

School Shootings and Their Lasting Impact: A Review of the Educational, Mental Health, and Socioeconomic Consequences for U.S. Students

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Abstract

Events of gun violence within school settings have emerged as one of the most pressing public health and social issues within the United States, causing pervasive consequences for individuals, families, and society. This review brings together extant literature on the education, psychological, and socioeconomic consequences of school-centered incidents of firearm violence. The evidence suggests that exposure to violence hinders students' education experience substantially, contributing to higher rates of absenteeism and grade retention and further damaging standardized testing performance, proportions of graduates, and admissions to college. Psychological outcomes are equally pronounced, with elevated risk for post-traumatic stress disorder, depression, anxiety, and increased utilization of mental health services and pharmacotherapy. Extend beyond school contexts, the lasting socioeconomic impact includes diminished employment prospects and widening disparities, especially for populations that are systemically disadvantaged. In aggregate, the results portray school shootings generating lasting ripple effects that disable the development of human capital and inhibit social mobility. The conclusion underscores the importance of unifying trauma-informed education and health strategies and sweeping policy intervention toward the root causes of handgun violence.

Keywords

Youth Resilience, Health Disparities, Human Capital Development, Trauma-Informed Education, Post-Traumatic Stress Disorder

1. Introduction

In the United States of America, USA, gun violence is a defining public health and

educational emergency. The effects on children and adolescents go beyond immediate fatalities and injuries. Data from [The White House Council of Economic Advisers \(2025\)](#) reveals that in 2022 alone 4,603 children and adolescents were killed by firearms and 27,902 were non-fatally shot. The White House Council of Economic Advisers uses these figures to document the scope of youth exposure to firearm violence and the downstream disruptions to schooling and wellbeing. These headline counts mask a deeper and more persistent problem: repeat exposure to community and school-based shootings creates chronic educational instability, elevated rates of psychological trauma, and measurable long-run economic losses for affected students and communities.

Trauma-informed education, as referenced throughout this paper, refers to instructional and institutional practices that recognize and respond to the effects of trauma on learning and behavior. It emphasizes safety, trust, and empowerment for students, integrating mental health awareness into pedagogy and school culture. This concept is central to understanding the educational recovery and policy responses discussed later in this review.

Research now shows that the harm from school shootings does not just happen right after the event. Using school records and earnings data, [Cabral et al. \(2024\)](#) found that being involved in a school shooting is linked to significant drops in student outcomes. This includes about a 3.4 percentage-point drop in high school graduation rates, about a 14.6% decrease in college completion, and an estimated loss of over \$100,000 in lifetime earnings for each affected student. These estimates come from studies that looked at differences in exposure among groups of students and schools. They show that one traumatic event can change a young person's future in a big way. Most national and education sources, other than Cabral et al., reveal that shootings cause longer-term issues within education. School shootings incur upfront losses of teaching because schools shut and additional students miss classes. They also alter the school atmosphere, causing more teachers to quit, reduced activities participation, and altered relations among students, which make learning more difficult for months or even years following an occurrence. [National Centre for Education Statistics and Bureau of Justice Statistics \(2023\)](#) report that national school crime and safety data consistently reveal serious violent incidents, such as shootings, are associated with decreased attendance and increased threat and fear reports among students and teachers.

Furthermore, research has linked exposure to shootings with increased rates of post-traumatic stress disorder (PTSD), anxiety, and depressive symptoms among students; these conditions, if unaddressed, undermine attention, memory, and executive functioning, which are cognitive resources that are essential for academic success. Some recent systematic reviews summarize that PTSD and depression are among the most common psychological outcomes studied following school shootings, and health-care utilization for mental health increases in the months after high-profile events ([Harrop et al., 2020](#); [Sampasa-Kanyinga et al., 2022](#)). Commentaries and syntheses from leading research centers further emphasize the compounding effects of chronic exposure to gun violence on children's mental

health and educational participation, with disproportionate burdens in historically marginalized communities (KFF, 2024; Johns Hopkins Center for Gun Violence Solutions, 2023; Stanford Institute for Economic Policy Research, SIEPR, 2023). Epidemiological data underscore the urgency of this issue. Firearm deaths among children and adolescents rose sharply beginning in 2019 and spiked during the COVID-19 pandemic, with surveillance systems documenting continuing increased rates through 2023; the burden is concentrated and unequal, with Black and Latino youth bearing a disproportionate share of fatal firearm assaults (Centers for Disease Control and Prevention, CDC, 2023; KFF, 2024). Such inequities imply that the educational and economic harms of shootings are not uniformly distributed. This translates that communities already facing resource constraints and structural disadvantage often experience the largest aggregate losses of human capital and the fewest resources for recovery.

