



Youth Data & Intervention Initiative

Identifying and Intervening with Youth at Risk for Gun Violence

October 2022

NICJR 
National Institute for
Criminal Justice Reform

INTRODUCTION

The **National Institute for Criminal Justice Reform (NICJR)** works to reduce violence by supporting the implementation of Gun Violence Reduction Strategies in several jurisdictions across the country, providing technical assistance and training, conducting research and analysis, and managing the **National Offices of Violence Prevention Network (NOVPN)**.

The National OVP Network (NOVPN) serves as a learning community with the goal of significantly increasing the expertise and effectiveness of local Offices of Violence Prevention (OVPs).¹ The Network provides trainings and presentations on effective violence reduction practices, coordinates cross-OVP learning exchanges and site visits, offers leadership and management development, and supports OVPs in growing capacity in data collection and reporting, fund development, and communications/media relations. The network also supports the creation of new OVPs in jurisdictions interested in developing such agencies. Launched in 2021 with 21 participating OVPs, there are now 35 jurisdictions in the National OVP Network.

With support from the Walmart Foundation through the Walmart.org Center for Racial Equity, NICJR will launch a Youth Data and Intervention Initiative (YDII) in NOVPN member cities. YDII is a research, data tracking, and intensive intervention initiative that seeks to prevent youth in their early teens from becoming involved in gun violence by the time they reach young adulthood

Utilizing interviews and data from law enforcement, probation and parole, and community-based organizations, NICJR has conducted detailed analyses of gun violence in several cities throughout the country. Although youth account for only a small proportion of the population involved in nonfatal injury shootings and homicides,² YDII is based on the premise that risk factors for gun violence were likely already present during the pre-teen and adolescent years. If specific experiences and measurable characteristics can predict who will become a victim or suspect in a shooting later in life, these data can be used to guide intervention strategies to prevent the violence.

¹ These offices are also known by other names, such as the Offices of Neighborhood Safety.

² https://nicjr.org/wp-content/uploads/2022/05/Washington-GVR-Report_V13_050622.pdf

But what risk factors did the young adult shooting suspect possess at the age of 13?

NICJR will select at least five jurisdictions to conduct data analysis and a longitudinal cohort assessment of young people between the ages of 18-25 who have been convicted of homicide or attempted homicide. The study will trace their backgrounds and contacts with the juvenile justice, child welfare, education, and other systems and attempt to identify a common pattern of combined risk factors that predict future gun violence.

After the completion of the data analysis and longitudinal assessment to identify the series of risk factors that is predictive of future gun violence involvement, the goal of YDII is to help jurisdictions track these risk factors in youth in real time, most likely through the school system. When any young person reaches the threshold of this series of risk factors, the project team will engage that young person and their family in an array of intensive community-based services and supports.

Based on current research findings and NICJR's experience, below is a hypothetical case of a thirteen-year-old in eighth grade who exhibits a series of risk factors that are likely to have him categorized as "high risk" for gun violence involvement as a young adult.

PROFILE: The 13-year-old

- Has ten or more unexcused absences from school in a single semester;
- Has an Individualized Education Plan (IEP) or some type of learning disability;
- Has been suspended from school for fighting;
- Is part of a family that has had five or more child welfare investigations opened for neglect;
- Was recently arrested for auto theft;
- Resides in a violent, impoverished neighborhood.




Such a student would be flagged by the YDII system. Staff from various government agencies (including public schools, child welfare, behavioral health departments, etc.) as well as community-based agencies would meet with the youth and their family to develop an intensive intervention plan. For the family, this may include the assignment of a family support liaison, family counseling, and even financial assistance. Support for the youth may include the assignment of an intensive life coach, educational support, cognitive behavioral therapy or other mental health services, and, when necessary, therapeutic and positive youth development-oriented residential options. Intensive intervention plans are individualized on a case-by-case basis and may require other types of interventions.

BACKGROUND

For many years, NICJR and its partner agencies throughout the country who are members of the National OVP Network have strategized about the need for not only effective intervention efforts to reduce gun violence in the short term, but also data-driven efforts to precisely identify younger people who possess certain key risk factors and connect them with needed prevention programs.

