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Teen Dating Violence (Physical and Sexual) Among US High School Students:

Findings From the 2013 National Youth Risk Behavior Survey

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Abstract

IMPORTANCE—National estimates of teen dating violence (TDV) reveal high rates of victimization among high school populations. The Centers for Disease Control and Prevention's national Youth Risk Behavior Survey has provided often-cited estimates of physical TDV since 1999. In 2013, revisions were made to the physical TDV question to capture more serious forms of physical TDV and to screen out students who did not date. An additional question was added to assess sexual TDV.

OBJECTIVES—To describe the content of new physical and sexual TDV victimization questions first administered in the 2013 national Youth Risk Behavior Survey, to share data on the prevalence and frequency of TDV (including the first-ever published overall “both physical and sexual TDV” and “any TDV” national estimates using these new questions), and to assess associations of TDV experience with health-risk behaviors.

DESIGN, SETTING, AND PARTICIPANTS—Secondary data analysis of a cross-sectional survey of 9900 students who dated, from a nationally representative sample of US high school students, using the 2013 national Youth Risk Behavior Survey.

MAIN OUTCOMES AND MEASURES—Two survey questions separately assessed physical and sexual TDV; this analysis combined them to create a 4-level TDV measure and a 2-level TDV measure. The 4-level TDV measure includes “physical TDV only,” “sexual TDV only,” “both physical and sexual TDV,” and “none.” The 2-level TDV measure includes “any TDV” (either or

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Study concept and design: All authors.

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both physical and sexual TDV) and “none.” Sex-stratified bivariate and multivariable analyses assessed associations between TDV and health-risk behaviors.

RESULTS—In 2013, among students who dated, 20.9% of female students (95% CI, 19.0%–23.0%) and 10.4% of male students (95% CI, 9.0%–11.7%) experienced some form of TDV during the 12 months before the survey. Female students had a higher prevalence than male students of physical TDV only, sexual TDV only, both physical and sexual TDV, and any TDV. All health-risk behaviors were most prevalent among students who experienced both forms of TDV and were least prevalent among students who experienced none (all $P < .001$).

CONCLUSIONS AND RELEVANCE—The 2013 TDV questions allowed for new prevalence estimates of TDV to be established that represent a more complete measure of TDV and are useful in determining associations with health-risk behaviors among youth exposed to these different forms of TDV.

Although there has been research on teen dating violence (TDV) for several decades, the subject has only received attention as a public health concern in recent years.^{1–3} The Centers for Disease Control and Prevention’s (CDC’s) definition of TDV comprises several forms of violence including physical, sexual, psychological, and stalking behaviors,⁴ although researchers rarely measure all types in the same study.⁵ Associations exist between various forms of TDV victimization and a range of both short- and long-term negative health outcomes. For example, cross-sectional research indicates that TDV victimization is associated with increased alcohol and tobacco use, depressive symptoms and suicidality, internalizing behaviors, eating disorders, and risky sexual behaviors (eg, not using condoms and multiple sexual partners).^{6,7} Longitudinal studies^{8–11} have demonstrated that TDV victimization has lasting effects because those persons entering adulthood with a history of TDV victimization report negative consequences such as depression, substance use, suicidality, and future intimate partner violence victimization.

Over time, prevalence estimates of physical TDV victimization from the CDC’s national Youth Risk Behavior Survey (YRBS) (first measured in 1999) have remained around 9% with similar rates among female and male students.¹² Until recently, there have been no ongoing national studies of sexual TDV to our knowledge, but one study from the 2005 National Survey of Adolescents³ found higher lifetime prevalence rates of sexual TDV for girls than for boys. In addition, results from studies that used convenience samples found rates of sexual TDV varying from 8% to 25% for females and from 5% to 11% for males, depending on the questions used and populations assessed.^{13–15}

The 1999 through 2011 national YRBS included a single TDV victimization item (“During the past 12 months, did your boyfriend or girlfriend ever hit, slap, or physically hurt you on purpose?”) that only assessed physical behaviors. This question combined less serious acts of aggression (eg, slapped) with more serious acts (eg, hurt you on purpose). Also, the location of “on purpose” made it unclear if it was referring to “physically hurt” or to all the types of aggression included in the question. As a result, this item may have also captured play-fighting or “horseplay,” which has been shown to be common among adolescent dating partners^{16,17}; researchers have pointed out that the boundaries between play-fighting/flirting and actual aggression in adolescence are not always clear.^{18–20} The previous question also

only asked about violence perpetrated by a “boyfriend or girlfriend,” which may have inadvertently included only serious relationships and excluded more casual dating relationships. Notably, the previous YRBS measure did not differentiate between those who reported dating and those who did not, and the only response options to the question were “yes” and “no,” rather than assessing the frequency of TDV. Using “yes” and “no” response options limits variance, which not only can hinder efforts to detect meaningful differences but can also fail to provide a sense of burden, particularly for those youth who experience violence more frequently. Furthermore, research shows that many teens experience TDV more than once and that the violence can be stable within a given relationship.²¹

To address these weaknesses, the CDC engaged in a formal process with TDV experts within the CDC’s Division of Violence Prevention and with external researchers and practitioners to reexamine the items for the 2013 administration. For the 2013 YRBS, the CDC revised the physical TDV question by stating “physically hurt you on purpose” prior to listing potential physical dating violence types to indicate that any harm experienced was intentional, including only more serious acts in the question such as injuring with an object or weapon, rewording “boyfriend or girlfriend” to more inclusive language used in other reliable and valid TDV measures (ie, “dating or going out with”),^{22,23} having students identify whether they have dated during the past 12 months, and asking about the frequency of the violence. In addition, the CDC created 1 new survey question to assess sexual TDV victimization, which others have called for in TDV measurement⁵ and which, to our knowledge, does not exist on any ongoing national survey of adolescents. The specific question wording and response options are described in our analysis.