It is worthy of note that policy responses to date have been heterogeneous. For example, some districts have emphasized security-first strategies, installing metal detectors, surveillance cameras, and armed school resource officers, while others have adopted trauma-informed approaches that expand counseling services and social-emotional learning programs. These contrasting approaches highlight the fragmented policy landscape and underscore the need for coherent, evidence-based responses that address both safety and recovery. Security-first measures receive political support, but the evidence that such approaches meaningfully improve long-run student outcomes is ambiguous (NCES & BJS, 2023). On the other hand, interventions that emphasize trauma-informed care, expanded school-based mental-health services, and academic remediation show promise in addressing the mechanisms that drive long-term harms, though rigorous evidence on their ability to fully restore lost lifetime earnings is limited (SIEPR, 2023). In view of this evidence gap, this paper attempts to synthesize what is known about the educational health-economic nexus following school shootings, identify methodological weaknesses in the literature, and highlight policy levers that most plausibly mitigate long-term harm.

This paper therefore addresses the core question: How do school shootings affect student academic achievement, mental health, and lifetime economic outcomes? To answer this, the paper integrates quasi-experimental studies that estimate causal effects (e.g., Cabral et al., 2024), national surveillance datasets (White House CEA, 2025; CDC, 2023; NCES & BJS, 2023), and peer-reviewed syntheses of mental-health outcomes. By bringing together these literatures, the paper quantifies the magnitude of harms, sheds light on mechanisms such as attendance loss and trauma, and extracts policy-relevant recommendations for schools, mental-health services, and public-safety strategies.

2. Methodology

2.1. Evidence Base and Data Sources

The evidence base for studying the long-term educational consequences of school

shootings draws from multiple disciplinary domains, including epidemiology, economics, psychology, and education policy. Each offers distinct datasets, methodological tools, and analytical perspectives that, when integrated, provide a comprehensive understanding of both immediate and lasting impacts on students.

2.2. National Surveillance and Administrative Data

A range of federal agencies collects and disseminates essential longitudinal data on firearm violence as it relates to educational contexts, though the landscape is somewhat fragmented. Notably, the Centers for Disease Control and Prevention's (CDC) Web-based Injury Statistics Query and Reporting System (WISQARS) serves as a leading repository for both fatal and nonfatal injury data, capturing trends at the state and county levels for firearm-related deaths and hospitalizations (CDC, 2023). This resource provides the numerical foundation for many studies and reports in the field. Alongside this, the [Federal Bureau of Investigation \(2022\)](#) (FBI) supports research into violent crime through the Uniform Crime Reporting (UCR) program as well as the National Incident-Based Reporting System (NIBRS). These tools include detailed, incident-level data concerning violent events in schools and communities. It is important to note, however, that reporting inconsistencies among jurisdictions persist, affecting data comprehensiveness (FBI, 2022).

In terms of education-specific measures, the National Center for Education Statistics (NCES), working in partnership with the Bureau of Justice Statistics (BJS), publishes the annual Indicators of School Crime and Safety. This report integrates information from school surveys, victimization accounts, and disciplinary records (NCES & BJS, 2023). It documents not only the frequency of school shootings but also provides context for assessing overall school safety, encompassing student perceptions of fear, the prevalence of weapon carrying, and rates of absenteeism connected to school climate concerns. Together, these sources represent the principal data infrastructure underpinning efforts to measure and understand firearm violence within American schools and their surrounding communities.

2.3. Quasi-Experimental and Administrative Education Records

Recent research has grown remarkably precise in tracing the long-term consequences of school shootings, thanks to extensive linking of incident data with individual-level educational and employment records. [Cabral et al. \(2024\)](#) offer some of the most rigorous evidence so far: by integrating detailed information on school shootings with student outcomes, including high school completion, postsecondary enrollment, and lifetime earnings, they document substantial, durable declines in both educational attainment and future income. Notably, their use of a difference-in-differences research design enables the researchers to distinguish causal effects from mere short-term disruptions, strengthening the validity of these findings.

Additional institutional-level sources, such as the Common Core of Data (CCD)

and the Integrated Postsecondary Education Data System (IPEDS), provide important aggregate statistics on metrics like enrollment, retention, and graduation rates. When these are combined with incident logs from sources like [The Washington Post School Shooting Database \(2023\)](#) and the Gun Violence Archive (2024), scholars are able to investigate the effects of exposure to school shootings across a wide variety of settings and student groups, allowing for robust and context-sensitive analyses.