In November 2020, the Washington, D.C. Criminal Justice Coordinating Council (CJCC) issued its [Root Cause Analysis Report](#), which examined the risk factors that lead youth into the juvenile justice system. CJCC's research revealed that youth who are involved in the juvenile justice system have significantly higher rates of:

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- Homelessness;
 - Temporary Assistance for Needy Families (TANF) and Medicaid participation;
 - Removal from foster care placement;
 - Reported childhood abuse and neglect;
 - Excused and unexcused school absences;
 - Suspensions;
 - Grade retention;
 - Changed schools;
 - Comorbid externalizing and internalizing disorders;
 - Externalizing only disorders;
 - Psychotic disorders;
 - Specific developmental learning and motor disorders;
 - Individualized Educational Plans (IEP);
 - Violent crime incidents within a ¼ mile of their residence and/or a residence located in gun violence “hot blocks.”

CJCC's findings suggest that educational indicators have the largest impact on justice system involvement. Consistent with other research, CJCC also found that peer influence, future uncertainty, and the absence of future expectations were all strongly correlated with youth engagement in delinquent behavior.

RISK FACTORS FOR GUN VIOLENCE

Risk factors for gun violence refer to the experiences, circumstances, characteristics, and other aspects of individuals and their environments that raise the probability of the individual being involved in violence.

Demographic Factors

The Bureau of Justice Statistics conducted an analysis of homicide trends in the United States over a 28 year period between 1980-2008. The study found that the large majority of both gun violence perpetrators (92.1%) and gun violence victims (82.6%) were male³ and primarily between the ages of 18-34.⁴ The study also identified major racial disparities in its analysis. However, it is important to note that the study failed to differentiate Latinos from Whites, a common challenge found in justice system data reporting. The study found that 56.9% of perpetrators and 51.4% of victims were reported as Black, and 41.2% of perpetrators and 46.5% of victims were categorized as White.⁵ Black males between the ages of 18-24 had the highest homicide victimization and offending rates;⁶ they are also 14 times more likely than their White peers to be the victim of a gun homicide.⁷ Gun homicides are also the primary cause of death for Black youth.⁸



³ <https://bjs.ojp.gov/content/pub/pdf/htus8008.pdf>

⁴ Id.

⁵ <https://bjs.ojp.gov/content/pub/pdf/htus8008.pdf>

⁶ Id.

⁷ <https://everytownresearch.org/report/the-impact-of-gun-violence-on-children-and-teens/>

⁸ <https://www.nejm.org/doi/full/10.1056/NEJMc2201761>

Adverse Childhood Experiences (ACEs)

“Potentially traumatic events that occur in childhood (0-17 years) such as experiencing violence, abuse, neglect, substance use problems, and mental health problems.” - Centers for Disease Control and Prevention

Adverse Childhood Experiences (ACEs)

Many risk factors are related to events known as adverse childhood experiences (ACEs), which can often affect an individual’s future involvement in violence as either a victim or perpetrator. ACEs are characterized by the Centers for Disease Control and Prevention (CDC) as “potentially traumatic events that occur in childhood (0-17 years) such as experiencing violence, abuse, neglect, substance use problems, and mental health problems.”⁹ These events are linked to negative health outcomes and a lack of opportunities later in life.

Research shows that ACEs have a significant and direct impact on brain development of adolescents: stress regulation,¹⁰ decision making, executive functioning and executive processing of the brain are all impaired.^{11,12} In a study of over 17,000 Kaiser Permanente members, individuals who experienced more than four ACEs were at an 800% increased risk for alcoholism, drug abuse, and depression; a 400% increased risk for smoking; and a 150% increased risk for obesity.¹³ Many of these health-related factors, in turn, affect the likelihood of future violence. In a meta-analysis of studies conducted by the Columbia Mailman School of Public Health, ACEs were directly correlated with a significantly increased risk of involvement in the juvenile justice system as well as an increased likelihood of reoffending.¹⁴

⁹ https://www.cdc.gov/violenceprevention/aces/fastfact.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fviolenceprevention%2Facestudy%2Ffastfact.html