By including questions on both physical and sexual TDV, we are able to look at those youth who experienced physical TDV only, sexual TDV only, both physical and sexual TDV, any TDV (ie, those who experienced physical TDV only, sexual TDV only, or both physical and sexual TDV), and none. These distinctions may be particularly important when investigating health outcomes associated with different types or combinations of TDV because some health-risk behaviors have been shown to be associated with certain types of TDV but not others.²⁴ By measuring 2 different types of TDV, we can determine whether there is variation in association with health-risk behaviors by type of TDV.

The purpose of our study is to describe the content of the new 2013 physical and sexual TDV questions; to present the updated prevalence estimates for TDV, including the first-ever published “both” and “any” national estimates and the frequency of any TDV among both female and male students; and to examine differences in health-risk behaviors by type of TDV victimization. We hypothesize that the 2013 physical and sexual TDV questions will have strong and nuanced associations with selected health-risk behaviors (eg, suicide ideation and attempts, violence and bullying, alcohol and other drug use, and sexual risk behaviors).

Methods

Sample

The CDC developed the Youth Risk Behavior Surveillance System to monitor priority health-risk behaviors among youth. The national school-based YRBS is a cross-sectional survey that has been conducted biennially since 1991. In each survey year, an independent 3-stage cluster-sample design is used to obtain a nationally representative sample of public and private school students in grades 9 through 12 in the 50 states and the District of Columbia. Student participation in the survey is anonymous and voluntary, and local parental permission procedures are used. Students record their responses directly on a self-administered computer-scannable questionnaire. A weighting factor is applied to each record to adjust for nonresponse and the oversampling of black and Hispanic students. An institutional review board at the CDC approved the national YRBS. More details regarding sampling strategies and the psychometric properties of the YRBS questionnaire are reported elsewhere.^{25,26}

Measures

Teen Dating Violence—Physical TDV was assessed with the following question: “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).” The new sexual TDV question was: “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).” Response options for both items were: “I did not date or go out with anyone during the past 12 months,” “0 times,” “1 time,” “2 or 3 times,” “4 or 5 times,” and “6 or more times.” Because of skewed frequency levels and for ease in interpreting the ratios, the responses for both TDV variables were dichotomized into 0 times and 1 or more times for all bivariate and multivariable analyses.

We used the physical and sexual TDV questions to create a 4-level (ie, “physical TDV only [physical TDV: 1 times, sexual TDV: 0 times],” “sexual TDV only [physical TDV: 0 times; sexual TDV: 1 times],” “both physical and sexual TDV [physical TDV: 1 times, sexual TDV: 1 times],” and “none [physical TDV: 0 times, sexual TDV: 0 times]”) and a 2-level combined TDV measure, which was dichotomized into “any TDV” and “none.” The YRBS prevalence of physical and sexual TDV have been published elsewhere²⁷; however, the physical and sexual TDV measures presented in the present study describe students who experienced only physical TDV or only sexual TDV (rather than students who experienced physical or sexual TDV regardless of whether they also experienced the other). Students who responded that they did not date or go out with anyone during the 12 months before the survey and students who have missing data for either TDV survey question were excluded from both variables.

Other Measures—We examined associations between each type of TDV and various health-risk behaviors. These behaviors, selected because they have been shown to be associated longitudinally with TDV,^{9,24} included suicide ideation and attempts, violence and

bullying, alcohol and other drug use, and sexual risk behaviors (ie, multiple sex partners and currently sexually active). For this analysis, all health-risk behaviors were dichotomized into "no/0 days/0 times" or "yes/1 or more days/1 or more times." More information regarding the survey questions is available at http://www.cdc.gov/healthyyouth/yrbs/pdf/questionnaire/2013_xhx_questionnaire.pdf (accessed May 9, 2014).

The national YRBS used 2 questions to assess race and ethnicity. Students were classified as white, non-Hispanic (referred to as "white"), black or African American, non-Hispanic (referred to as "black"), and Hispanic or Latino (referred to as "Hispanic"). The numbers of students from other racial/ethnic groups were too small for meaningful analysis.

Statistical Analysis

All analyses were conducted in SUDAAN version 10.0.1 (Research Triangle Institute) to account for the complex sample design of the national YRBS, and all prevalence estimates reported herein reflect weighted estimates. The significance level was set at 5%. Because female and male students experience TDV differently,^{3,22,28} all bivariate and multivariable analyses were stratified by sex, and no overall estimates are reported. Bivariate associations were tested using overall χ^2 tests. Multiple logistic regression models were used to separately assess the association between TDV and each health-risk behavior, controlling for race/ethnicity and grade in school; these associations are reported as adjusted prevalence ratios with 95% CIs²⁹ with "none" as the referent group. Because these are cross-sectional survey data, adjusted prevalence ratios are more appropriate than adjusted odds ratios; adjusted prevalence ratios are mathematically identical to adjusted risk ratios and can be interpreted in a similar way.

Results

The 2013 national YRBS had a student response rate of 88%, a school response rate of 77%, and an overall response rate of 68%. Of the 13 633 completed questionnaires, 50 failed quality control and were excluded from the data set, leaving a total of 13 583 usable questionnaires; of those, 13 097 (96.4%) were valid responses for both TDV questions. The analytic sample was 50.9% female, 56.2% white, 15.3% black, and 20.8% Hispanic, and roughly 25% of the students were in each grade (ninth through 12th).

