Prevalence of Teen Dating Violence and Co-occurring Risk Factors Among Middle School Youth in High-Risk Urban Communities

Phyllis Holditch Niolon, Ph.D.[a,*], **Alana M. Vivolo-Kantor, M.P.H.**[a], **Natasha E. Latzman, Ph.D.**[a], **Linda Anne Valle, Ph.D.**[a], **Henrietta Kuoh, M.P.H.**[a], **Tessa Burton, M.P.H.**[a], **Bruce G. Taylor, Ph.D.**[b], and **Andra T. Tharp, Ph.D.**[a]

[a]Division of Violence Prevention, National Center for Injury Prevention and Control, Centers for Disease Control and Prevention, Atlanta, Georgia

[b]NORC at the University of Chicago, Chicago, Illinois

Abstract

Purpose—This study describes the lifetime prevalence of teen dating violence (TDV) perpetration in a sample of middle school students from high-risk urban communities and examines the relation between TDV and related cognitive and behavioral risk factors.

Methods—Surveys were administered to 2,895 middle school students in four U.S. cities; 1,673 students (58%) reported having dated and were included in analyses. The sample was 52.3% female, 48.2% non-Hispanic black/African-American, 38.2% Hispanic, 4.8% non-Hispanic white, and 7.6% other race. Six types of TDV perpetration were assessed: threatening behaviors, verbal/emotional abuse, relational abuse, physical abuse, sexual abuse, and stalking.

Results—Of the students who had dated, 77% reported perpetrating verbal/emotional abuse, 32% reported perpetrating physical abuse, 20% reported threatening a partner, 15% reported perpetrating sexual abuse, 13% reported perpetrating relational abuse, and 6% reported stalking. Girls were more likely than boys to report perpetrating threatening behaviors, verbal/emotional abuse, and physical abuse, and boys were more likely to report perpetrating sexual abuse. Involvement in bullying positively predicted perpetration of TDV, albeit, in different ways for boys and girls. Other risk factors differed by sex. For instance, alcohol use and sex initiation predicted multiple forms of TDV perpetration for boys, whereas weapon carrying and emotional symptoms predicted several forms of TDV perpetration for girls.

Conclusions—The prevalence of TDV was high in our sample. Important sex differences in rates of perpetration and risk factors emerged. Comprehensive prevention programs that target TDV and related risk factors, such as bullying and other risk factors, seem warranted.

[*]Address correspondence to: Phyllis Holditch Niolon, Ph.D., Division of Violence Prevention, National Center for Injury Prevention and Control, Centers for Disease Control and Prevention, 4770 Buford Highway NE, MS-F63, Atlanta, GA 30341. PNiolon@cdc.gov (P.H. Niolon).

Keywords

Teen dating violence; High risk; Middle school; Risk factors

Teen dating violence (TDV) is any psychologically, physically, or sexually violent behavior, including stalking, directed toward a teen dating partner [1]. Approximately, 25% of high school students report psychological, physical, and/or sexual TDV victimization, and 15%– 50% report some form of TDV perpetration [2,3], although prevalence estimates vary widely based on sample characteristics and measures used [4]. Given that TDV is associated with serious negative consequences, including suicidal ideation, substance use, injury, and death [1,5], the past decade has seen a growing public health interest in development of primary prevention strategies to address TDV, including the initiation of the Centers for Disease Control and Prevention's Domestic Violence Prevention Enhancement and Leadership Through Alliances [6] and *Dating Matters: Strategies to Promote Healthy Teen Relationships* [7,8] initiatives.

To date, the majority of evidence-based TDV prevention programs were developed for high school–aged youth [9–12]. However, with physical TDV frequency increasing across grades 9–12 [13] and peaking at the age of 17–18 years [14], early adolescence may represent the critical window for intervention [9,15] if primary prevention of TDV is our goal. Given the significant developmental differences between middle and high school youth [16], the same evidence-based approaches currently used with high school students may not be effective for younger students. To ensure an evidence-based approach to the primary prevention of TDV, understanding the cognitive and behavioral risk factors that influence the occurrence of TDV in this critical period is essential. Unfortunately, little research has investigated potential mechanisms associated with TDV perpetration during early to mid adolescence. The present study aims to fill this gap by examining risk factors for TDV perpetration among middle school students to inform prevention strategies during this developmental period.

A particular gap exists in our knowledge of TDV among middle school youth living in high-risk (e.g., higher than average rates of crime and economic disadvantage) urban communities. At least with studies utilizing older samples, the prevalence of TDV appears to vary by setting [14], with urban communities evidencing higher rates than rural or suburban communities [17,18]. Further, we know that established historical risk factors for TDV, such as exposure to crime and exposure to intimate partner violence (IPV) in childhood, are more common in economically disadvantaged neighborhoods [19], and low socioeconomic status is associated with both perpetration and victimization of TDV [20]. Therefore, we expect that rates of TDV may be higher in high-risk urban communities. Additionally, the cumulative risk hypothesis [21,22] suggests that the greater number of risk factors an individual has, the greater their likelihood for negative outcomes, further suggesting that TDV may be more likely in these communities. Despite this, very little research, including research on prevalence, etiology, or prevention effectiveness, has been conducted with high-risk urban samples.

As stated previously, little to none of what we know about risk factors for TDV comes from research conducted with middle school youth from high-risk urban neighborhoods.

Therefore, risk factors examined in our review were drawn from a recent systematic review conducted by Vagi et al. [23], which found a number of historical and modifiable longitudinal risk factors for TDV, including mental health problems, substance use, antisocial attitudes, antisocial behavior, risky sexual behavior, and exposure to IPV in childhood. Although understanding the historical risk factors, such as exposure to IPV in childhood, is critical from an etiological standpoint, it is the modifiable risk factors that are the most important in designing primary prevention programs for TDV. Additionally, many negative behavioral outcomes for youth share similar risk factors [24]. Therefore, primary prevention approaches which target not only TDV but also a constellation of risk factors related to TDV may reduce engagement in TDV over time, both by addressing cognitive and behavioral risk factors for TDV perpetration and by reducing the overall number of behavioral risk factors in which teens are engaged. Therefore, a first step to informing the primary prevention of TDV among high-risk urban youth is to understand the modifiable risk factors that are related to TDV perpetration.

