Trauma from School Shootings Among Children and Adolescents in the United States

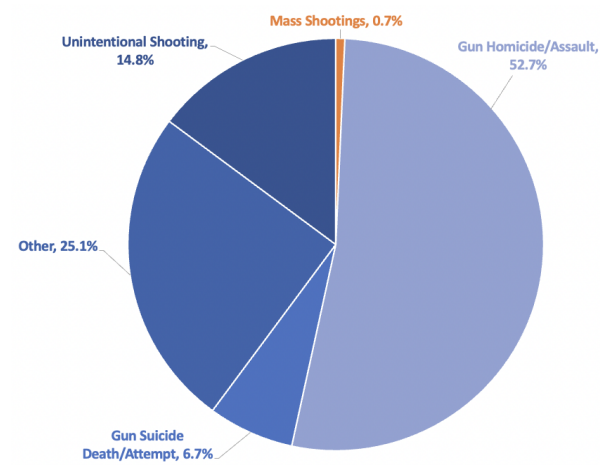Developed by Mackenzie Furnari, MPH and Hsing-Fang Hsieh, Ph.D., MPH

Overview

- Direct firearm violence exposure includes being threatened, injured, or killed with a firearm. Indirect firearm violence exposure includes witnessing violence involving a firearm, hearing gunshots, knowing someone who has been victimized, or seeing violence in the media.[1,2]
- Firearm violence and school shootings are a uniquely American epidemic. The U.S. accounts for **92%** of all firearm deaths among children and adolescents in high-income countries.[3,4]
- **Over 1,000,000** high school students in the U.S. are injured or threatened with a weapon each year at school.[5]
- Approximately **3 million** children and adolescents are exposed to firearm violence each year, and **over 41,000** are injured or killed by firearms.[6,7] That equals **113** children or adolescents a day.[7]
- Exposure to firearm violence and school shootings is associated with an increase in traumatic stress symptoms, including post-traumatic stress and major depression.[8]

How common are these forms of school shootings?

- **Mass shootings**
  - Mass shootings are difficult to define because there is no single definition. Generally, a mass shooting is an incident in which four or more victims (or three or more victims, depending on the source) are shot and/or killed from gunfire, not including the shooter, within one event, in one or more locations in close proximity.[1,9]
  - Mass shootings in schools account for **less than 1%** of overall school firearm violence incidents.[10]

- **School shootings**
  - School shootings include incidents where a firearm is fired, or bullets hit school property for any reason, regardless of the number of victims, time, day of the week, or reason (planned attack, accidental, domestic violence, or gang-related).[1,11]
  - Since 1970, there have been **2,069 school shootings**, **684 firearm deaths**, and **1,937 firearm-related injuries** from **school shootings**.[12]

- **Intentional interpersonal shootings**
  - An intentional interpersonal firearm incident involves an instigator (shooter), a firearm, and a victim, where one or more shots are fired, and one or more persons are killed or injured.[1,13,14]
  - **More than half** of all school firearm violence incidents are due to intentional interpersonal shootings.[15,16] However, most interpersonal firearm-related injuries and deaths that occur at school do not receive media coverage.

Gunfire on School Grounds By Intent, 2013-2021

Mass Shootings, 0.7%
Unintentional Shooting, 14.8%
Gun Homicide/Assault, 52.7%
Other, 25.1%
Gun Suicide Death/Attempt, 6.7%

Source: Gunfire on School Grounds

What are the predictors of school shootings?

- There is **no single profile** that can predict who will engage in targeted school violence.[17]
- Serious mental illness plays a limited role in mass shootings. It is neither a necessary nor a sufficient condition for mass shootings.[18,19]
- Characteristics such as demographics, personality, school history, and social characteristics do not necessarily determine whether a student is thinking or planning targeted school violence, as these vary among school shooters.[17]
- Instead, efforts should be made to focus on **behaviors** and **communications** to identify students that may be planning or preparing for targeted school violence.[17]
- **Behaviors and warning signs**: **bullying**, **isolation**, **withdrawing** from friends, family, and activities, persistent **thoughts of harming** themselves or others, **bragging about access to weapons**, directly **expressing a threat as a plan**, and **excessive irritability.**[17,20]

  *Exhibiting one of these signs doesn't necessarily indicate imminent violence.