Table 1 shows the 2013 prevalence of TDV among students who dated during the 12 months before the survey by demographic subgroups. Among the 75.0% of female students who dated during the past 12 months, the prevalence of TDV was 6.6% for physical only, 8.0% for sexual only, 6.4% for both physical and sexual, and 20.9% for any TDV; among the 72.8% of male students who dated during the past 12 months, the prevalence of TDV was 4.1% for physical only, 2.9% for sexual only, 3.3% for both physical and sexual, and 10.4% for any TDV. The distribution of TDV differed by sex ($P < .001$). The prevalence of TDV also varied by race/ethnicity, with black and Hispanic students generally experiencing more TDV than white students, but did not vary by grade.

Table 2 shows the 2013 prevalence of TDV among students who dated during the 12 months before the survey broken down by frequency of victimization. Among all subgroups, the vast

majority of students did not report experiencing TDV, but most students who experienced TDV experienced more than 1 incident. For example, among female students, 4.8% reported 1 incident of physical TDV, while more than 8% reported 2 incidents or more, and 5.7% reported 1 incident of sexual TDV, while more than 8% reported 2 incidents or more. Similarly, among male students, 2.3% reported 1 incident of physical TDV, while more than 5% reported 2 incidents or more, and 2.0% reported 1 incident of sexual TDV, while more than 4% reported 2 incidents or more.

Table 3 shows bivariate associations between TDV and selected health-risk behaviors, and Table 4 shows the adjusted associations. For both male and female students, every risk behavior was most prevalent among students who had experienced both physical and sexual TDV and least prevalent among students who experienced no TDV (all $P < .001$). For both male and female students, the adjusted rates were higher for every risk behavior among students experiencing physical TDV only, compared with students experiencing none, and among students experiencing both physical and sexual TDV, compared with students experiencing none. The associations were not consistent among students who experienced sexual TDV only. Female students who experienced sexual TDV only were more likely than those who experienced none to seriously consider attempting suicide, make a suicide plan, attempt suicide, get in a physical fight, carry a weapon, be electronically bullied, and report current alcohol use and binge drinking. Male students who experienced sexual TDV only were also more likely than those who experienced no TDV to experience these same health-risk behaviors, as well as to have had sex with 4 or more people and to be currently sexually active.

Discussion

The purpose of the present study was to describe the content of and findings from new physical and sexual TDV victimization questions first administered in the 2013 YRBS. The CDC updated the existing physical TDV question for the 2013 YRBS to account for more serious forms of violence, to allow students to indicate that they did not date during the past 12 months, and to measure the frequency of physical TDV. The 2013 YRBS also included a new sexual TDV question. The results of our study suggest that both physical and sexual TDV are prevalent among high school students and that significant sex differences exist in both outcomes. Approximately 1 in 5 female students and 1 in 10 male students have been victims of physical and/or sexual TDV during the past 12 months. Female students had double the prevalence of any form of TDV than male students. Consistent with other research, most victims of physical or sexual TDV reported more than 1 incident, suggesting that TDV is not usually an isolated incident. Physical and sexual TDV victimization was associated with several health-risk behaviors.

Our analyses also indicate that, although health-risk behaviors were prevalent among those who experienced any form of TDV, for female students, it is especially important that we can now look at sexual TDV in the YRBS. For male more than female students, a combined physical and sexual TDV measure produces stronger associations with the health-risk behaviors than physical or sexual TDV alone. For example, compared with students who experienced either physical or sexual TDV, female students who experienced both forms of

TDV were approximately twice as likely to attempt suicide, and male students who experienced both forms of TDV were roughly 3 times as likely to attempt suicide. These findings suggest that, consistent with previous research,⁶ there may be different health risks related to the type of violence experienced and that there may be a cumulative negative effect for victims experiencing both forms of TDV.

Furthermore, the literature suggests differential variation by sex depending on the form of TDV.^{22,30} Some studies^{15,22} suggest that female and male students report physical TDV victimization at similar rates but that female students report more incidents of sexual TDV victimization than do male students. As Hamby and Turner⁵ point out, the studies that have shown sex parity typically show it for physical (but not sexual) aggression. These studies often combine measures of severe physical acts with less severe acts (eg, pushing and shoving) that are less likely to result in serious injury.^{31,32} The findings in the present study are consistent with previous studies examining more severe forms of TDV by sex (eg, hitting, hurting with a weapon, and forced sexual penetration) that have shown that female adolescents report more physical and sexual victimization than male adolescents.^{3,28}

Although the data cannot directly answer this question, the lower physical TDV prevalence estimates among male students in 2013 compared with previous administrations of the YRBS may be due, in part, to the fact that the new question clarifies the intent to physically harm and eliminates confusion around whether or not to include play-fighting; Foshee et al³³ have found that teens often use physical contact (eg, scratching and twisting arms) as a form of flirting in dating relationships. The change to include only those who dated in the denominator is an important clarification that allows for a more accurate understanding of TDV victimization. Enabling students to indicate that they have not dated during the time period of interest increases the accuracy of the measures by excluding acts that may have been perpetrated outside the context of a dating relationship.^{2,34} In addition, sexual violence is often a component of the TDV victimization experience.^{5,22} Even though the YRBS does not afford the space to measure TDV comprehensively, the new items represent an expansion and fine-tuning of the TDV measurement.

These results present broader implications for TDV prevention efforts. Although female students have a higher prevalence than male students, male and female students are both impacted by TDV, and prevention efforts may be more effective if they include content for both sexes. Our study findings also suggest that prevention efforts can take a comprehensive approach to preventing TDV and health-risk behaviors. Because TDV victimization was associated with a constellation of health-risk behaviors, it is possible that implementing TDV prevention programming may also affect the rates of these behaviors.