Present study

The present study is exploratory in nature and will address these gaps in the TDV literature by (1) examining the prevalence of perpetration in a sample of middle school youth from high-risk urban communities and (2) exploring the association between modifiable cognitive and behavioral risk factors and TDV to inform current and future prevention efforts. The sample for the present study is drawn from the student (sixth to eighth grades) baseline surveys from the evaluation of the *Dating Matters: Strategies to Promote Healthy Teen Relationships Initiative. Dating Matters* is a Centers for Disease Control and Prevention funded initiative in which a comprehensive approach to TDV prevention that attempts to address a constellation of risk factors thought to be related to TDV was developed and is being tested among high-risk urban middle school youth. The comprehensive approach includes sixth to eighth grade student curricula, sixth to eighth grade parent curricula, a youth-driven community-based communications campaign, and an educator training for school faculty and personnel and is a combination of evidence-based and evidence-informed approaches [7,8]. Understanding the prevalence and associated risk factors for TDV in this sample can inform the rollout and dissemination of the *Dating Matters* comprehensive approach, if found to be effective.

Methods

Design

The *Dating Matters* evaluation involves a cluster randomized controlled trial, in which 46 schools in four sites were randomly assigned to receive either the *Dating Matters* comprehensive approach or the "standard of care" approach, which was operationalized as the Safe Dates program for eighth graders. The present study focuses on baseline survey data (before intervention) collected from students in sixth to eighth grades in the first year of implementation (2012–2013 school year).

Participants

Participants were drawn from the 2,895 youth that comprise the first year baseline sample from the four sites. Participants who reported that they had never dated (n = 956) or did not complete the question on dating history (n = 286) were excluded. Comparisons of the dating sample (N = 1,653) and the nondating sample on sociodemographic variables demonstrated significant differences by grade, sex, and race/ethnicity (Table 1). The 1,653 youth who dated were enrolled in schools in Alameda County, California (n = 432), Baltimore, Maryland (n = 191), Broward County, Florida (n = 612), and Chicago, Illinois (n = 418). On average, 76% of the sample was eligible for free/reduced lunch across all schools (range, 52%–100%). This subsample was 52.3% female (n = 848), 48.2% non-Hispanic black (n = 758), 38.2% (n = 602) Hispanic, 4.8% non-Hispanic white (n = 75), and 7.6% (n = 119) identified as other race (e.g., Asian, Native Hawaiian/Pacific Islander, Native American, or mixed race). The largest percentage (44.9%) were in eighth grade (n = 728), 30.6% in seventh (n = 497), and 24.5% in sixth (n = 397) grades.

Procedure

All procedures and materials for the study were approved by multiple Institutional Review Boards. Students were recruited in participating middle schools; health departments partnered with school staff to distribute and collect parental consent forms. Active parental consent was required for survey participation, and we asked parents to sign and return forms both to give and decline consent to participate. The overall consent form return rate was about 62%. The majority of parents (75%) who returned forms gave permission for their child to participate. Trained research staff obtained student assent and proctored self-administered paper-and-pencil surveys during regular school hours.

Measures

All outcome, predictor, and covariate variables are described in greater detail in Table 2.

Teen dating violence—The primary outcome of interest, TDV perpetration, was measured using the Conflict in Adolescent Dating Relationships Inventory [25]. The Conflict in Adolescent Dating Relationships Inventory is a reliable and valid instrument, which assesses five forms of TDV: threatening behaviors, physical, sexual, relational, and emotional/verbal abuse. Items for each subscale, determined by previous factor analysis presented in Wolfe et al. [25], were summed to create a continuous score for each youth. Two additional items were adapted from the National Intimate Partner and Sexual Violence Survey [26] to capture stalking perpetration.

Predictors/risk factors—Predictor variables assessed included alcohol use, illegal drug use, bullying, emotional symptoms, attitudes toward female violence, attitudes toward male violence, delinquency/fighting, weapon carrying, and initiation of sexual intercourse. Detailed descriptions of predictor and outcome variables are presented in Table 2.

Covariates—Sociodemographic variables included sex, grade (as a proxy for age), race/ethnicity, site, and exposure to family and community violence and are described in Table 2.

Missing data and analytic strategy

Analyses of missing data showed an average of less than 5% missing for each of the TDV perpetration items. Some participants had complete data on some subscales and not others; thus, sample sizes for each model vary. Participants were coded as perpetrating a particular type of TDV if they endorsed one or more items in that subscale. Therefore, if a participant completed only some items within a subscale but indicated at least one instance of perpetration, they were coded as having perpetrated. However, if a participant completed fewer than all the items on a subscale and they responded "never" to all these items, their data were counted as missing. This is a conservative strategy that precludes the inclusion of a perpetrator in the "nonperpetrator" group.

Bivariate Spearman rank order correlations for all TDV outcomes and risk factors were computed for the sample stratified by sex. In multivariate analysis, we ran sex-stratified logistic regression models predicting each of the six TDV types to obtain adjusted odds ratios and 95% confidence intervals. Because of the nested nature of our participants, we tested intraclass correlations (ICCs) across schools to see if multilevel nested modeling was warranted. The ICCs on our six TDV outcomes ranged between 0% and 7.3%, which provides some evidence that variance in our outcomes stems from differences within schools and not between schools. Because all ICCs were under the generally accepted threshold of 10% [27], we ran logistic regression models and controlled for site. All multivariate models controlled for grade, race/ethnicity, site, exposure to family violence, and exposure to community violence. For both sexes, we tested more parsimonious models in which nonsignificant predictors were removed, but these parsimonious models did not improve model fit. Analyses were run in SPSS Statistics 21 (SPSS, Inc., Chicago, IL).

Results

Descriptives

Among the 1,653 students who reported dating, 77% reported perpetrating verbal/emotional abuse at least once in their lifetime, 33% reported perpetrating physical abuse, 20% reported perpetrating threatening behaviors, 15% reported perpetrating sexual violence, 13% reported perpetrating relational aggression, and 6% reported stalking a partner. Chi-square analyses indicated significant sex differences on all outcomes except relational aggression and stalking. More girls than boys reported perpetrating verbal/emotional abuse, physical abuse, and threatening behaviors against their dating partners. More boys than girls reported perpetrating sexual violence against a partner (Table 3). Sex-stratified correlations between all predictor and outcome variables are presented in Table 4.

Multivariate logistic regression

Table 5 presents the multivariate logistic regression models for boys. Across types of TDV, the most robust finding was for youth who report both bullying perpetration and victimization ("bully/victim"). Risk for all TDV perpetration types (except stalking) was between 3.2 and 6.0 times higher for boys reporting bully/victim status relative to boys not involved in bullying. Risk for perpetration of threatening behaviors, verbal/emotional abuse, and sexual abuse was 4.1, 3.3, and 3.2 times higher, respectively, for boys reporting alcohol

use than for those reporting no alcohol use. Boys reporting having initiated sexual intercourse had a roughly 2.5-fold increase in risk to report verbal/emotional abuse, physical abuse, and sexual abuse perpetration. Risk for perpetrating threatening behaviors and physical abuse was significantly lower for boys who carried a weapon in the past 30 days. In contrast, each incremental increase in emotional symptoms was related to a nearly 30% increased risk of perpetrating verbal/emotional abuse. Each incremental increase in attitudes disapproving of female-to-male TDV related to a 12% decrease in risk for boys' perpetration of physical abuse, and each increase in attitudes disapproving of male-to-female TDV related to a 16% decrease in risk for boys' perpetration of threatening behaviors.

