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State-level Teen Dating Violence Education Laws and Teen Dating Violence Victimization in the United States: A Cross-Sectional Analysis of 36 States

Karisa K. Harland, MPH, PhD [Associate Research Scientist],

University of Iowa, Carver College of Medicine, Department of Emergency Medicine, 200 Hawkins Drive, RCP 1008, Iowa City, IA 52242

J. Priyanka Vakkalanka, ScM [Graduate Research Assistant],

University of Iowa, Carver College of Medicine, Department of Emergency Medicine, 200 Hawkins Drive, RCP 1008, Iowa City, IA 52242

Corinne Peek-Asa, MPH PhD [Professor & Associate Dean for Research],

University of Iowa, College of Public Health, Department of Occupational and Environmental Health, 145 N. Riverside Dr., S143 CPHB, Iowa City IA 52242

Audrey F. Saftlas, MPH PhD [Professor Emeritus]

University of Iowa, College of Public Health, Department of Epidemiology, 145 N. Riverside Dr., S427 CPHB, Iowa City IA 52242

Abstract

BACKGROUND: Approximately 10% of teens report experiencing sexual dating violence (SDV) or physical dating violence (PDV), collectively represented as teen dating violence (TDV). This study examines the association between laws incorporating TDV education in schools on TDV prevalence.

METHODS: TDV prevalence was estimated using data contributed by 36 states that participated in the 2015 Youth Risk Behavioral Surveillance Survey (YRBS). Presence of TDV laws was determined using Westlaw®, a legal search engine. The adjusted odds of TDV victimization was estimated by the presence or absence of a state law and length of time the law was in effect using hierarchical regression modeling, clustering on state, controlling for individual- and state-level covariates and incorporating the YRBS weighted survey design.

RESULTS: After controlling for individual- and state-level covariates, presence of a law was not associated with TDV (aOR: 0.98; 95%CI: 0.87–1.09), PDV (aOR: 1.05; 95%CI: 0.86–1.29) or SDV (aOR: 1.03; 95%CI: 0.90–1.17). These odds did not differ across the length of time the policies were in effect.

CONCLUSIONS: This study suggest that just the presence of a law incorporating TDV education in schools is not associated with reduced TDV victimization but further research is needed to understand the association of the content of these laws and their implementation on TDV victimization.

Corresponding Author Phone: (319)356-4520, Fax: (319)356-1138, kari-harland@uiowa.edu.

Keywords

Dating Violence; Health Policies; Adolescent Health

Teen dating violence (TDV) is defined as verbal, physical, emotional, psychological, or sexual abuse in a teenage dating relationship, including stalking and perpetration via electronic media.¹ In 2015, among dating teens, approximately 10% reported sexual or physical TDV.² While TDV results in physical and psychosocial harm in the short-term, evidence suggests that victimized youth may also suffer long-term health effects including depressive symptoms, substance abuse, suicidal ideation, and victimization in future relationships.³

With increasing awareness of the harmful consequences of TDV, 24 states have passed laws to address TDV in schools;⁴ however, the effectiveness of state laws in reducing TDV is unknown as just one study has been conducted to date. This previous study focused on policies providing teens with access to civil protection orders and analyzed the relationship between the presence of these laws and state TDV rates.⁵ States with policies that provided access to civil protection orders had lower prevalence of TDV. To date, no study has examined whether students within states with legislation requiring or permitting TDV education in schools have lower TDV prevalence than students within states with no such legislation.

To address this gap in knowledge, we conducted a cross-sectional, comparative state policy analysis to determine if the presence of state TDV education laws has a measurable influence on student-reported prevalence of TDV. We hypothesized that students within states with TDV laws would report a lower prevalence of TDV victimization overall, as well as a lower prevalence of physical dating violence (PDV) and sexual dating violence (SDV) specifically; and prevalence would be lowest in students in states with longer standing legislation.

METHODS

The goal of this cross-sectional study was to determine if state-level TDV education laws were independently associated with student-reported TDV prevalence after controlling for state-level covariates indicative of state culture and individual-level TDV risk factors reported by youth completing the 2015 Youth Risk Behavior Surveillance Survey (YRBS). This study was determined to not be human subjects research by the University of Iowa Human Subjects Office.