¹⁰ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6131660/>

¹¹ <https://prc.springeropen.com/articles/10.1186/s41155-018-0107-y>

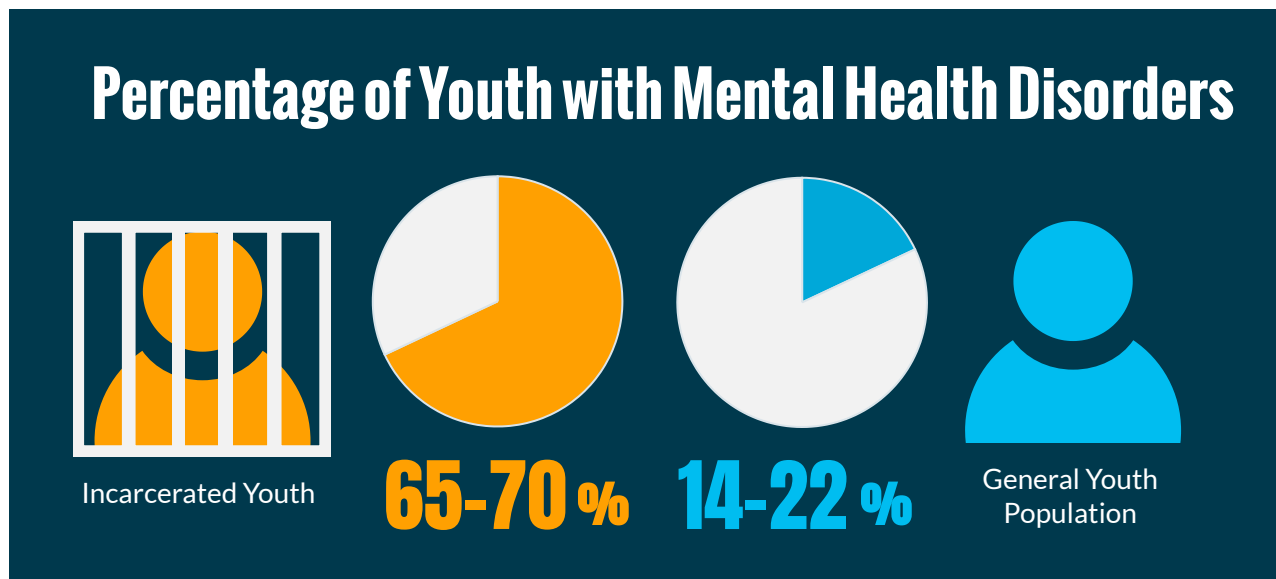
¹² <https://link.springer.com/article/10.1007/s10643-017-0869-3>

¹³ <https://pubmed.ncbi.nlm.nih.gov/9635069/>

¹⁴ https://www.prisonpolicy.org/scans/Prevalence_of_ACE.pdf

Mental Health Disorders

Though causality is difficult to ascertain, mental health disorders in youth are correlated with justice system involvement.¹⁵ Youth in juvenile detention centers have consistently higher rates of mental health disorders when compared to their peers;¹⁶ approximately 65-70% of justice involved youth have been diagnosed with mental health disorder, compared just 14-22% of youth in the general population.¹⁷ Moreover, youth in detention centers tend to underreport symptoms and potentially problematic behavior. The most frequent disorders occurring in system-involved youth are substance use disorder, conduct disorders, major depressive disorder, and attention deficit hyperactivity disorder.¹⁸ Additionally, characteristics in male youth such as hyperactivity, aggressiveness, concentration issues, antisocial behavior, restlessness, and risk-taking behaviors were correlated with future violence.¹⁹



¹⁵ <https://ojjdp.ojp.gov/model-programs-guide/literature-reviews/intsection-between-mental-health-and-the-juvenile-justice-system.pdf>

¹⁶ <https://files.eric.ed.gov/fulltext/EJ1157674.pdf>

¹⁷ <https://www.ncsl.org/documents/cj/jjguidebook-mental.pdf>

¹⁸ <https://files.eric.ed.gov/fulltext/EJ1157674.pdf>

¹⁹ <https://www.ojp.gov/pdffiles1/ojjdp/179065.pdf>



Substance Use

Substance use at individual, family, and community levels during adolescence has been found to be a significant risk factor for gun violence. A Cities United meta-analysis found that for children ages six to 11, substance abuse is a strong predictor of violence perpetrated after 15 years of age.²⁰ This increased risk of adolescent gun homicide involvement due to substance use may be the result of potential cognitive impairment as well as an insufficient ability to recognize risky circumstances.²¹

Being present in an environment where alcohol or drugs are accessible, even if there is no individual consumption, increases an adolescent's risk for gun violence involvement. Caregiver or parental substance use is also related to poor life outcomes for youth such as violence, childhood maltreatment,²² and adolescent substance use.²³ As such, parental substance use could affect adolescent violence due to decreased supervision and a troublesome home environment.²⁴ On a community level, the increased density of liquor stores was strongly associated with violent behavior in adolescents as exhibited by a study encompassing 1,050 adolescents.²⁵