What are the effects of school shootings?

- **Short-term effects**
  - **Individual-level direct:** following direct exposure to a school shooting, there is an increase in posttraumatic stress symptoms, absenteeism and grade repetition, major depression, and other adverse psychological outcomes.[21-28]
  - **Community-level indirect:** after targeted school violence, perceptions of safety at school declined, and fear of victimization increased, for affected communities and persons living far outside of the affected community.[8,29-32]
- **Long-term effects**
  - **Individual-level direct:** survivors of school shootings often experience posttraumatic stress disorder, major depression, substance use disorder, lower educational attainment, and other psychological distress.[8,26,27,33-36]
  - **Community-level indirect:** fear and anxiety often persist in communities, following a shooting.[8,37]
- Trauma from firearm violence and school shootings can vary, but there are several **factors that may heighten an individual trauma**, including direct involvement, severity, prolonged exposure, prior history of trauma, limited social support, and ongoing life stressors.[8,21,22,38]

How to prevent school shootings?

- **Individual-level strategies**
  - **Knowing the warning signs:** signaling an individual may be in crisis or need help. In **93%** of school shootings, the attacker engaged in concerning behaviors prior to the attack.[17] Knowing the warning signs of students who may be in a crisis allows intervention before a student commits an act of targeted school violence.
- **Family-level strategies**
  - **Safe firearm storage:** can restrict adolescents' access to firearms, which results in the highest injury burdens in school shootings.[10,38] Given that **76%** of firearms used in school shootings were taken from the home of a parent or close relative, safe firearm storage significantly impacts lives saved.[39]

How to prevent school shootings (continued)

- **School-level strategies**
  - **Anonymous or confidential reporting systems:** have significant potential to help identify immediate threats and resolve them promptly, as **81%** of school shooters tell someone what they plan to do, and **69%** tell more than one person, most often a peer.[17-19,40,41]
  - **Supportive school environments:** create a trusting and emotionally safe school climate for students to ask adults for help and report any firearm threats on social media or weapons carrying, which can be effective in preventing targeted school violence.[10]
- **Policy-level strategies**
  - **Extreme risk laws:** authorizes law enforcement, family members, and, in certain states, educators, to act on warning signs of violence and temporarily prevent a person from having access to firearms.[10] Since **77%** of mass shooters purchased their firearms legally, temporarily preventing them from accessing firearms permits time for them to seek help in a crisis. [42,43]

How to support students returning to school after a crisis?

- **Talking with students the first day back:** provide time for discussion both at the beginning of the day and as a debrief at the end of the day. Limit the amount of time for discussions to no more than an hour and a half to prevent fatigue, and don't force students to talk about the traumatic event.[44]
- **Create space for those who may want to process how they are feeling:** create a safe space in the school for students who need to decompress or have someone to talk to, or create one in a classroom. These spaces could contain fidget toys, counselors, therapy dogs, or other tools to reduce stress and anxiety.[44]
- **Stress management techniques:** teachers can use stress management techniques such as progressive muscle relaxation, 5-finger breathing, diaphragmatic breathing, drawing exercises, and writing exercises to support their students as they cope after an attack.[44]
- **Using restorative practices:** restorative circles allow students to know that they are supported. Navigating restorative conversations involves self-reflection, language, vulnerability, and ground rules to foster emotional conversations. These circles help students express their feelings and encourage ownership over one's thoughts and feelings.[44]

Where can I find more information?

- Resources for Communities After a School Shooting from the University of Michigan Institute for Firearm Injury Prevention.
- Crisis Navigation Resources for educators, students, caregivers, community members, and mental health professionals from the National Center for School Safety.
- Trauma-Informed Practices and Programs for Schools for school and district leaders, teachers, and other professional staff from the University of Michigan School of Social Work.
- Resources for Coping and Caring for those Impacted by Community Violence from the National Child Traumatic Stress Network.

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