

HHS Public Access

Author manuscript

J Public Health Manag Pract. Author manuscript; available in PMC 2018 February 16.

Published in final edited form as:

J Public Health Manag Pract. 2018 ; 24(Suppl 1 INJURY AND VIOLENCE PREVENTION): S32–S41. doi:10.1097/PHH.0000000000000669.

Connecting the Dots: State Health Department Approaches to Addressing Shared Risk and Protective Factors Across Multiple Forms of Violence

Dr. Natalie Wilkins, PhD, Ms. Lindsey Myers, MPH, Ms. Tomei Kuehl, MPA, Ms. Alice Bauman, MSPH, and Ms. Marci Hertz, MS

Division of Analysis, Research, and Practice Integration, National Center for Injury Prevention and Control, Centers for Disease Control and Prevention, Atlanta, Georgia (Dr Wilkins and Ms Hertz); Violence and Injury Prevention-Mental Health Promotion Branch, Colorado Department of Public Health & Environment, Denver, Colorado (Mss Myers and Kuehl); and Maryland Department of Health and Mental Hygiene, Baltimore, Maryland (Ms Bauman)

Abstract

Violence takes many forms, including intimate partner violence, sexual violence, child abuse and neglect, bullying, suicidal behavior, and elder abuse and neglect. These forms of violence are interconnected and often share the same root causes. They can also co-occur together in families and communities and can happen at the same time or at different stages of life. Often, due to a variety of factors, separate, "siloed" approaches are used to address each form of violence. However, understanding and implementing approaches that prevent and address the overlapping root causes of violence (risk factors) and promote factors that increase the resilience of people and communities (protective factors) can help practitioners more effectively and efficiently use limited resources to prevent multiple forms of violence and save lives. This article presents approaches used by 2 state health departments, the Maryland Department of Health and Mental Hygiene and the Colorado Department of Public Health and Environment, to integrate a shared risk and protective factor approach into their violence prevention work and identifies key lessons learned that may serve to inform crosscutting violence prevention efforts in other states.

Keywords

injury; prevention; protective factors; risk factors; violence

Violence takes many forms, including intimate partner violence, sexual violence, child abuse and neglect, bullying, suicidal behavior, and elder abuse and neglect. These forms of violence are interconnected and often share the same root causes. They can also co-occur

Correspondence: Natalie Wilkins, PhD, Division of Analysis, Research, and Practice Integration, National Center for Injury Prevention and Control, Centers for Disease Control and Prevention, 4770 Buford Hwy, MS F 62, Atlanta, GA 30341 (nwilkins@cdc.gov).

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

The authors declare no conflicts of interest.

together in families and communities and can happen to individuals at the same time or at different stages of their lives. 1-4

In practice, different forms of violence are often addressed separately without a coordinated approach that considers these connections.^{5,6} There are many factors that contribute to this "siloing" of violence prevention, including separate funding streams, organizational structures that separate staff addressing different forms of violence, and different stakeholder groups. For example, practitioners working in the area of child abuse and neglect prevention may collaborate substantially with maternal and child health programs within state health departments, whereas youth violence prevention practitioners may work more closely with partners in juvenile justice. Gaining an understanding of the ways in which different forms of violence are intertwined, however, can help public health practitioners, and others working in the field of violence prevention, identify ways to coordinate across some of these historical siloes and better address violence in all its forms.

Rationale for a Shared Risk and Protective Factor Approach

Most people who are victims of violence do not act violently. However, people who experience or are exposed to one form of violence are at a higher risk for both being a victim of other forms of violence and for inflicting harm on others. For example, children who experience physical abuse or neglect early in their lives are at greater risk for committing violence against peers (particularly for boys), ^{7–9} bullying, ¹⁰ teen dating violence, ^{10,11} and committing child abuse, ¹² elder abuse, ¹³ intimate partner violence, ^{14,15} and sexual violence^{15–18} later in life. In fact, exposure to violence is one of many shared risk factors linked to multiple forms of violence. There are also a number of common protective factors that make it less likely a community, family, or individual will experience violence or buffer the effects of risk factors on violence outcomes. Risk and protective factors can occur across the social ecology¹⁹ and can affect entire communities (eg, neighborhood poverty) or occur in interactions between family and friends (eg, family conflict, association with deviant peers). Individuals' experiences or traits are also nested within these larger contexts of risk and protection and can place people at higher or lower risk for experiencing violence (eg, substance abuse, lack of nonviolent problem-solving skills). Research has suggested that it is not just the mere presence of risk factors or protective factors that influences whether or not a person experiences violence; it is the type and ratio of risk to protective factors that are critical.^{8,20} This is vital for prevention, as it provides opportunities to develop buffering or protective factors that can be instrumental, particularly in communities and with families who were or are exposed to a multitude of risk factors.^{8,20,21}

A shared risk and protective factor approach refers to prioritizing risk and protective factors linked to multiple forms of violence in prevention planning, partnership, and programmatic efforts (vs focusing on different violence outcomes separately). This approach provides state health departments and other state and local agencies and organizations with the opportunity to streamline and scale up prevention approaches and services. Breaking down some of the traditional "siloes" across different forms of violence and moving toward a shared risk and protective factor approach can help states and communities better coordinate with partners and agencies that have traditionally focused on a single form of violence and leverage and

coordinate resources to bring efficiencies to programs and strategies as they are scaled up for population-level impact. At the national level, federal agencies and funders have the opportunity to facilitate this coordinated approach in states and communities by supporting a shared risk and protective factor approach in funding opportunities/grants, coordinating reporting structures, and identifying performance and evaluation measures and metrics that can be used to demonstrate impact on shared risk and protective factors and across multiple forms of violence. For example, the Centers for Disease Control and Prevention's (CDC's) National Center for Injury Prevention and Control has engaged in a number of efforts to begin to facilitate a shared risk and protective factor approach to violence prevention. The National Center for Injury Prevention and Control's Division of Violence Prevention has developed a strategic vision for preventing multiple forms of violence to help support CDC's efforts to better address the connections among different forms of violence, shape future funding initiatives, and guide collaborative efforts with partners across the country.²² Also, the National Center for Injury Prevention and Control's Division of Analysis, Research, and Practice Integration currently funds 23 state health departments through the Core State Violence and Injury Prevention Program to decrease injury and violence-related morbidity and mortality by decreasing risk factors and increasing protective factors linked to multiple forms of injury and violence.