Participants

The state YRBS is a cross-sectional survey administered by the Centers for Disease Control and Prevention (CDC) that assesses health risk behaviors among U.S. high school students (grades 9–12). This survey uses a two-stage cluster-sample designed to obtain state representative samples of students. Additional detail on YRBS methodology has been reported elsewhere.⁶

We obtained data from states through the CDC, and individually contacted five states for their 2015 YRBS data as these states do not allow CDC to release their data without statelevel permission. We excluded three states which did not participate in the YRBS in 2015, ten which did not have weighted data, and one state which did not ask any questions about TDV. Ultimately 36 states with representative PDV and 30 states with SDV [Figure 1] prevalence were included. Students who reported that they did not date in the last 12 months were excluded for all analyses.

Procedure

The primary exposure was the presence of a law pertaining to TDV education in schools. We utilized Westlaw® to identify enacted laws using the Westlaw Codified Law Index Terms of "curriculum", "domestic violence", "education", "secondary schools" and "violence" as well as designated search terms of "coercion", "dating abuse", "dating relationship", dating violence", "domestic abuse", "healthy relationship", "human growth and development", "intimate partner violence", "relationship skills", "sex(ual) education" and "teen dating violence". Students were considered *exposed* if a school-based TDV education law was effective in their state prior to January 1, 2015. To measure the association of the length of time a TDV education law had been enacted with TDV prevalence, the date the law was effective was recorded.

We evaluated the associations of both individual- and state-level covariates with TDV prevalence. At the individual-level, we assessed students' demographics (e.g. age, grade, sex, sexual identity, race/ethnicity). State-level factors may have been associated with enactment of a law or TDV prevalence. As a result, we obtained state-level covariates from several secondary data sources. To control for influence of state-level sociodemographic indicators on whether a policy was enacted and the impact of these state-level factors on TDV, we included the proportion of students eligible for free or reduced lunch in 2014 and a poverty marker of the proportion of those age 5–17 years of age living in poverty reported by the U.S. Census. We accounted for cultural and political elements that may influence policy including a state's tightness-looseness scores (a measure of state's rule enforcement and tolerance for deviance),⁷ political party affiliation (Governor) from the National Governors Association,⁸ and Federal Bureau of Investigations violent crime rates.⁹ Given that previous research has found overlap between TDV and bullying laws,¹⁰ shared risk factors for perpetration of TDV and bullying,¹¹ and increased prevalence of bullying among those experiencing TDV¹² we controlled for the U.S. Department of Education scoring of comprehensiveness of state bullying laws¹³ and length of time the law was in place. The date the bullying law as effective was abstracted from a previous review by Nikolaou.¹⁴

The primary outcome was any report of TDV defined as a youth reporting either PDV or SDV in the 2015 YRBS. The type of TDV, physical or sexual, was examined to measure differential impact of the presence of a law on TDV type. Physical TDV was measured using the 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.)" Sexual TDV was captured by the question "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.)"Students reported their experience of PDV and SDV in the last 12 months as 0, 1, 2 or 3 times, 4 or 5 times, or 6 or more times. For each outcome this was dichotomized to yes (1–6+ times) versus no (0 times).

Data Analysis

The prevalence, with 95% confidence intervals (95%CI), of TDV, and each TDV subtype, by individual-level demographics were calculated. TDV prevalence was considered significantly different if the 95% CIs did not overlap across each group. Continuous state-level covariates (i.e. violent crime rate, free lunch percentage, poverty) were divided into quartiles among states that were included in the analysis, and mean prevalence of any TDV, PDV, or SDV were compared across quartiles.

To measure the association of the presence of a TDV law with the odds of reporting TDV, we developed hierarchical multivariable logistic regression models for any TDV, PDV, and SDV. We used generalized estimating equations with a random effect for state (to control for clustering on responses within a state) and weighting provided by the YRBS. Individual- and state-level variables that were associated with each outcome in bivariate analyses were considered for inclusion in the multivariable model. Final multivariable models for each outcome were based on purposeful selection of confounders identified and evaluation of the Akaike Information Criterion.

