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School-Level Poverty and Persistent Feelings of Sadness or Hopelessness, Suicidality, and Experiences with Violence Victimization among Public High School Students

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Abstract

Objectives.—To examine the association between school-level poverty status and students' persistent feelings of sadness or hopelessness, suicidality, and experiences with violence victimization among U.S. high school students.

Methods.—Public schools captured in the 2015 and 2017 national Youth Risk Behavior Surveys were categorized as high-, mid-, or low-poverty based on the percentage of students eligible for free or reduced-price meals (N=29,448).

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Results.—Students in high-poverty schools were significantly more likely than students in low-poverty schools to experience persistent feelings of sadness or hopelessness, experience suicidal thoughts and attempts, not go to school because of safety concerns, be threatened or injured with a weapon on school property, be bullied on school property, be physically forced to have sexual intercourse, and be victims of sexual and physical dating violence.

Conclusions.—School and community approaches to address suicide and violence victimization may be especially important for students living in poverty.

Keywords

Adolescent; poverty; violence; suicide

The relationship between poverty or low socioeconomic status (SES) and poor health and mortality is well established among adults as well as children and adolescents.^{1–7} In general, that relationship may be explained by factors such as reduced access to health care, less healthy lifestyle experiences (e.g., lack of time, facilities, and safe places for physical activity; poor diet due to the inability to afford or access adequate amounts of nutritious foods), poor living conditions and community opportunities (e.g., unstable housing, exposure to pollutants, unsafe neighborhoods, lack of greenspace for physical activity, higher fast food restaurant density), low health literacy, and individual and community stress among those living in poverty.^{2,3,5}

In particular, youth living in poverty appear to be more vulnerable to mental health concerns and violence victimization than higher-SES youth.^{6–8} For example, a systematic review examining the relationship between SES and mental health among youth found that low-SES youth were two to three times more likely than their higher-SES peers to develop mental health problems.⁶ Correlates of poverty, such as exposure to violence and crime, residential density and crowding, frequent moves, family conflict stemming from financial stress, or perceptions of inadequate family support, may partially explain the association between SES and mental health.⁷

Youth exposure to violence may be indirect (e.g., neighborhood violence or witnessing family violence) or direct (e.g., bullying or dating violence). Both types of exposure are detrimental to the health of young people^{1,7,8} and both are associated with individual- and community-level socioeconomic conditions.^{8–13} Violent neighborhoods are often characterized by high levels of poverty and unemployment, and lower education levels.¹⁴ Among youth, living in a violent neighborhood and coming from a low-income home are associated with being exposed to violence¹⁴ and being a victim of violence.^{10, 15}

Indicators of SES among youth include household income, parental education, parental occupation status, and receipt of welfare benefits.⁶ Children and adolescents, however, are not always able to answer questions about their parents' education level, employment, or income.^{16,17} Thus, an SES measure independent of adolescent self-report can be useful. Day et al. demonstrated that the percentage of students eligible for free and reduced-price meals at the school-level is a useful and practical measure of SES when individual-level measures are not available.¹⁸

Beyond being a useful proxy measure for student-level poverty, school-level SES may independently affect health behaviors and experiences among students regardless of their household SES.^{19,20} Few studies, however, have examined the association between school poverty measures and student health outcomes. Thus, the purpose of this study was to analyze data from a nationally representative sample of public U.S. high school students to examine whether school-level SES was associated with student-level measures of persistent feelings of sadness or hopelessness, suicidal thoughts and attempts, not going to school because of safety concerns, being threatened or injured with a weapon on school property, being bullied on school property or *via* electronic bullying, being physically forced to have sexual intercourse, and being victims of sexual and physical dating violence. These experiences are important to consider because youth living in poverty appear to be especially vulnerable to mental health concerns and violence victimization.^{6-8,10,15}

Methods

Data source.