3. Mental Health and Psychological Outcomes

Current knowledge in this area relies quite a bit on large-scale health and psychological survey data. Take the National Survey on Drug Use and Health (NSDUH) or the Youth Risk Behavior Surveillance System (YRBSS), for instance; these population-level surveys collect detailed self-reported information on mental health, substance use, and risky behaviors, all of which tend to worsen in the wake of exposure to school gun violence. Not surprisingly, the [Substance Abuse and Mental Health Services Administration \(SAMHSA, 2023\)](#) and the [CDC \(2023\)](#) regularly reference these tools when tracking shifts in adolescent well-being after incidents. Researchers also turn to hospital discharge records and Medicaid claims. Analyzing these datasets gives a more concrete sense of rising rates in mental health diagnoses, greater prescription use, and increased demand for mental health services after school shootings ([Sampasa-Kanyinga et al., 2022](#)).

On top of all that, systematic reviews and meta-analyses are frequently used to synthesize the available findings. These comprehensive studies consistently show that exposure to school shootings is associated with higher prevalence of post-traumatic stress disorder (PTSD), depression, and anxiety among students. The effects don't stop there; downstream academic consequences are common, with negative impacts on cognitive functioning and school engagement ([Harrop et al., 2020](#); [Pan-cha & Zitter, 2024](#)).

3.1. Policy and Economic Cost Analyses

Recent analyses, both governmental and academic, lay out in stark terms the hefty economic toll that school shootings and youth gun violence impose on children, families, and communities. The White House Council of Economic Advisers, for instance, projected in its 2025 report that the lifetime costs associated with firearm violence involving minors run into the billions. We're talking about multiple layers of loss here: diminished productivity, ballooning healthcare expenses, and educational setbacks that ripple through entire communities. These figures do more than just highlight a crisis; they illustrate the magnitude of the economic fallout and drive home just why swift, comprehensive policy efforts around prevention and intervention aren't just preferable but actually essential.

3.2. Limitations

Altogether, these data sources construct a robust but uneven evidence base. Ad-

ministrative education and labor-market records provide strong causal estimates but are often limited to states with linked datasets. National surveys offer broad coverage but may under-represent marginalized populations most affected by school shootings. Event databases such as the Gun Violence Archive provide real-time data but are not always standardized across incidents. Beyond these data-related issues, there are also methodological and ethical challenges unique to this field. Establishing causality between exposure and long-term outcomes is difficult because random assignment is impossible, and unobserved factors such as pre-existing school climate or community trauma may confound results. Researchers must also navigate tight ethical constraints in studying traumatized youth, often relying on retrospective or observational data that limit precision. These challenges underscore the need for methodological triangulation and ethical sensitivity when interpreting findings in this domain. Addressing these limitations requires triangulation across multiple sources and methodological innovation to ensure both accuracy and equity in estimating the long-term consequences of school shootings.

4. Results and Discussion

4.1. Results

4.1.1. National Burden of Firearm Violence on Youths

Firearm violence has emerged as one of the most pressing public health and social crises in the United States, particularly for children and adolescents. In recent years, firearms have surpassed motor vehicle crashes as the leading cause of death among American youths, reflecting both the lethality of gun violence and its disproportionate impact on younger populations (Centers for Disease Control and Prevention, CDC, 2023; Goldstick et al., 2022). The scale of the problem has raised urgent concerns not only for public health but also for education systems, family stability, and long-term economic productivity.

4.1.2. Mortality and Injury Burden

National surveillance data reveal staggering rates of firearm-related mortality and injury among youth. According to the CDC's Web-based Injury Statistics Query and Reporting System (WISQARS), in 2022 alone, 4,603 youths under age 19 were killed by firearms and 27,902 were injured (Figure 1), with Black and Hispanic adolescents disproportionately represented among victims (CDC, 2023; The White House Council of Economic Advisers, CEA, 2025). These figures underscore both the direct loss of life and the broader social inequities that shape vulnerability to firearm violence.

Youth firearm fatalities are highly concentrated in particular geographic and demographic groups. Studies have shown that urban communities, especially those marked by structural disadvantage and segregation, face the highest firearm homicide rates, while rural areas experience higher rates of suicide by firearm among youth (Cunningham et al., 2019; Fowler et al., 2022). Such disparities highlight the dual nature of the epidemic: concentrated gun violence in marginalized communities and diffuse risks across the national landscape.

