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Trends in Secondary School Practices Related to Violence Prevention, 2012–2018

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Abstract

BACKGROUND: Schools are important venues for addressing interpersonal violence among youth. However, it is unclear to what extent school violence prevention practices have been implemented across states and over time. This study examined trends in the percentage of US secondary schools that engaged in practices related to violence prevention (eg, bullying, fighting, dating violence) across 33 states.

METHODS: With representative data from 4 waves (2012–2018) of School Health Profiles, we used logistic regression to examine change over time of 5 practices related to violence prevention in school-based settings: professional development for health education teachers (received and would like to receive); increasing student knowledge; and teaching healthy and respectful relationships in grades 6–8 and grades 9–12.

RESULTS: Two practices had rates of adoption >90% across years (tried to increase student knowledge on violence prevention and taught healthy and respectful relationship in grades 9–12). Adoption of professional development on violence prevention for health education teachers was lowest (53%–61% across years). For all practices, most states experienced no change in the percentage of schools implementing violence prevention practices from 2012 to 2018.

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Conflict of Interest

All authors of this article declare they have no conflicts of interest.

SUPPORTING INFORMATION

The following Supporting Information is available for this article:

Appendix S1: Supporting Tables

Additional supporting information may be found online in the Supporting Information section at the end of the article.

Human Subjects Approval Statement

The study was deemed not human subjects research by the University of Washington Institutional Review Board because the study used de-identified data from secondary sources.

CONCLUSION: Education about healthy relationships in middle school and professional development on violence prevention for health education teachers are needed.

Keywords

violence prevention; adolescence; schools; health education

Experiences of interpersonal violence are common among youth in the United States, and they have substantial and long-lasting adverse consequences for individuals and communities. In 2019, almost half (44.3%) of US high school students reported either being in a physical fight or threatened with a weapon or experiencing physical dating violence, sexual violence, or bullying.¹ Fifteen percent reported 2 or more of these experiences, reflecting the shared etiologies and common developmental risk periods that connect multiple forms of violence.¹⁻³ These experiences of violence are, in turn, associated with subsequent risk for poor physical and mental health outcomes, such as depression, substance use, sexual risk behaviors, and violent injury and death, including suicide.⁴

School-based policies and programs may provide effective, large-scale strategies to reduce youth interpersonal violence and related health consequences. Prior research shows that preventive social-emotional learning approaches can help youth develop skills to prevent violence, including communication and problem-solving, empathy, emotional awareness and regulation, and conflict resolution.⁵⁻⁷ For instance, school-based cognitive behavioral interventions have been consistently associated with reductions in aggressive and defiant behavior.⁸ Other, more punitive approaches such as zero tolerance policies (which emphasize punishment, including suspension) have shown less promise.⁹ The ability of teachers and school staff to effectively implement primary prevention programs (eg, educating students about how to build respectful relationships) is increasingly recognized as an important component of youth violence prevention.^{10,11} Moreover, in the past 2 decades, states have adopted laws requiring or encouraging school districts to have policies for preventing bullying, sexual harassment, and dating violence.¹²⁻¹⁴ However, there is little information about the degree to which schools have implemented these policies and practices across states or how implementation has changed over time.¹⁵⁻¹⁷

In the current study, we examined trends from 2012 to 2018 in the percentage of secondary schools across 33 US states that engaged in practices related to violence prevention (including bullying, fighting, dating violence). With increasing awareness of violence as a public health issue and attention to interpersonal violence (eg, #MeToo movement),¹⁸ we hypothesized that there would be an increase in the number of schools engaging in violence prevention practices during the study period. By describing whether and where schools have implemented violence prevention practices and how implementation has (or has not) changed over time, our findings can help identify opportunities for improvement and inform future research on barriers and facilitators to implementation.

METHODS

Data

Data were obtained from 4 waves of School Health Profiles (“Profiles”), a system of surveys conducted biennially to assess school health policies and practices in states.¹⁹ With assistance from the Centers for Disease Control and Prevention (CDC), education and health agencies field repeated cross-sectional surveys to a sample or to all public secondary schools, defined as middle schools, junior high schools, and high schools with any of grades 6 through 12. In each school, the principal and lead health education teacher (ie, the person designated by the principal as the most knowledgeable about health education) each complete a questionnaire. Profiles produces data representative of secondary schools in each jurisdiction. This analysis used lead health education teacher data from 2012 to 2018 from 33 states with overall response rates of at least 70% in each year and data-sharing agreements with the CDC. The study was deemed not human subjects research by the University of Washington Institutional Review Board.

