

POLICY BRIEF

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# The Effects of Firearm Violence on Children

*Implications for Its Prevention in Our Schools and Communities*

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## SYNOPSIS

The impact of exposure to gun violence—both during and outside of the school day—on children’s health, development, and motivation to learn is significant. And these impacts disproportionately impact children of color. Investing in meaningful and evidence-informed preventive efforts that ensure schools are spaces where children feel safe, secure, and valued is critical for children across disparate conditions.

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## ABOUT THE AUTHORS

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## THE EFFECTS OF FIREARM VIOLENCE ON CHILDREN

Exposure to firearm violence persists as an urgent public health problem because of its prevalence and impact. In the United States, firearms are now the leading cause of death among all children, ages 1-19 years old, and nonfatal firearm assaults occur at more than twice the rate for youth compared to the general population.<sup>1,2</sup> Furthermore, recent work has highlighted that 92 percent of all firearm-related deaths of 5- to 14-year-old children in high-income countries occur in the US.<sup>3</sup> Firearm violence affects children not only through direct exposure, such as being threatened, injured, or killed by a firearm, but also through indirect exposure by hearing or witnessing incidents or by losing a peer or family member to this form of violence.<sup>4,5</sup> Tragically, the burden of firearm violence falls disproportionately on children of color,<sup>6,7,8</sup> particularly young Black men between the ages of 15 and 24 in urban settings.<sup>9</sup> Research further illustrates that Black children between the ages of 5 and 17 years were exposed to violence in their neighborhoods 4.44 times more frequently than white children prior to the COVID-19 pandemic, and that these stark disparities have become even more pronounced since.<sup>10</sup> An analysis of homicides in Washington, DC, in 2021 found that 89 percent of children of color (compared to 57 percent of white children) lived within a half mile of a homicide.<sup>11</sup> In this brief, we describe the

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impact of exposure to violence on youth, review factors that are protective, highlight prevention and interventions for this urgent issue, and provide implications for policy.

## Impact on Children

The impact of firearm violence on youth is significant. Exposure to violence is consistently associated with post-traumatic stress disorder (PTSD) symptoms<sup>12, 13</sup> and other internalizing symptoms, such as anxiety and depression.<sup>14, 15, 16, 17</sup> Youth exposure to violence is also associated with higher risk for suicide attempts and deaths.<sup>18</sup> Some research has found that girls may be more impacted with regard to internalizing symptoms.<sup>19, 20</sup> However, a recent study of first-time male juvenile offenders interviewed nine times over five years found that they experienced an increase in anxiety symptoms during waves where they were exposed directly to or witnessed firearm violence even after controlling for confounding variables (e.g., exposure to non-firearm related violence).<sup>21</sup>

Childhood exposure to violence is also associated with externalizing symptoms, such as aggressive, disruptive, and delinquent behavior and this exposure appears to have a cumulative effect.<sup>22, 23</sup> Specifically, as youth are exposed to more violence, they exhibit more externalizing behaviors.<sup>24, 25</sup> This relationship has been shown to be bidirectional; in other words, witnessing violence predicts physical aggression and physical aggression also predicts subsequent witnessing of violence, suggesting that violence within communities is cyclical and may become self-perpetuating.<sup>26</sup> Exposure to firearm violence in particular is associated more strongly with reactive than proactive aggression.<sup>27</sup> Furthermore, peer victimization is associated with adolescents' attitudes towards guns, particularly in terms of their use as aggressive responses to shame.<sup>28</sup>

It is likely that violence becomes socialized and youth exposed to violence may experience more hyperarousal and thus engage in more aggressive behaviors.<sup>29</sup> Indeed, most studies about motivation to carry firearms among youth have found a perceived need for protection or self-defense as the primary motive.<sup>30</sup> Additional work drawing on a national sample of adolescent youth has highlighted that perceptions of safety and previous experiences with violence are also associated with youth firearm possession.<sup>31</sup> In addition, gun socialization and masculinity culture may contribute to those who are exposed directly or indirectly to violence view firearms as exuding force that allow the holder to recast themselves as more powerful in their environment.<sup>32</sup> Relatedly, affiliating with deviant peers also increases exposure to violence<sup>33</sup> and firearm possession and carrying,<sup>34</sup> and moderates the association between community violence exposure and aggressive behavior.<sup>35</sup>