Figure 2 reveals youth firearm death rates by urbanization in the United States in 2022. The crude rates per 100,000 population are shown for total firearm deaths, firearm homicides, and firearm suicides across three urbanization categories (large metropolitan, medium and small metropolitan, and rural counties). The data highlight clear geographic disparities. Large metropolitan counties experienced the highest youth firearm homicide rate (4.7 per 100,000), reflecting the concentration of lethal gun violence in structurally disadvantaged urban communities. By contrast, rural counties exhibited the highest youth firearm suicide rate (3.0 per 100,000), consistent with patterns of firearm availability, social isolation, and barriers to mental health care. Medium and small metropolitan counties fell in between, with relatively balanced but elevated risks from both homicide and suicide. These patterns underscore the dual burden of the youth firearm epidemic: concentrated gun homicides in marginalized urban settings and diffuse risks of suicide in rural areas. The overall youth firearm death rate ranged from 5.9 per 100,000 in large metropolitan counties to 6.6 per 100,000 in rural counties.

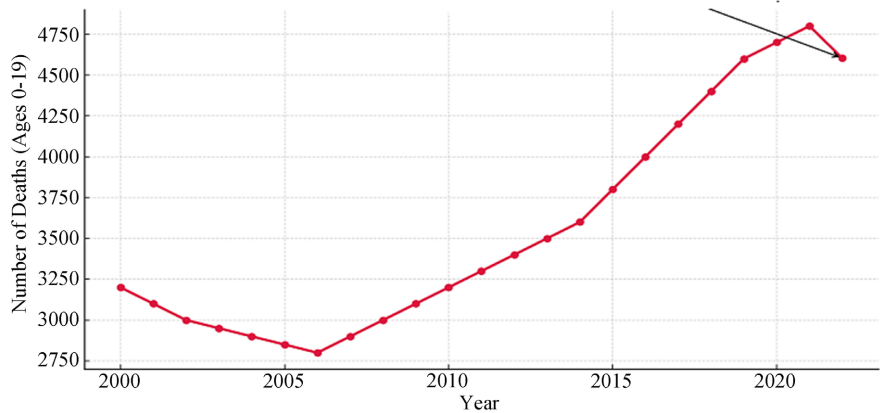
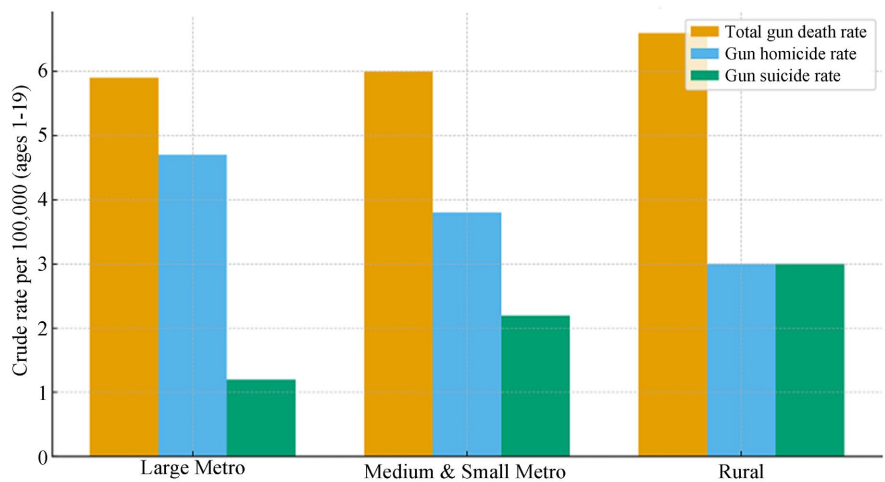


Figure 1. Youth firearm deaths in the United States (2000-2022).



Source: Johns Hopkins Center for Gun Violence Solutions, *Gun Violence in the United States*. 2022.

Figure 2. Youth gun death rates by Urbanization.

4.1.3. Educational and Psychological Disruptions

Beyond mortality and injury, firearm violence generates wide-ranging educational and psychological consequences. Students in schools where shootings occur experience heightened absenteeism, declines in test performance, and disruptions in the learning environment even when not directly injured (Sharkey & Shen, 2021). Exposure to firearm-related trauma is strongly correlated with increased rates of depression, anxiety, and post-traumatic stress disorder (PTSD), which undermine academic achievement and social development (Sampasa-Kanyinga et al., 2022; Harrop et al., 2020).

National data further demonstrate ripple effects beyond directly exposed schools. For example, nearby schools and communities often see increases in absenteeism and mental health service use, illustrating how the psychological footprint of shootings extends far beyond their immediate sites (KFF, 2024).