Risk and Protective Factors Across the Social Ecology*

Community and societal risk and protective factors are critical because they make it more or less likely that entire populations and communities will suffer from violence. These risk and protective factors are not evenly distributed, and often a community experiences an overwhelming number of risk factors without an equal balance of protective factors to buffer their effects. This means that individuals and families living in some communities where there are many risk factors and structural causes of disparity (eg, high poverty, unemployment, and crime) are more likely than those living in other communities to experience multiple forms of violence.^{23–25} For example, in neighborhoods where there is low cohesion, or where residents do not support and trust each other, risk for perpetration of child abuse and neglect, ²⁶ intimate partner violence, ²⁷ sexual violence, ²⁸ teen dating violence, ²⁹ youth violence, ³⁰ and suicide ^{31–33} is higher than in neighborhoods with high support and cohesion between residents. Diminished economic opportunities in neighborhoods and high unemployment are also associated with perpetration of child abuse and neglect, ³⁴ intimate partner violence, ²⁴ self-directed violence, ^{35,36} sexual violence, ^{37,38} and youth violence.³⁹ Also, norms in societies or communities that support strict gender roles for men and women are associated with perpetration of child abuse and neglect, 40,41 intimate partner violence, 42-45 sexual violence, 16,18,38,42,46,47 teen dating violence, 48,49 youth violence, ⁵⁰ suicide, ⁵¹ and bullying, ^{52,53} and norms supporting aggression or coercion are associated with almost all forms of violence. 24,40,49,52,54-56

While the research is less well developed on protective factors that can increase communities' resilience to violence, there are a few things that have been shown to make it

^{*}For a synthesis of risk and protective factors linked to multiple forms of violence, see *Connecting the Dots: An Overview of the Links Between Multiple Forms of Violence*.

less likely that an entire community will experience violence. For example, neighborhood support and connectedness (eg, high levels of community cohesion and a strong sense of community or community identity) have been shown to protect communities from perpetration of child abuse and neglect, ^{26,34} intimate partner violence, ^{24,57–59} sexual violence, ^{60,61} youth violence, ^{62,63} and suicide. ^{64–66} Access to mental health services has also been found to be associated with lower levels of child abuse and neglect ⁶⁷ and suicide. ²¹ Also, some emerging, primarily qualitative research indicates that coordination of resources and services among community agencies can help increase protection from violence at the community level. ^{68,69}

In addition to the risk and protective factors that occur within the broader community context, aspects of individuals' relationships and interactions with others can also place them at higher or lower risk for experiencing violence. For example, people who are socially isolated and who do not have social support from family, friends, or neighbors (eg, poor relationships with peers) are more likely to perpetrate child abuse and neglect, ³⁴ intimate partner violence, ²⁹ teen dating violence, ²⁹ sexual violence, ³⁸ suicide, ^{70,71} bullying, ⁷² youth violence, ⁷² and elder abuse. ^{13,73} Also, conflict within the family (eg, poor family management, violence between parents) is linked to almost all forms of violence perpetration including child abuse and neglect (children in homes with high conflict are at higher risk for being victims), ^{74,75} teen dating violence, ⁷⁶ intimate partner violence, ^{42,77} sexual violence, ¹⁸ youth violence, ^{78,79} bullying, ⁸⁰ and elder abuse and neglect. ¹³ Youth who associate with delinquent peers or friends are also at a higher risk of harming others through bullying, ^{52,80,81} youth violence, ^{79,82–84} teen dating violence, ^{29,48,85} later in life sexual violence, ^{18,28,48,60} and intimate partner violence.

However, individuals' relationships can also help *protect* them from violence and even buffer the potential negative effects of risk in their communities. For example, there is evidence that individuals who live in high-risk communities are less likely to perpetrate violence or engage in other destructive behaviors such as substance use if they have nonviolent, supportive relationships with family, friends, and other groups, such as schools or faith organizations. More specifically, youth who feel connected and committed to school are at a lower risk of harming others through dating violence, youth violence, youth violence, and strong family support and connectedness can be protective against perpetration of child abuse and neglect, youths' association with prosocial peers has been shown to be protective against perpetration of teen dating violence, youth violence, bullying, had suicide.

Risk and protective factors at the individual level operate within the context of those factors in communities and relationships that have been previously described. In other words, while risk and protective factors at the individual level (typically individual-level behaviors and traits) place people at higher or lower risk for perpetrating violence, these individual-level factors are often also "outcomes" in their own right and linked to experiencing risk and protective factors in communities and relationships. ^{103,104} For example, substance abuse is an individual-level behavior that is a risk factor for all forms of violence^{8,13,15,42,72,76,105,106} and also a health *outcome* that is linked to risk factors at the community and relationship

levels such as neighborhood poverty¹⁰⁷ and lack of social support.¹⁰⁸ Other risk factors at the individual level that are associated with increased risk for perpetration of almost all forms of violence include low educational achievement^{5,42,76,79,109,110} lack of nonviolent coping skills,^{5,18,27,75,76,79,80,111} poor behavioral control/impulsiveness,^{5,18,29,52,75,76,79,111} history of violent victimization,^{8,10–13,18,42,112} witnessing violence,^{18,29,52,76,94,113,114} and psychological or mental health problems.^{8,12,13,18,42,76,115} Conversely, improvements in nonviolent problem-solving skills have been found to be protective against perpetration of some forms of violence including child abuse and neglect,¹¹⁶ teen dating violence,¹¹⁷ youth violence,¹¹⁸ and suicide.¹¹⁹

The "nesting" of risk and protection across the various contexts and relationships in people's lives is complex and interrelated. For example, parents may have a harder time preventing their children from associating with delinquent peers when there are high levels of community violence in their neighborhood, putting youth already exposed to violence in their community at even higher risk for experiencing other forms of violence. This overlaying of risk and protection within the "real world" lives of individuals, families, and communities is what necessitates a shared risk and protective factor approach to preventing violence. Moreover, addressing shared risk and protective factors broadens the potential impact of prevention strategies by increasing the likelihood that they will impact not just one form of violence but many.

While it is important to articulate *why* a shared risk and protective approach to violence prevention is important, it is equally if not more important to also describe *how* this kind of approach might be implemented. What follows are 2 case studies, 1 from the Maryland Department of Health and Mental Hygiene (MDHMH) and another from the Colorado Department of Public Health and Environment (CDPHE), which demonstrate some of the concrete ways that state health departments have taken on the challenge of addressing shared risk and protective factors in their violence prevention work.

Case Study 1: MDHMH

Background—How did a shared risk and protective factor approach get started?

The Maryland Violence Prevention Initiative is a state agency–led approach to addressing shared risk and protective factors of violence. This initiative engages existing programs, data sources, coalitions, funding resources, and leadership to mobilize violence prevention efforts around selected shared risk and protective factors. The initiative began in 2015 after the United Healthcare Foundation released state rankings, which highlighted Maryland's progress in many health areas but stressed violence as an area where little improvement had been observed over the previous 10 years. This, combined with the recent publication of the CDC's *Connecting the Dots: An Overview of the Links Among Multiple Forms of Violence*, prompted the MDHMH to conduct a scan of violence prevention programming, data sources, coalitions, and funding that exist across the State oriented by the life course. ⁶

Action—the Maryland State Environmental Scan

The Maryland State Environmental Scan was framed from a life course perspective. The environmental scan focused on state and local health department agency programs. It was conducted by interviewing representatives from 16 state agencies and Maryland's 24 local health departments. Representatives were selected by their connection to a program or data set that addressed 1 or more forms of violence. Representatives were identified and contacted by cold calling, e-mail introduction, and through Web site searches. Each representative was asked: (1) What violence prevention programming, data sources, or other initiatives does the agency lead?; (2) Who is the target population for the agency's programs, data sources, or initiatives?; (3) What funding resources are harnessed to implement the agency's programs, data sources, or initiatives?; and (4) What partners, state or otherwise, does the agency work with on these programs, data sources, or initiatives?