There are a few limitations of our study. First, because of the limited space for questions in the YRBS, we were unable to assess all aspects of TDV, including psychological aggression and stalking, nor were we able to include several behaviorally specific items for each type of violence, which is recommended to increase disclosure.^{5,35} We also could not measure fear or injury associated with TDV to get further context around the violence, which has been suggested by Hamby and Turner.⁵ In addition, the YRBS data are cross-sectional and can only provide an indication of associations between TDV and the selected health-risk

behaviors. These data are only generalizable to students who attend school and may not be representative of all people in this age group. In 2009, approximately 4% of people in the United States 16 to 17 years of age were not enrolled in a high school program and had not completed high school.³⁶ Finally, these data are self-reported. Although the extent of underreporting or overreporting of TDV on this survey cannot be determined, the YRBS questions assessing other risk behaviors have been shown to have good test-retest reliability.

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Conclusions

We believe that we now have a more relevant and robust estimate of TDV, by focusing the physical TDV item on more serious aggression and adding sexual TDV, and the first nationally representative rate of sexual TDV from an ongoing survey. As a result, the field has new national prevalence estimates of TDV for high school students who experienced physical or sexual TDV or both. We further demonstrated that those who experience different forms of TDV are at risk for multiple other health-risk behaviors. Future work should examine in more detail the frequency of physical and sexual TDV and the effect that a higher frequency of TDV has on negative health outcomes.

References

1. Howard DE, Debnam KJ, Wang MQ. Ten-year trends in physical dating violence victimization among U.S. adolescent females. *J Sch Health*. 2013; 83(6):389–399. [PubMed: 23586883]
2. Haynie DL, Farhat T, Brooks-Russell A, Wang J, Barbieri B, Iannotti RJ. Dating violence perpetration and victimization among U.S. adolescents: prevalence, patterns, and associations with health complaints and substance use. *J Adolesc Health*. 2013; 53(2):194–201. [PubMed: 23664626]
3. Wolitzky-Taylor KB, Ruggiero KJ, Danielson CK, et al. Prevalence and correlates of dating violence in a national sample of adolescents. *J Am Acad Child Adolesc Psychiatry*. 2008; 47(7):755–762. [PubMed: 18520962]
4. Centers for Disease Control and Prevention. [Accessed January 15, 2015] Understanding teen dating violence: fact sheet. 2014. <http://www.cdc.gov/violenceprevention/pdf/teen-dating-violence-2014-a.pdf>
5. Hamby S, Turner H. Measuring teen dating violence in males and females: insights from the National Survey of Children's Exposure to Violence. *Psychol Violence*. 2013; 3(4):323–339. [Accessed January 15, 2015] <http://psycnet.apa.org/index.cfm?fa=buy.optionToBuy&id=2012-23870-001>.
6. Silverman JG, Raj A, Mucci LA, Hathaway JE. Dating violence against adolescent girls and associated substance use, unhealthy weight control, sexual risk behavior, pregnancy, and suicidality. *JAMA*. 2001; 286(5):572–579. [PubMed: 11476659]
7. Lormand DK, Markham CM, Peskin MF, et al. Dating violence among urban, minority, middle school youth and associated sexual risk behaviors and substance use. *J Sch Health*. 2013; 83(6): 415–421. [PubMed: 23586886]
8. Foshee VA, Reyes HLM, Gottfredson NC, Chang LY, Ennett ST. A longitudinal examination of psychological, behavioral, academic, and relationship consequences of dating abuse victimization among a primarily rural sample of adolescents. *J Adolesc Health*. 2013; 53(6):723–729. [PubMed: 23910572]
9. Exner-Cortens D, Eckenrode J, Rothman E. Longitudinal associations between teen dating violence victimization and adverse health outcomes. *Pediatrics*. 2013; 131(1):71–78. [PubMed: 23230075]
10. Roberts TA, Klein JD, Fisher S. Longitudinal effect of intimate partner abuse on high-risk behavior among adolescents. *Arch Pediatr Adolesc Med*. 2003; 157(9):875–881. [PubMed: 12963592]