Table 6 presents the logistic regression models for girls. The most robust findings were for bully perpetration only and weapon carrying. Risk for perpetrating stalking, relational abuse, physical abuse, and sexual abuse was 7.8, 5.0, 4.9, and 4.5 times higher, respectively, for girls reporting weapon carrying compared with girls not carrying weapons. Risk for perpetrating verbal/emotional abuse, sexual abuse, and physical abuse was 10.0, 4.6, and 2.4 times higher, respectively, for girls reporting bullying perpetration only compared with girls not involved in bullying. Girls reporting bully/victim status had almost a threefold increase in risk of perpetrating verbal/emotional abuse and physical abuse compared with girls not involved in bullying, but bullying victimization only was not related to increases in risk for any perpetration types. Each incremental increase in emotional symptoms resulted in about a 22%, 15%, and 14% increase in risk for girls' perpetration of relational abuse, threatening behaviors, and verbal/emotional abuse, respectively. Each incremental increase in delinquency/fighting scores resulted in a 22% and 14% increase in girls' perpetration of threatening behaviors and physical abuse, respectively. Risk for perpetrating physical abuse was almost twice as high for girls who reported using alcohol than for girls who had not used alcohol. In contrast, each incremental increase in attitudes disapproving of female-to-male TDV resulted in about a 12% decrease in risk for girls' perpetration of threatening behaviors, verbal/emotional abuse, and physical abuse. Each incremental increase in attitudes disapproving of male-to-female TDV resulted in about a 12% decrease in risk for girls' perpetration of sexual abuse.

Discussion

This study described TDV perpetration prevalence and explored the relation between TDV perpetration and other cognitive and behavioral risk factors among the *Dating Matters* sample. Our sample reported high lifetime TDV perpetration prevalence rates compared with other perpetration rates reported in the literature [3,28]. High rates of TDV may be due to the high-risk nature of the sample, but it is also possible that our reported rates are higher than those typically reported in the literature because of the way we measured TDV. Our more comprehensive measurement of TDV allowed for a more in-depth assessment of TDV and provided more opportunity to endorse TDV perpetration than measures employing only one or two questions. Additionally, our study measured stalking as a form of TDV, which is not yet typical practice in the measurement of TDV. Our data clearly show that TDV is a serious problem in the high-risk middle schools included in our sample and confirm the need for comprehensive TDV programming like *Dating Matters*.

The sex differences in observed prevalence generally parallel to those found in previous work [29,30], with more girls than boys reported perpetrating threatening behaviors, verbal/emotional abuse, and physical abuse against dating partners and more boys than girls reported perpetrating sexual abuse toward partners. Overall, it is clear that prevention programming that addresses TDV perpetration by boys and girls is warranted.

In our logistic regression models, the relation between bullying and TDV perpetration was robust across sexes but in slightly different ways. For boys, those who reported bully/victim status had increased risk of perpetrating all forms of TDV except stalking, but perpetration only (without victimization) was not related to any of the six TDV outcomes. For girls, however, bullying perpetration only increased risk for perpetrating verbal/emotional abuse, physical abuse, and sexual abuse, whereas bully/victim status increased risk of perpetrating verbal/emotional abuse and physical abuse. The pattern of risk prediction for TDV for girls in our sample, in which bullying perpetration, both with and without accompanying victimization, puts them at greater risk for TDV, appears to be consistent a few studies that have examined bullying and TDV. One study found that youth who bully others participate earlier in romantic dating, are less committed to these romantic relationships, and have less positive views of their dating partner [31], which may increase the risk of TDV. Similarly, another study found that bullying perpetration in early middle school predicted physical TDV perpetration in later middle school [32]; however, this study measured direct bullying (e.g., physical and face-to-face verbal harassment) rather than the more relational bullying measured in the present study (e.g., rumor spreading).

For boys, however, there seems to be something specific about the experience of perpetrating and being a victim of bullying in predicting TDV perpetration. Some previous research has shown that bully/victims are at greater risk in that they have poorer physical and mental health outcomes (e.g., depression, externalizing problems) than those who only perpetrate or experience bullying [33]. Feminist theories suggest that partner violence is perpetrated in an effort to maintain power and control in the relationship [34]; perhaps, boys who are bullied and attempt to regain a sense of control and power by bullying others are most likely to perpetrate TDV. It is also possible that bully/victims may be more likely to associate with deviant peers, and this exposure increases the likelihood of TDV perpetration [23]. Additional empirical research on the relation between bullying and TDV could inform TDV prevention and ways to combine efforts to prevent bullying and TDV [35].

Other important sex differences also emerged in risk factors for TDV. Boys who reported having used alcohol were more likely to perpetrate threatening behaviors, verbal/emotional abuse, and sexual abuse than boys who did not use alcohol. However, alcohol use predicted only one outcome for girls; girls who used alcohol were more likely to perpetrate physical abuse than those who did not. Although substance use is thought to be a robust risk factor for TDV, our results provide only partial support for this relation and highlight important sex differences in how alcohol is related to perpetration. Similarly, emotional symptoms, an established risk factor in the literature [23], put girls at greater risk for perpetration of threatening behaviors, verbal/emotional abuse, and relational abuse but was related to only one form of TDV (verbal/emotional abuse) for boys.

Sex differences also emerged for weapon carrying and initiation of sexual activity. Weapon carrying increased girls' risk for relational abuse, physical abuse, sexual abuse and stalking, whereas it decreased boys' risk for threatening behaviors and physical abuse. The fact that weapon carrying lowered boys' risk for perpetrating TDV is counterintuitive and requires further investigation. Similarly, initiation of sexual activity was related to boys' increased risk for perpetration of verbal emotional abuse, physical abuse, and sexual abuse but was not related to any TDV outcomes for girls. Early initiation of sexual activity is known to put adolescents at risk for a myriad of negative outcomes [36], including TDV, but our results support these findings only for boys. Interestingly, two programs that combine sexual health with dating violence prevention (Stepping Stones [37] and Fourth R [11]) show reductions in physical violence perpetration for young men. Overall, these sex differences may suggest that tailoring prevention strategies for boys and girls to address differential risk factors may be beneficial.

In addition, many variables related to TDV in other studies did not predict TDV perpetration in this sample. Bullying victimization only and drug use did not predict boys' or girls' TDV perpetration. The latter finding is in contrast to findings that longitudinally, both marijuana use and alcohol and drug use, predicted TDV perpetration [38,39]. However, these findings were based on rural [38] and/or older [39] samples; thus, there may be something different about how this risk factor operates in our young high-risk sample.