The environmental scan revealed that state agencies' efforts are often not explicitly tied to violence as their primary outcome (eg, health, housing, reentry, parks and recreation) but overlap on the basis of their target population (eg, youth, older adults, veterans) and the shared risk and protective factors that each program addresses (eg, substance abuse, economic stress, community support/connectedness). For example, MDHMH's program focused on decreasing suicide among veterans and the Department of Aging's program for minimizing financial fraud among the elderly are programs that seem unrelated, yet are linked both in target population (individuals older than 65 years) and by the shared risk and protective factors that each program addresses, such as economic stress and family connectedness. Identifying the shared risk and protective factors of violence that are being addressed in different programs across state agencies provides an opportunity to ultimately address violence outcomes through collaboration around these common risk and protective factors of interest.

Next steps—statewide violence prevention summit

The Maryland State Environmental Scan highlighted that within different state agencies, there are opportunities to coordinate and integrate programs, data sets, and funding streams on the basis of shared risk and protective factors. To facilitate this opportunity for coordination and integration, the MDHMH planned a statewide Violence Prevention Summit. The summit gathered key state agency stakeholders together to inspire agency-level change for a more coordinated approach to addressing violence in the state of Maryland. 121 Stakeholders from each state agency presented on panels focused on individual, family/ relationship, and community-/neighborhood-level programs to highlight the shared risk and protective factors that link programs across state agencies. This structure facilitated conversations that explored opportunities to coordinate and partner across state agencies on the basis of shared risk and protective factors. Moving forward, the conversations from the summit serve as the foundation for partnership, knowledge sharing, and the initial step toward agencies adopting a statewide violence prevention strategy. For example, the MDHMH is working internally to develop mechanisms for effective dissemination of violence prevention data to local and state agency partners. This includes integrating data sources on violence outcomes (eg, child abuse and neglect, suicide) as well as risk and protective factors (eg, affordable housing, emergency department visits for mental health

issues) and developing more interactive, public-facing platforms and mechanisms for sharing these data, such as the creation of an interactive Web site and data-driven policy briefs. The health department is also promoting communication and opportunities for collaboration between violence prevention programs, with a focus on local-level implementation and partnership. For example, the department's violence prevention programming—directed by the Environmental Health Bureau—is incorporating nontraditional partners into grant efforts to increase coordination around violence prevention efforts and shared risk and protective factors. Also, local health improvement coalitions are reforming their reporting requirements, with technical assistance and guidance from the MDHMH, to align resources on the basis of risk and protective factors for violence, among and other health priorities.

Case Study 2: CDPHE

Background—How did a shared risk and protective factor approach get started?

In 2004, CDC awarded the CDPHE a 2-year grant to enhance child and adolescent health through violence prevention. As a result of this funding, CDPHE formed a violence prevention advisory council, comprising national violence prevention experts, state agency leaders, and members of statewide prevention groups. This council completed a state assessment of child and adolescent violence efforts and identified risk and protective factors that were associated with multiple forms of violence based on available research. The CDPHE used this information to publish a statewide violence prevention strategic plan, *Bold Steps Toward Child and Adolescent Health, A Plan for Youth Violence Prevention in Colorado*. This plan was designed to improve the overall health and safety of Colorado's children and youth by recommending "bold steps" toward decreasing risk and increasing protective factors that are shared across multiple forms of violence at each level of the social ecology.

In 2007, CDPHE received additional funds from the CDC to fund 5, 2-year local pilot projects to implement strategies outlined in the plan. These successful pilot projects at the local level helped CDPHE recognize that applying a shared risk and protective factor approach to address violence prevention was possible in practice. For example, a pilot project that integrated violence prevention lessons into a school-based curricula designed to improve academic achievement among third graders found positive impacts on students' prosocial problem-solving skills and ability to regulate emotions, which are protective factors for multiple forms of violence. Other pilot projects improved connectedness between youth and adults, another shared protective factor, by increasing youth involvement in community-based activities and organizations (reports detailing these findings are available from the authors upon request). These pilots also created new opportunities to develop partnerships and leverage funding sources to have a larger impact (J. Hindman, unpublished data, 2010).

Action—Leveraging funding streams to address shared risk and protective factors

For the last 10 years, CDPHE has used the concept of shared risk and protective factors to justify leveraging funding to support innovative programs. For example, CDPHE used CDC

Rape Prevention Education (RPE) Program funding, as well as in-kind staff time funded through CDC's Core Violence and Injury Prevention Program (CoreVIPP) to create a state grant program that funded community-based agencies to select and implement prevention strategies that were community-driven, evidence-informed, and addressed risk and protective factors that impacted multiple forms of violence. The Colorado RPE and CoreVIPP programs also partnered with Colorado State University to develop an evaluation tool to measure the impact these local grantees were having on shared risk and protective factors including (1) life and interpersonal skills; (2) information, knowledge, and skills for healthy sexuality; (3) antisocial, delinquent, and violent behavior; (4) attitudes and beliefs about gender roles; and (5) school connectedness. Results from this evaluation indicated improved conflict resolution skills, a decrease in attitudes supporting rigid gender stereotypes, sexual harassment, and abuse, an increase in attitudes supporting consent for sexual activity, and increased understanding of behaviors that led to healthy dating relationships (eg, lower acceptance of jealous behaviors in a relationship) among individual youth at posttest compared with pretest (Colorado Department of Public Health and Environment, unpublished data, 2016).

Similar to the original state grant program, CDPHE also leveraged RPE funds and state funding from the Colorado Office of Suicide Prevention and the Colorado Child Fatality Prevention System to support the implementation of *Sources or Strength*, an evidence-based youth suicide prevention program. Implementation occurred in 10 schools in 2015–2017 and is in the process of being evaluated for effects on school connectedness, a shared protective factor for both sexual violence and suicide prevention, using the evaluation tool Colorado State University created. As a result of this pilot project, CDPHE was positioned to partner with the University of Florida and the University of Rochester on a research grant that will rigorously evaluate *Sources of Strength* for its impact on sexual violence, suicide, and bullying outcomes, as well protective factors such as youth-adult connectedness and school connectedness. The CDPHE is leveraging RPE and state funds to support the implementation of *Sources of Strength* in 24 schools across Colorado.