This study examined data from the national Youth Risk Behavior Survey (YRBS), a cross-sectional, school-based survey that has been conducted by the Centers for Disease Control and Prevention (CDC) biennially since 1991. Each survey year, an independent three-stage, cluster sample design is used to obtain a nationally representative sample of public and private school students in grades 9–12 in the 50 U.S. states and District of Columbia. Student participation in the YRBS is anonymous and voluntary, and local parental permission procedures are used. Survey participants complete a self-administered pencil and paper questionnaire during a regular class period and record their responses on a computer-scannable answer sheet. This survey offers a unique opportunity to study both school-level and student-level measures using a large, nationally representative survey of public high school students. More information about the YRBS sampling and psychometric properties have been published elsewhere.^{21,22}

For the current analysis, we combined data from the national 2015 and 2017 YRBS to improve statistical power. During 2015 and 2017, respectively, the number of students in the sample was 15,624 and 14,765, the school response rates were 69% and 75%, the student response rates were 86% and 81%, and the overall response rates (the product of the school and student response rates) were 60% for both years. Because the school-level SES measure (described below) was available only for public schools, this analysis was limited to students attending public schools (N=29,448), and the findings are generalizable only to public school students. The CDC's Institutional Review Board approved the protocol for the national YRBS.

Measures.

The 2015 and 2017 YRBS questionnaire asked students to indicate their sex (female or male), grade (9th, 10th, 11th, or 12th), and their race/ethnicity. Students were classified into four racial/ethnic categories: White, non-Hispanic (“White”); Black, non-Hispanic (“Black”); Hispanic or Latino of any race (“Hispanic”); and other or multiple races. The numbers of students in the other or multiple racial/ethnic groups were too small

for meaningful analysis; therefore, those data are not presented, although they remain in the analytic sample. In addition, 10 variables assessing persistent feelings of sadness or hopelessness, suicidal thoughts and attempts, and violence victimization were examined as outcomes. Question wording and analytic coding for each of the 10 variables is provided in Table 1.

The YRBS data were linked with extant data from the Market Data Retrieval database (<https://mdreduction.com>), a commercial database that contains information about individual U.S. schools. This database was used to determine the percentage of public school students eligible for free or reduced-price meals (FRPM). Using the U.S. Department of Education (NCES) cutoff points, “high-poverty schools” were defined as public schools in which more than 75% of the students were eligible for FRPM, and “low-poverty schools” were defined as public schools in which 25% or less of the students were eligible for FRPM. Schools in which 26%–75% of students were eligible for FRPM were deemed “mid-poverty schools.”²³

Analysis.

A weight based on student sex, race/ethnicity, and grade was applied to each record to adjust for school and student nonresponse and oversampling of Black and Hispanic students. The overall weights were scaled so that the weighted count of students equals the total sample size, and the weighted proportions of students in each grade match the national population proportions.²² The result is that YRBS data are representative of all students in grades 9–12 attending public and private schools in the United States; though, for this study, only students from public schools were included in the analysis. Missing data were not imputed. To account for the complex sample design of the survey and weighting, all analyses were conducted using SUDAAN statistical software (version 11.0.1) (Research Triangle Institute, Research Triangle Park, North Carolina).

Initially, chi-square tests were used to examine whether the unadjusted prevalence of persistent feelings of sadness or hopelessness, suicidal thoughts and attempts, and violence victimization varied by demographic characteristics and school poverty status. Then, using logistic regression models that controlled for sex, race/ethnicity, and grade, we calculated adjusted prevalence ratios (APRs) *via* predicted marginal standardization to examine the association between school-level poverty status and persistent feelings of sadness or hopelessness, suicidal thoughts and attempts, and violence victimization. In the first set of logistic regression models, low-poverty status was the referent. In the second set of models, mid-poverty status was the referent. For the second set of models, only significant findings are presented in the text. Findings were considered statistically significant if the chi-square p-value was $<.05$ or if the APR 95% confidence interval did not include 1.0.

Results

The sample comprised 51.1% male students, and 52.1% White students, 23.8% Hispanic students, and 14.2% Black students. Students of other races or students of multiple races made up 9.9% of the sample. Approximately one quarter of students were in each grade level from 9th through 12th grade. Most students attended a mid-poverty school (67.1%)

and the remaining students attended a high-poverty school (10.3%) or low-poverty school (22.6%).

Persistent feelings of sadness or hopelessness and suicidal thoughts and attempts.

Overall, among public high school students in 2015 and 2017, 31.4% had persistent feelings of sadness or hopelessness, 17.8% had seriously considered attempting suicide, and 8.5% had attempted suicide during the 12 months before the survey (Table 2). The chi-square comparisons showed that persistent feelings of sadness or hopelessness, having seriously considered attempting suicide, and having attempted suicide varied by sex, race/ethnicity, and school poverty status. Having attempted suicide also varied by grade.