Several limitations are worth noting when considering our results. The data are cross-sectional; the temporal ordering of risk factors and TDV perpetration cannot be determined. Longitudinal data for the *Dating Matters* initiative is currently being collected and can inform future investigations. This sample was specifically drawn from high-risk urban schools, and the results may not be generalizable to other populations. Additionally, due to low rates of return of active parental consent forms, we cannot assume that the current sample is representative of all students attending the schools included in the study. There are also the usual limitations of relying on self-reports and act-based measures that do not assess the context of the violence (e.g., acts of self-defense) [11].

Despite these limitations, the present study contributes to the literature in important ways. First, it takes an in-depth look at TDV using a multiquestion assessment of six forms of TDV. Second, this study sampled high-risk urban middle school students; although research suggests that TDV rates may be high among this population, very little research and few prevention efforts have targeted this population. Third, analyzing risk factors separately for boys and girls allows us to examine differential risk, which has important implications for prevention efforts. Data collected as part of the *Dating Matters* initiative will allow us to compare the effectiveness of TDV prevention initiatives within this high-risk population and examine how these risk factors operate over time. In sum, this study provides an initial look at the prevalence of TDV in a high-risk urban middle school sample and provides insight into associations between risk factors and TDV perpetration. These findings provide support for the approach taken by the *Dating Matters* initiative, which seeks not only to promote healthy relationship behaviors but also to address a constellation of cognitive and behavioral risk factors that may impact dating violence behavior in high-risk urban communities.

Acknowledgments

References

1. Prevention CfDCa. 2012 Teen dating violence fact sheet. 2012.

2. Foshee VA, Linder F, MacDougall JE, et al. Gender differences in the longitudinal predictors of adolescent dating violence. Prev Med. 2001; 32:128–41. [PubMed: 11162338]

3. Alleyne-Green B, Coleman-Cowger VH, Henry DB. Dating violence perpetration and/or victimization and associated sexual risk behaviors among a sample of inner-city African American and Hispanic adolescent females. J interpersonal violence. 2012; 27:1457–73.

4. Teten AL, Ball B, Valle LA, et al. Report from CDC: Considerations for the definition, measurement, consequences, and prevention of dating violence victimization among adolescent girls. J Women's Health. 2009; 18:923–7.

5. Exner-Cortens D, Eckenrode J, Rothman E. Longitudinal associations between teen dating violence victimization and adverse health outcomes. Pediatrics. 2013; 131:71–8. [PubMed: 23230075]

6. Centers for Disease Control and Prevention. [Accessed May 1, 2014] The Delta Program: At A Glance. 2012. Available at: http://www.cdc.gov/violenceprevention/DELTA/AAG.html

7. Teten Tharp A. Dating matters: The next generation of teen dating violence prevention. Prev Sci. 2012; 13:398–401. [PubMed: 22644504]

8. Teten Tharp A, Burton T, Freire K, et al. Dating matters™: Strategies to promote healthy teen relationships. J Women's Health. 2011; 20:1–5.

9. Foshee VA, Bauman KE, Arriaga XB, et al. An evaluation of Safe Dates, an adolescents dating violence prevention program. Am J Public Health. 1998; 88:45–50. [PubMed: 9584032]

10. Miller E, Tancredi DJ, McCauley HL, et al. One-year follow-up of a coach-delivered dating violence prevention program: A cluster randomized controlled trial. Am J Prev Med. 2013; 45:108–12. [PubMed: 23790995]

11. Wolfe DA, Crooks CV, Jaffe P, et al. A school-based program to prevent adolescent dating violence: A cluster randomized trial. Arch Pediatr Adolesc Med. 2009; 163:692–9. [PubMed: 19652099]

12. Wolfe DA, Wekerle C, Scott K, et al. Dating violence prevention with at-risk youth: A controlled outcome evaluation. J consulting Clin Psychol. 2003; 71:279.

13. Kann L, Kinchen S, Shanklin SL, et al. Youth risk behavior surveillance-United States, 2013. MMWR Surveill Summ. 2014; 63:1–168.

14. O'Leary KD, Slep AMS. Prevention of partner abuse by focusing on males and females. Prev Sci. 2012; 13:329–39. [PubMed: 21779924]

15. Whitaker DJ, Morrison S, Lindquist C, et al. A critical review of interventions for the primary prevention of perpetration of dating violence. Aggression Violent Behav. 2006; 11:151–66.

16. Steinberg L. Cognitive and affective development in adolescence. Trends Cogn Sci. 2005; 9:69–74. [PubMed: 15668099]

17. Bergman L. Dating violence among high school students. Social Work. 1992; 37:21–7.

18. Lane K, Gwartney-Gibbs P. Violence in the context of dating and sex. J Fam Issues. 1985; 6:45–59.

19. Sampson, RJ., Lauritsen, JL. Violent victimization and offending: Individual-, situational-, and community-level risk factors. In: Reiss, AJ., Roth, JA., editors. Understanding and preventing violence. Washington, DC: National Academy Press; 1994. p. 1-114.

20. Lewis SF, Fremouw W. Dating violence: A critical review of the literature. Clin Psychol Rev. 2001; 21:105–27. [PubMed: 11148892]

21. Rutter, M. Protective factors in children's responses to stress and disadvantage. In: Kent, MW., Rolf, JE., editors. Primary prevention of psychopathology: Social competence in children. Hanover, NH: University of New England Press; 1979. p. 49-74.

22. Sameroff, AJ. Dialectical processes in developmental psychopathology. In: Sameroff, AJ.Lewis, M., Miller, S., editors. Handbook of developmental psychopathology. 2. New York, NY: Kluwer Academic/Plenum Publishers; 2000. p. 23-40.

23. Vagi KJ, Rothman E, Latzman NE, et al. Beyond correlates: A review of risk and protective factors for adolescent dating violence perpetration. J Youth Adolescence. 2013; 42:633–49.

24. DeGue S, Massetti GM, Holt MK, et al. Identifying links between sexual violence and youth violence perpetration. Psychol violence. 2013; 3:140–56.

25. Wolfe DA, Scott K, Reitzel-Jaffe D, et al. Development and validation of the conflict in adolescent dating relationships inventory. Psychol Assess. 2001; 13:277. [PubMed: 11433803]

26. Black, MC., Basile, KC., Breiding, MJ., et al. National Center for Injury Prevention and Control CfDCaP. The National Intimate Partner and Sexual Violence Survey (NISVS): 2010 summary report. Atlanta, GA: 2011.