Measures

Since 2012, the lead health education teacher has been asked about the following 5 practices:

1. During the past 2 years, did you receive professional development (eg, workshops, conferences, continuing education, any other kind of in-service) on violence prevention (eg, bullying, fighting, dating violence prevention)?
2. Would you like to receive professional development on violence prevention (eg, bullying, fighting, dating violence prevention)?
3. During this school year, have teachers in your school tried to increase student knowledge on violence prevention (eg, bullying, fighting, dating violence prevention) in a required course in any of grades 6 through 12?
4. During this school year, did teachers in your school teach how to create and sustain healthy and respectful relationships in a required course for students in grades 6, 7, or 8?
5. During this school year, did teachers in your school teach how to create and sustain healthy and respectful relationships in a required course for students in grades 9, 10, 11, or 12?

While some of these questions were asked prior to 2012, the wording had slight differences, so we restricted to waves where the questions were asked consistently to ensure changes in trends did not reflect changes in question wording.

Data Analysis

To be included in the analysis, states must have collected data on the measures of interest for at least 3 out of 4 waves (2012, 2014, 2016, 2018) to be able to calculate trends. In total, we included lead health education teacher survey data from 33 states. In 2018, sample sizes ranged from 94 to 370 schools, and response rates ranged from 70% to 94% across the

included states. For states that used a sample of schools, weights were applied to account for school selection and nonresponse. For states that conduct a census, weights were applied to account for nonresponse.¹⁹

We calculated the median and interquartile range (IQR) for the percentage of schools across states engaged in each practice per year. For each practice, data were missing for 0%–4% of teachers across all states and excluded from the denominator to align with CDC reporting.¹⁹ We examined changes over time in 2 ways for each state. As the primary analysis, we assessed significant linear trends in the percentage of secondary schools that engaged in violence prevention. We ran separate unadjusted logistic regression models for each school practice where violence prevention practices were the dependent variable and a linear time component was the independent variable.²⁰ Secondly, we compared endline to baseline values (eg, 2018 to 2012) in each state by rerunning the regression models with the time component as a categorical variable. We considered a trend or endline to baseline values to be significant if the p-value for the β was <0.05 .

RESULTS

Table 1 presents the overall medians and IQRs for the percentage of schools in each state that are engaged in violence prevention practices for each year. The highest medians for percentage of schools reporting a practice were for trying to increase student knowledge on violence prevention in a required course (2018 median = 93%, IQR = 91%–95%) and teaching how to create and sustain healthy and respectful relationships in a required course in grades 9–12 (2018 median = 93%, IQR = 90%–95%). The lowest median prevalence was for having a lead health education teacher who received professional development on violence prevention in the past 2 years (2018 median = 57%, IQR = 52%–64%).

A summary of linear time effects in the percentage of schools engaged in violence prevention practices across states is presented in Figure 1. Tables showing the percentage of schools that engaged in the violence prevention practices and resulting trends and endline vs. baseline comparison in each state are available in Appendix S1. Across all 5 practices, the number of significant linear decreases ($n = 19$) was greater than the number of significant linear increases ($n = 8$). Having a lead health education teacher who received professional development on violence prevention in the past 2 years was the practice with the highest number of states with significant linear decrease ($n = 8$). Teaching how to create and sustain healthy and respectful relationships in grades 6–8 and grades 9–12 were the practices with the highest number of states with significant linear increases ($n = 3$ each). For all school practices, it was most common for there to be no significant linear change between 2012 and 2018 ($n = 138$ total).

Results were very similar when we compared endline to baseline values. Again, the number of significant decreases ($n = 17$) was greater than the number of significant increases ($n = 8$). For all school practices, it was most common for there to be no significant change between 2012 and 2018 ($n = 140$).

DISCUSSION

This study examined state-level trends in the implementation of school-based practices related to violence prevention. Contrary to the initial hypothesis, we found that implementation of many school-based practices related to violence prevention did not significantly increase between 2012 and 2018 across the majority of states in our sample. In fact, we observed more decreases than increases in the 5 practices included in the study, and it was most common to observe no change over time. Two practices had encouraging findings with high rates of adoption (>90%) over time across states¹: increasing student knowledge on violence prevention and² teaching healthy and respectful relationships in grades 9–12. These practices represent important foundational components to teaching students how to engage in relationships free of violence.^{21,22} The high rates of adoption for these practices across states likely explains why so many states saw no change over time. While the prevalence of these practices is encouraging, further research into the content, quality, and effectiveness of this education for students is needed.