## Protective Factors

It is important to highlight that not all children exposed to violence experience emotional and behavioral problems, as some show resilience, or adaptive functioning, despite exposure to adversity.<sup>36</sup> A meta-analysis of over 100 studies of protective factors (i.e., variables that enhance adaptive functioning) for youth exposed to violence found significant buffering effects for self-regulation, family support, school support, and peer support.<sup>37</sup> The positive impact of social support from adults has been demonstrated even with high-risk samples, as have other variables such as concern for others, aspirations for working and creating families in the future, and religious beliefs.<sup>38</sup> And a scoping review of adolescent firearm carrying identified the protective factors of school attachment, parenting practices (e.g., monitoring, respect), school-based drug and violence prevention programming, neighborhood collective efficacy, and stricter state-level firearm laws.<sup>39</sup>

In recognition of the critical need to better understand and prevent firearm injury in youth and given that gun violence as a field has been historically deeply underfunded,<sup>40</sup> the National Institutes of Health (NIH) funded the Firearm Safety among Children and Teens (FACTS) Consortium.<sup>41</sup>

As part of the FACTS Consortium's work, the researchers conducted a scoping review of primary prevention of firearm injuries among children and adolescents, identifying 46 articles that addressed safe storage, screening, or firearm handling, carrying, or use.<sup>42</sup> Unfortunately, they concluded that few evidenced-based programs exist and that data are lacking. There are some promising approaches to reducing exposure to violence and firearm injury; however, we note that further research is sorely needed.

## Prevention and Interventions

In responding to the firearm violence crisis among children in the US, we need concerted efforts to prevent this kind of violence from happening in the first place, coupled with efforts to effectively and equitably support children and their communities in the aftermath of exposure to violence. Below we outline a summary of the existing evidence on interventions in healthcare settings, communities at large, and schools. A brief summary of known effective policy approaches is also presented.

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## Healthcare Settings

Pediatrician offices, emergency departments, and other healthcare settings are where the most rigorous evaluations have taken place for identifying risk for exposure to violence (e.g., access to firearms, treatment for injuries) and providing education and training for parents and adolescents and supplying gun locks. There is some research to support that screening and education around firearm safety with parents, especially when accompanied by distribution of free gun locks, increases self-reported safe firearm storage.<sup>43</sup> This is consistent with modeling studies indicating that safe storage practices would result in reduced firearm mortality<sup>44</sup> and work showing that pediatricians screening youth for behavioral problems and providing positive parenting skills training results in reduced aggression.<sup>45</sup> Relatedly, there are some promising findings from single-session interventions for adolescents presenting to emergency departments (e.g., Project Sync) in reducing involvement in violent aggression.<sup>46, 47</sup> Project Sync is a therapist-delivered 30-minute intervention that combines motivational interviewing and cognitive skills training (e.g., review of goals, feedback, decision-making, role-playing). Explicitly including gun violence exposure as an adverse childhood experience (ACE), so it can be screened for more routinely across settings, would also help provide more avenues and resources for interventions and other preventive efforts.<sup>48</sup>

## Community Investments and Interventions

Given that firearm violence is a multifaceted issue, prevention efforts that subsequently involve a multifaceted public health approach are needed. One such example is the Michigan Youth Violence Prevention Center (MI-YVPC), which includes: (a) Youth Empowerment Solutions curriculum focused on developing leadership skills and empowering youth to improve their communities;<sup>49</sup> (b) Fathers and Sons,<sup>50</sup> a 15-session (45 contact hours) program addressing parenting, culture and ethnicity, and communication about risky behavior; (c) Project Sync (described above); (d) Targeted Outreach Mentoring, developed and delivered by the Boys and Girls Clubs of America, where mentors developed relationships with youth and families and helped develop and meet goals (e.g., obtain driver's license) over a 6-12 month period; (e) Community Policing Mobilization, which distributed crime data analysis and provided technical support for crime prevention; and (f) Clean and Green, a county-funded initiative to work with community groups to maintain and develop (e.g., add gardens) to vacant lots.<sup>51</sup> An evaluation of this prevention approach found that youth victimization and assault injuries decreased in the intervention area but not in the comparison area.<sup>52</sup> Due to the consistent disproportionality in exposure to violence based on race, it is critical that multisector, place-based initiatives that address structural factors related to poverty in segregated neighborhoods are also implemented.<sup>53</sup>

The role of these systemic-level factors, such as racism and poverty, plays out in other ways as well, including via access to community-level interventions, services, and care. Research on the impact of ACEs such as gun violence exposure and on



Mentoring to Manhood, Community Youth Advance, Hyattsville, MD, <https://communityyouthadvance.org/mentoringtomanhood/>.

the developing brain<sup>54</sup> has helped us to better understand how such experiences place children at such heightened risk. Exposure to ACEs typically results in serious long-term health outcomes if there are limited protective factors in place and also no early intervention made available in the aftermath of that exposure.<sup>55</sup> Examples of these kinds of early interventions in response to ACEs include increased access to primary care, family therapy, grief support, school-based programming that center trauma-informed practices/care, among many others. Unfortunately, sufficient and ready access to these kinds of support services have always been hard to come by, particularly in communities where ACEs are the most prevalent.<sup>56</sup> Encouragingly, research on street outreach and other community mobilization efforts that contribute to disrupting cycles of disenfranchisement have shown some promise.<sup>57, 58</sup>