In adjusted models, persistent feelings of sadness or hopelessness, having seriously considered attempting suicide, and having attempted suicide was associated with school poverty status (Table 3). Specifically, students in mid-poverty (32.2%) and high-poverty (36.6%) schools were significantly more likely than students in low-poverty schools (26.1%) to have had persistent feelings of sadness or hopelessness (APR=1.25 and 1.44, respectively). Students in high-poverty schools were significantly more likely than students in mid-poverty schools to have persistent feelings of sadness or hopelessness (APR=1.15, 95% CI=1.06–1.25 [data not shown]). Students in mid-poverty (18.4%) and high-poverty (18.6%) schools were significantly more likely than students in low-poverty schools (15.7%) to have seriously considered attempting suicide (APR = 1.22 and 1.33, respectively); students in mid-poverty (8.6%) and high-poverty (12.5%) schools were significantly more likely than students in low-poverty schools (6.0%) to have attempted suicide (APR = 1.42 and 1.97, respectively). Students in high-poverty schools were significantly more likely than students in mid-poverty schools to have attempted suicide (APR=1.39, 95% CI=1.10–1.76 [data not shown]).

Violence victimization on school property and bullying.

Overall, among public high school students in 2015 and 2017, 6.3% did not go to school because of safety concerns during the 30 days before the survey, 6.2% had been threatened or injured with a weapon on school property during the 12 months before the survey, 19.6% had been bullied on school property during the 12 months before the survey, and 15.3% had been electronically bullied during the 12 months before the survey (Table 4). The chi-square comparisons showed that not going to school because of safety concerns, having been threatened or injured with a weapon on school property, and having been electronically bullied varied by sex, race/ethnicity, grade, and school poverty status. Having been bullied on school property varied by sex, race/ethnicity, and grade but not school poverty status.

In adjusted models, not going to school because of safety concerns, having been threatened or injured with a weapon on school property, and having been bullied on school property were each associated with school poverty status (Table 4). Students in mid-poverty (6.6%) and high-poverty (8.2%) schools were significantly more likely not to go to school because of safety concerns than students in low-poverty schools (4.0%) (APR = 1.53 and 1.55, respectively). Students in high-poverty (8.0%) schools were significantly more likely than students in low-poverty schools (4.7%) to have been threatened or injured with a weapon on

school property (APR = 1.49). Students in mid-poverty schools (20.1%) were significantly more likely than students in low-poverty schools (18.4%) to have been bullied on school property (APR = 1.16).

Forced sexual intercourse and dating violence.

Overall, among public high school students in 2015 and 2017, 7.4% had ever been forced to have sexual intercourse when they did not want to, 6.2% had experienced sexual dating violence, and 6.3% had experienced physical dating violence. The chi-square comparisons showed that ever having been forced to have sexual intercourse when they did not want to varied by sex, grade, and school poverty status; having experienced sexual dating violence varied only by sex; and having experienced physical dating violence varied by sex, race/ethnicity, grade, and school poverty status.

In adjusted models, the percentage of students who had ever been forced to have sexual intercourse, had experienced sexual dating violence, and had experienced physical dating violence was associated with school poverty status. Students in mid-poverty (7.7%) and high-poverty (8.7%) schools were significantly more likely than students in low-poverty schools (5.3%) to have ever been forced to have sexual intercourse (APR = 1.56 and 1.77, respectively). Students in high-poverty (7.6%) schools were significantly more likely than students in low-poverty schools (5.7%) to have experienced sexual dating violence (APR = 1.50). Students in mid-poverty (6.5%) and high-poverty (7.7%) schools were significantly more likely to have experienced physical dating violence than students in low-poverty schools (4.4%) (APR = 1.52 and 1.76, respectively).

Discussion

The current study examined the prevalence of persistent feelings of sadness or hopelessness, suicidal thoughts and attempts, and experiences with violence victimization among U.S. public high school students, and whether those behaviors and experiences were associated with school-level poverty status. Previous reports of YRBS data indicated increases in the prevalence of persistent feelings of sadness or hopelessness and missing school due to safety concerns among high school students nationwide, but decreases in the prevalence of suicidality and most measures of violence victimization during the last several decades.²⁴ Data from this study show that the prevalence of those and other related behaviors and experiences remains high. Thus, expanding our understanding of risk factors for mental health concerns and violence victimization in adolescence, particularly understudied factors at the community level, is warranted.