11. Smith PH, White JW, Holland LJ. A longitudinal perspective on dating violence among adolescent and college-age women. *Am J Public Health.* 2003; 93(7):1104–1109. [PubMed: 12835193]
12. Eaton DK, Kann L, Kinchen S, et al. Centers for Disease Control and Prevention (CDC). Youth risk behavior surveillance—United States, 2011. *MMWR Surveill Summ.* 2012; 61(4):1–162.
13. Bonomi AE, Anderson ML, Nemeth J, Bartle-Haring S, Buettner C, Schipper D. Dating violence victimization across the teen years: abuse frequency, number of abusive partners, and age at first occurrence. *BMC Public Health.* 2012; 12:637. [PubMed: 22882898]
14. Foshee VA, Linder GF, Bauman KE, et al. The Safe Dates Project: theoretical basis, evaluation design, and selected baseline findings. *Am J Prev Med.* 1996; 12(5 suppl):39–47.
15. Swahn MH, Simon TR, Arias I, Bossarte RM. Measuring sex differences in violence victimization and perpetration within date and same-sex peer relationships. *J Interpers Violence.* 2008; 23(8): 1120–1138. [PubMed: 18319366]
16. Foshee VA, Bauman KE, Arriaga XB, Helms RW, Koch GG, Linder GF. An evaluation of Safe Dates, an adolescent dating violence prevention program. *Am J Public Health.* 1998; 88(1):45–50. [PubMed: 9584032]
17. Gonzalez-Mendez R, Hernandez-Cabrera JA. Play context, commitment, and dating violence: a structural equation model. *J Interpers Violence.* 2009; 24(9):1518–1535. [PubMed: 18794376]
18. Capaldi DM, Crosby L. Observed and reported psychological and physical aggression in young, at-risk couples. *Soc Dev.* 1997; 6(2):184–206. DOI: 10.1111/j.1467-9507.1997.tb00101.x
19. Jouriles EN, Garrido E, Rosenfield D, McDonald R. Experiences of psychological and physical aggression in adolescent romantic relationships: links to psychological distress. *Child Abuse Negl.* 2009; 33(7):451–460. [PubMed: 19589597]
20. Maccoby, EE. *The Two Sexes: Growing Up Apart, Coming Together.* Cambridge, MA: Harvard University Press; 1998.
21. O’Leary KD, Slep AMS. Prevention of partner violence by focusing on behaviors of both young males and females. *Prev Sci.* 2012; 13(4):329–339. [PubMed: 21779924]
22. Foshee VA. Gender differences in adolescent dating abuse prevalence, types and injuries. *Health Educ Res.* 1996; 11(3):275–286. DOI: 10.1093/her/11.3.275-a
23. Wolfe DA, Scott K, Reitzel-Jaffe D, Wekerle C, Grasley C, Straatman AL. Development and validation of the conflict in adolescent dating relationships inventory. *Psychol Assess.* 2001; 13(2): 277–293. [PubMed: 11433803]
24. Vagi KJ, Rothman EF, Latzman NE, Tharp AT, Hall DM, Breiding MJ. Beyond correlates: a review of risk and protective factors for adolescent dating violence perpetration. *J Youth Adolesc.* 2013; 42(4):633–649. [PubMed: 23385616]
25. Brener ND, Kann L, McManus T, Kinchen SA, Sundberg EC, Ross JG. Reliability of the 1999 youth risk behavior survey questionnaire. *J Adolesc Health.* 2002; 31(4):336–342. [PubMed: 12359379]
26. Brener ND, Kann L, Shanklin S, et al. Centers for Disease Control and Prevention (CDC). Methodology of the Youth Risk Behavior Surveillance System—2013. *MMWR Recomm Rep.* 2013; 62(RR-1):1–20.
27. Kann L, Kinchen S, Shanklin SL, et al. Centers for Disease Control and Prevention (CDC). Youth risk behavior surveillance—United States, 2013. *MMWR Surveill Summ.* 2014; 63(suppl 4):1–168.
28. Coker AL, McKeown RE, Sanderson M, Davis KE, Valois RF, Huebner ES. Severe dating violence and quality of life among South Carolina high school students. *Am J Prev Med.* 2000; 19(4):220–227. [PubMed: 11064224]
29. Bieler GS, Brown GG, Williams RL, Brogan DJ. Estimating model-adjusted risks, risk differences, and risk ratios from complex survey data. *Am J Epidemiol.* 2010; 171(5):618–623. [PubMed: 20133516]
30. Molidor C, Tolman RM. Gender and contextual factors in adolescent dating violence. *Violence Against Women.* 1998; 4(2):180–194. [PubMed: 12295440]
31. Archer J. Sex differences in aggression between heterosexual partners: a meta-analytic review. *Psychol Bull.* 2000; 126(5):651–680. [PubMed: 10989615]

32. Halpern CT, Oslak SG, Young ML, Martin SL, Kupper LL. Partner violence among adolescents in opposite-sex romantic relationships: findings from the National Longitudinal Study of Adolescent Health. *Am J Public Health*. 2001; 91(10):1679–1685. [PubMed: 11574335]
33. Foshee VA, Bauman KE, Linder F, Rice J, Wilcher R. Typologies of adolescent dating violence: identifying typologies of adolescent dating violence perpetration. *J Interpers Violence*. 2007; 22(5):498–519. [PubMed: 17429020]
34. Foshee VA, Reyes HLM, Gottfredson NC, Chang LY, Ennett ST. A longitudinal examination of psychological, behavioral, academic, and relationship consequences of dating abuse victimization among a primarily rural sample of adolescents. *J Adolesc Health*. 2013; 53(6):723–729. [PubMed: 23910572]
35. Cook SL, Gidycz CA, Koss MP, Murphy M. Emerging issues in the measurement of rape victimization. *Violence Against Women*. 2011; 17(2):201–218. [PubMed: 21307030]
36. Chapman, C., Laird, J., Ifill, N., Kewal Ramani, A. US Dept of Education. Trends in High School Dropout and Completion Rates in the United States: 1972–2009. Washington, DC: National Center for Education Statistics; 2013.

Prevalence of Physical and Sexual TDV Among 9900 Students Who Dated, by Demographic Subgroup, National Youth Risk Behavior Survey, 2013^a

Table 1

Demographic	% of Students (95% CI)					P Value ^b	Any Form of TDV; ^c % of Students (95% CI)	P Value ^d
	Physical TDV Only	Sexual TDV Only	Both Physical and Sexual TDV	No TDV				
Sex								
Male	4.1 (3.5–4.9)	2.9 (2.4–3.6)	3.3 (2.7–4.0)	89.6 (88.2–91.0)			10.4 (9.0–11.7)	<.001
Female	6.6 (5.6–7.7)	8.0 (7.0–9.1)	6.4 (5.4–7.5)	79.1 (77.0–81.0)			20.9 (19.0–23.0)	
Race								
White ^e	4.7 (3.8–5.9)	4.8 (4.0–5.7)	5.0 (4.2–6.0)	85.5 (83.2–87.5)			14.5 (12.5–16.8)	
Black ^e	6.6 (5.5–8.0)	5.2 (4.2–6.5)	3.7 (2.8–4.8)	84.5 (82.4–86.5)		.001	15.5 (13.5–17.6)	.04
Hispanic	5.7 (4.6–7.1)	6.8 (5.2–8.9)	4.6 (3.4–6.3)	82.8 (80.0–85.2)			17.2 (14.8–20.0)	
Grade								
9	4.5 (3.7–5.4)	6.6 (5.5–8.0)	4.3 (3.5–5.3)	84.6 (82.6–86.3)			15.4 (13.7–17.4)	
10	4.9 (3.7–6.6)	5.5 (4.4–7.0)	5.0 (3.9–6.5)	84.5 (81.8–86.9)		.05	15.5 (13.1–18.2)	.67
11	5.4 (4.2–6.8)	4.8 (3.7–6.1)	5.0 (3.8–6.5)	84.9 (82.2–87.2)			15.1 (12.8–17.8)	
12	6.5 (5.3–8.1)	5.0 (3.9–6.4)	5.2 (4.0–6.6)	83.4 (81.2–85.3)			16.6 (14.7–18.8)	

Abbreviation: TDV, teen dating violence.