Next steps—Expanding a shared risk and protective factor approach beyond violence

As part of its CDC-funded CoreVIPP work, CDPHE developed and published a statewide violence and injury prevention strategic plan that expands the shared risk and protective factor approach beyond violence prevention to include unintentional injury prevention. 124 This 5-year plan prioritizes common risk and protective factors associated with suicide, prescription drug overdose, older adult falls, motor vehicle crashes, interpersonal violence, child maltreatment, and traumatic brain injury. It identifies the connections across injury and violence prevention programs and leverage points. For example, the plan identifies evidence-based strategies for each major form of injury and violence, along with the state agencies that fund that work, and highlights the connection to other forms of injury and violence. The CDPHE used this plan as the basis for its application for funding from the current round of the Core State Violence and Injury Prevention Program. As part of its current and future Core State Violence and Injury Prevention Program work, CDPHE and its partners will implement the plan by focusing on shared protective factors at the community level to: improve connectedness; promote positive social norms; increase individual, family, and

community resiliency; increase access to strong behavioral health systems; and increase economic opportunity. The CDPHE will also develop community-level indicators to evaluate these new strategies.

Discussion

Shifting focus to a shared risk and protective factor approach to violence prevention presents many opportunities for the field of violence prevention. A summary of the lessons learned through the 2 case studies presented in this paper can be found in the Table. The strategic planning process that the MDHMH is engaging in provides an example of how state health departments can take a leadership role in the very beginning stages of a shared risk and protective factor approach to violence prevention. By assessing how state agencies and their partners are already addressing shared risk and protective factors, MDHMH has set the stage for building upon those activities to more purposefully organize the state's work to impact all forms of violence.

In addition, the CDPHE provides an example of how state public health departments can produce a paradigm shift toward a shared risk and protective factor approach within their injury and violence prevention units and with key partners. Leaders within the Violence and Injury Prevention-Mental Health Promotion Branch at CDPHE have built a culture that encourages staff to innovate and think outside of traditional program lines and have purposefully hired staff on the basis of their ability and willingness to understand violence prevention through a shared risk and protective factor lens. The CDPHE has also cultivated extensive partnerships with state and community-based agencies that have been willing to test the application of the shared risk and protective factor approach to effectively break down issue-specific silos within agencies and enhance the sustainability of these initiatives.

Shifting toward addressing violence through shared risk and protective factors is not without its challenges and limitations. This approach can conflict with more traditionally siloed views of violence prevention and often pushes violence prevention programs to think further "upstream" than they may be used to, in order to address shared root causes and opportunities for building resilience to prevent multiple forms of violence. This change in perspective takes time and requires building relationships and developing trust with a variety of partners and stakeholder groups, identifying common goals, and finding opportunities to leverage resources. States may also face varying challenges dependent on their specific context. For example, there is wide variation in the way in which state health departments are structured, and some organizational structures may be more or less conducive to bridging across siloed topic areas and forming partnerships on the basis of shared risk and protective factors of interest (eg, substance abuse, mental health, etc). It is also worth noting that while addressing shared risk and protective factors holds great promise for increasing the efficiency and effectiveness of violence prevention efforts, it is an approach that is still emerging and its public health impact has yet to be fully evaluated. Further research and evaluation provide opportunities for measuring not only the impact of a shared risk and protective factor approach on violence-related outcomes but also other important social, public health, and economic outcomes (eg, substance abuse, education, housing, employment).

Despite these challenges and uncertainties, this article outlines the ways in which state health departments are implementing a shared risk and protective factor approach to violence prevention to strengthen public health practice. The case studies presented from the MDHMH and the CDPHE illustrate how shifting focus toward addressing shared risk and protective factors enables public health practitioners and their partners to address violence in ways that are more integrated, responsive, and consistent with the realities of individuals, families, and communities experiencing multiple forms of violence. These case studies also demonstrate the tremendous opportunity this approach provides for local, state, and national public health systems to increase the coordination, reach, and potential impact of their violence prevention efforts across traditional "silos" and organizational divides. It is hoped that other states and communities may build upon the lessons presented here to help guide the integration of a shared risk and protective factor approach to their own violence prevention work and to strengthen the valuable role public health systems play in facilitating multisector, responsive, and broad-scale responses to some of the nation's most challenging issues.

References

- 1. Butchart, APA., Check, P., Villaveces, A. Preventing Violence: A Guide to Implementing World Report on Violence and Health. Geneva, Switzerland: World Health Organization; 2004.
- Klevens J, Simon TR, Chen J. Are the perpetrators of violence one and the same? Exploring the cooccurrence of perpetration of physical aggression in the United States. J Interpers Violence. 2012; 27(10):1987–2002. [PubMed: 22328658]
- Anda RF, Felitti VJ, Bremner JD, et al. The enduring effects of abuse and related adverse experiences in childhood. A convergence of evidence from neurobiology and epidemiology. Eur Arch Psychiatry Clin Neurosci. 2006; 256(3):174–186. [PubMed: 16311898]
- 4. Dube SR, Felitti VJ, Dong M, Giles WH, Anda RF. The impact of adverse childhood experiences on health problems: evidence from four birth cohorts dating back to 1900. Prev Med. 2003; 37(3):268–277. [PubMed: 12914833]
- 5. Lubell KM, Vetter JB. Suicide and youth violence prevention: the promise of an integrated approach. Aggress Violent Behav. 2006; 11(2):167–175.
- 6. 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; Oakland, CA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention and Prevention Institute; 2014.
- Logan JE, Leeb RT, Barker LE. Gender-specific mental and behavioral outcomes among physically abused high-risk seventh-grade youths. Public Health Rep. 2009; 124(2):234–245. [PubMed: 19320365]
- 8. Resnick MD, Ireland M, Borowsky I. Youth violence perpetration: what protects? What predicts? Findings from the National Longitudinal Study of Adolescent Health. J Adolesc Health. 2004; 35(5):424e421–e424.e410.
- 9. Johnson RM, Kotch JB, Catellier DJ, et al. Adverse behavioral and emotional outcomes from child abuse and witnessed violence. Child Maltreat. 2002; 7(3):179–186. [PubMed: 12139186]
- Duke NN, Pettingell SL, McMorris BJ, Borowsky IW. Adolescent violence perpetration: associations with multiple types of adverse childhood experiences. Pediatrics. 2010; 125(4):e778–e786. [PubMed: 20231180]
- Hamby S, Finkelhor D, Turner H. Teen dating violence: co-occurrence with other victimizations in the National Survey of Children's Exposure to Violence (NatSCEV). Psychol Violence. 2012; 2(2):111–124.
- 12. Pears KC, Capaldi DM. Intergenerational transmission of abuse: a two-generational prospective study of an at-risk sample. Child Abuse Neglect. 2001; 25(11):1439–1461. [PubMed: 11766010]