We determined *a priori* that we would investigate the impact of the presence of a law in two ways. First, we examined whether individual-level demographics modified the association between the presence of a law and TDV odds such that we would observe differential associations by demographic variables. To test for effect modification, we fit an interaction term with each individual-level demographic and TDV law. Second, we evaluated if the length of time since a law was implemented, calculated as months since January 1 2015, was associated with the odds of TDV. We decided to evaluate the length of time since the law was implemented until this date to account for the potential lag between implementation and change in individual-level reports of TDV behaviors. We hypothesized that states with TDV educational policies implemented for longer periods may have had different outcomes of TDV prevalence compared to states that only recently implemented such policies. As there were only 11 states with laws enacted by January 1, 2015, we categorized states as follows: no law, law in effect 1–24 months, law in effect 25–48 months, and law in effect >48 months.

Data management and statistical analysis of survey data (proc surveyfreq, surveymeans, and surveylogistic) were performed using SAS v.9.4 (SAS Institute, Cary, NC). To illustrate the differences in TDV prevalence by presence of a TDV law, maps of PDV and SDV prevalence estimates were generated using ArcGIS® software (ESRI). This study was determined to not be human subjects research by the University of Iowa Human Subjects Office.

RESULTS

Prevalence of Any TDV

In the 2015 YRBS, the prevalence of any TDV was 16.0% (95%CI: 15.3–16.6) (Table 1). The prevalence of any TDV was greater among females than males (20.4% vs 11.1%; uOR: 2.07, 95%CI 1.83–2.33), and increased by grade. Any TDV was greatest among Native Hawaiian/Others (25.2%; 95%CI: 16.3–34.0) and lowest among Asian students (9.4%; 95%CI: 6.5–12.2) as compared to white students. The prevalence of any TDV among heterosexual students was 13.5%, while approximately 30% of gay or lesbian students, bisexual students, and those not sure of their sexual identity reported TDV. The prevalence of any TDV across demographics was stratified by sex and is presented in Supplemental Digital Content - Appendix A.

Prevalence of Physical and Sexual Dating Violence

The prevalence of PDV and SDV was 9.8% (95%CI: 9.2–10.3) and 10.9% (95%CI: 10.3–11.5), respectively (Table 1). In females, the overall PDV prevalence was 11.2% (95%CI: 10.4–11.9) while the SDV prevalence was 15.0% (95%CI: 13.9–16.0). The prevalence estimates varied across race/ethnicity (Table 1). The demographic distribution of PDV prevalence stratified by sex is presented in Supplemental Digital Content – Appendix B. The prevalence of SDV was lowest in heterosexual males (4.9%, 95%CI: 4.2–5.6%) and females (13.6%, 95%CI: 12.5–14.7%), and higher among non-heterosexual groups (Supplemental Digital Content – Appendix C).

State-Level Covariates

The association of state-level characteristics and presence or absence of a TDV education law are shown in Table 2. States with a TDV education law had significantly different comprehensive bullying law scores than states without a TDV education law (p=0.034). No other state-level characteristics were significantly associated with the presences or absence of a TDV education law.

Prevalence estimates, with 95% CI, of any TDV, PDV, and SDV within each quartile of select state-level covariates are presented in Figure 2. Anti-bullying policy scores and governors' political party affiliation did not vary across any of the three outcomes (data not shown). For any TDV, prevalence varied across quartiles for free lunch percentages (p<0.001), tightness-looseness score quartiles (p=0.001), age 5–17 poverty percentages (p<0.001), and length of time since bullying legislation was effective (p=0.006). The prevalence of PDV varied across quartiles of violent crime (p=0.039), free lunch quartile (p<0.001), and poverty (p=0.003). As seen with any TDV, SDV prevalence also varied across quartiles for free lunch percentages (p<0.001), tightness-looseness quartiles (p<0.001), age 5–17 poverty rates (p<0.001), and length of time since bullying legislation (p=0.004) only.

Relationship with Law

The prevalence of any TDV, PDV and SDV by presence of a law in each state are presented in Figure 3. TDV and SDV prevalence do not appear to differ by geography but PDV prevalence appears to be higher in the southern region of the U.S. State-level distributions of each outcome stratified by sex are presented in Supplemental Digital Content – Appendices D–I.