^aDuring the 12 months before the survey.

^bDetermined by use of the χ^2 test.

^cPhysical only, sexual only, or both.

^dAny vs none (determined by use of the χ^2 test).

^eNon-Hispanic.

Frequency of Physical and Sexual TDV Among 9900 Students Who Dated, by Demographic Subgroup, National Youth Risk Behavior Survey, 2013^a

Table 2

Demographic	% of Students (95% CI)				
	0 Times	1 Time	2-3 Times	4-5 Times	6 Times
Physical TDV					
Male	92.6 (91.4-93.6)	2.3 (1.7-3.1)	2.2 (1.8-2.8)	0.6 (0.4-0.9)	2.3 (1.8-3.0)
Female	87.0 (85.5-88.4)	4.8 (4.1-5.6)	5.0 (4.2-5.9)	1.3 (0.8-2.0)	1.9 (1.4-2.5)
White ^b	90.3 (88.5-91.8)	3.1 (2.4-3.9)	3.6 (3.0-4.4)	1.1 (0.7-1.8)	1.9 (1.4-2.7)
Black ^b	89.7 (87.6-91.5)	3.8 (2.7-5.2)	3.3 (2.5-4.4)	1.0 (0.7-1.4)	2.2 (1.5-3.2)
Hispanic	89.6 (88.0-91.0)	3.7 (2.8-4.9)	3.8 (3.0-4.7)	0.7 (0.3-1.5)	2.2 (1.5-3.3)
Grade					
9	91.2 (89.8-92.4)	3.8 (3.0-4.8)	2.5 (1.8-3.4)	0.5 (0.3-0.8)	2.0 (1.3-3.1)
10	90.0 (87.9-91.8)	3.4 (2.6-4.5)	3.8 (2.8-5.1)	1.0 (0.6-1.6)	1.8 (1.2-2.6)
11	89.6 (87.5-91.4)	3.2 (2.2-4.5)	3.8 (3.0-4.9)	1.2 (0.8-1.8)	2.1 (1.5-3.1)
12	88.3 (86.8-89.6)	3.8 (3.0-4.7)	4.4 (3.6-5.4)	1.2 (0.6-2.4)	2.4 (1.7-3.2)
Sexual TDV					
Male	93.8 (92.7-94.7)	2.0 (1.6-2.6)	1.6 (1.3-2.1)	0.5 (0.3-0.9)	2.0 (1.6-2.6)
Female	85.6 (83.9-87.2)	5.7 (5.1-6.5)	5.3 (4.4-6.4)	1.1 (0.8-1.6)	2.2 (1.7-2.7)
White ^b	90.2 (88.6-91.6)	3.6 (2.9-4.6)	3.7 (2.9-4.7)	0.7 (0.5-1.1)	1.8 (1.4-2.3)
Black ^b	91.2 (89.8-92.3)	3.1 (2.6-3.8)	2.9 (2.1-3.9)	0.7 (0.4-1.4)	2.1 (1.4-3.2)
Hispanic	88.5 (85.4-91.0)	4.6 (3.1-6.7)	3.3 (2.6-4.3)	1.1 (0.6-1.8)	2.5 (1.8-3.4)
Grade					

Demographic	% of Students (95% CI)					
	0 Times	1 Time	2-3 Times	4-5 Times	6 Times	6 Times
9	89.1 (87.5-90.5)	4.5 (3.4-5.8)	3.8 (3.0-4.9)	0.8 (0.4-1.6)	1.8 (1.3-2.6)	1.8 (1.3-2.6)
10	89.5 (87.6-91.1)	4.3 (3.3-5.5)	3.1 (2.2-4.2)	0.6 (0.3-1.3)	2.6 (1.9-3.4)	2.6 (1.9-3.4)
11	90.3 (88.2-92.0)	3.3 (2.3-4.7)	3.4 (2.6-4.6)	0.8 (0.5-1.5)	2.1 (1.4-3.3)	2.1 (1.4-3.3)
12	89.8 (87.5-91.8)	3.6 (2.7-4.7)	3.7 (2.8-4.9)	1.0 (0.7-1.5)	1.8 (1.3-2.5)	1.8 (1.3-2.5)

Abbreviation: TDV, teen dating violence.

^aDuring the 12 months before the survey.

^bNon-Hispanic.