²⁰https://cdn.citiesunited.org/files/Cities_United_Interventions_for_Reducing_Violence_and_its_Consequences_for_Young_Black_Males_in_America_August_20173fd05d6a-b79a-495c-a892-de490ddddd00a.pdf

²¹ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5567686/>

²² <https://pubmed.ncbi.nlm.nih.gov/8985609/>

²³ <https://pubmed.ncbi.nlm.nih.gov/11015524/>

²⁴ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5567686/>

²⁵ <https://pubmed.ncbi.nlm.nih.gov/20857328/>



Homelessness

Adolescents experiencing homelessness are at an elevated risk for involvement in the criminal justice system²⁶ According to a study conducted by the Coalition for Juvenile Justice, approximately one in ten young adults ages 18 to 24 experience homelessness in the United States; of those, close to 50% have been incarcerated.²⁷

Often, a juvenile record is a major roadblock for housing and can contribute to a cyclical issue of homelessness and delinquency. Many youth experiencing homelessness lacked any form of identification, and faced barriers to residing with family such as difficulty meeting probationary terms²⁸ or child maltreatment.²⁹ Inadequate housing also results in school absenteeism and increased mental health issues, which are both associated with violence.³⁰

²⁶ <https://pubmed.ncbi.nlm.nih.gov/24337524/>

²⁷ <http://www.juvjustice.org/sites/default/files/resource-files/Implementing%20Change%20-%20Juvenile%20Justice%20and%20Youth%20Homelessness.pdf>

²⁸ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5726419/>

²⁹ http://www.juvjustice.org/sites/default/files/resource-files/Homeless%20and%20Runaway%20Youth_0.pdf

³⁰ <https://www.icphusa.org/commentary/absenteeism/>

Weak Social Ties

Longitudinal studies have found that adolescents who engage in antisocial behavior and endure antisocial behavior from peers are more likely to be engaged in future gun violence.³¹ In youth ages 12-14, weak social connections and antisocial peers were the strongest predictors of gun violence.³² Delinquent peer relations are also associated with other factors which can increase the risk of future gun violence, such as substance use and firearm carrying.³³ A report on youth violence published by the Office of the Surgeon General explains, “Peer groups are all-important in adolescence. Adolescents who have weak social ties—that is, who are not involved in conventional social activities ... are at high risk of becoming violent, as are adolescents with antisocial, delinquent peers.”³⁴

Gang/Group Membership

Adolescent gang membership has a significant effect on future violence.³⁵ Youth involved with gangs are more likely to commit nonviolent and violent offenses when compared with non-gang involved youth.³⁶ Rivalries among gangs may be connected to retaliatory or expressive violence.³⁷ Gang membership also increases the risk of violent victimization.³⁸

Additional characteristics that influence gang involvement during adolescence include: disciplinary issues at school, low socioeconomic status, substance use,³⁹ and gun ownership, with gun ownership being highly influential. An adolescent boy who owns a gun is at a fivefold increased risk of gang involvement.⁴⁰ Furthermore, gang influence can extend even after an adolescent leaves a gang. Rates of criminal activity remained high among previously gang-involved youth, particularly for robbery and drug-related offenses.⁴¹

³²https://cdn.citiesunited.org/files/Cities_United_Interventions_for_Reducing_Violence_and_its_Consequences_for_Young_Black_Males_in_America_August_20173fd05d6a-b79a-495c-a892-de490ddd00a.pdf

³³ Id.

³⁴ <https://www.ncbi.nlm.nih.gov/books/NBK44293/>

³⁵ <https://popcenter.asu.edu/content/gun-violence-among-serious-young-offenders-0>

³⁶ <https://ojjdp.ojp.gov/sites/g/files/xyckuh176/files/jjbulletin/9808/youth.html>

³⁷ <https://popcenter.asu.edu/content/gun-violence-among-serious-young-offenders-0>

³⁸ http://www.antonioacasella.eu/restorative/Peterson_2004.pdf

³⁹ <https://ojjdp.ojp.gov/sites/g/files/xyckuh176/files/jjbulletin/9808/youth.html>