Presence of a law was not associated with the odds of reporting TDV, PDV or SDV in the final adjusted model, which controlled for individual- and state-level covariates (Table 3). Regardless of the length of time a law was in effect, we observed no influence of this variable on the adjusted odds of any TDV, PDV or SDV (Table 3). While sexual identity was associated with TDV in unadjusted analyses (Table 1), there were 12 states which did not include this question in their 2015 YRBS survey. To examine this relationship in adjusted analyses, we completed a sub-analysis modeling the odds of reporting TDV with adjustment for all variables found in Table 3 plus sexual identity among the subset of states (n=24) that included this question. The results of this sub-analysis did not differ significantly from those of the entire sample therefore the sub-analysis is not presented.

In the evaluation of the law serving as a potential effect modifier, the relationship between presence of a law and odds of TDV did not vary across levels of sex (p=0.520), race/ ethnicity (p=0.537), age (p=0.958), or sexual identity (p=0.722).

DISCUSSION

We examined the association of the presence of a TDV law on TDV prevalence among a representative sample of students in 36 U.S. states. Students living in states with a TDV law had similar TDV prevalence as students living in states without such a law. As in previous studies, the individual-level characteristics of age and sex were associated with reporting TDV.^{12,15} The associations of state-level characteristics with TDV prevalence, specifically time since bullying law was effective, percentage of free lunch and poverty among those ages 5–17, and tightness-looseness score are novel, important findings.

From the current analysis, it is difficult to discern why no relationship between presence of a TDV law and TDV prevalence was found. It may be that states with TDV laws require schools to report TDV incidents and prevention activities. These requirements may create a school culture more open to communication and reporting of TDV. In addition, teens in states with TDV laws may have a fuller grasp of the behaviors which constitute TDV and therefore may be more likely to report what they are experiencing as TDV compared to teens in states without laws. Therefore increased reporting after the law is initially effective, as is seen in Figure 2 for students in states with a law in effect for 1–24 months, is a positive outcome of such a law.

Previous research on TDV laws have focused on the availability of civil protective orders for teens and not the prevention of TDV through education policy. Hoefer et al examined the association between state-level covariates on the Break the Cycle "grades" for strength of civil protective orders for teens.^{16,17} They found that Democratic control was associated with a better grade but other state-level covariates were not associated.¹⁶ We focused on the prevention of TDV through school education laws, and found an association between Democratic Party control and presence of TDV laws. We also found a relationship between proportion of free lunches, proportion in poverty for those 5–17 years of age, and the state's

tightness looseness score on the presence of a TDV law. The differences between the two studies may be due to the purpose of law being examined, as one could hypothesize that states with higher poverty and a greater proportion of students receiving free or reduce lunch may be less likely to have a TDV law due to a state culture that is having difficulty addressing basic health disparities.

Using data from the 2011 YRBS, Hoefer et al examined the relationship between the Break the Cycle grades for strength of civil protective orders and student reports of physical TDV. ^{5,17} This work found that states with lower grades (worse policies) and a republican governor had significantly more reports of TDV. Our work did not find an association with governor party but did see an association between proportion of free and reduced lunch, tightness-looseness score and time since bullying legislation was in place and the odds of TDV. This discordance may again be due to differences in the purpose of the laws examined.

Research into the overlap between bullying and TDV is increasing. Perpetration of bullying and TDV are associated with acceptance of harmful gender norms, lack of conflict resolution skills and history of violence victimization.¹⁸ Teens experiencing TDV are more likely to experience bullying and those who perpetrate bullying are more likely to perpetrate TDV in the future.^{12,19} This suggests that the comprehensiveness of bullying laws and the time a bullying law has been effective may reduce TDV.¹³ Any TDV and SDV were significantly reduced among students from states where a bullying law had been in place for five to ten years compared to students in states with bullying laws effective for less than five years; however, after ten years the prevalence of TDV and SDV increased again. In addition, state bullying law comprehensiveness and odds of TDV. The lack of association between bullying law comprehensiveness and odds of TDV may be due to the absence of overlap between bullying and TDV laws.¹⁰ Although the two types of violence have similar risk factors for perpetration, the prevention of these separate types of violence through policy may require different policy components.

