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School Bullying Perpetration and Other Childhood Risk Factors as Predictors of Adult Intimate Partner Violence Perpetration

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Objective: To assess the relationship between bullying peers as a child and adult intimate partner violence perpetration in a clinic-based sample of adult men. School bullying perpetration and intimate partner violence perpetration are both thought to stem from desire for power and control over others.

Design: A cross-sectional survey was conducted between January 2005 and December 2006.

Setting: Three urban community health centers in Boston, Massachusetts.

Participants: Men aged 18 to 35 years (n=1491) seeking services at participating community health centers.

Main Exposure: School bullying perpetration.

Outcome Measure: Past-year physical or sexual violence perpetration against a female partner (intimate-partner violence [IPV]).

Results: Two-fifths of men reported perpetrating school bullying as a child (n=610; 40.9%). Men who rarely bullied in school were 1.53 times more likely to perpetrate past-year IPV than men who did not bully (95% confidence interval [CI], 1.02-2.29); this risk was elevated to 3.82 times more likely to perpetrate any past-year IPV for those men who bullied peers frequently (95% CI, 2.55-5.73).

Conclusions: The present study indicates that bullying peers in school as a child, especially frequent bullying perpetration, is associated with increased risk for men's perpetration of IPV as an adult. The effect remains strong after controlling for common prior risk factors for both bullying and IPV perpetration. Future research is needed to discern the mechanisms and underlying root causes of abusive behavior, such as power and control, as a means to prevent violence perpetration across settings and life stages.

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APPROXIMATELY 1 IN 4 women will experience intimate-partner violence (IPV) in her lifetime.¹ Evidence indicates that IPV victimization is associated with major physical and mental health concerns, including increased risk for sexually transmitted infection, human immunodeficiency virus infection, depression, and substance abuse,

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making IPV a serious public health concern.^{2,3} Since the vast majority of IPV perpetrators are men and the health consequences of such victimization are more pronounced for women,^{4,5} a critical step in preventing and mitigating the effects of IPV is to identify and address risk factors for IPV perpetration among men.

Previous research drawing on samples from community-based health clinics has estimated that between 20% and 40% of

adult men have ever perpetrated IPV,⁶⁻⁸ and a recent study estimated a 4% prevalence of past-year IPV perpetration in a national sample of men.⁹ There is clear and consistent evidence that adverse childhood experiences may increase risk for adult IPV perpetration; exposure to community violence, exposure to parental IPV, and physical or sexual child abuse during these crucial developmental years have been associated with later adult perpetration of IPV.⁹⁻¹³ Limited evidence suggests participation in youth delinquency is also related to adult IPV, although distinctions between nonviolent and violent youth delinquency are lacking in the literature.^{14,15}

Within the literature concerning childhood experiences as factors in adult IPV perpetration, surprisingly little is known about the role of school bullying perpetration. School bullying has sparked recent public health and media attention and is defined as physical or psychological ag-

gression repeatedly directed toward another student who is perceived by the aggressor as weaker and less powerful than himself or herself.¹⁶ Like IPV perpetration, it is fueled by desire for power and control over other individuals, leading to concern that it may be a precursor to IPV.¹⁷ In particular, a recent theoretical article proposed that “sexual bullying,” or unwanted sexual teasing, harassment, or threats, overlaps dating violence in young adolescents.¹⁷ Other work, guided by a social-ecological framework, extends this hypothesis and asserts that there is significant overlap between sexual harassment and bullying behaviors in students such that youths may participate in multiple forms of abuse and aggression concurrently.¹⁸ One previous study of bullies documented less positive and equitable attitudes toward dating partners and more reports of aggression.¹⁹ However, no study, to our knowledge, has examined the association of bullying with other forms of physical or sexual IPV in adulthood.¹⁸

Beyond the conceptual basis for such investigation, recent evidence strongly indicates that bullying peers in school may share common prior causes with IPV perpetration. Specifically, exposure to community violence,²⁰ witnessing parental IPV,^{16,21,22} delinquent behavior,^{23,24} and childhood physical or sexual abuse²⁵ have all been found to be relevant to both IPV perpetration and bullying perpetration in separate studies. Evidence also indicates that bullying others in school may be an important predictor of other types of adult criminal behavior.^{23,26,27}

Although bullying and IPV share a common framework and common developmental factors, to our knowledge there has been no empirical quantitative investigation of the relationship of these concerns. To address this gap in knowledge, the current study seeks to assess the relationship between history of school bullying perpetration and recent adult IPV perpetration among men, and to determine whether exposure to other developmental risks affects this relationship.