13. Johannesen M, LoGiudice D. Elder abuse: a systematic review of risk factors in community-dwelling elders. Age Ageing. 2013; 42(3):292–298. [PubMed: 23343837]

- 14. Ernst AA, Weiss SJ, Hall J, et al. Adult intimate partner violence perpetrators are significantly more likely to have witnessed intimate partner violence as a child than nonperpetrators. Am J Emerg Med. 2009; 27(6):641–650. [PubMed: 19751620]
- 15. Jewkes R, Fulu E, Roselli T, Garcia-Moreno C. Prevalence of and factors associated with non-partner rape perpetration: findings from the UN Multi-country Cross-sectional Study on Men and Violence in Asia and the Pacific. Lancet Glob Health. 2013; 1(4):e208–e218. [PubMed: 25104346]
- 16. Abbey A, Jacques-Tiura AJ, LeBreton JM. Risk factors for sexual aggression in young men: an expansion of the confluence model. Aggress Behav. 2011; 37(5):450–464. [PubMed: 21678429]
- 17. Abbey A, Wegner R, Pierce J, Jacques-Tiura AJ. Patterns of sexual aggression in a community sample of young men: risk factors associated with persistence, desistance, and initiation over a one year interval. Psychol Violence. 2012; 2(1):1–15. [PubMed: 22272382]
- 18. Tharp AT, DeGue S, Valle LA, Brookmeyer KA, Massetti GM, Matjasko JL. A systematic qualitative review of risk and protective factors for sexual violence perpetration. Trauma Violence Abuse. 2013; 14(2):133–167. [PubMed: 23275472]
- Bronfenbrenner U. Toward an experimental ecology of human development. Am Psychol. 1977; 32(7):513.
- Losel F, Farrington DP. Direct protective and buffering protective factors in the development of youth violence. Am J Prev Med. 2012; 43(2 suppl 1):S8–S23. [PubMed: 22789961]
- 21. Borowsky IW, Ireland M, Resnick MD. Adolescent suicide attempts: risks and protectors. Pediatrics. 2001; 107(3):485–493. [PubMed: 11230587]
- 22. Centers for Disease Control and Prevention. Preventing Multiple Forms of Violence: A Strategic Vision for Connecting the Dots. Atlanta, GA: US Department of Health & Human Services, Centers for Disease Control and Prevention; http://www.cdc.gov/violenceprevention/overview/strategicvision.html. Published 2016 [Accessed June 1, 2017]
- 23. Acevedo-Garcia D, Lochner KA, Osypuk TL, Subramanian SV. Future directions in residential segregation and health research: a multilevel approach. Am J Public Health. 2003; 93(2):215–221. [PubMed: 12554572]
- 24. Pinchevsky GM, Wright EM. The impact of neighborhoods on intimate partner violence and victimization. Trauma Violence Abuse. 2012; 13(2):112–132. [PubMed: 22589222]
- 25. Sampson RJ, Morenoff JD, Gannon-Rowley T. Assessing "neighborhood effects": social processes and new directions in research. Annu Rev Soc. 2002; 28(1):443–478.
- Coulton CJ, Crampton DS, Irwin M, Spilsbury JC, Korbin JE. How neighborhoods influence child maltreatment: a review of the literature and alternative pathways. Child Abuse Negl. 2007; 31(11–12):1117–1142. [PubMed: 18023868]
- Herrenkohl TI, Kosterman R, Mason WA, Hawkins JD. Youth violence trajectories and proximal characteristics of intimate partner violence. Violence Vict. 2007; 22(3):259–274. [PubMed: 17619633]
- 28. DeGue S, Massetti GM, Holt MK, et al. Identifying links between sexual violence and youth violence perpetration: new opportunities for sexual violence prevention. Psychol Violence. 2013; 3(2):140–156.
- 29. Capaldi DM, Knoble NB, Shortt JW, Kim HK. A systematic review of risk factors for intimate partner violence. Partner Abuse. 2012; 3(2):231–280. [PubMed: 22754606]
- 30. Sampson RJ, Raudenbush SW, Earls F. Neighborhoods and violent crime: a multilevel study of collective efficacy. Science. 1997; 277(5328):918–924. [PubMed: 9252316]
- 31. Griffith J. Cross (unit)-level effects of cohesion on relationships of suicide thoughts to combat exposure, postdeployment stressors, and postdeployment social support. Behav Med. 2015; 41(3): 98–106. [PubMed: 26332927]
- 32. Desai RA, Dausey DJ, Rosenheck RA. Mental health service delivery and suicide risk: the role of individual patient and facility factors. Am J Psychiatry. 2005; 162(2):311–318. [PubMed: 15677596]

33. Kunst AE, van Hooijdonk C, Droomers M, Mackenbach JP. Community social capital and suicide mortality in the Netherlands: a cross-sectional registry-based study. BMC Public Health. 2013; 13(1):969. [PubMed: 24139454]