27. Lee VE. Using hierarchical linear modeling to study social contexts: The case of school effects. Educ Psychol. 2000; 35:125–41.

28. Cascardi M, Avery-Leaf S, O'Leary KD, et al. Factor structure and convergent validity of the Conflict Tactics Scale in high school students. Psychol Assess. 1999; 11:546–55.

29. Archer J. Sex differences in aggression between heterosexual partners: A meta-analytic review. Psychol Bull. 2000; 126:651. [PubMed: 10989615]

30. Foshee VA. Gender differences in adolescent dating abuse prevalence, types and injuries. Health Edu Res. 1996; 11:275–86.

31. Connolly J, Craig W, Goldberg A, et al. Mixed-gender groups, dating, and romantic relationships in early adolescence. J Res Adolescence. 2004; 14:185–207.

32. Foshee V, McNaughton Reyes L, Vivolo-Kantor AM, et al. Bullying as a predictor of adolescent dating violence: A longitudinal assessment. J Adolesc Health. 2014; 55:432–8. [PubMed: 24768163]

33. Haynie DL, Nansel T, Eitel P, et al. Bullies, victims, and bully/victims: Distinct groups of at-risk youth. J Early Adolesc. 2001; 21:29–49.

34. Walker, L. The battered woman. New York, NY: Harper & Row; 1979.

35. Corvo K, deLara E. Towards an integrated theory of relational violence: Is bullying a risk factor for domestic violence? Aggression Violent Behav. 2010; 15:181–90.

36. Coker AL, Richter DL, Valois RF, et al. Correlates and consequences of early initiation of sexual intercourse. J Sch Health. 1994; 64:371–7.

37. Jewkes R, Nduna M, Levin J, et al. Impact of stepping stones on incidence of HIV and HSV-2 and sexual behavior in rural South Africa: Cluster randomized controlled trial. Br Med J. 2008; 337:a506. [PubMed: 18687720]

38. Foshee VA, Reyes HL, Ennett ST. Examination of sex and race differences in longitudinal predictors of the initiation of adolescent dating violence perpetration. J Aggress Maltreat Trauma. 2010; 19:492–516. [PubMed: 25484571]

39. Schnurr MP, Lohman BJ. How much does school matter? An examination of adolescent dating violence perpetration. J Youth Adolesc. 2008; 37:266–83.

40. Streiner DL. Being inconsistent about consistency: When coefficient alpha does and doesn't matter. J Personal Assess. 2003; 80:217–22.

41. Eaton DK, Kann L, Kinchen S, et al. Youth risk behavior surveillance-United States, 2011. MMWR Surveill Summ. 2012; 61:1–162.

42. Espelage DL, Holt ML. Bullying and victimization during early adolescence: Peer influences and psychosocial correlates. J Emotional Abuse. 2001; 2:123–42.

43. Goodman R. The strengths and difficulties questionnaire: A research note. J Child Psychol Psychiatry. 1997; 38:581–6. [PubMed: 9255702]

44. Udry, JR. The National Longitudinal Study of Adolescent Health (Add health), Waves I & II, 1994–1996; Wave III, 2001–2002 [machine-readable data file and documentation]. Chapel Hill, NC: Carolina Population Center, University of North Carolina at Chapel Hill; 2003.

Table 1

Comparison of dating sample and nondating sample on sociodemographic characteristics

Variables	Total sample, n (%) (N = 2,895)[a]	Dating sample, n (%) (N = 1,653)	Nondating sample, n (%) (N = 956)	χ^2
Grade[b]				
Sixth	868 (30.6)	397 (24.5)	380 (40.7)	
Seventh	911 (32.1)	497 (30.6)	311 (33.3)	**108.08**
Eighth	1,057 (37.3)	728 (44.9)	243 (26)	
Sex[c]				
Male	1,254 (44.4)	772 (47.7)	345 (37.1)	
Female	1,568 (55.6)	848 (52.3)	584 (62.9)	**26.53**
Race/ethnicity[d]				
Non-Hispanic black	1,203 (44)	758 (48.2)	337 (37.2)	**28.02**
Non-Hispanic white	159 (5.8)	75 (4.8)	68 (7.5)	**7.95**
Hispanic	1,098 (40.1)	602 (38.2)	393 (43.4)	**6.30**
Other	233 (8.5)	119 (7.6)	89 (9.8)	3.83

Significant relationships at $p < .001$ are shown in boldface.

[a] 286 missing on dating question.

[b] 59 missing on grade question.

[c] 73 missing on sex question.

[d] 158 missing on race/ethnicity question.

Table 2

Measures

	No. of items	Response options	Exact/sample item	Scoring	Reliability (Cronbach's alpha)[a]
Covariates					
Biological sex	1	Male; female	"What is your sex?"	Dichotomized to 1 = male and 0 = female	—
Grade level	1	Sixth; seventh; eighth	"What is your current grade?"	Categorized as 0 = sixth grade, 1 = seventh grade, and 2 = eighth grade	—
Site	1	A; B; C; D	Determined on survey form	Dummy variables for each site (e.g., Site A = 1 and not Site A = 0)	—
Race/ethnicity[b]	2	Yes; no	"Are you Hispanic or Latino?"	Students were classified as "Hispanic/Latino" if they answered "yes" to the first question, regardless of how they answered the second question.	
		American-Indian or Alaska Native; Asian; black or African-American; Native Hawaiian or other Pacific Islander; white; and other	"What is your race? Mark one or more."	Students who answered "no" to the first question and selected only one additional race category, for example black or African-American, were classified as "non-Hispanic black". When a student answered "no" to the first question and selected multiple racial groups in the second question, they were classified as "mixed." Due to small cell sizes for some categories, the mixed group was combined with American-Indian or Alaska Native, Asian, Native Hawaiian or other Pacific Islander, and other to create the race/ethnicity category of "other."	—
Exposure to family violence	1	Yes; no	"At any time in your life, did you see a parent get pushed, slapped, hit, punched, or beat up by another parent, or their boyfriend or girlfriend?"	Dichotomized to 1 = yes and 0 = no	—
Exposure to community violence	1	Yes; no	"At any time in your life, in real life, did you see anyone get attached on purpose with a stick, rock, gun, knife, or other thing that would hurt? Somewhere like at home, at school, at a store, in a car, on the street, or anywhere else?"	Dichotomized to 1 = yes and 0 = no	—
Predictor variables					
Alcohol use[c]	2	Never; one or two times; three to five times; six to nine times; 10 or more times	"In the last year, how many times have you been drunk?"	Items summed to create a total score and dichotomized to 1 = one or more times and 0 = never for analyses	.687
Illicit drug use[c]	4	Never; one or two times; three to five times; six to nine times; 10 or more times	"In the last year, how many times have you used marijuana or weed (pot, hash, reefer)?"	Items summed to create a total score and dichotomized to 1 = one or more times and 0 = never for analyses	.357