This study found that among U.S. public high school students, the poverty level of their school—based on the percentage of students eligible for free or reduced-price meals—was associated with their experiences of persistent feelings of sadness or hopelessness, suicidal thoughts and attempts, and with violence victimization. These findings are consistent with other studies among youth that demonstrated an association between neighborhood poverty levels and suicidal behavior,^{6,25} and some measures of violence victimization (physical violence and threats).²⁶ We did not find an association between school poverty status and electronic bullying in adjusted models.

These findings suggest school and community approaches that are effective in reducing suicide and violence victimization are needed, particularly for students attending high-poverty schools. The CDC has identified a variety of programs, policies, and practices that can be used to reduce suicide, youth violence (including bullying), sexual violence, and intimate partner violence in a series of technical packages designed to summarize the best available evidence for prevention for schools, communities, and states.^{27–30} The importance of youth feeling safe and connected to peers and adults at school is widely recognized.^{31, 32} For example, Tomek et al. found that school connectedness (i.e., social belonging) was an especially important factor in reducing suicide ideation and attempts over time among Black female and male adolescents living in low-income neighborhoods.³¹ The advantage of school-level interventions, though not to the exclusion of addressing individual student needs, is that they potentially address the needs of all students, regardless of income.

Because students attending high-poverty schools disproportionately live in impoverished neighborhoods, it is important to explore prevention strategies that reduce poverty and address the risk and protective factors of the community itself, in addition to risk characteristics of the individual, to reduce youth suicide and violence.^{27–30} Evidence suggests that comprehensive, multi-component strategies and programs that address multiple risk and protective factors reduces multiple forms of violence and other risk behaviors such as substance use and sexual risk behaviors.^{27,32} A multi-level, multi-sector approach to address the challenges faced by students living in poverty could involve not only schools, but families, health care, and the broader community.^{27–30} For example, schools can implement programs that enhance student resiliency and school-connectedness (or, belongingness), which can aid in mitigating some of the negative impacts of poverty.^{27–30} Community-level policies and programs could address risk factors such as low social connectedness or social capital, neighborhood disorder and blight, residential instability, gang activity, employment opportunities, troubled parent-student relationships, and inadequate parental monitoring and supervision.^{10,27–30}

Direct measures of student poverty status are difficult to attain because of the challenges children and adolescents have reporting accurate information about their parents' education level, employment, or income.^{16,17} Yet, because youth living in poverty appear to be especially vulnerable to mental health concerns and violence victimization,^{6–8,10,15} it would be useful to have another approach to assessing student SES. Although school poverty is not a direct measure of any individual student's SES, there are important benefits of using a school-level measure as a proxy for student-level SES. One such benefit is that schools are a meaningful geographic unit in light of growing evidence that area-based SES measures derived from large geographic areas (e.g., ZIP codes) are not ideal.^{33,34}

Another benefit is that school-level poverty information, based on FRPM status, is readily available for public schools in the U.S., and is a reliable school-level economic indicator.²³ Further, FRPM status consistently indicated that students attending schools with a higher percentage of students living in poverty were most at risk for issues related to mental health, suicide, and violence victimization. Additional studies, including longitudinal studies, are needed to confirm the benefits of using this school-level measure to examine its association with health outcomes. For example, this study included demographic characteristics of

students in logistic regression models, but did not explore how sex/gender/sexual orientation or race/ethnicity might differentially affect the relationship between poverty and student health risks. Future studies could examine the viability of using school-level poverty measures as a proxy for student-level poverty among specific sex/gender/sexual orientation and racial/ethnic subgroups.

Limitations.

First, the YRBS does not include an individual-or family-level measure of SES and, thus, we were unable to distinguish between individual- and school-level influences on the outcomes examined in this study. However, the percentage of students eligible for free and reduced-price meals at the school-level is a useful and practical measure of SES when individual-level measures are not available.¹⁸ Some misclassification of school poverty status may exist due to the U.S. Department of Education's community eligibility provision (CEP), which allows schools meeting a student eligibility threshold to provide all students with free meals regardless of individual need or eligibility.³⁵ For this study, however, even though some students in the sample may have attended a school that participated in CEP, participation in that program was unlikely to bias the findings because the sample included students attending schools in all three poverty level categories. Second, because FRPM data are available only for public schools, these findings apply only to high school youth who attend public schools and, therefore, are not representative of all persons in this age group, including out-of-school youth or those who attend private schools. Third, the extent of student under-reporting or over-reporting of behaviors and experiences cannot be determined; however, YRBS questions generally demonstrate good test-retest reliability.²¹

Conclusion.