METHODS

The current study uses cross-sectional data from the Men’s Ecological Systems, Development, and Abuse Study²⁸ that took place between January 2005 and December 2006. Institutional review board approval was granted by the Harvard Human Subjects Committee. The study used a convenience sample of young men recruited from 3 urban community health centers (CHCs) in Boston, Massachusetts. Participants were aged 18 to 35 years and were fluent in English, Portuguese, or Spanish. Trained researchers recruited all men attending the clinic during designated recruitment hours by asking them if they would like to participate in a brief survey; men indicating interest were screened for eligibility in a semiprivate area. Staff members obtained verbal informed consent from eligible and willing participants.

After informed consent procedures, participants completed a 30-minute confidential health survey via an audio computer-assisted survey instrument (ACASI), which allowed them to hear questions and answer choices read aloud through headphones in the language of their choice. The ACASI has been shown to reduce literacy barriers and minimize the underreporting of sensitive behaviors, rendering it particularly useful

for violence research.²⁹⁻³⁴ After completion of the interview, participants were given a \$20 gift card to compensate them for their time and a list of local community resources for violence-prevention and health-promotion services.

Of the 3430 men approached for the study, 2229 (65%) agreed to participate; 75 of these participants were excluded owing to extensive missing data, yielding a final effective sample size of 2154. The sample was then further restricted to those who reported ever having sexual intercourse, and that provided complete data on the outcome (past year IPV perpetration) and predictors of interest, which yielded a final sample size of 1491.

MEASURES

Demographic assessments for age, race, ethnicity, and educational attainment were modified from the National Behavioral Risk Factor Surveillance System.³⁵ Past-year IPV perpetration was assessed using modified physical assault, sexual assault, and injury subscales from the Conflict Tactics Scale 2 (CTS-2).³⁶ A dichotomous summary variable of past-year IPV perpetration was then created. Past-year IPV perpetration was selected as the outcome of interest (rather than lifetime perpetration) to ensure that school bullying and other childhood predictors preceded IPV perpetration. School bullying perpetration data were obtained by a single survey item: “How often did you take part in bullying other students?” Results were coded as “never,” “rarely (once or twice),” or “frequently (once a month or more).” Childhood risk factors, including bullying victimization, exposure to parental IPV, exposure to community violence, experiencing physical or sexual child abuse, and participating in nonviolent or violent delinquency were also assessed. *Adolescent nonviolent delinquency* was defined as ever participating in graffiti, vandalism, or stealing property between ages 12 and 18 years. *Adolescent violent delinquency* was defined as ever participating in physical fighting, pulling a gun or knife on a non-dating and/or sexual partner, stabbing or shooting a person they were not in a dating or sexual relationship with, or participation in gang fighting between ages 12 and 18 years. All delinquency items were drawn from the National Longitudinal Study of Adolescent Health.³⁷ Both nonviolent and violent delinquency were coded as dichotomous summary variables such that any affirmative response to the items was coded as positive for nonviolent and violent delinquency, respectively.

STATISTICAL ANALYSIS

Descriptive statistics for prevalence of past-year IPV perpetration, frequency of bullying in childhood, demographics, and exposure to childhood risk factors were generated. We used χ^2 analyses to assess for differences in predictors based on past-year IPV perpetration ($P < .05$). We used a logistic regression model to assess the relationship between recent past-year IPV perpetration and school bullying in childhood, controlling for potential risk factors (eg, bullying victimization, exposure to parental IPV, exposure to community violence, experiencing physical or sexual child abuse, and participating in nonviolent or violent delinquency) and demographics.

RESULTS

DEMOGRAPHICS AND CHILDHOOD PREDICTORS

Demographic characteristics are listed in **Table 1**. Almost half of participants were aged between 18 and 24

Table 1. Characteristics of the Study Sample by Past-Year Physical or Sexual IPV Perpetration