Covariates	No. of items	Response options	Exact/sample item	Scoring	Reliability (Cronbach's alpha)[a]
Bullying[d]				All bullying variables were binary and categorized such that perpetration only = endorsement of perpetration, but no victimization; victimization only = endorsement of victimization but no perpetration; perpetration and victimization = endorsement of both perpetration and victimization. For all variables, referent = no experience with either bullying perpetration or victimization.	
Perpetration	8	Never; one or two times; three or four times; five or more times	"In the last 30 days at school, how often did this happen? … I spread rumors about other students."		Perpetration = .828
Victimization	2				Victimization = .885
Emotional symptoms[e]	5	Not true; somewhat true; certainly true	"Please give your answers based on how things have been for you in the last 6 months … I worry a lot."	Items summed to create a total score and kept continuous	.680
Attitudes toward female violence[f]	5	Strongly agree; somewhat agree; somewhat disagree; strongly disagree	"These statements are about hitting in situations in which boys and girls are dating. How strongly do you agree or disagree with each statement? …It is OK for a girl to hit her boyfriend if he did something to make her mad."	Items summed to create a total score and kept continuous	.865
Attitudes toward male violence[f]	5	Strongly agree; somewhat agree; somewhat disagree; strongly disagree	"These statements are about hitting in situations in which boys and girls are dating. How strongly do you agree or disagree with each statement? …It is OK for a boy to hit his girlfriend if she insulted him in front of friends."	Items summed to create a total score and kept continuous	.920
Delinquency and peer violence[f]	7	Never; one or two times; three or four times; five or more times	"In the past 4 months, how often did you deliberately damage property that did not belong to you (including painting graffiti or signs)?"	Items summed to create a total score and kept continuous	.742
Initiation of sexual intercourse[g]	1	Yes; no	"Have you ever had sexual intercourse?"	Dichotomized 1 = yes and 0 = no for analysis	—
Weapon carrying[h]	1	0 days; 1 day; 2 or 3 days; 4 or 5 days; 6 or more days	"During the past 30 days, on how many days did you carry a weapon such as a gun, knife, or club?"	Dichotomized to 1 = at least 1 day and 0 = 0 days for analysis	—
Outcome variables:					
CADRI Scales[i]			The following questions ask you about things that may have happened with a boyfriend/girlfriend. How often have these things ever happened with someone you were dating …		
Sexual abuse	4	Never; seldom; sometimes; often	"I forced him/her to have sex when he/she did not want to."	Items summed to create a total score for the subscale and dichotomized to 1 = seldom, sometimes, or often and 0 = never for analysis	.527
Threatening behavior	4	Never; seldom; sometimes; often	"I destroyed or threatened to destroy something he/she valued."	Items summed to create a total score for the subscale and dichotomized to 1 =	.687

Covariates	No. of items	Response options	Exact/sample item	Scoring	Reliability (Cronbach's alpha)[a]
				seldom, sometimes, or often and 0 = never for analysis	
Verbal or emotional abuse	10	Never; seldom; sometimes; often	"I insulted her with put downs."	Items summed to create a total score for the subscale and dichotomized to 1 = seldom, sometimes, or often and 0 = never for analysis	.837
Relational abuse	3	Never; seldom; sometimes; often	"I tried to turn his/her friends against him/her."	Items summed to create a total score for the subscale and dichotomized to 1 = seldom, sometimes, or often and 0 = never for analysis	.478
Physical abuse	4	Never; seldom; sometimes; often	"I kicked, hit, or punched him/her."	Items summed to create a total score for the subscale and dichotomized to 1 = seldom, sometimes, or often and 0 = never for analysis	.801
Outcome variables:			Have you ever done the following to someone you were dating or used to date …		
Stalking[i]	2	Yes; no	"Repeatedly followed, harassed, and contacted them when they didn't want to be (and in a way that felt uncomfortable, scary, or threatening to them)?"	Items summed to create a total score and dichotomized to 1 = yes and 0 = no for analysis	.506

CADRI = Conflict in Adolescent Dating Relationships Inventory.

[a] We calculated alpha values for all our scale measures, which is appropriate as scale measures have items that reflect the "effects" of the latent construct and therefore must be correlated as well as the index measures such as the CADRI. However, items that constitute indexes are usually items that are combined to form the index without consideration of their correlations. Index items are considered as causal indicators that "cause" the concept and may not be correlated; thus, they would or may have a low coefficient alpha, which does not reflect low reliability for the population in which the index was administered [40].

[b] Center for Disease Control and Prevention's Youth Behavioral Risk Survey methodology for handling race/ethnicity was used as a guide [41].

[c] Adapted from the LINKAGE items used in University of Illinois Bully Scale (UIBS), Espelage and Holt, 2001 [42].

[d] UIBS, Espelage and Holt, 2001 [42].

[e] Strengths and Difficulties Questionnaire, Goodman, 1997 [43].

[f] Foshee et al., 1998 [9].

[g] Adapted from Add Health; Udry, 2003 [44].

[h] Youth Risk Behavior Survey, CDC, 2011 [41].

[i] Wolfe et al., 2001 [25].

[j]Two items were adapted from the seven-item National Intimate Partner and Sexual Violence Survey [26] to assess stalking through physical presence behaviors and communications behaviors. Full references for measures from which questions were adapted are available upon request.

Table 3

Teen dating violence perpetration by sex

Scale	Total sample, n (%) (N = 1,653)[a]	Males, n (%) (N = 772)	Females, n (%) (N = 848)	χ^2
CADRI				
Threatening behavior	313 (20.4)	112 (16.0)	194 (24.1)	**15.27**
Verbal/emotional abuse	1,230 (77.1)	526 (71.6)	679 (81.8)	**23.09**
Relational abuse	197 (12.9)	88 (12.5)	105 (13.1)	.12
Physical abuse	510 (32.6)	146 (20.3)	353 (43.3)	**91.79**
Sexual abuse	231 (14.6)	143 (19.6)	83 (10.1)	**21.12**
Stalking	95 (6.4)	47 (7.1)	47 (6.0)	.75

Significant relationships at $p < .001$ are shown in boldface.

CADRI = Conflict in Adolescent Dating Relationships Inventory.

[a]33 missing on sex.