Table 3
 Bivariate Associations Between TDV and Select Health-Risk Behaviors Among High School Students Who Dated, 2013 National Youth Risk Behavior Survey^a

Behavior, Sex	% of Students (95% CI)				No TDV	P Value ^b	Any Form of TDV, ^c % of Students (95% CI)	P Value ^d
	Physical TDV Only	Sexual TDV Only	Both Physical and Sexual TDV	Sexual TDV Only				
Seriously considered attempting suicide ^e								
Male	21.2 (15.5–28.4)	17.9 (13.0–24.2)	40.4 (31.5–49.9)	10.7 (9.4–12.2)	<.001	26.3 (22.5–30.4)	<.001	
Female	37.6 (31.5–44.0)	37.1 (32.2–42.2)	55.4 (47.8–62.8)	19.7 (18.0–21.5)	<.001	42.8 (38.9–46.7)	<.001	
Made a suicide plan ^e								
Male	21.9 (15.4–30.2)	18.1 (13.0–24.7)	41.3 (32.7–50.3)	9.2 (8.0–10.5)	<.001	26.8 (23.2–30.8)	<.001	
Female	32.8 (26.7–39.4)	29.0 (24.1–34.5)	52.7 (45.0–60.2)	13.4 (11.7–15.4)	<.001	37.4 (33.6–41.2)	<.001	
Attempted suicide ^f								
Male	14.9 (9.0–23.8)	13.2 (8.2–20.6)	45.8 (34.2–57.8)	4.7 (3.8–5.7)	<.001	23.8 (18.7–29.7)	<.001	
Female	21.0 (16.2–26.7)	21.5 (16.5–27.5)	39.5 (32.2–47.3)	8.3 (7.2–9.6)	<.001	26.7 (22.9–31.0)	<.001	
In a physical fight ^f								
Male	54.0 (45.8–62.1)	53.1 (43.8–62.1)	77.7 (67.0–85.7)	33.0 (30.5–35.7)	<.001	60.7 (54.9–66.3)	<.001	
Female	44.4 (36.3–52.9)	25.4 (20.6–30.9)	46.9 (41.5–52.4)	18.7 (17.0–20.5)	<.001	37.8 (34.4–41.5)	<.001	
Carried a weapon ^g								
Male	49.0 (40.3–57.8)	36.6 (28.0–46.2)	71.1 (60.3–79.9)	29.8 (26.8–32.9)	<.001	51.6 (45.5–57.6)	<.001	
Female	18.2 (11.9–26.8)	9.2 (6.6–12.7)	28.6 (22.7–35.3)	6.6 (5.5–8.0)	<.001	17.7 (15.0–20.8)	<.001	
Electronically bullied ^e								
Male	20.5 (14.7–28.0)	19.9 (13.6–28.2)	38.4 (28.9–48.8)	6.7 (5.5–8.1)	<.001	25.9 (21.6–30.8)	<.001	

Behavior, Sex	% of Students (95% CI)						P Value ^b	Any Form of TDV, ^c % of Students (95% CI)	P Value ^d
	Physical TDV Only	Sexual TDV Only	Both Physical and Sexual TDV	No TDV	TDV	TDV			
Female	34.0 (27.1–41.7)	40.8 (35.0–46.9)	54.0 (46.7–61.0)	18.9 (16.8–21.1)	42.6 (38.3–47.2)	<.001		<.001	
Current alcohol use ^h									
Male	58.0 (47.4–67.9)	50.7 (40.2–61.1)	77.5 (67.4–85.2)	39.2 (36.6–41.9)	61.9 (55.4–68.0)	<.001		<.001	
Female	64.4 (58.6–69.7)	44.9 (37.5–52.5)	59.9 (48.5–70.4)	38.5 (35.7–41.4)	55.4 (49.8–60.9)	<.001		<.001	
Binge drinking ⁱ									
Male	38.0 (30.0–46.7)	30.4 (23.6–38.2)	59.8 (46.4–71.9)	24.8 (22.3–27.5)	42.4 (35.9–49.1)	.004		<.001	
Female	38.1 (31.3–45.3)	27.8 (21.1–35.6)	47.8 (37.2–58.6)	20.4 (18.2–22.7)	36.9 (30.7–43.6)	<.001		.001	
Current marijuana use ^j									
Male	42.9 (34.6–51.6)	33.3 (26.7–40.5)	61.8 (49.1–73.2)	27.7 (25.0–30.7)	45.9 (39.8–52.0)	<.001		<.001	
Female	44.1 (37.0–51.4)	28.4 (22.2–35.5)	37.0 (32.2–42.1)	23.8 (20.8–27.1)	35.9 (31.2–40.9)	<.001		.001	
Ever used cocaine ^k									
Male	19.0 (13.0–26.9)	7.7 (4.3–13.4)	41.3 (32.7–50.5)	6.2 (4.9–7.9)	22.7 (18.6–27.4)	<.001		<.001	
Female	11.2 (6.3–19.2)	6.0 (3.3–10.7)	17.9 (13.6–23.2)	3.6 (2.8–4.6)	11.2 (8.2–15.3)	<.001		.003	
Had sex with 4 persons ^l									
Male	38.9 (30.7–47.8)	34.9 (25.8–45.2)	58.4 (51.2–65.2)	19.1 (16.8–21.8)	43.6 (37.6–49.8)	<.001		<.001	
Female	33.4 (28.1–39.1)	15.8 (10.3–23.6)	33.4 (25.8–41.9)	14.6 (12.5–16.9)	26.5 (23.2–30.2)	<.001		<.001	
Currently sexually active ^m									
Male	67.0 (57.0–75.6)	54.4 (43.4–65.1)	80.7 (73.0–86.6)	40.4 (37.7–43.1)	67.5 (61.1–73.3)	<.001		<.001	
Female	65.3 (57.7–72.3)	39.6 (33.8–45.6)	66.4 (56.6–75.0)	42.6 (39.7–45.6)	55.6 (49.7–61.4)	<.001		.002	

Abbreviation: TDV, teen dating violence.