Characteristics	Participants, No. (%) ^a	Prevalence Among Those Reporting Past-Year IPV Perpetration, No. (%) ^b	Prevalence Among Those Not Reporting Past-Year IPV Perpetration, No. (%) ^b	P Value
Overall	1491 (100)	241 (16.2)	1250 (83.8)	
Bullying perpetration				<.001
Never	881 (59.1)	86 (35.7)	795 (63.6)	
Rarely	367 (24.6)	63 (26.1)	304 (24.3)	
Frequently	243 (16.3)	92 (38.2)	151 (12.1)	
Age				.18
18-24	689 (46.2)	101 (14.7)	588 (85.3)	
25-29	345 (23.1)	66 (19.1)	279 (80.9)	
30-35	457 (30.6)	74 (16.2)	383 (83.8)	
Race				.26
Non-Hispanic white	125 (8.4)	16 (6.6)	109 (8.72)	
Non-Hispanic black	725 (48.6)	128 (53.1)	597 (47.8)	
Hispanic	465 (31.2)	75 (31.1)	390 (31.2)	
Other	176 (11.8)	22 (9.1)	154 (12.3)	
Educational attainment				.28
<High school	406 (27.2)	69 (28.6)	337 (26.9)	
High school graduate/GED	663 (44.5)	114 (47.3)	549 (43.9)	
Some college/technical school	422 (28.3)	58 (24.1)	264 (29.1)	
Exposure to parental IPV	416 (27.9)	126 (52.3)	290 (23.2)	<.001
Physical child abuse, victim	650 (43.6)	169 (70.1)	481 (38.5)	<.001
Sexual child abuse, victim	306 (20.5)	101 (41.9)	205 (16.4)	<.001
Exposure to community violence				<.001
Never	445 (29.8)	41 (17.0)	404 (32.3)	
Rarely	836 (56.1)	139 (57.7)	697 (55.8)	
Frequently	210 (14.1)	61 (25.3)	149 (11.9)	
Bullying victim				<.001
Never	864 (57.9)	116 (48.1)	748 (59.8)	
Rarely	472 (31.7)	81 (33.6)	391 (31.3)	
Frequently	155 (10.4)	44 (18.3)	111 (8.9)	
Nonviolent youth delinquency	413 (27.7)	104 (43.2)	309 (24.7)	<.001
Violent youth delinquency	456 (30.6)	115 (47.7)	341 (27.3)	<.001

Abbreviations: GED, General Educational Development test; IPV, intimate-partner violence.

^aData reported as number (percentage) of participants.

^bData reported as number (percentage) of participants with the named characteristic.

years (46.2%), with a mean age of 25.7 years; 48.6% of the sample was on-Hispanic black, while almost one-third self-identified as Hispanic (31.2%). A smaller portion of the sample self-identified as non-Hispanic white (8.4%); 11.8% of the sample were self-classified as "other." Approximately 27% of participants had less than a high school education.

Frequent and rare school bullying perpetration was reported by 16.3% (n=243) and 24.6% (n=367) of participants, respectively. Over one-quarter of participants were exposed to parental IPV during childhood (27.9%), while 43.6% experienced physical child abuse, and 20.5% experienced sexual child abuse. Frequent exposure to community violence was reported by 14.1% of the sample; over half the sample reported occasional exposure to community violence (56.1%). Roughly one-quarter reported taking part in nonviolent youth delinquency (27.7%), with slightly more reporting violent youth delinquency (30.6%). One in 10 respondents reported frequent bullying victimization at school (10.4%).

Approximately 16% of men reported perpetrating physical or sexual IPV in the past year (n=241). Of these men, almost 40% bullied other students frequently. Slightly less than 20% of men who reported perpetrating bullying rarely went on to perpetrate IPV. Less than

10% of men who did not report bullying other students perpetrated past-year IPV. The main predictor, school bullying, and each of the childhood risk factors was statistically significantly associated with IPV perpetration in the χ^2 analyses.

ASSOCIATION BETWEEN HISTORY OF BULLYING STUDENTS AND RECENT IPV PERPETRATION

Those who reported frequent bullying of other students were 5.63 times more likely to report perpetrating past-year IPV (95% confidence interval [CI], 4.00-7.93); those who rarely bullied peers were almost twice as likely to report perpetrating past-year IPV (odds ratio [OR], 1.92; 95% CI, 1.35-2.72) as those who never reported school bullying perpetration in the unadjusted model (**Table 2**). After the inclusion of childhood risk factors and demographic characteristics, frequent bullying remained strongly associated with perpetration of any past-year IPV (adjusted OR, 3.82; 95% CI, 2.55-5.73). The effect of rarely bullying other students was slightly attenuated, such that those men were 1.5 times more likely to perpetrate past-year IPV (adjusted OR, 1.53; 95% CI, 1.02-2.29) than those who never reported bullying others.