Table 4

Correlations among risk factors and teen dating violence for boys and girls

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Threatening behavior	—	**.26**	**.23**	**.52**	**.23**	**.13**	**.15**	.08	−.08	**.26**	**.23**	**.20**	**.26**	**.09**	**.21**	**−.33**	**−.21**
2. Verbal/emotional abuse	**.27**	—	**.19**	**.35**	**.15**	**.11**	**.16**	**.16**	**−.09**	**.21**	.09	**.22**	**.18**	**.09**	**.17**	**−.16**	.02
3. Relational abuse	**.28**	**.21**	—	**.18**	**.19**	**.21**	**.18**	.00	**−.09**	**.13**	**.16**	**.09**	**.10**	**.10**	.02	**−.16**	−.05
4. Physical abuse	**.44**	**.29**	**.24**	—	**.24**	**.14**	**.18**	.09	**−.11**	**.26**	**.21**	**.25**	**.21**	.02	**.20**	**−.32**	**−.15**
5. Sexual abuse	**.29**	**.24**	**.18**	**.24**	—	**.22**	.08	**.18**	**−.15**	**.21**	**.21**	**.17**	**.20**	.01	**.26**	**−.10**	−.07
6. Stalking	**.17**	**.09**	**.19**	**.20**	**.18**	—	.07	.00	−.08	.08	**.23**	**.14**	**.09**	.04	**.09**	−.07	**−.09**
7. Bully/victim	**.15**	**.27**	**.15**	**.30**	**.21**	.08	—	**−.33**	**−.38**	**.22**	**.09**	**.17**	**.15**	.06	.06	−.08	−.04
8. Bully perpetration only	.04	.03	.00	−.03	.05	−.05	**−.28**	—	**−.21**	**.13**	−.01	**.11**	.09	.01	.06	−.06	−.06
9. Bully victimization only	−.08	−.07	−.04	−.09	−.07	−.07	**−.27**	**−.14**	—	−.08	.02	**−.14**	**−.13**	**.14**	**−.10**	.06	.06
10. Delinquency/fighting	**.12**	**.22**	**.13**	**.17**	**.18**	.06	**.26**	**.12**	**−.11**	—	**.20**	**.31**	**.36**	**.10**	**.25**	**−.17**	−.04
11. Weapon carry	.02	.08	.08	**.10**	**.12**	**.14**	**.10**	.09	−.07	**.24**	—	**.18**	**.22**	.01	**.23**	**−.09**	**−.10**
12. Alcohol use	**.15**	**.26**	**.10**	**.12**	**.24**	.04	**.15**	**.12**	**−.14**	**.37**	**.17**	—	**.40**	.08	**.23**	**−.09**	**−.20**
13. Drug use	**.10**	**.14**	.06	**.15**	**.14**	.05	**.13**	**.10**	**−.13**	**.33**	**.38**	**.38**	—	.05	**.41**	−.05	**−.10**
14. Emotional symptoms	**.12**	**.14**	**.14**	**.08**	**.12**	**.13**	**.18**	−.07	.06	.07	.05	.04	.05	—	.00	−.04	−.05
15. Sex initiation	**.17**	**.21**	**.11**	**.21**	**.18**	.08	.03	.05	−.08	**.20**	**.30**	**.24**	**.33**	−.07	—	−.03	**−.11**
16. Attitudes toward female violence	**−.10**	−.09	−.08	**−.18**	−.06	**−.10**	**−.11**	.02	.00	**−.11**	−.07	**−.11**	−.06	**−.11**	−.06	—	**.32**
17. Attitudes toward male violence	**−.15**	−.07	**−.12**	**−.16**	−.05	**−.12**	**−.10**	−.03	**.13**	−.10	−.10	−.08	−.08	−.06	−.05	**.34**	—

Total N = 848 girls and N = 772 boys. Sample per item, and therefore correlation, varies. Significant correlations $p < .05$ are shown in boldface.

Boys are below the diagonal; girls above.

Table 5

Predicting boys' teen dating violence perpetration

	Threatening behavior (N = 266)		Verbal/emotional abuse (N = 268)		Relational abuse (N = 264)		Physical abuse (N = 264)		Sexual abuse (N = 265)		Stalking (N = 255)	
	AOR	95% CI	AOR	95% CI	AOR	95% CI	AOR	95% CI	AOR	95% CI	AOR	95% CI
Covariates												
Site (ref. = Site D)												
Site A	.93	.20–4.25	.91	.24–3.40	.58	.12–2.89	.34	.09–1.35	.67	.16–2.83	.30	.02–4.03
Site B	.62	.18–2.11	1.25	.51–3.06	.57	.16–2.02	**.28**	**.09–.86**	.90	.30–2.69	.99	.20–4.78
Site C	.38	.08–1.41	1.15	.43–3.10	.52	.13–2.14	.46	.15–1.47	.63	.19–2.12	1.70	.34–8.54
Grade-level (0 = sixth)	**.48**	**.27–.84**	1.23	.84–1.79	**.56**	**.32–.97**	1.32	.78–2.25	1.06	.65–1.72	**.47**	**.24–.90**
Race/ethnicity (ref. = white)												
Hispanic	1.17	.17–8.20	2.40	.74–7.74	.23	.05–1.11	1.04	.17–6.48	.60	.15–2.34	1.41	.15–13.61
Black	1.59	.24–10.39	2.18	.69–6.95	.38	.09–1.65	3.34	.59–18.78	.71	.19–2.72	1.28	.13–12.40
Other	6.77	.67–68.62	2.31	.45–11.81	2.21	.35–14.07	2.28	.22–23.55	.52	.07–3.76	1.83	.09–39.39
Exposure to family violence	1.69	.70–4.08	**2.41**	**1.12–5.18**	1.46	.61–3.51	**2.31**	**1.06–5.02**	1.53	.73–3.20	2.74	.89–8.41
Exposure to community violence	1.05	.42–2.64	1.33	.69–2.57	1.21	.49–3.04	1.43	.65–3.16	.73	.34–1.57	.61	.19–1.93
Predictors												
Bully/victim	**3.78**	**1.18–12.13**	**3.41**	**1.50–7.80**	**3.22**	**1.00–10.35**	**5.96**	**2.18–16.35**	**3.59**	**1.41–9.18**	.96	.27–3.37
Bully perpetration only	3.40	.90–12.90	1.32	.53–3.28	2.41	.57–10.21	1.81	.49–6.62	2.34	.74–7.41	.81	.14–4.57
Bully victimization only	1.19	.19–7.37	.74	.29–1.89	2.86	.64–12.83	1.82	.39–8.59	1.53	.39–5.99	Not included[a]	
Delinquency/fighting	1.02	.85–1.22	.95	.80–1.15	1.01	.85–1.21	.94	.81–1.09	1.04	.90–1.20	1.09	.89–1.348
Weapon carry	**.10**	**.02–.67**	1.00	.27–3.71	.75	.19–3.01	**.26**	**.07–.99**	1.55	.50–4.76	2.24	.47–10.80
Alcohol use	**4.06**	**1.59–10.37**	**3.26**	**1.53–6.95**	2.11	.82–5.43	1.47	.66–3.31	**3.23**	**1.49–6.99**	1.09	.33–3.63
Drug use	.67	.21–2.18	.44	.15–1.33	.79	.24–2.53	1.25	.45–3.52	.51	.19–1.38	.50	.10–2.65
Emotional symptoms	1.14	.91–1.43	**1.28**	**1.06–1.53**	1.21	.97–1.50	.95	.77–1.16	1.20	.99–1.45	1.24	.96–1.60
Sex initiation	2.26	.86–5.95	**2.57**	**1.11–5.92**	1.97	.74–5.22	**2.45**	**1.04–5.77**	**2.49**	**1.11–5.62**	2.40	.73–7.86
Attitudes toward female violence	.99	.89–1.10	.99	.92–1.06	1.02	.91–1.13	**.88**	**.80–.96**	1.00	.91–1.09	1.02	.91–1.16
Attitudes toward male violence	**.84**	**.74–.94**	.96	.88–1.06	.97	.86–1.10	.96	.87–1.06	1.02	.92–1.14	.93	.81–1.07