## School-Based Prevention

In terms of school-based prevention programming, there is some evidence that education and behavioral skills rehearsal (i.e., programs that provide information to increase knowledge about violence and its effects, teach social and regulation skills, provide opportunities for guided practice and feedback, and change social norms) leads to increased knowledge and reduced weapon carrying, but more research is needed.<sup>59, 60</sup> Although many school-based prevention efforts have not targeted exposure to violence or weapon carrying explicitly, it is important to highlight some of the factors that have been shown to impact related outcomes. Meta-analyses of the effects of social-emotional learning, or teaching competencies related to self-

awareness, self-management, social awareness, relationship skills, and decision-making, have revealed that these programs not only improve competencies, attitudes, and academic performance, but also reduce aggressive and disruptive behavior as well as emotional distress.<sup>61, 62</sup>

Other aspects of the school environment are also critical for lower levels of violence.<sup>63</sup> More specifically, there is less violence in schools where students perceive rules to be fairly and consistently enforced.<sup>64, 65, 66</sup> Similarly, there is less violence in schools where students perceive their school building to be comfortable and secure.<sup>67, 68</sup> A sense of community,<sup>69</sup> perceptions of teachers and other adults at school as caring and supportive,<sup>70, 71</sup> and teacher and school staff members' use of social-emotional learning instruction<sup>72</sup> are also associated with lower levels of various forms of school violence.

In addition, although prevention is key, it is important that, given the increasing prevalence of gun violence across school communities, school leadership, policymakers, and other community members must also be prepared to effectively support youth exposed to firearm violence in order to mitigate the adverse impact of this. Youth who have PTSD symptoms may need increased access to additional evidence-based interventions. Cognitive-Behavioral Intervention for Trauma in Schools (CBITS)<sup>73</sup> is a school-based group treatment that has been shown to decrease PTSD and related symptoms in racially and ethnically diverse youth.<sup>74, 75, 76</sup> There are also evidence-based treatments provided by community mental health providers to treat trauma in youth, such as individual and group cognitive-behavioral therapies (CBT) and eye movement desensitization and reprocessing (EMDR).<sup>77</sup>

## A Roadmap for Policymakers

Lastly, the role of policy in preventing gun violence is critical, and its implications for the physical and mental well-being of children are significant. Recent research has highlighted that more restrictive state-level firearm laws and lower rates of gun ownership are directly associated with lower rates of active shootings specifically in K-12 schools and after controlling for critical covariates.<sup>78</sup> The impact of policies on gun violence outside of school settings is also well established. Examples of effective policies include bans on assault weapons,<sup>79</sup> large capacity magazine bans,<sup>80</sup> and extreme risk laws.<sup>81</sup> Firearm buyback programs have been shown to increase the number of firearms relinquished, yet it is not known if this leads to reduced firearm injuries for youth.<sup>82</sup> And while policies like these are critical components of the gun violence prevention puzzle, they alone are not sufficient. Indeed, efforts such as place-based initiatives and changes in structural factors are also critical for gun violence prevention and improving community well-being.<sup>83</sup>

It is worth noting that we are at a pivotal moment where the first national bipartisan piece of legislation in nearly 30 years in response to the unabating persistence of gun violence in the US was just passed. This is an encouraging first step and we



should do all we can to build upon this momentum. This means expanding gun safety laws in line with the existing evidence and increasing investments in schools and communities to broaden the scope and access of prevention and intervention efforts so that the likelihood of gun violence and its impact on children can be meaningfully and effectively addressed.

# ENDNOTES

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## **ABOUT THE REGIONAL GUN VIOLENCE RESEARCH CONSORTIUM**

The Regional Gun Violence Research Consortium is dedicated to the reduction of gun violence involving firearms through interdisciplinary research and analysis.

With the combined expertise of public health, social welfare, public policy, and criminal justice experts, the consortium informs the public and provides evidence-based, data-driven policy recommendations to disrupt the cycle of firearm-involved mass shootings, homicides, suicides, and accidents.

The consortium is part of States for Gun Safety, a multistate coalition that aims to reduce gun violence. Previous analyses include:

- + Creating a multistate database to supplement the federal National Instant Criminal Background Check System.
- + Tracking and intercepting guns that are used in crimes as well as guns transported across state borders.
- + Informing policymakers and the public through interdisciplinary research and analysis.

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