This study has limitations. Examining the presence or absence of a TDV law does not address the comprehensiveness of the law or how the law is implemented; however, this is an important first look at the prevention of TDV through state-level education policies. The YRBS is a survey of mostly high school students attending public schools; therefore the effect of these laws on private schools students or those not attending high school are unknown. Youth who have a previous history of violence are more likely to drop out of school,²⁰ have low school attendance and may potentially be absent on the day of the survey, ²¹ and perpetrate TDV;¹¹ therefore the highest risk group may not be addressed by these school-based policies. Additionally, there is a possibility of misclassification of exposure status (i.e. implementation of a law as of 1/1/2015) as the outcome was measured as past-year prevalence of TDV. We may have reduced the potential for exposure misclassification by further categorizing the length of time the law was in effect from enactment date until 1/1/2015. There is potential for the underestimation of TDV, as although the definition is given in the YRBS, teens may not identify what they are experiencing as TDV and may also be less likely to report TDV due to stigma surrounding being a 'victim'.

This is the first study to examine the association of the presences of TDV education laws on TDV. Teen dating violence is prevalent among U.S. youth. Although no association was found in this study, these results should not be interpreted as a reason to not consider policy approaches to reduce TDV but as a starting point in the examination of the comprehensiveness of these state-level laws and how they are implemented at the school district level on TDV victimization.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

REFERENCES

- Breiding M, Basile K, Smith S, Black M, Mahendra R. Intimate Partner Violence Surveillance: Uniform Definitions and Recommended Data Elements, Version 2.0. Atlanta GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention;2015.
- Kann L, McManus T, Harris WA, et al. Youth Risk Behavior Surveillance United States, 2015. MMWR Surveill Summ. 2016;65(6):1–174.
- 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]
- 4. National Conference of State Legislatures. Teen Dating Violence. 2018; http://www.ncsl.org/ research/health/teen-dating-violence.aspx. Accessed 3/28/2019.
- 5. Hoefer R, Black B, Ricard M. The impact of state policy on teen dating violence prevalence. Journal of adolescence. 2015;44:88–96. [PubMed: 26255246]
- 6. Brener ND, Kann L, Shanklin S, et al. Methodology of the Youth Risk Behavior Surveillance System—2013. MMWR Recommendations and reports : Morbidity and mortality weekly report Recommendations and reports / Centers for Disease Control. 2013;62(Rr-1):1–20.
- Harrington JR, Gelfand MJ. Tightness-looseness across the 50 united states. Proceedings of the National Academy of Sciences of the United States of America. 2014;111(22):7990–7995. [PubMed: 24843116]
- National Governors Association. The Governors Political Affiliations and Terms of Office. 2019; https://www.nga.org/wp-content/uploads/2019/03/Governors-Historical-Rosters.pdf. Accessed 3/28/2019.
- Federal Bureau of Investigation. Violent Crime. 2015; https://ucr.fbi.gov/crime-in-the-u.s/2015/ crime-in-the-u.s.-2015/offenses-known-to-law-enforcement/violent-crime. Accessed 3/28/2019.
- Cascardi M, King CM, Rector D, DelPozzo J. School-Based Bullying and Teen Dating Violence Prevention Laws: Overlapping or Distinct? J Interpers Violence. 2018;33(21):3267–3297. [PubMed: 30253722]
- Foshee VA, McNaughton Reyes HL, Chen MS, et al. Shared Risk Factors for the Perpetration of Physical Dating Violence, Bullying, and Sexual Harassment Among Adolescents Exposed to Domestic Violence. J Youth Adolesc. 2016;45(4):672–686. [PubMed: 26746242]
- Vivolo-Kantor AM, Olsen EO, Bacon S. Associations of Teen Dating Violence Victimization With School Violence and Bullying Among US High School Students. The Journal of school health. 2016;86(8):620–627. [PubMed: 27374352]
- Stuart-Cassel V, Bell A, Springer JF. Analysis of State Bullying Laws and Policies. U.S. Department of Education, Office of Planning, Evaluation and Policy Development, Policy and Program Studies Services;2011.
- 14. Nikolaou D Do anti-bullying policies deter in-school bullying victimization? International Review of Law and Economics. 2017;50:1–6.
- Vagi KJ, O'Malley Olsen E, Basile KC, Vivolo-Kantor AM. Teen Dating Violence (Physical and Sexual) Among US High School Students: Findings From the 2013 National Youth Risk Behavior Survey. JAMA Pediatr. 2015;169(5):474–482. [PubMed: 25730143]