- 34. Freisthler B, Merritt DH, LaScala EA. Understanding the ecology of child maltreatment: a review of the literature and directions for future research. Child Maltreat. 2006; 11(3):263–280. [PubMed: 16816324]
- 35. Reeves A, Stuckler D, McKee M, Gunnell D, Chang S-S, Basu S. Increase in state suicide rates in the USA during economic recession. Lancet. 2012; 380(9856):1813–1814. [PubMed: 23141814]
- 36. Luo F, Florence CS, Quispe-Agnoli M, Ouyang L, Crosby AE. Impact of business cycles on US suicide rates, 1928–2007. Am J Public Health. 2011; 101(6):1139–1146. [PubMed: 21493938]
- 37. Coker AL, Smith PH, McKeown RE, King MJ. Frequency and correlates of intimate partner violence by type: physical, sexual, and psychological battering. Am J Public Health. 2000; 90(4): 553. [PubMed: 10754969]
- 38. Baron L, Straus MA. Four theories of rape: a macrosociological analysis. Soc Probl. 1987; 34(5): 467–489.
- 39. Morenoff JD, Sampson RJ, Raudenbush SW. Neighborhood inequality, collective efficacy, and the spatial dynamics of urban violence. Criminology. 2001; 39(3):517–558.
- 40. Briggs CM, Cutright P. Structural and cultural determinants of child homicide: a cross-national analysis. Violence Vict. 1994; 9(1):3–16. [PubMed: 7826933]
- 41. Ferrari AM. The impact of culture upon child rearing practices and definitions of maltreatment. Child Abuse Negl. 2002; 26(8):793–813. [PubMed: 12363332]
- 42. Fulu E, Jewkes R, Roselli T, Garcia-Moreno C. Prevalence of and factors associated with male perpetration of intimate partner violence: findings from the UN Multi-country Cross-sectional Study on Men and Violence in Asia and the Pacific. Lancet Global Health. 2013; 1(4):e187–e207. [PubMed: 25104345]
- 43. Fleming PJ, McCleary-Sills J, Morton M, Levtov R, Heilman B, Barker G. Risk factors for men's lifetime perpetration of physical violence against intimate partners: results from the international men and gender equality survey (IMAGES) in eight countries. PLoS One. 2015; 10(3):e0118639. [PubMed: 25734544]
- 44. Moore TM, Stuart GL, McNulty JK, Addis ME, Cordova JV, Temple JR. Domains of masculine gender role stress and intimate partner violence in a clinical sample of violent men. Psychol Men Masculinity. 2008; 9(2):82–89.
- 45. Levinson, D. Handbook of Family Violence. Thousand Oaks, CA: Springer; 1988. Family violence in cross-cultural perspective.
- 46. Espelage DL, Basile KC, Hamburger ME. Bullying perpetration and subsequent sexual violence perpetration among middle school students. J Adolesc Health. 2012; 50(1):60–65. [PubMed: 22188835]
- 47. Casey EA, Masters NT, Beadnell B, Hoppe MJ, Morrison DM, Wells EA. Predicting sexual assault perpetration among heterosexually active young men. Violence Against Women. 2017; 23(1):3–27. [PubMed: 26951305]
- 48. Reed E, Silverman JG, Raj A, Decker MR, Miller E. Male perpetration of teen dating violence: associations with neighborhood violence involvement, gender attitudes, and perceived peer and neighborhood norms. J Urban Health. 2011; 88(2):226–239. [PubMed: 21311987]
- 49. Reitzel-Jaffe D, Wolfe DA. Predictors of relationship abuse among young men. J Interpersonal Violence. 2001; 16(2):99–115.
- 50. Whitehead A. Man to man violence: how masculinity may work as a dynamic risk factor. Howard J Crime Justice. 2005; 44(4):411–422.
- 51. Clements-Nolle K, Marx R, Katz M. Attempted suicide among transgender persons: the influence of gender-based discrimination and victimization. J Homosex. 2006; 51(3):53–69. [PubMed: 17135115]
- 52. Álvarez-García D, García T, Núñez JC. Predictors of school bullying perpetration in adolescence: a systematic review. Aggress Violent Behav. 2015; 23:126–136.
- 53. Espelage DL, Swearer SM. Addressing research gaps in the intersection between homophobia and bullying. School Psychol Rev. 2008; 37(2):155.

54. Jackson S, Thompson RA, Christiansen EH, et al. Predicting abuse-prone parental attitudes and discipline practices in a nationally representative sample. Child Abuse Negl. 1999; 23(1):15–29. [PubMed: 10075190]

- 55. Kosberg, JI., Nahmiash, D., Baumhover, L. Abuse, Neglect, and Exploitation of Older Persons: Strategies for Assessment and Intervention. Baltimore MD: Health Professions Press; 1996. Characteristics of victims and perpetrators and milieus of abuse and neglect; p. 31-50.
- 56. Reeves PM, Orpinas P. Dating norms and dating violence among ninth graders in Northeast Georgia: reports from student surveys and focus groups. J Interpers Violence. 2012; 27(9):1677–1698. [PubMed: 22203621]
- 57. Browning CR. The span of collective efficacy: extending social disorganization theory to partner violence. J Marriage Fam. 2002; 64(4):833–850.
- 58. Wright EM, Benson ML. Immigration and intimate partner violence: exploring the immigrant paradox. Soc Probl. 2010; 57(3):480–503.
- Tsai AC, Lucas M, Kawachi I. Association Between Social Integration and Suicide Among Women in the United States. JAMA Psychiatry. 2015; 72(10):987–993. [PubMed: 26222043]
- 60. Basile KC, Hamburger ME, Swahn MH, Choi C. Sexual violence perpetration by adolescents in dating versus same-sex peer relationships: differences in associated risk and protective factors. West J Emerg Med. 2013; 14(4):329–340. [PubMed: 23930146]
- 61. Borowsky IW, Hogan M, Ireland M. Adolescent sexual aggression: risk and protective factors. Pediatrics. 1997; 100(6):e7–e7.
- 62. Widome R, Sieving RE, Harpin SA, Hearst MO. Measuring neighborhood connection and the association with violence in young adolescents. J Adolesc Health. 2008; 43(5):482–489. [PubMed: 18848677]
- 63. Kennedy BP, Kawachi I, Prothrow-Stith D, Lochner K, Gupta V. Social capital, income inequality, and firearm violent crime. Soc Sci Med. 1998; 47(1):7–17. [PubMed: 9683374]
- 64. Kaminski JW, Puddy RW, Hall DM, Cashman SY, Crosby AE, Ortega LA. The relative influence of different domains of social connectedness on self-directed violence in adolescence. J Youth Adolesc. 2010; 39(5):460–473. [PubMed: 19898780]
- 65. Maimon D, Browning CR, Brooks-Gunn J. Collective efficacy, family attachment, and urban adolescent suicide attempts. J Health Soc Behav. 2010; 51(3):307–324. [PubMed: 20943592]
- 66. Kleiman EM, Riskind JH, Schaefer KE, Weingarden H. The moderating role of social support on the relationship between impulsivity and suicide risk. Crisis. 2012; 33(5):273–279. [PubMed: 22562860]
- 67. Klevens J, Barnett SB, Florence C, Moore D. Exploring policies for the reduction of child physical abuse and neglect. Child Abuse Negl. 2015; 40:1–11. [PubMed: 25124051]
- 68. Daro, D., Huang, LA., English, B. The Duke Endowment Child Abuse Prevention Initiative: A Midpoint Assessment. Chicago, IL: Chapin Hall at the University of Chicago; 2009.
- 69. Klevens J, Baker CK, Shelley GA, Ingram EM. Exploring the links between components of coordinated community responses and their impact on contact with intimate partner violence services. Violence Against Women. 2008; 14(3):346–358. [PubMed: 18292374]
- 70. Holma KM, Melartin TK, Haukka J, Holma IA, Sokero TP, Isometsä ET. Incidence and predictors of suicide attempts in DSM-IV major depressive disorder: a five-year prospective study. Am J Psychiatry. 2010; 167(7):801–808. [PubMed: 20478879]
- Arango A, Opperman KJ, Gipson PY, King CA. Suicidal ideation and suicide attempts among youth who report bully victimization, bully perpetration and/or low social connectedness. J Adolesc. 2016; 51:19–29. [PubMed: 27262934]
- Nansel TR, Overpeck MD, Haynie DL, Ruan WJ, Scheidt PC. Relationships between bullying and violence among US youth. Arch Pediatr Adolesc Med. 2003; 157(4):348–353. [PubMed: 12695230]
- 73. Jackson SL, Hafemeister TL. Risk factors associated with elder abuse: the importance of differentiating by type of elder maltreatment. Violence Vict. 2011; 26(6):738–757. [PubMed: 22288093]