Despite the fact that most schools report teaching students about violence prevention, many health education teachers are not receiving professional development on violence prevention. This calls into question the content and quality of the student education if teachers do not have fundamental knowledge and skills to teach these topics.²³ Furthermore, the majority of health education teachers reported wanting to receive professional development on violence prevention, indicating an opportunity for increased training. Several organizations have developed learning modules to support school staff working on violence prevention.^{24,25} Future research should explore barriers and facilitators for implementing such practices and evaluate strategies to improve implementation.

While most schools taught healthy and respectful relationships to students in grades 9–12, fewer included this education for students in grades 6–8. Early adolescence (eg, middle school) is a critical developmental period as youth are socializing more and getting into dating relationships.²⁶ Establishing important social-emotional skills like empathy, respect, and healthy conflict resolution in these earlier age groups has the potential to reduce future involvement in violence.²⁷ Early adolescence may also include increased use of cell phones and social media, so incorporating the role technology can play in the experience and perpetration of violence in peer and dating relationships should be considered.²⁸

School staff face many competing demands, and finding the time and resources to address violence prevention may not be a priority. The extent to which a school prioritizes implementation of these practices may largely depend on a handful of influential individuals (eg, principals, school board members). Addressing multiple forms of violence at once may mitigate challenges of having separate programs for each type of violence.³ Moreover, implementation challenges may be greater in school districts serving disinvested communities, which often have limited resources, compounded risks across various domains, and low social and political capital.²⁹ Importantly, students in these communities are at high risk for violence, so inconsistent implementation of school violence prevention policies may exacerbate socioeconomic and racial inequities.³⁰ Future research should

examine the extent to which social disadvantage is associated with implementation and effectiveness of school violence prevention policies and programs.

Limitations

Only 33 states are included in this analysis; several states did not achieve weighted data for at least 3 data collection waves or do not permit the CDC to distribute their data. These states, however, were from all regions of the country and varied in population size. In addition, not every state included in the analysis had data from all of the same survey years (eg, trends for some states are based on 2012–2016 while others are based on 2014–2018). Profiles data apply to public secondary schools only, so results are not generalizable to private or elementary schools. All data are self-reported by lead health education teachers, so results rely on respondent knowledge and interpretation of existing practices. Furthermore, there was no response option to indicate that the respondent did not know the information, but few respondents (<5%) skipped the questions of interest. The questions about professional development only reflect that of the lead health education teacher, not all staff or teachers who might engage with the topic on some level. Importantly, Profiles data do not assess the quality or content of the practices. For example, while the majority of lead health education teachers reported that their school tried to increase student knowledge on violence prevention in a required course, it is unclear the quality or depth of the content is being taught, nor does this information provide the impact of the practices being implemented. For violence prevention questions, all types of violence were grouped together (eg, “bullying, fighting, dating violence”). More granular understanding of the content of the education, including whether the curricula are evidence-based, is necessary to inform efforts to improve these practices. Future Profiles analyses with more waves of data should examine nonlinear trends to identify more complex patterns. Lastly, Profiles does not provide data on characteristics that might explain increases, decreases, or lack of change across certain policies and practices. Additional research is needed to better understand why particular trends emerge in the data.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Acknowledgments

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IMPLICATIONS FOR SCHOOL HEALTH

The current study shows wide variation across states in secondary school practices related to violence prevention. Schools have fairly consistently adopted some practices related to violence prevention (increasing student knowledge and teaching healthy and respectful relationship in grades 9–12). While this is encouraging, professional development for health education teachers and teaching healthy relationships in middle schools represent areas in which schools can strengthen their violence prevention efforts. States that have lower percentages of schools or decreases in the percentage of schools engaged in violence prevention practices should explore the reasons (eg, resource allocation, political priorities) to ultimately improve school practices. In addition, schools should carefully consider the content of the violence prevention education being provided to both students and health education teachers and can draw on resources from local and national organizations to ensure that programming is relevant and evidence-based. States can also continue to use Profiles data to monitor and support improvements to their state-level violence prevention practices. Given growing awareness and support for violence prevention in school settings, ongoing surveillance of the extent to which practices related to violence prevention is warranted.