This study found that school-level SES, as determined by the percentage of students eligible for free or reduced-price meals, was associated with student-level measures of persistent feelings of sadness or hopelessness, suicidal thoughts and attempts, and a variety of experiences with violence victimization. School- and community-level interventions, particularly in economically disadvantaged communities, may be needed to address the social and environmental risk factors for adolescent health and safety.

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Table 1. QUESTION WORDING AND ANALYTIC CODING FOR INCLUDED HEALTH RISK BEHAVIORS AND EXPERIENCES, NATIONAL YOUTH RISK BEHAVIOR SURVEYS 2015 AND 2017

Variable	Question	Response Options and Analytic Coding
Persistent feelings of sadness or hopelessness	During the past 12 months, did you ever feel so sad or hopeless almost every day for two weeks or more in a row that you stopped doing some usual activities?	Yes vs. No
Seriously considered attempting suicide	During the past 12 months, did you ever seriously consider attempting suicide?	Yes vs. No
Attempted suicide	During the past 12 months, how many times did you actually attempt suicide?	0 times vs. 1 time, 2 or 3 times, 4 or 5 times, and 6 or more times
Did not go to school because of safety concerns	During the past 30 days, on how many days did you not go to school because you felt you would be unsafe at school or on your way to or from school?	0 days vs. 1 day, 2 or 3 days, 4 or 5 days, and 6 or more days
Threatened or injured on with a weapon on school property	During the past 12 months, how many times has someone threatened or injured you with a weapon such as a gun, knife, or club on school property?	0 times vs. 1 time, 2 or 3 times, 4 or 5 times, 6 or 7 times, 8 or 9 times, 10 or 11 times, and 12 or more times
Bullied on school property	Bullying is when 1 or more students tease, threaten, spread rumors about, hit, shove, or hurt another student over and over again. It is not bullying when 2 students of about the same strength or power argue or fight or tease each other in a friendly way. During the past 12 months, have you ever been bullied on school property?	Yes vs. No
Electronically bullied	During the past 12 months, have you ever been electronically bullied? (Count being bullied through texting, Instagram, Facebook, or other social media.)	Yes vs. No
Ever physically forced to have sexual intercourse when they did not want to	Have you ever been physically forced to have sexual intercourse when you did not want to?	Yes vs. No
Sexual dating violence	During the past 12 months, how many times did someone you were dating or going out with force you to do sexual things that you did not want to do? (Count such things as kissing, touching, or being physically forced to have sexual intercourse.)	I did not date or go out with anyone during the past 12 months and 0 times vs. 1 time, 2 or 3 times, 4 or 5 times, and 6 or more times
Physical dating violence	During the past 12 months, how many times did someone you were dating or going out with physically hurt you on purpose? (Count such things as being hit, slammed into something, or injured with an object or weapon.)	I did not date or go out with anyone during the past 12 months and 0 times vs. 1 time, 2 or 3 times, 4 or 5 times, and 6 or more times

Table 2.

PERSISTENT FEELINGS OF SADNESS OR HOPELESSNESS AND SUICIDAL THOUGHTS AND ATTEMPTS AMONG PUBLIC HIGH SCHOOL STUDENTS, BY PERCENTAGE OF STUDENTS ELIGIBLE FOR FREE AND REDUCED-PRICE MEALS (FRPM)—NATIONAL YOUTH RISK BEHAVIOR SURVEYS, 2015 AND 2017