74. Turner HA, Finkelhor D, Ormrod R, et al. Family context, victimization, and child trauma symptoms: variations in safe, stable, and nurturing relationships during early and middle childhood. Am J Orthopsychiatry. 2012; 82(2):209–219. [PubMed: 22506523]

- 75. Stith SM, Liu T, Davies LC, et al. Risk factors in child maltreatment: a meta-analytic review of the literature. Aggress Violent Behav. 2009; 14(1):13–29.
- 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]
- 77. Foshee VA, Reyes HL, Ennett ST, et al. Risk and protective factors distinguishing profiles of adolescent peer and dating violence perpetration. J Adolesc Health. 2011; 48(4):344–350. [PubMed: 21402262]
- 78. Gorman-Smith D, Henry DB, Tolan PH. Exposure to community violence and violence perpetration: the protective effects of family functioning. J Clin Child Adolesc Psychol. 2004; 33(3):439–449. [PubMed: 15271602]
- 79. Herrenkohl TI, Maguin E, Hill KG, Hawkins JD, Abbott RD, Catalano RF. Developmental risk factors for youth violence. J Adolesc Health. 2000; 26(3):176–186. [PubMed: 10706165]
- 80. Hong JS, Espelage DL. A review of research on bullying and peer victimization in school: an ecological system analysis. Aggress Violent Behav. 2012; 17(4):311–322.
- 81. Salmivalli C. Bullying and the peer group: a review. Aggress Violent Behav. 2010; 15(2):112-120.
- 82. Bernat DH, Oakes JM, Pettingell SL, Resnick M. Risk and direct protective factors for youth violence: results from the National Longitudinal Study of Adolescent Health. Am J Prev Med. 2012; 43(2 suppl 1):S57–S66. [PubMed: 22789958]
- 83. Pardini DA, Loeber R, Farrington DP, Stouthamer-Loeber M. Identifying direct protective factors for nonviolence. Am J Prev Med. 2012; 43(2 suppl 1):S28–S40. [PubMed: 22789956]
- 84. Haynie DL, Silver E, Teasdale B. Neighborhood characteristics, peer networks, and adolescent violence. J Quant Criminol. 2006; 22(2):147–169.
- 85. Casey EA, Beadnell B. The structure of male adolescent peer networks and risk for intimate partner violence perpetration: findings from a national sample. J Youth Adolesc. 2010; 39(6):620–633. [PubMed: 20422351]
- 86. Spano R, Vazsonyi AT, Bolland J. Does parenting mediate the effects of exposure to violence on violent behavior? An ecological-transactional model of community violence. J Adolesc. 2009; 32(5):1321–1341. [PubMed: 19162312]
- 87. Herrenkohl TI, Tajima EA, Whitney SD, Huang B. Protection against antisocial behavior in children exposed to physically abusive discipline. J Adolesc Health. 2005; 36(6):457–465. [PubMed: 15901510]
- 88. Margolin G, Gordis EB. The effects of family and community violence on children. Annu Rev Psychol. 2000; 51(1):445–479. [PubMed: 10751978]
- 89. McNeely C, Falci C. School connectedness and the transition into and out of Health-Risk behavior among adolescents: a comparison of social belonging and teacher support. J School Health. 2004; 74(7):284–292. [PubMed: 15493705]
- 90. Carter M, McGee R, Taylor B, Williams S. Health outcomes in adolescence: associations with family, friends and school engagement. J Adolesc. 2007; 30(1):51–62. [PubMed: 16808970]
- 91. Jaffee SR, Bowes L, Ouellet-Morin I, et al. Safe, stable, nurturing relationships break the intergenerational cycle of abuse: a prospective nationally representative cohort of children in the United Kingdom. J Adolesc Health. 2013; 53(4 suppl):S4–S10.
- 92. Conger RD, Schofield TJ, Neppl TK, Merrick MT. Disrupting intergenerational continuity in harsh and abusive parenting: the importance of a nurturing relationship with a romantic partner. J Adolesc Health. 2013; 53(4 suppl):S11–S17. [PubMed: 24059934]
- 93. MacLeod J, Nelson G. Programs for the promotion of family wellness and the prevention of child maltreatment: a meta-analytic review. Child Abuse Negl. 2000; 24(9):1127–1149. [PubMed: 11057701]
- 94. Sousa C, Herrenkohl TI, Moylan CA, et al. Longitudinal study on the effects of child abuse and children's exposure to domestic violence, parent-child attachments, and antisocial behavior in adolescence. J Interpers Violence. 2011; 26(1):111–136. [PubMed: 20457846]

95. Hoeve M, Dubas JS, Eichelsheim VI, van der Laan PH, Smeenk W, Gerris JR. The relationship between parenting and delinquency: a meta-analysis. J Abnorm Child Psychol. 2009; 37(6):749–775. [PubMed: 19263213]