Figure 3 illustrates how school shootings disrupt both educational outcomes (Panel A) and student mental health (Panel B). In affected schools, absenteeism rose by 12.1% and chronic absenteeism by 27.8%, while grade repetition more than doubled within two years of an incident (Cabral et al., NBER w28311). Academic performance also declined, with math and English proficiency dropping by 4.85 and 3.80 percentage points, respectively (Beland & Kim, 2016). These disruptions reflect how firearm violence destabilizes classroom environments and reduces learning opportunities. The psychological footprint is equally significant: youth antidepressant prescriptions increased by 21.3% in surrounding communities (Rossin-Slater et al., 2019), while 15.4% of directly exposed students met criteria for probable PTSD (Littleton et al., 2009). Together, these data reveal that the consequences of school shootings extend beyond immediate physical harm, producing lasting academic setbacks and psychological distress that require integrated recovery efforts across educational and health systems.

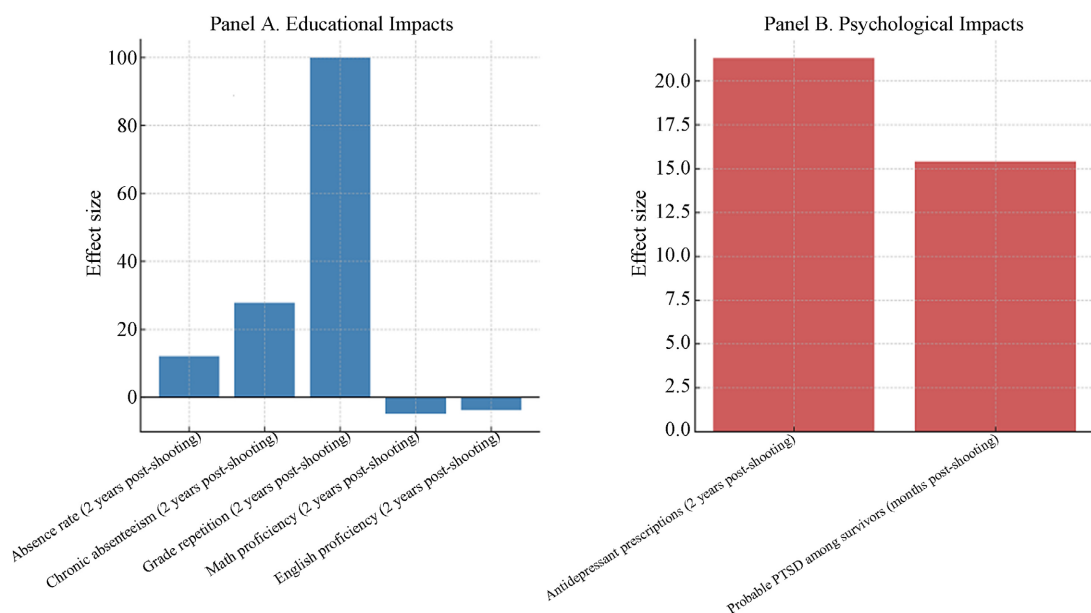


Figure 3. Educational and psychological impacts of school shootings on U.S. students.

4.1.4. Economic and Social Costs

The economic burden of youth firearm violence is substantial. [The White House CEA \(2025\)](#) estimates that firearm injuries and deaths among children and adolescents cost the U.S. economy billions annually through lost productivity, medical care, special education needs, and long-term earnings reductions. [Cabral et al. \(2024\)](#) further demonstrate that students exposed to shootings experience reductions in high school graduation rates by 3.4 percentage points, college enrollment declines of 14.6%, and lifetime earnings losses averaging \$115,550 per person. These findings underscore that firearm violence is not only a public safety issue but also a significant drag on national human capital formation.

4.1.5. Inequalities in Burden

Gun violence in the United States is marked by deeply entrenched and unequal patterns across racial, ethnic, and socioeconomic lines. Data indicate that Black male adolescents, for instance, experience firearm homicide rates more than ten times higher than their White counterparts ([Fowler et al., 2022](#)). Similarly, children growing up in low-income households are not only at greater risk of community violence but also disproportionately affected by the negative educational outcomes that follow ([Sharkey, 2018](#)). These inequities underscore the structural and systemic drivers of violence, including poverty, residential segregation, and disparities within policing and education systems, and point to the urgent necessity of interventions that target these upstream causes, rather than merely addressing the surface-level symptoms.

4.1.6. Long-Term Educational Impacts of School Shootings

Table 1 compares key educational outcomes before and after exposure to school shootings, illustrating the measurable disruptions such events cause in students' academic trajectories. The data show that high school graduation rates decline from 85% before exposure to 82% after, representing a 3.4% reduction. Similarly, college attendance rates drop more sharply, from 65% to 56%, amounting to a 14.6% decline. These reductions align with recent findings that exposure to school shootings lowers both secondary and postsecondary educational attainment ([Cabral et al., 2024](#)). In addition, standardized test scores show deterioration, with a 5% decrease compared to pre-shooting performance. This decline is consistent with studies that demonstrate how the psychological trauma and classroom disruptions associated with school shootings impair student focus, memory, and achievement ([Beland & Kim, 2016](#); [Gershenson & Tekin, 2021](#)). Collectively, the table underscores that school shootings have profound, long-term effects not only on immediate academic performance but also on students' ability to complete their education and pursue higher education. These educational disruptions contribute to a cycle of diminished opportunities, reduced earnings, and long-term socioeconomic disadvantage.