⁴⁰ <https://ojjdp.ojp.gov/sites/g/files/xyckuh176/files/action/sec3.htm#note15>

⁴¹ <https://ojjdp.ojp.gov/sites/g/files/xyckuh176/files/jjbulletin/9808/youth.html>

Neighborhood Dynamics: Poverty and Social Disorganization

Residents in areas known as “hot blocks”—blocks with the highest rates of gun violence in a community—are 1.44 times more at risk of being involved in gun violence than residents living outside of hot blocks.⁴² Hot blocks are usually geographically associated with low-income, communities of color.⁴³ Family poverty and community-level socioeconomic disadvantage are also contributing factors to youth gun violence.⁴⁴

Youth violence is also more prevalent in neighborhoods that are experiencing social disorganization⁴⁵—a state characterized by a breakdown of informal social control and a lack of social cohesion/collective efficacy.⁴⁶ Neighborhood social cohesion, or the “network of relationships as well as the shared values and norms of residents in a neighborhood,”⁴⁷ is the foundational principle of collective efficacy, which can be understood as a community’s shared willingness to intervene and capacity to enforce norms and values.⁴⁸ A longitudinal study examining Chicago neighborhoods and youth delinquency found that among neighborhoods with low levels social cohesion and collective efficacy among residents, members of the community are less inclined to intervene and stop events such as truancy involving children in the neighborhood.⁴⁹ Conversely, strong social ties and high social cohesion may offer protection against community violence.⁵⁰

Neighborhood disorganization⁵¹ and concentrated socioeconomic disadvantage can both affect firearm violence by increasing a youth’s likelihood of having school conduct issues and antisocial relationships with peers.⁵² A study funded by the National Institutes of Health found that, “children in impoverished families... [and their] parents may have fewer cognitive, emotional, and physical resources.”⁵³

⁴² https://cjcc.dc.gov/sites/default/files/dc/sites/cjcc/CJCC%20Root%20Cause%20Analysis%20Report_Companded.pdf

⁴³ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5296702/>

⁴⁴ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7527255/>

⁴⁵ <https://www.tandfonline.com/doi/abs/10.1080/15374416.2019.1644646>

⁴⁶ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7101464/>

⁴⁷ <https://bmcpublikealth.biomedcentral.com/articles/10.1186/s12889-021-11633-8>

⁴⁸ <https://www.ojp.gov/pdffiles1/nij/249823.pdf>

⁴⁹ <https://www.nytimes.com/1997/08/17/us/study-links-violence-rate-to-cohesion-in-community.html>

⁵⁰ <https://journals.sagepub.com/doi/abs/10.1177/0272431616675974>

⁵¹ <https://journals.sagepub.com/doi/abs/10.1177/00224278211004667>

⁵² <https://pubmed.ncbi.nlm.nih.gov/31393169/>

⁵³ <https://www.tandfonline.com/doi/abs/10.1080/15374416.2019.1644646>

School Absenteeism

The United States Department of Education's Office for Civil Rights reported that approximately seven million students were chronically absent in the 2015-2016 school year.⁵⁴ Chronic absenteeism is generally defined as missing 10% or more of mandatory school days and is associated with a host of negative impacts, including but not limited to poor academic performance, substance use, poverty, repeating a grade, dropping out of high school, and criminal justice system involvement.⁵⁵

The Office of Juvenile Justice and Delinquency Prevention's Program of Research on the Causes and Correlates of Delinquency found school absenteeism or truancy may also predict later violent offenses.⁵⁶ A longitudinal study on school attendance also found that there is a "three-way interaction between attendance, self-regulation, and sex, [such that] the strength of the relation between lack of control and criminal outcomes was moderated by school attendance."⁵⁷

Dropping out of high school is strongly correlated with the likelihood of incarceration in prison. Approximately 40% of men in state and federal prison did not graduate high school.⁵⁸ Black males born between 1975-1979 who dropped out of high school had a 70% likelihood of imprisonment between the ages of 30 to 34, while their White counterparts had less than a 20% likelihood of imprisonment.⁵⁹



⁵⁴ <https://www2.ed.gov/about/offices/list/ocr/docs/2013-14-first-look.pdf>

⁵⁵ <https://www.sciencedirect.com/science/article/abs/pii/S0145213417304507>

⁵⁶ <https://www.ojp.gov/pdffiles1/ojdp/188947.pdf>

⁵⁷ <https://journals.sagepub.com/doi/10.1080/016502599383667>

⁵⁸ <https://bjs.ojp.gov/content/pub/pdf/ecp.pdf>

⁵⁹ <https://www.brookings.edu/research/ten-economic-facts-about-crime-and-incarceration-in-the-united-states/>