Table 2. Crude and Adjusted Regression Models of Bullying and IPV Perpetration

Characteristic	Past-Year IPV Perpetration, OR (95% CI) (n=1491)	
	Unadjusted	Adjusted ^a
Bullying		
Never	1 [Reference]	1 [Reference]
Rarely	1.92 (1.35-2.72)	1.53 (1.02-2.29)
Frequent	5.63 (4.00-7.93)	3.82 (2.55-5.73)
Exposure to parental IPV	3.63 (2.73-4.82)	1.86 (1.33-2.59)
Physical child abuse	3.75 (2.78-5.06)	1.84 (1.27-2.68)
Sexual child abuse	3.68 (2.73-4.95)	1.99 (1.39-2.86)
Community violence		
Never	1 [Reference]	1 [Reference]
Rarely	1.97 (1.36-2.84)	0.80 (0.52-1.24)
Frequently	4.03 (2.60-6.25)	1.38 (0.83-2.29)
Bullying victim		
Never	1 [Reference]	1 [Reference]
Rarely	1.34 (0.98-1.82)	0.75 (0.52-1.10)
Frequently	2.56 (1.71-3.81)	0.84 (0.51-1.39)
Nonviolent delinquency	2.31 (1.74-3.08)	1.44 (1.03-2.00)
Violent delinquency	2.43 (1.84-3.23)	2.08 (1.50-2.88)

Abbreviation: IPV, intimate-partner violence.

^aAdjusted for age, race, and educational attainment

COMMENT

Men who reported bullying their childhood peers in school were found to be significantly more likely to physically or sexually abuse their female partners as adults. Over two-fifths of men reported perpetrating any bullying of students, indicating the importance of addressing bullying peers as a potential risk marker for future IPV perpetration.

Consistent with previous evidence, sexual and physical child abuse, exposure to parental IPV, and participation in nonviolent or violent delinquency were also strong independent predictors of adult IPV perpetration. However, even after accounting for these other childhood risk factors, frequently bullying peers was the strongest predictor of past-year IPV perpetration. Bullying victimization or exposure to community violence was not found to be associated with past-year IPV perpetration in the final adjusted model.

Critically, this analysis demonstrates that those reporting school bullying are significantly more likely to perpetrate physical or sexual IPV, even after adjusting for potential confounders. This relationship was stronger for those who reported frequent bullying than for those who reported rare school bullying. Bullying others at school and perpetration of IPV are both defined by concepts of power and control over others.^{15,18} Thus, this finding was not surprising and provides empirical data to support the previously hypothesized links between bullying and IPV perpetration such that those who perpetrate school bullying by asserting power and control over classmates may also attempt to assert power and control over intimate partners as adults. Further research is needed to assess specific mechanisms, including investigation into whether bullying peers serves as a risk marker, as sug-

gested by the convergence of risk factors for both bullying and recent adult IPV perpetration.¹⁸

These findings must be interpreted in light of several limitations. Although our analysis uses a large sample size, participants were recruited using a convenience sampling method, which may limit the generalizability of results to the larger population. Furthermore, only 65% responded, and we were unable to collect demographic information about those who chose not to participate, limiting our ability to understand any potential biases. Bullying perpetration was assessed via a single item, limiting our ability to understand the extent to which various aspects of bullying may be most relevant to IPV perpetration. In addition, bullying has been previously defined as one student having power and control over another student.¹⁷ However, our measure was self-defined by the participant, which may lead to a discrepancy between our conceptualization of school bullying and the participant's own definition. Although the frequency of bullying others in school was captured, we do not have data on the timing during the participant's schooling, severity, or specific forms of covert or overt bullying, which may have implications for potential programs to effectively and efficiently reduce the bullying of peers in school. Due to the cross-sectional design of the survey, we cannot discern whether other childhood factors temporally preceded school bullying thereby confounding the relationship of school bullying and IPV perpetration. Childhood exposures were assessed retrospectively and are subject to potential errors and biases in recall; therefore, causality cannot be ensured.

The present study indicates that bullying peers in school as a child, especially frequent bullying perpetration, is associated with increased risk for men's perpetration of IPV as an adult. The effect remains strong after controlling for common prior risk factors for both bullying and IPV perpetration. These findings suggest that individuals who are likely to perpetrate abusive behaviors against others may do so across childhood and into adulthood. Furthermore, these abusive behaviors—bullying peers in school and perpetrating violence against an intimate partner—may co-occur within individuals. Future research is needed to discern the mechanisms and underlying root causes of abusive behavior, such as power and control, as well as specific forms and timing of bullying peers in school. Potential programs that may seek to reduce bullying peers during school may also be effective avenues to reduce future violence perpetration within intimate partner relationships by focusing on the reduction of abusive behaviors and the promotion of equitable attitudes across settings, life stages, and relationships.

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sis. *Study concept and design*: Falb, McCauley, and Silverman. *Acquisition of data*: Decker, Gupta, and Silverman. *Analysis and interpretation of data*: Falb, McCauley, Decker, Gupta, and Raj. *Drafting of the manuscript*: Falb and McCauley. *Critical revision of the manuscript for important intellectual content*: McCauley, Decker, Gupta, Raj, and Silverman. *Statistical analysis*: Silverman. **Financial Disclosure**: None reported.

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