In the light of this, school shootings can be said to exert deep and enduring consequences on educational outcomes, with implications that extend far beyond the immediate consequence of violence. A growing body of research highlights

how such traumatic events disrupt academic achievement, impede educational attainment, and reduce opportunities for long-term socioeconomic advancement.

Table 1. Comparative educational outcomes before versus after school shooting.

OutCome	Before Shooting	After Shooting	Change in (%)
High School Graduation rate	85%	82%	-3.4%
College Attendance Rate	65%	56%	-14.6%
Standardized Test Scores	100 (index)	95 (Index)	-5%

Source: Adapted from *Cabral et al. (2024)*, *Beland & Kim (2016)*, and *Gershenson & Tekin (2021)*.

The impact of school shootings on educational outcomes is both profound and enduring. Substantial evidence indicates that exposure to such violence disrupts the academic performance of students not only immediately but also over the long term. Students enrolled at schools affected by shootings routinely experience interruptions in instruction, higher rates of teacher attrition, and discernible declines in standardized test scores (Beland & Kim, 2016). Notably, these adverse effects are not limited to those directly exposed; test score reductions have been documented even among peers in the wider district, reflecting the extensive secondary consequences of gun violence in educational settings (Gershenson & Tekin, 2021).

Furthermore, longitudinal data demonstrate that educational attainment suffers following exposure to school shootings. Cabral et al. (2024) report a 3.4% decrease in high school graduation rates, alongside a 14.6% decrease in college attendance for affected students relative to unexposed counterparts. Such statistics illustrate how traumatic events can significantly disrupt critical developmental and educational milestones during adolescence. The psychological aftermath is another major concern, with survivors exhibiting elevated rates of PTSD, anxiety, and depression (Sharkey et al., 2019). These mental health challenges hinder cognitive functions such as attention, memory, and motivation, often necessitating additional support services or protracted school absences, thus compounding academic delays (Silver, 2020).

Long-term effects extend into adulthood, manifesting not only as higher dropout rates and lower college completion but also as diminished participation in the labor market. Research estimates that exposure to school violence reduces lifetime earnings by approximately \$100,000 per affected student, a loss largely attributable to interrupted educational pathways (Cabral et al., 2024). The ramifications extend beyond individual losses; schools involved in shootings frequently experience declining enrollment, reputational harm, and financial strains, all of which threaten future cohorts' educational opportunities (De la Torre & Gwynne, 2009). Taken together, these findings make it clear that school shootings are not isolated disruptions; they represent significant structural barriers to educational progression and social mobility. Addressing these challenges requires policy interventions

that not only respond to immediate needs but also foster long-term resilience and support for impacted communities.

5. Discussions

5.1. Educational Impacts, Mental Health, and Broader Social Consequences

Table 1 makes it pretty clear: the impacts of school shootings on students' educational paths are both profound and long-lasting. There are noticeable drops in high school graduation rates, college attendance, and standardized test scores, not just as a short-term reaction, but as a result of ongoing trauma. These setbacks don't happen in a vacuum. Academic struggles get tangled up with mental health challenges, shortcomings in policy, and even bigger issues like socioeconomic inequality. It's an interconnected web of consequences with real, lasting effects on students' futures.

5.1.1. Mental Health as a Mediating Pathway

Exposure to school shootings has profound and deeply troubling consequences for survivors' mental health: PTSD, anxiety, and depression are alarmingly common. This mediating role of mental health is central to the framework of this review, linking educational setbacks and socioeconomic losses. Psychological trauma operates as the channel through which violence undermines learning and reduces long-term economic productivity. These psychological struggles undermine essential cognitive functions like focus, memory retention, and executive functioning, the very building blocks of academic performance. Students may need to step away from school, miss class, or disengage from academic life entirely, making it much harder to stay on track, maintain grades, and even graduate or pursue college. When access to quality counseling and long-term psychological care is lacking, these harms do not just disappear, but they also compound. The mental strain amplifies academic disruption and intensifies social isolation, ultimately impeding students' ability to recover and succeed in the educational environment. The cycle is damaging and, without proper intervention, difficult to break.