- 96. Elgar FJ, Craig W, Boyce W, Morgan A, Vella-Zarb R. Income inequality and school bullying: multilevel study of adolescents in 37 countries. J Adolesc Health. 2009; 45(4):351–359. [PubMed: 19766939]
- 97. Wang MC, Joel Wong Y, Tran KK, Nyutu PN, Spears A. Reasons for living, social support, and Afrocentric worldview: assessing buffering factors related to Black Americans' suicidal behavior. Arch Suicide Res. 2013; 17(2):136–147. [PubMed: 23614486]
- 98. Dutton CE, Rojas SM, Badour CL, Wanklyn SG, Feldner MT. Posttraumatic stress disorder and suicidal behavior: indirect effects of impaired social functioning. Arch Suicide Res. 2016; 20(4): 567–579. [PubMed: 26984044]
- 99. Sharaf AY, Thompson EA, Walsh E. Protective effects of self-esteem and family support on suicide risk behaviors among at-risk adolescents. J Child Adolesc Psychiatr Nurs. 2009; 22(3):160–168. [PubMed: 19702970]
- 100. Serafini G, Muzio C, Piccinini G, et al. Life adversities and suicidal behavior in young individuals: a systematic review. Eur Child Adolesc Psychiatry. 2015; 24(12):1423–1446. [PubMed: 26303813]
- 101. Linder JR, Collins WA. Parent and peer predictors of physical aggression and conflict management in romantic relationships in early adulthood. J Fam Psychol. 2005; 19(2):252–262. [PubMed: 15982103]
- 102. Farrell CT, Bolland JM, Cockerham WC. The role of social support and social context on the incidence of attempted suicide among adolescents living in extremely impoverished communities. J Adolesc Health. 2015; 56(1):59–65. [PubMed: 25438969]
- 103. Bronfenbrenner, U. The ecology of human development: experiments by design and nature. Cambridge, MA: Harvard University Press; 1979.
- 104. Gorman-Smith D, Tolan PH, Henry DB. A developmental-ecological model of the relation of family functioning to patterns of delinquency. J Quant Criminol. 2000; 16(2):169–198.
- 105. Smith DK, Johnson AB, Pears KC, Fisher PA, DeGarmo DS. Child maltreatment and foster care: unpacking the effects of prenatal and postnatal parental substance use. Child Maltreat. 2007; 12(2):150–160. [PubMed: 17446568]
- 106. Pompili M, Serafini G, Innamorati M, et al. Substance abuse and suicide risk among adolescents. Eur Arch Psychiatry Clin Neurosci. 2012; 6:469–485.
- 107. Lo CC, Cheng TC. Race, employment disadvantages, and heavy drinking: a multilevel model. J Psychoactive Drugs. 2015; 47(3):221–229. [PubMed: 26121125]
- 108. Tracy EM, Min MO, Park H, Jun M, Brown S, Francis MW. Personal network structure and substance use in women by 12 months post treatment intake. J Subst Abuse Treat. 2016; 62:55–61. [PubMed: 26712040]
- 109. Nansel TR, Overpeck M, Pilla RS, Ruan WJ, Simons-Morton B, Scheidt P. Bullying behaviors among US youth. JAMA. 2001; 285(16):2094. [PubMed: 11311098]
- 110. Hussey JM, Chang JJ, Kotch JB. Child maltreatment in the United States: prevalence, risk factors, and adolescent health consequences. Pediatrics. 2006; 118(3):933–942. [PubMed: 16950983]
- 111. Schiamberg LB, Gans D. Elder abuse by adult children: an applied ecological framework for understanding contextual risk factors and the intergenerational character of quality of life. Int J Aging Hum Dev. 2000; 50(4):329–359. [PubMed: 11087111]
- 112. Briere J, Madni LA, Godbout N. Recent suicidality in the general population: multivariate association with childhood maltreatment and adult victimization. J Interpers Violence. 2016; 31(18):3063–3079. [PubMed: 25948645]
- 113. Black DA, Heyman RE, Slep AMS. Risk factors for child physical abuse. Aggress Violent Behav. 2001; 6(2):121–188.
- 114. Dube SR, Anda RF, Felitti VJ, Chapman DP, Williamson DF, Giles WH. Childhood abuse, household dysfunction, and the risk of attempted suicide throughout the life span. JAMA. 2001; 286(24):3089. [PubMed: 11754674]

115. Cavanagh JTO, Carson AJ, Sharpe M, Lawrie SM. Psychological autopsy studies of suicide: a systematic review. Psychol Med. 2003; 33(3):395–405. [PubMed: 12701661]

- 116. Oleg Bilukha M, Hahn RA, Alex Crosby M, et al. Effectiveness of early childhood home visitation in preventing violence: a systematic review. Am J Prev Med. 2005; 28(2S1):11–39. [PubMed: 15698746]
- 117. Foshee VA, Bauman KE, Ennett ST, Linder GF, Benefield T, Suchindran C. Assessing the long-term effects of the Safe Dates program and a booster in preventing and reducing adolescent dating violence victimization and perpetration. Am J Public Health. 2004; 94(4):619–624. [PubMed: 15054015]
- 118. Botvin GJ, Griffin KW, Nichols TD. Preventing youth violence and delinquency through a universal school-based prevention approach. Prev Sci. 2006; 7(4):403–408. [PubMed: 17136462]
- 119. Becker-Weidman EG, Jacobs RH, Reinecke MA, Silva SG, March JS. Social problem-solving among adolescents treated for depression. Behav Res Ther. 2010; 48(1):11–18. [PubMed: 19775677]
- 120. Slattery TL, Meyers SA. Contextual predictors of adolescent antisocial behavior: the developmental influence of family, peer, and neighborhood factors. Child Adolescent Soc Work J. 2013; 31(1):39–59.
- 121. Kotter, JP., Cohen, DS. The Heart of Change: Real-Life Stories of How People Change Their Organizations. Boston, MA: Harvard Business Press; 2002.
- 122. Hindman, J. Child and Adolescent Violence in Colorado: 2005 Status Report. Denver CO: Colorado Department of Public Health and Environment; 2005.
- 123. Bold Steps Toward Child and Adolescent Health: A Plan for Youth Violence Prevention in Colorado. Denver CO: Colorado Department of Public Health and Environment; 2009.
- 124. Colorado Violence and Injury Prevention—Mental Health Promotion Strategic Plan 2016–2020. Creating Connected & Thriving Communities Free From Violence and Injury. Denver CO: Colorado Department of Public Health and Environment; 2016.

Implications for Policy & Practice

 Understanding and implementing approaches that prevent and address shared risk and protective factors linked to multiple forms of violence can help practitioners more effectively and efficiently use limited resources to prevent violence and save lives.

- State public health departments can produce a paradigm shift toward a shared
 risk and protective factor approach within their injury and violence prevention
 units, and with key partners (eg, braiding funding streams, hiring staff who
 are committed to addressing shared risk and protective factors, measuring
 impact of programs on shared risk and protective factors, and multiple
 violence outcomes).
- State public health departments are also well positioned to lead the
 coordination and integration of work across state agencies to focus more
 purposefully on shared risk and protective factors linked to multiple forms of
 violence (eg, convening and coordinating key state agencies and partners
 working on common risk and protective factors, linking and coordinating data
 sets).
- As a new and emerging approach to violence prevention, providing
 opportunities for states to share lessons learned will be critical for scaling up
 a shared risk and protective factor approach across state and local contexts.
- Shifting away from programs siloed by specific violence outcomes and toward a shared risk and protective factor approach takes time, requires building relationships and developing trust with a variety of partners and stakeholder groups, identifying common goals, and finding opportunities to leverage resources.

TABLE

Implementing a Shared Risk and Protective Factor Approach to Violence Prevention: Lessons Learned From Colorado and Maryland

Identify opportunities for coordination: MDHMH's environmental scan revealed key overlaps in state agencies' efforts such as the same/similar populations of focus (eg, veterans) and shared risk and protective factors addressed (eg, substance abuse).

Invest time in partnership development: MDHMH convened a statewide Violence Prevention Summit to facilitate conversations and connections between state agencies across the state.

Demonstrate early applications and successes: CDPHE implemented 2 early local-level pilot projects focused on addressing shared risk and protective factors that helped demonstrate that this approach to violence prevention was possible in practice.

Measure impact on multiple outcomes: CDPHE partnered with Colorado State University to evaluate the impact of their work, across multiple programs and funding streams, on shared risk and protective factors and multiple forms of violence.

Engage in strategic planning. CDPHE developed and published a statewide violence and injury prevention strategic plan that prioritizes common risk and protective factors associated with multiple forms of injury and violence, identifies connections across injury and violence prevention programs, and outlines leverage points for coordination and achieving impact on multiple injury and violence outcomes.

Abbreviations: CDPHE, Colorado Department of Public Health and Environment; MDHMH, Maryland Department of Health and Mental Hygiene.