- Hoefer R, Black B, Salehin M. Dating violence policy: Making the grade. Journal of Sociology and Social Welfare. 2012;39(4):9–24.
- 17. Break the Cycle. 2010 State Law Report Cards: A National Survey of Teen Dating Violence Laws. Los Angeles, CA 2010.
- 18. Wilkins N, Tsao B, Hertz M, Davis R, Klevens J. Connecting the Dots: An Overview of the Links Among Multiple Forms of Violence. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention Oakland, CA: Prevention Institute.2014.
- 19. Foshee VA, Benefield TS, McNaughton Reyes HL, et al. Examining explanations for the link between bullying perpetration and physical dating violence perpetration: Do they vary by bullying victimization? Aggress Behav. 2016;42(1):66–81. [PubMed: 26299840]
- Peguero AA. Violence, schools, and dropping out: racial and ethnic disparities in the educational consequence of student victimization. J Interpers Violence. 2011;26(18):3753–3772. [PubMed: 22170457]
- 21. U.S. Department of Education. Teen Dating Violence in the United States. 2015; https:// www2.ed.gov/about/offices/list/oese/oshs/teendatingviolence-factsheet.html. Accessed 3/28/2019.

WHAT IS ALREADY KNOWN ON THIS SUBJECT

- Teen dating violence is prevalent among youth in the United States.
- Individual-level interventions have been shown to reduce teen dating violence but the long-term effectiveness is largely unknown therefore changes that impact societal level culture, such as policies, need to be evaluated.

WHAT THIS STUDY ADDS

- No association is found when examining the cross-sectional association between teen dating violence state-level education laws and reports of teen dating violence victimization
- Further evidence for the need for a of comprehensiveness examination of teen dating violence state-level education laws and how they are implemented at the school district level on TDV victimization.







CT, DE, FL, IL, IN, MD, MA, NE, PA, RI, VA



50 states

Figure 1.

Flow Chart of 2015 YRBS Sample and Summary of Teen Dating Violence (TDV) Law Status

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* Indicates statistically significant differences across category for outcome

Figure 2. Prevalence of TDV, PDV, and SDV by TDV Legislation Status and State-Level Covariates

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Table 1.

Prevalence of Reported Physical and Sexual Teen Dating Violence by Select Student Demographics