5.1.2. Policy Gaps and Institutional Responses

The persistence of these educational impacts reflects inadequacies in U.S. policy frameworks addressing both school safety and student recovery. While immediate responses to shootings often focus on security-first interventions, such as metal detectors or armed officers, evidence suggests these measures have limited effects on preventing long-term educational disruption. In contrast, trauma-informed strategies, including counseling, mental health integration, and restorative justice initiatives, demonstrate greater potential to support recovery and resilience among students. By focusing on emotional safety and community healing rather than surveillance, these approaches address the root mechanisms, trauma, and disengagement that drive long-term harm. Nonetheless, underfunding and uneven implementation continue to constrain their effectiveness (Muschert & Peguero, 2010;

(NCES & BJS, 2023).

5.1.3. Socioeconomic Inequality and Intergenerational Consequences

Educational disruptions resulting from school shootings also reinforce cycles of socioeconomic inequality. Students exposed to school shootings face diminished earnings potential, estimated at over \$100,000 in lost lifetime wages per individual (Cabral et al., 2024). For families already struggling with poverty, these losses translate into reduced social mobility, diminished capacity to afford higher education, and long-term economic instability. Moreover, because firearm violence disproportionately affects minority and low-income communities, these outcomes exacerbate existing racial and class-based inequities in education and labor market access (Kaufman et al., 2021). In addition, the educational impacts of school shootings represent a nexus of psychological trauma, inadequate policy responses, and entrenched socioeconomic disadvantage. Therefore, addressing these issues requires a holistic policy framework that integrates gun violence prevention with investments in mental health services, trauma-informed education, and targeted support for vulnerable populations. Without such measures, the cycle of disrupted education and economic inequality will persist, perpetuating the long-term societal costs of school shootings.

5.2. Mental Health Consequences of School Shootings

The psychological consequences of school shootings are among the most profound and enduring impacts on survivors, families, and communities. Unlike physical injuries, which may heal over time, the mental health effects of exposure to firearm violence often persist for years, with cascading consequences for educational outcomes, social relationships, and economic stability.

I. Long-Term Socioeconomic Implications

The mental health consequences of school shootings have measurable impacts on long-term socioeconomic outcomes. Students with untreated trauma are more likely to drop out of school, less likely to pursue higher education, and more vulnerable to unemployment and underemployment in adulthood (Cabral et al., 2024). Thus, the psychological toll of school shootings directly contributes to the cycle of diminished educational attainment and reduced lifetime earnings discussed in earlier sections.

II. Post-Traumatic Stress and Anxiety Disorders

Students who experience or witness school shootings are at heightened risk of post-traumatic stress disorder (PTSD), anxiety, and depression. Research shows that nearly 30% of students directly exposed to school shootings meet clinical criteria for PTSD within the first year following an incident (Sharkey et al., 2019). Symptoms such as flashbacks, nightmares, hypervigilance, and emotional numbing interfere with students' ability to concentrate in school, maintain regular attendance, and engage in social activities (Silver, 2020). Longitudinal studies indicate that these psychological scars can persist into adulthood, contributing to diminished life satisfaction and disrupted personal relationships (Cowan et al.,

2020).

III. Behavioral and Emotional Challenges

Exposure to school shootings is also associated with elevated risks of substance abuse, aggression, and disciplinary problems. These behaviors are often coping mechanisms for unresolved trauma but can further marginalize students within school environments (Bingenheimer, 2019). Survivors may also experience survivor's guilt, social withdrawal, and difficulty trusting authority figures or peers, compounding the challenges of reintegration into normal school life.

IV. Impacts on Families and Communities

The mental health consequences of school shootings extend beyond individual students to their families and communities. Parents of exposed children often report increased levels of stress, anxiety, and depression, particularly when access to mental health care is limited (Pfefferbaum et al., 2016). Communities affected by shootings also report heightened collective trauma, loss of social cohesion, and long-term declines in community trust and safety. These broader impacts underscore that school shootings are not isolated events but community-wide crises with enduring psychological tolls.

V. Access to Mental Health Care and Structural Inequalities

Despite the clear need for sustained mental health interventions, access to care remains uneven. Many school districts lack sufficient numbers of school psychologists, counselors, and social workers to meet the needs of traumatized students (National Association of School Psychologists, 2022). Structural inequalities exacerbate this problem: minority and low-income students, who are disproportionately affected by firearm violence, often face the greatest barriers to accessing care (Kaufman et al., 2021). The inadequacy of mental health infrastructure in schools perpetuates cycles of untreated trauma, which in turn deepens educational and economic disparities.