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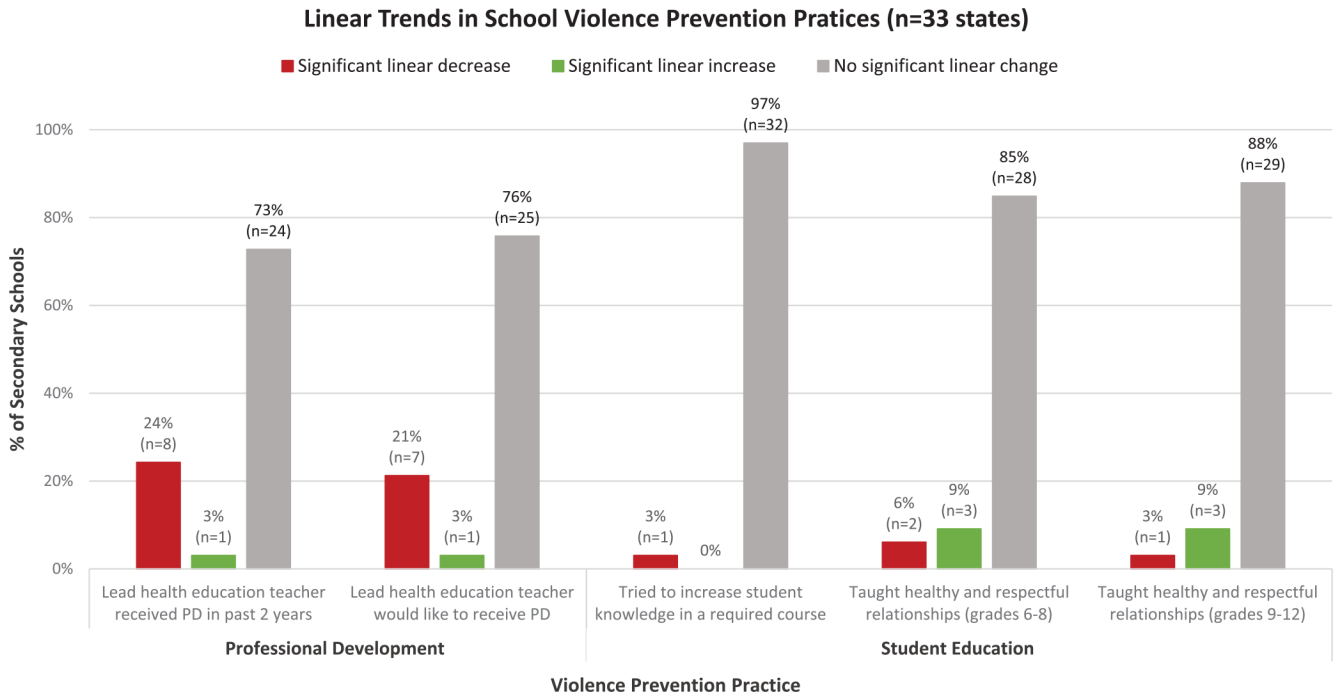


Figure 1. Summary of Linear Time Trends in the Percentage of Secondary Schools That Engaged in Practices Related to Violence Prevention (eg, Bullying, Fighting, Dating Violence Prevention)—33 States, 2012–2018.

Linear time trends are based on the unadjusted logistic regression models for each school practice where violence prevention practices were the dependent variable and a linear time component was the independent variable. We considered a trend to be significant if the p-value for the β was <0.05 . Regression results are provided in Table S3.

Table 1. Medians and Interquartile Ranges (IQR) of Percentages of Secondary Schools That Engaged in Practices Related to Violence Prevention (eg, Bullying, Fighting, Dating Violence Prevention)—33 States, 2012–2018

	2012	2014	2016	2018
Violence Prevention Practice (n = 33)	Median % (IQR)			
Professional development (PD)				
Lead health education teacher received PD in past 2years	60.9% (56.4%–67.3%)	58.0% (51.0%–68.1%)	53.1% (47.2%–63.0%)	56.9% (52.3%–64.3%)
Lead health education teacher would like to receive PD	76.9% (73.5%–79.8%)	73.6% (69.7%–76.6%)	71.5% (69.2%–75.7%)	73.2% (69.8%–76.8%)
Student education				
Tried to increase student knowledge in a required course	94.0% (90.9%–96.2%)	93.0% (90.8%–96.0%)	92.7% (89.9%–94.9%)	92.9% (90.6%–94.7%)
Taught healthy and respectful relationships (grades 6–8)	74.2% (61.0%–79.8%)	78.5% (67.8%–81.7%)	74.3% (62.6%–82.0%)	77.4% (68.9%–84.0%)
Taught healthy and respectful relationships (grades 9–12)	91.4% (82.2%–93.4%)	91.7% (88.7%–94.9%)	92.4% (88.8%–95.2%)	92.7% (90.3%–95.3%)