(The successive is	7	Any Teen Dat	ting Vio	lence		Physical Dat	ing Viol	ence		Sexual Dati	ng Viole	nce
CHARACTERIN	Prev.	95% CI	uOR	95% CI	Prev.	95% CI	uOR	95% CI	Prev.	95% CI	uOR	95% CI
Overall	16.0	15.3–16.6		NA	9.8	9.2-10.3		NA	10.9	10.3-11.5		NA
Gender												
Female	20.4	19.3–21.6	2.07	1.83–2.33	11.2	10.4 - 11.9	1.43	1.27–1.61	15.0	13.9–16.0	2.54	2.21–2.92
Male	11.1	10.2-11.9		Ref	8.1	7.4–8.8		Ref	6.5	5.8-7.1		Ref
Race												
American Indian/Alaska Native	18.0	13.6-22.5	1.25	0.91-1.73	11.9	8.8–14.9	1.44	1.05-1.97	10.6	7.1-14.2	1.00	0.67 - 1.48
Asian	9.4	6.5-12.2	0.59	0.42 - 0.83	4.8	3.0-6.7	0.54	0.36 - 0.81	6.0	3.7-8.4	0.54	0.35 - 0.83
Black/African American	15.3	13.9–16.7	1.03	0.91 - 1.16	10.8	9.6–11.9	1.29	1.14 - 1.46	9.3	8.3-10.2	0.86	0.76-0.97
Hispanic-Latino	17.5	15.8-19.1	1.21	1.04 - 1.40	11.3	9.6–13.1	1.37	1.12-1.66	11.2	10.0 - 12.4	1.06	0.93-1.21
Multiple - Non-Hispanic	20.0	17.3-22.6	1.42	1.19–1.70	12.3	10.6 - 14.0	1.50	1.26–1.78	14.1	11.4–16.7	1.38	1.09-1.75
Native Hawaiian/Other	25.2	16.3 - 34.0	1.92	1.19–3.08	10.8	6.6 - 15.0	1.30	0.83-2.02	21.1	12.5-29.7	2.25	1.32–3.82
White	14.9	14.0-15.9		Ref	8.6	8.0-9.1		Ref	10.6	9.5-11.5		Ref
Grade												
gth	14.4	13.2–15.5		Ref	<i>T.T</i>	7.0-8.4		Ref	10.3	9.3-11.3		Ref
10th	15.9	14.7-17.0	1.12	0.99–1.28	9.3	8.5-10.2	1.23	1.08 - 1.40	10.9	10.0 - 11.8	1.07	0.92 - 1.23
11th	16.3	14.8-17.8	1.16	1.00 - 1.34	10.2	9.1–11.3	1.36	1.15-1.62	11.1	9.9–12.3	1.09	0.93-1.27
12th	16.5	15.2–17.7	1.18	1.02 - 1.36	10.9	9.9–11.9	1.47	1.27 - 1.70	10.4	9.1–11.8	1.01	0.83 - 1.23
Age												
14 years	15.5	13.8–17.3		Ref	7.7	6.6-8.9		Ref	11.5	9.7–13.2		Ref
15 years	14.5	13.1–15.8	0.92	0.77 - 1.10	8.1	7.2–9.0	1.06	0.87 - 1.28	10.2	9.0–11.4	0.88	0.70 - 1.10
16 years	15.8	14.4–17.2	1.02	0.88 - 1.19	9.6	8.8 - 10.4	1.26	1.06 - 1.50	11.0	9.8–12.1	0.95	0.78 - 1.17
17 years	15.6	14.3-17.0	1.01	0.86 - 1.18	10.1	9.0-11.2	1.34	1.10-1.63	10.1	8.9–11.2	0.87	0.70 - 1.07
18 years or older	17.4	15.6–19.3	1.15	0.95–1.38	11.7	10.3-13.2	1.59	1.29 - 1.94	11.0	9.4–12.7	0.96	0.73 - 1.26
Sexual Identity												
Heterosexual (straight)	13.5	12.7–14.2		Ref	7.6	6.9-8.3		Ref	9.1	8.4–9.8		Ref
Gay or lesbian	31.0	26.2-35.8	3.04	2.58-3.59	21.6	17.3–25.8	3.33	2.57-4.31	20.1	15.8–24.5	2.51	1.90 - 3.34
Bisexual	32.2	29.0–35.4	2.88	2.28–3.65	21.9	19.0–24.7	3.39	2.72-4.22	22.6	19.8–25.3	2.91	2.43-3.50

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		Any Teen Da	ting Viol	lence		Physical Dat	ing Viol	ance		Sexual Dati	ng Viole	ICE
Unaracterisuc	Prev.	95% CI	uOR	95% CI	Prev.	95% CI	uOR	95% CI	Prev.	95% CI	uOR	95% CI
Not sure	31.0	24.5-37.4	2.88	2.10-3.94	20.5	15.4–25.7	3.13	2.23-4.38	25.6	18.8–32.5	3.46	2.40-4.94

Prev, Prevalence; 95% CI, 95% confidence interval; uOR, unadjusted odds ratio; NA, not applicable; Ref, referent group

Table 2.