	Threatening behavior (N = 266)		Verbal/emotional abuse (N = 268)		Relational abuse (N = 264)		Physical abuse (N = 264)		Sexual abuse (N = 265)		Stalking (N = 255)	
	AOR	95% CI	AOR	95% CI	AOR	95% CI	AOR	95% CI	AOR	95% CI	AOR	95% CI
Model R^2	.356		.287		.206		.346		.220		.216	

Significant relationships at $p < .05$ are shown in boldface.

AOR = adjusted odds ratio; CI = confidence interval.

[a] Bullying victimization only was not included in the stalking model due to small cell size count (n < 5).

Table 6

Predicting girls' teen dating violence perpetration

	Threatening behavior (N = 375)		Verbal/emotional abuse (N = 413)		Relational abuse (N = 378)		Physical abuse (N = 377)		Sexual abuse (N = 378)		Stalking (N = 376)	
	AOR	95% CI	AOR	95% CI	AOR	95% CI	AOR	95% CI	AOR	95% CI	AOR	95% CI
Covariates												
Site (ref. = Site D)												
Site A	.56	.17–1.91	**10.74**	**1.23–93.78**	.25	.05–1.22	1.57	.58–4.264	.81	.13–5.11	.21	.02–2.41
Site B	1.35	.57–3.21	1.13	.57–2.26	.72	.31–1.67	.73	.38–1.42	2.55	.74–8.82	.39	.11–1.39
Site C	1.56	.61–4.02	1.43	.61–3.36	.51	.18–1.43	.86	.40–1.84	2.41	.60–9.74	.46	.11–1.91
Grade-level (0 = sixth)	1.32	.85–2.03	**1.61**	**1.09–2.37**	**.49**	**.31–.79**	1.25	.87–1.81	**4.65**	**1.67–12.92**	.83	.41–1.67
Race/ethnicity (ref. = white)												
Hispanic	.30	.08–1.19	1.64	.54–4.98	1.11	.26–4.80	.53	.18–1.56	.68	.13–3.45	2.33	.13–43.51
Black	1.61	.45–5.78	2.35	.77–7.18	1.14	.26–4.90	1.26	.43–3.68	.66	.13–3.46	3.39	.18–64.08
Other	1.74	.39–7.73	1.35	.32–5.61	1.86	.35–9.99	2.85	.79–10.35	1.08	.15–7.18	7.02	.30–162.46
Exposure to family violence	.78	.41–1.50	1.21	.62–2.37	.57	.25–1.28	1.28	.74–2.22	.89	.37–2.16	2.98	.95–9.30
Exposure to community violence	1.15	.60–2.18	1.03	.56–1.89	.91	.44–1.89	.97	.57–1.65	1.60	.61–4.20	.70	.22–2.17
Predictors												
Bully/victim	1.71	.75–3.89	**2.93**	**1.41–6.08**	2.02	.79–5.13	**2.80**	**1.44–5.44**	2.02	.58–6.97	1.29	.41–4.08
Bully perpetration only	1.53	.57–4.10	**10.02**	**2.13–47.21**	1.76	.53–5.79	**2.41**	**1.03–5.67**	**4.56**	**1.17–17.67**	Not included[a]	
Bully victimization only	.93	.33–2.62	1.43	.68–3.00	.28	.06–1.19	1.70	.77–3.75	.20	.02–2.07	.38	.06–2.42
Delinquency/fighting	**1.22**	**1.08–1.38**	1.07	.87–1.31	1.11	.98–1.27	**1.14**	**1.01–1.28**	1.05	.93–1.20	1.00	.85–1.19
Weapon carry	2.85	.94–8.64	1.89	.37–9.62	**4.98**	**1.55–16.01**	**4.92**	**1.47–16.50**	**4.52**	**1.30–15.71**	**7.82**	**1.83–33.48**
Alcohol use	1.85	.91–3.73	1.89	.95–3.74	1.08	.48–2.42	**1.81**	**1.02–3.21**	1.13	.43–3.03	2.83	.83–9.58
Drug use	.79	.33–1.88	1.71	.65–4.53	1.07	.42–2.78	1.11	.53–2.30	1.50	.52–4.31	.51	.12–2.12
Emotional symptoms	**1.15**	**1.01–1.32**	1.14	**1.00–1.30**	**1.22**	**1.05–1.42**	.97	.86–1.08	1.09	.91–1.30	1.14	.91–1.42
Sex initiation	2.07	.83–5.19	Not included[b]		.99	.32–3.01	1.68	.74–3.85	1.99	.66–5.99	1.37	.32–5.85
Attitudes toward female violence	**.87**	**.81–.93**	**.88**	**.81–.94**	.94	.86–1.02	**.87**	**.82–.93**	.98	.88–1.08	.97	.86–1.10
Attitudes toward male violence	.96	.88–1.05	1.07	.97–1.18	1.05	.94–1.17	.96	.88–1.04	**.88**	**.79–.99**	.94	.82–1.08

	Threatening behavior (N = 375)		Verbal/emotional abuse (N = 413)		Relational abuse (N = 378)		Physical abuse (N = 377)		Sexual abuse (N = 378)		Stalking (N = 376)	
	AOR	95% CI	AOR	95% CI	AOR	95% CI	AOR	95% CI	AOR	95% CI	AOR	95% CI
Model R^2	.405		.338		.249		.399		.366		.227	

Significant relationships at $p < .05$ are shown in boldface.

AOR = adjusted odds ratio; CI = confidence interval.

[a]Bully perpetration only was not included in the stalking model due to small cell size count (n < 5).

[b]Sex initiation was not included in the verbal/emotional model due to small cell size count (n < 5).