Childhood Abuse/ Neglect

Childhood abuse is defined by the Federal Child Abuse Prevention and Treatment Act as “any recent act or failure to act on the part of a parent or caretaker which results in death, serious physical or emotional harm, sexual abuse or exploitation.”⁶⁰ Neglect and/or abuse can lead to a range of negative outcomes including homelessness, mental health issues, substance use, and complex trauma.⁶¹

Additionally, childhood abuse, neglect, and family violence are associated with increased delinquent behavior and increased involvement in the justice system.^{62, 63} Between 9% and 29% of adolescents previously involved with Child Protective Services (CPS) are later involved in the juvenile justice system.⁶⁴ A longitudinal study known as the Lehigh Study tracked a group of 450 children from early childhood to adulthood. The researchers found that “childhood abuse increased the risk of adulthood crime by promoting antisocial behavior during childhood and adolescence, followed by the formation of relationships with antisocial romantic partners and peers in adulthood.”⁶⁵

⁶⁰ <https://www.hhs.gov/answers/programs-for-families-and-children/what-is-child-abuse/index.html>

⁶¹ <https://aifs.gov.au/cfca/publications/effects-child-abuse-and-neglect-adult-survivors>

⁶² <https://journals.sagepub.com/doi/10.1177/0022427801038004001>

⁶³ <https://pubmed.ncbi.nlm.nih.gov/29241115/>

⁶⁴ Id.

⁶⁵ <https://nij.ojp.gov/topics/articles/pathways-between-child-maltreatment-and-adult-criminal-involvement>



Juvenile Justice System Involvement

The previously cited study conducted by Cities United reported that for children ages six to 11, the strongest predictor of perpetrating violence after 15 years of age is a prior youth offense.⁶⁶ Between the ages of 15 and 18, general offenses still serve as a moderate predictor of violence, but the strength of prediction is lower when compared to general offenses before the age of 15.⁶⁷ Carrying a gun is linked to gun violence, and among juvenile justice-involved males, a majority report carrying guns.⁶⁸ A longitudinal cohort study examining firearm use in youth in a temporary juvenile detention center over a 16-year period found that 85% of males and 63% of females had previous firearm involvement, defined as having access to, being injured or threatened by, or using a firearm.⁶⁹ A prior history of gun violence, including nonfatal injury shootings, also predicts future gun violence. In a longitudinal study examining justice-involved youth, 25% of participants self-reported a history of gun violence, and 16.3% self-reported additional gun violence involvement over a period of seven years following the initial assessment.⁷⁰

⁶⁶https://cdn.citiesunited.org/files/Cities_United_Interventions_for_Reducing_Violence_and_its_Consequences_for_Young_Black_Males_in_America_August_20173fd05d6a-b79a-495c-a892-de490ddd00a.pdf

⁶⁷ <https://www.ncbi.nlm.nih.gov/books/NBK44293/>

⁶⁸ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8925316/>

⁶⁹ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7862991/>

⁷⁰ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8925316/>

CONCLUSION

Though more research is needed, it is clear that numerous risk factors place specific young people at much higher risk of future involvement in gun violence. Pre-teens and early adolescents who possess a combination of certain risk factors are significantly more likely to be victims or perpetrators of shootings as young adults.

NICJR will work with jurisdictions within the National OVP Network to conduct detailed analyses of the specific set of risk factors that predict which youth are at the highest risk of future gun violence. NICJR will then work with each jurisdiction to develop a real-time data tracking system that allows school and social service officials to be alerted when a young person reaches the threshold of the combined number and type of risk factors that place them in the very high risk category. These young people and their families will then be connected to the appropriate array of effective, intensive intervention services.



Goals of YDII

The ultimate goals of YDII are to interrupt the cycle of violence, improve the outcomes for youth, and significantly reduce the number of shootings and homicides in each participating jurisdiction.





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Funding from the Walmart Foundation



The research included in this report was made possible through funding from the Walmart Foundation. The findings, conclusions, and recommendations presented in this report are those of NICJR alone, and do not necessarily reflect the opinions of the Walmart Foundation.