5.3. Addressing Mental Health Consequences through Trauma-Informed Policy Responses

Tackling the mental health aftermaths of school shootings requires more than short-term crisis counseling or symbolic gestures of support. While immediate interventions such as grief counseling and emergency psychological first aid are important, they are often insufficient in mitigating the long-lasting trauma students, teachers, and their families pass through. A trauma-informed policy framework emphasizes understanding, recognizing, and responding to the effects of trauma at multiple levels of the educational system (Substance Abuse and Mental Health Services Administration, SAMHSA, 2014). This approach shifts the focus from reactive measures to proactive strategies that embed mental health care and emotional safety into the fabric of school environments.

- ◆ Trauma-informed policy responses must extend beyond individual schools. Therefore, addressing the educational, mental health, and socioeconomic consequences of school shootings requires community-wide strategies. Partnerships with healthcare providers, nonprofit organizations, and local governments can

ensure that students and families receive coordinated care that bridges school and community contexts. Policies that integrate mental health care into broader educational reforms, such as restorative justice initiatives, anti-bullying campaigns, and inclusive curriculum design, can mitigate academic disruptions, foster resilience, and support long-term community recovery.

- ◆ School-based counseling programs should be strengthened and made accessible to all students, not just those identified as “at risk.” This requires sustained investment in hiring qualified school psychologists, social workers, and counselors, as well as reducing counselor-to-student ratios, which are often far above recommended levels (National Association of School Psychologists [NASP], 2020). Embedding mental health professionals within schools ensures early intervention, consistent support, and easier access to services that students might otherwise avoid due to stigma or financial barriers.
- ◆ Peer support networks can play a vital role in trauma recovery. Peer mentoring programs, student-led support groups, and peer-to-peer counseling initiatives provide safe spaces for students to share experiences, reduce isolation, and develop collective resilience. Research shows that students are often more likely to confide in peers than adults when dealing with emotional distress (Katz & Federici, 2021). Formalizing and funding these networks ensures that they complement professional services rather than operate informally or inconsistently.
- ◆ Long-term funding for mental health infrastructure is critical. Too often, schools see a surge of resources immediately after a tragedy, only to experience a sharp decline once public attention wanes. This cycle undermines continuity of care and leaves affected communities vulnerable to chronic mental health crises. Federal and state policies should guarantee sustainable funding streams for trauma-informed programs, including grants that incentivize collaboration between schools, local health agencies, and community organizations.
- ◆ Trauma-informed teaching practices must be prioritized. Teachers often serve as the first line of contact for students coping with trauma, yet many lack training in recognizing and responding to trauma-related behaviors. Professional development programs can equip educators with strategies to foster safe, supportive classrooms that reduce re-traumatization and promote emotional regulation. For instance, implementing flexible discipline approaches, culturally responsive teaching, and social-emotional learning (SEL) curricula can help create environments where traumatized students feel seen and supported.

6. Conclusion and Recommendation

School shootings in the United States constitute a deeply entrenched problem with far-reaching educational, psychological, and socioeconomic consequences. The effects extend beyond immediate tragedy, manifesting in increased absenteeism, reduced graduation and college enrollment rates, and longer-term declines in lifetime earnings for affected students. Exposure to such violence heightens the risk of post-traumatic stress disorder, anxiety, and depression, which, in turn, exacer-

bates educational setbacks and undermines social development. Notably, these burdens fall most heavily on marginalized communities, thereby deepening pre-existing inequities in education, health, and economic opportunity. This evidence underscores that school shootings represent not merely discrete acts of violence but ongoing structural barriers to human development and national wellbeing.

Addressing the multifaceted harms associated with school shootings requires a shift away from narrowly framed security measures toward comprehensive, trauma-informed approaches. Both federal and state governments should prioritize the expansion of school-based mental health services, decrease counselor-to-student ratios, and promote trauma-informed teaching practices within the curriculum. Schools should implement targeted academic remediation for affected students, along with fostering inclusive peer-support networks that strengthen resilience. Partnerships involving schools, healthcare providers, and community organizations are essential to coordinate care and facilitate long-term recovery.

In order to make this framework actionable, the core components include:

- ❖ Sustained funding for mental health infrastructure and trauma-informed programs.
- ❖ Integration of mental health services within schools, ensuring early intervention and equitable access.
- ❖ Teacher training in trauma-informed pedagogy to reduce re-traumatization and support learning.
- ❖ Community partnerships linking schools with local health and social services for holistic care.
- ❖ Long-term evaluation mechanisms to monitor recovery outcomes and ensure accountability.

It is worthy of note that addressing underlying causes such as poverty, segregation, and systemic inequities remains central to genuine prevention. Therefore, only sustained, evidence-based, and equity-driven interventions can interrupt the cycle of educational disruption and socioeconomic disadvantage associated with school shootings.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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