call to action. *Am Psychol*. 2012;67(7):532-544.
34. Juszczak L, Melinkovich P, Kaplan D. Use of health and mental health services by adolescents across multiple delivery sites. *J Adolesc Health*. 2003;32(6):108-118.
35. Vreeman RC, Carroll AE. A systematic review of school-based interventions to prevent bullying. *Arch Pediatr Adolesc Med*. 2007;161(1):78-88.
36. Brown MB, Bolen LM. The school-based health center as a resource for prevention and health promotion. *Psychol Sch*. 2008;45(1):28-38.

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37. Ford CA, Millstein SG, Halpern-Felsher BL, Irwin CE. Influence of physician confidentiality assurances on adolescents' willingness to disclose information and seek future health care: a randomized controlled trial. *JAMA*. 1997;278(12):1029-1034.
38. Adolescent Health Working Group. Youth Health Rights and Responsibilities. 2003. Available at: http://www.ahwg.net/. Accessed January 31, 2015.
39. Institute for Educational Leadership. Coalition for Community Schools. Available at: http://www.communityschools.org/. Accessed January 31, 2015.
40. Department of Health and Human Services. Stop Bullying. Available at: http://www.stopbullying.gov. Accessed January 31, 2015.

17461561, 2015, 5, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/josh.12256 by Stanford University, Wiley Online Library on [24/11/2023]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License