	Persistent Feelings of Sadness or Hopelessness % (95% CI)	Seriously Considered Attempting Suicide % (95% CI)	Attempted Suicide % (95% CI)
Total	31.4 (30.4–32.5)	17.8 (17.2–18.4)	8.5 (7.9–9.1)
Sex			
Female	42.2 (40.6–43.8)	23.7 (22.6–24.8)	11.4 (10.4–12.4)
Male	20.9 (19.8–22.1)	12.0 (11.2–12.7)	5.4 (4.8–6.1)
Chi-square p-value	p < .001	p < .001	p < .001
Race/ethnicity			
White, non-Hispanic	30.5 (28.9–32.1)	18.0 (16.9–19.0)	7.1 (6.4–7.9)
Black, non-Hispanic	27.2 (24.9–29.6)	14.6 (13.2–16.1)	9.5 (7.8–11.6)
Hispanic	34.7 (33.1–36.4)	17.6 (16.5–18.6)	9.8 (8.8–11.0)
Chi-square p-value	p < .001	p < .001	p = .001
Grade			
9 th	30.0 (28.4–31.5)	17.5 (16.3–18.7)	9.5 (8.6–10.5)
10 th	31.9 (30.1–33.8)	18.4 (17.1–19.9)	9.7 (8.5–10.9)
11 th	32.7 (30.6–34.8)	17.9 (16.5–19.3)	7.5 (6.6–8.6)
12 th	31.1 (29.5–32.8)	17.0 (15.9–18.2)	6.5 (5.6–7.6)
Chi-square p-value	p = .128	p = .413	p < .001
School-level poverty status ^a			
Low-poverty	26.1 (24.0–28.3)	15.7 (14.2–17.4)	6.0 (5.1–7.1)
Mid-poverty	32.2 (31.2–33.4)	18.4 (17.6–19.1)	8.6 (7.9–9.3)
High-poverty	36.6 (33.7–39.6)	18.6 (16.9–20.5)	12.5 (10.4–14.9)
Chi-square p-value	p < .001	p = .024	p < .001

Notes

^aLow-poverty schools = 25% of students were eligible for FRPM; mid-poverty schools = 26%–75% of students were eligible for FRPM; high-poverty schools = >75% of students were eligible for FRPM. CI=Confidence Interval

Table 3.

ADJUSTED PREVALENCE RATIOS (APR) OF PERSISTENT FEELINGS OF SADNESS OR HOPELESSNESS, SUICIDAL THOUGHTS AND ATTEMPTS, AND VIOLENCE VICTIMIZATION AMONG PUBLIC HIGH SCHOOL STUDENTS, BY PERCENTAGE OF STUDENTS ELIGIBLE FOR FREE AND REDUCED-PRICE MEALS (FRPM)—NATIONAL YOUTH RISK BEHAVIOR SURVEYS, 2015 AND 2017

	School-Level Poverty Status ^a		
	Low-Poverty	Mid-Poverty APR ^b (95% CI)	High-Poverty APR (95% CI)
Persistent feelings of sadness or hopelessness	ref	1.25 (1.14–1.37)	1.44 (1.28–1.62) ^c
Seriously considered attempting suicide	ref	1.22 (1.09–1.37)	1.33 (1.15–1.53)
Attempted suicide	ref	1.42 (1.16–1.73)	1.97 (1.55–2.51) ^c
Did not go to school because of safety concerns	ref	1.53 (1.22–1.92)	1.55 (1.10–2.18)
Threatened or injured on with a weapon on school property	ref	1.34 (1.00–1.79)	1.49 (1.07–2.08)
Bullied on school property	ref	1.16 (1.06–1.29)	1.18 (0.99–1.40)
Electronically bullied	ref	1.14 (0.99–1.33)	1.08 (0.88–1.31)
Ever physically forced to have sexual intercourse when they did not want to	ref	1.56 (1.25–1.93)	1.77 (1.32–2.37)
Sexual dating violence	ref	1.15 (0.96–1.38)	1.50 (1.03–2.20)
Physical dating violence	ref	1.52 (1.20–1.92)	1.76 (1.33–2.34)

Notes

^aLow-poverty schools = 25% of students were eligible for FRPM; mid-poverty schools = 26%–75% of students were eligible for FRPM; high-poverty schools = >75% of students were eligible for FRPM.

^bAdjusted prevalence ratios (APRs) determined using logistic regression models that controlled for sex, race/ethnicity, and grade.

^cSignificantly different than mid-poverty. Bolding indicates significance differences.

CI=Confidence Interval

Table 4.