Comparison of State Level Covariates with Presence of TDV Education Policy

State Lavel Characteristic	Law Prese	nt (N=11)	Law Abser	nt (N=25)	p-value ¹
State-Level Characteristic	States (n)	Percent	States (n)	Percent	
Comprehensive Bullying Laws Score					
6–13	3	27.3	4	19.1	
14–18	3	27.3	5	23.8	0.004
19–21	0	0	9	42.9	0.034
22–28	5	45.5	3	14.3	
Poverty (Ages 5-17)					
10.6–14.1	4	36.4	5	20.0	
14.5–18.6	4	36.4	5	20.0	0.1.15
19.0–22.6	3	27.3	6	24.0	0.145
22.8-30.3	0	0	9	36.0	
Free Lunch Quartile					
29.0-40.2	4	36.4	5	20.0	
43.1-47.1	4	36.4	5	20.0	
48.5-55.9	2	18.2	8	32.0	0.363
56.9-73.7	1	9.1	7	28.0	
Tightness-Looseness Scores ²					
27.4–38.4	2	18.2	7	28.0	
39.4–49.3	4	36.4	5	20.0	
49.7–57.4	5	45.5	4	16.0	0.056
59.6-78.9	0	0	9	36.0	
Violent Crime (per 100,000)					
118.0–239.4	2	18.2	7	28.0	
242.5-379.7	3	27.3	6	24.0	
383.1-461.9	5	45.5	4	16.0	0.282
472.4–730.2	1	9.1	8	32.0	
Time Since Bullying Legislation					
<5 years	1	9.1	7	28.0	
5-10 years	8	72.7	7	44.0	0.283
>10 years	2	11.2	7	28.0	
Governor					
Democrat	5	45.5	8	32.0	
Republican	6	54.6	16	64.0	0.160
Independent	0	0	1	4.0	

¹Differences in state-level covariates by presence of law by quartiles or categories were determined by Fisher's exact tests for categorical measures

 2 State tightness-looseness scores reflect a summary score for each state that evaluates the strength of punishment and degree of latitude/ permissiveness in that state. Higher values are associated with a stricter adherence to norms and policies, while lower scores as associated with permissive policies.

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Table 3.

Association of Laws and Length of Time Effective as of January 1, 2015 on Physical and Sexual Dating Violence, YRBS 2015

	Any	TDV	Ч	DV	SI	Λ
Law Categorization	Prevalence	aOR^b (95% CI)	Prevalence	aOR ^c (95% CI)	Prevalence	aOR^d (95% CI)
Law						
Yes	15.3 (14.6–15.9)	0.97 (0.88–1.06)	9.7 (9.1–10.3)	1.12 (0.95–1.33)	$10.5\ (10.0-11.1)$	0.99 (0.91–1.08)
No	16.4 (15.5–17.3)	Ref	9.8 (9.1–10.5)	Ref	11.1 (10.2–12.0)	Ref
Time Since Law Passed ^a						
No law/0 Months	16.4 (15.5–17.3)	Ref	9.8 (9.1–10.5)	Ref	11.1 (10.2–12.0)	Ref
1–24 months	16.6 (15.4–17.9)	0.94 (0.82–1.07)	11.1 (9.9–12.3)	1.14 (0.92–1.41)	11.2 (10.3–12.2)	$0.93\ (0.80-1.08)$
25-48 months	13.8 (12.4–15.3)	1.08 (0.89–1.30)	9.0 (8.0–10.0)	1.17 (0.98–1.40)	9.5 (8.4–10.6)	$1.09\ (0.88-1.35)$
>48 months	14.4 (13.3–15.5)	0.97 (0.86–1.09)	8.4 (7.5–9.2)	0.95 (0.79–1.16)	10.3 (9.5–11.1)	1.03 (0.92–1.15)
YRBS, Youth Risk Behavior	Survey; TDV, teen o	lating violence; PDV	, physical dating v	iolence; SDV, sexus	dating violence; a	OR, adjusted Odds Ratio, Ref. referent group
^a States with laws in effect 1–	24 months = FL, IL;	States with laws 25-	-48 months = IL,]	DE, MD, VA, PA; St	ates with laws >48 r	nonths = MA, CT, IN, NE, RI
$b_{ m Adjusted}$ for individual leve	l characteristics (sex	, age, race/ethnicity)	and state-level ch	aracteristics (free lur	nch quartile, tightnes	ss-looseness score, time since bullying legislation)
c Adjusted for individual leve	l characteristics (sex	, age, race/ethnicity)	and state-level ch	aracteristics (free lur	ich quartile, violent	crime quartile, age 5–17 poverty quartile)
d Adjusted for individual leve	l characteristics (sex	, age, race/ethnicity)	and state-level ch	aracteristics (free lur	ich quartile, tightnes	ss-looseness score, time since bulling legislation)