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- ^a Among students who dated or went out with someone during the 12 months before the survey.
- ^b Determined by use of the χ^2 test.
- ^c Physical only, sexual only, or both.
- ^d Any vs none (determined by use of the χ^2 test).
- ^e During the 12 months before the survey.
- ^f One or more times during the 12 months before the survey.
- ^g For example, a gun, knife, or club, on at least 1 day during the 30 days before the survey.
- ^h Had at least 1 drink of alcohol on at least 1 day during the 30 days before the survey.
- ⁱ Had 5 or more drinks in a row within a couple of hours on at least 1 day during the 30 days before the survey.
- ^j Used marijuana 1 or more times during the 30 days before the survey.
- ^k One or more times during their life.
- ^l During their life.
- ^m Had sexual intercourse with 1 or more persons during the 30 days before the survey.

Table 4

Adjusted Prevalence Ratios Between TDV and Select Health-Risk Behaviors Among High School Students Who Dated, by Sex, 2013 National Youth Risk Behavior Survey^a

Behavior, Sex	Adjusted Prevalence Ratio (95% CI)			
	Physical TDV Only	Sexual TDV Only	Both Physical and Sexual TDV	Any TDV
Seriously considered attempting suicide ^b				
Male	1.8 (1.2–2.7)	1.6 (1.1–2.2)	3.7 (2.8–4.9)	2.3 (1.8–2.9)
Female	1.9 (1.6–2.3)	1.8 (1.5–2.1)	2.8 (2.4–3.2)	2.1 (1.9–2.4)
Made a suicide plan ^b				
Male	2.1 (1.4–3.2)	2.0 (1.4–2.8)	4.3 (3.2–5.8)	2.8 (2.2–3.5)
Female	2.4 (1.9–3.0)	2.0 (1.7–2.4)	3.8 (3.2–4.6)	2.7 (2.3–3.1)
Attempted suicide ^c				
Male	3.3 (1.9–5.8)	2.7 (1.7–4.4)	9.3 (7.1–12.2)	5.0 (3.8–6.4)
Female	2.5 (1.9–3.4)	2.3 (1.7–3.0)	4.7 (3.8–5.8)	3.1 (2.5–3.8)
In a physical fight ^c				
Male	1.7 (1.4–2.0)	1.6 (1.3–1.9)	2.4 (2.1–2.7)	1.8 (1.7–2.0)
Female	2.3 (2.0–2.8)	1.3 (1.1–1.7)	2.6 (2.3–3.0)	2.0 (1.8–2.3)
Carried a weapon ^d				
Male	1.6 (1.3–2.0)	1.3 (1.1–1.6)	2.4 (2.1–2.8)	1.8 (1.6–2.0)
Female	2.8 (1.9–4.0)	1.3 (0.9–1.9) ^e	4.2 (3.1–5.7)	2.6 (2.2–3.2)
Electronically bullied ^b				
Male	3.2 (2.2–4.7)	2.9 (1.9–4.5)	5.6 (4.2–7.5)	3.9 (3.0–5.0)
Female	2.0 (1.6–2.3)	2.1 (1.8–2.5)	2.7 (2.3–3.2)	2.3 (2.0–2.5)
Current alcohol use ^f				
Male	1.4 (1.2–1.7)	1.3 (1.1–1.6)	1.9 (1.7–2.2)	1.5 (1.4–1.7)
Female	1.6 (1.5–1.8)	1.2 (1.0–1.3)	1.6 (1.3–1.8)	1.4 (1.3–1.6)
Binge drinking ^g				
Male	1.5 (1.2–1.9)	1.3 (1.0–1.7)	2.4 (1.9–2.9)	1.7 (1.5–2.1)
Female	1.9 (1.6–2.3)	1.4 (1.1–1.7)	2.3 (1.8–2.9)	1.8 (1.5–2.1)

Behavior, Sex	Adjusted Prevalence Ratio (95% CI)			
	Physical TDV Only	Sexual TDV Only	Both Physical and Sexual TDV	Any TDV
Current marijuana use ^h				
Male	1.5 (1.2–2.0)	1.2 (1.0–1.5) ^e	2.2 (1.8–2.7)	1.6 (1.4–1.9)
Female	1.8 (1.4–2.2)	1.2 (1.0–1.4) ^e	1.6 (1.3–1.9)	1.5 (1.3–1.7)
Ever used cocaine ⁱ				
Male	3.0 (2.0–4.7)	1.3 (0.7–2.4) ^e	6.3 (4.5–8.7)	3.6 (2.6–4.9)
Female	2.9 (1.5–5.6)	1.4 (0.8–2.4) ^e	4.9 (3.6–6.7)	2.9 (2.1–4.0)
Had sex with 4 persons ^j				
Male	2.0 (1.5–2.6)	1.7 (1.3–2.2)	2.9 (2.4–3.4)	2.2 (1.8–2.6)
Female	2.2 (1.8–2.7)	1.2 (0.8–1.8) ^e	2.3 (1.7–3.2)	1.8 (1.5–2.2)
Currently sexually active ^k				
Male	1.6 (1.4–1.9)	1.4 (1.1–1.7)	2.0 (1.8–2.1)	1.6 (1.5–1.8)
Female	1.5 (1.3–1.7)	1.0 (0.8–1.1) ^e	1.6 (1.4–1.8)	1.3 (1.2–1.5)

Abbreviation: TDV, teen dating violence.

^a Among students who dated or went out with someone during the 12 months before the survey, adjusted for race/ethnicity and grade, referenced against students who experienced no TDV.

^b During the 12 months before the survey.

^c One or more times during the 12 months before the survey.

^d For example, a gun, knife, or club, on at least 1 day during the 30 days before the survey.

^e The 95% CI contains the value of 1.00.

^f Had at least 1 drink of alcohol on at least 1 day during the 30 days before the survey.

^g Had 5 or more drinks in a row within a couple of hours on at least 1 day during the 30 days before the survey.

^h Used marijuana 1 or more times during the 30 days before the survey.

ⁱ One or more times during their life.

^j During their life.

^k Had sexual intercourse with 1 or more persons during the 30 days before the survey.