VIOLENCE VICTIMIZATION AMONG PUBLIC HIGH SCHOOL STUDENTS, BY PERCENTAGE OF STUDENTS ELIGIBLE FOR FREE AND REDUCED-PRICE MEALS (FRPM)—NATIONAL YOUTH RISK BEHAVIOR SURVEYS, 2015 AND 2017

	Did Not Go to School Because of Safety Concerns % (95% CI)	Threatened or Injured with a Weapon on School Property % (95% CI)	Bullied on School Property % (95% CI)	Electronically Bullied % (95% CI)	Ever Physically Forced to Have Sexual Intercourse When They Did Not Want To % (95% CI)	Sexual Dating Violence % (95% CI)	Physical Dating Violence % (95% CI)
Total	6.3 (5.7–7.0)	6.2 (5.7–6.7)	19.6 (18.6–20.6)	15.3 (14.5–16.1)	7.4 (6.7–8.1)	6.2 (5.8–6.7)	6.3 (5.8–6.8)
Sex							
Female	6.9 (6.2–7.8)	4.6 (4.1–5.3)	23.5 (22.1–25.0)	21.1 (19.8–22.6)	11.2 (10.1–12.5)	9.5 (8.8–10.3)	7.6 (6.8–8.5)
Male	5.5 (4.9–6.2)	7.5 (6.8–8.2)	15.7 (14.8–16.7)	9.6 (8.9–10.5)	3.5 (3.0–4.0)	2.9 (2.4–3.4)	4.8 (4.3–5.3)
Chi-square p-value	p < .001	p < .001	p < .001	p < .001	p < .001	p < .001	p < .001
Race/ethnicity							
White, non-Hispanic	4.7 (3.9–5.7)	5.2 (4.6–5.9)	22.8 (21.5–24.1)	18.2 (17.1–19.3)	7.0 (6.2–7.9)	6.2 (5.6–6.9)	5.9 (5.3–6.6)
Black, non-Hispanic	8.0 (6.8–9.4)	8.1 (6.9–9.4)	13.1 (11.3–15.0)	9.8 (8.5–11.3)	7.6 (6.4–9.0)	5.4 (4.1–7.1)	7.5 (6.4–8.7)
Hispanic	8.5 (7.5–9.6)	6.4 (5.7–7.3)	16.1 (14.8–17.5)	12.2 (11.2–13.3)	7.2 (6.3–8.3)	6.0 (5.3–6.9)	6.0 (5.2–6.9)
Chi-square p-value	p < .001	p < .001	p < .001	p < .001	p = .724	p = .650	p = .043
Grade							
9 th	7.4 (6.4–8.4)	7.1 (6.3–7.9)	23.4 (21.8–25.1)	16.7 (15.7–17.8)	5.8 (5.0–6.7)	5.6 (4.8–6.5)	4.7 (4.0–5.5)
10 th	6.8 (5.9–7.9)	6.7 (5.9–7.7)	20.2 (18.7–21.8)	15.6 (14.4–16.9)	7.0 (6.0–8.1)	6.4 (5.5–7.3)	6.3 (5.6–7.1)
11 th	5.3 (4.6–6.2)	5.5 (4.7–6.5)	19.0 (17.4–20.8)	14.6 (13.0–16.4)	7.8 (6.8–8.9)	6.5 (5.6–7.5)	6.4 (5.6–7.3)
12 th	5.3 (4.5–6.1)	4.8 (4.1–5.7)	14.9 (13.6–16.3)	13.9 (12.6–15.4)	8.9 (7.8–10.1)	6.2 (5.4–7.1)	7.7 (6.8–8.7)
Chi-square p-value	p < .001	p < .001	p < .001	p = .007	p < .001	p = .423	p < .001
School-level poverty status ^a							
Low-poverty	4.0 (3.3–4.9)	4.7 (3.7–6.0)	18.1 (16.7–19.6)	14.8 (13.0–16.7)	5.3 (4.3–6.5)	5.7 (4.8–6.7)	4.4 (3.6–5.4)
Mid-poverty	6.6 (5.8–7.5)	6.3 (5.7–6.9)	20.1 (18.9–21.4)	15.8 (14.8–16.9)	7.7 (7.0–8.4)	6.2 (5.7–6.8)	6.5 (5.9–7.1)
High-poverty	8.2 (6.5–10.4)	8.0 (6.8–9.3)	16.9 (14.2–20.0)	12.1 (10.4–14.2)	8.7 (6.7–11.2)	7.6 (5.6–10.1)	7.7 (6.4–9.2)
Chi-square p-value	p < .001	p = .006	p = .050	p = .021	p = .001	p = .362	p = .001

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Notes

^aLow-poverty schools = 25% of students were eligible for FRPM; mid-poverty schools = 26%–75% of students were eligible for FRPM; high-poverty schools = >75% of students were eligible for FRPM.

CI=Confidence Interval