Children's Advocacy Institute

# Pathways to Prevention: The Intersection of Child Maltreatment, Child Welfare, and Gun Violence

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CHILDREN'S ADVOCACY INSTITUTE

University of San Diego
SCHOOL OF LAW

# About this Report

The Children's Advocacy Institute (CAI) works to improve the safety and well-being of children and hold child-serving systems accountable for harms they cause. CAI typically engages in policy advocacy on behalf of children who have been abused or neglected and are involved with the child welfare system. When presented with the opportunity to examine the issue of gun violence, our expertise in the area of maltreatment and child welfare opened the door to exploring children as not only victims of gun violence, but as a population that could benefit from interventions aimed at preventing perpetration as well. It is with this goal of protecting children and their futures that CAI presents this white paper.

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# Table of Contents

# EXECUTIVE SUMMARY

Gun violence in the United States has become a rapidly growing public health crisis.[1] In 2021, the United States reached a deeply troubling record of 48,830 gun deaths. This sobering statistic includes almost 21,000 gun homicides — the most ever recorded. Also in 2021, the firearm suicide rate reached its highest level since the Centers for Disease Control (CDC) began tracking these deaths in 1968.[2]

Today, firearm injury is the leading cause of death for children ages 1-19.[3] Among children and teens, homicide is the most common form of gun-related death.[4] Suicide ranks as the second leading cause of death among adolescents, with firearms accounting for a staggering 44% of suicide deaths among adolescents between the ages of 14 and 18 between 2015 and 2020.[5] Further, pronounced disparities are evident, as Black children experience significantly higher rates of firearm mortality than their White peers.[6]

Given the alarming impact of gun violence today, it is crucial to address this issue through a public health approach. Key to this approach is the identification of risks and patterns, enabling the development of valuable data-driven interventions.[7] To that end, this white paper explores the question of whether child maltreatment and experience within the child welfare system contribute to the risk of perpetrating gun violence against others or oneself later in life. An extensive literature review was undertaken to answer that question, guided by the following research questions:

On the **Connection Between Child Maltreatment and Gun Violence**: (a) Is there a connection between experiencing childhood maltreatment and later perpetrating gun violence on others?  (b) Is there a connection between experiencing child maltreatment and later perpetrating gun violence on oneself (i.e. suicide by firearm)?

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[1] American Medical Association. (2016, June 14). AMA calls gun violence "a public health crisis." AMA. https://www.ama-assn.org/press-center/press-releases/ama-calls-gun-violence-public-health-crisis

[2] Johns Hopkins Bloomberg School of Public Health - Center for Gun Violence Solutions. (June 2023). *U.S. Gun Violence in 2021: An accounting of a public health crisis. An annual report from the Johns Hopkins Center for Gun Violence Solutions.* Retrieved on April 29, 2024 from https://publichealth.jhu.edu/sites/default/files/2024-01/2023-june-cgvs-u-s-gun-violence-in-2021-v3.pdf

[3] Johns Hopkins, p. 6.

[4] Johns Hopkins, p. 12.

[5] Kemal, S., Krass, P., Brogan, L., Min, J., Quarshie, W. O., & Fein, J. A. (2023). Identifying suicide risk in adolescents with firearm access: Screening in the emergency department. Journal of Adolescent Health, 23(1), p. 165. https://doi.org/10.1016/j.acap.2022.05.011

[6] Roberts, B. K., Nofi, C. P., Cornell, E., Kapoor, S., Harrison, L., & Sathya, C. (2023). Trends and disparities in firearm deaths among children. Pediatrics, 152(3), e2023061296, p.4.

[7] Johns Hopkins, p. 26.

On the **Impact of Child Welfare System:** Does involvement in the child welfare system, especially placement in out-of-home care (i.e. foster care), impact any relationship between childhood maltreatment and gun violence?

On **Mediating Factors:** Are there factors that strengthen or weaken any relationship between childhood maltreatment and subsequent perpetration of gun violence?

After reviewing and analyzing the literature, we conclude that child maltreatment is likely a risk factor for gun violence perpetrated against self and others. Although the research exploring a direct connection between child maltreatment and gun violence is limited in quantity and scope, there is a well-established connection between child maltreatment and the risk of violent crime and suicidality. The additional research indicating that child maltreatment increases the risk of weapon-carrying and threats with guns suggests an increased likelihood of gun use among maltreated individuals. Finally, research specifically indicating that family-of-origin violence increases gun carrying in adolescence and intimate partner violence in adulthood — a circumstance that has a high rate of gun use—suggests a connection between maltreatment and later gun violence.

Furthermore, involvement in the child welfare system may present an additional risk factor, although the research on this connection is even more limited and less conclusive. Nevertheless, existing research suggests that those who experience the child welfare system tend to experience increased negative outcomes.

Finally, the clear connection between child maltreatment and suicide and the clear connection between access to firearms and suicide indicate significant risk among maltreated youth who have access to firearms. Although some research indicates that attempts at suicide with firearms is less frequent among maltreated youth than other forms of attempted suicide, it is well-established that access to a firearm increases the risk of the most lethal form of suicide attempt.

These findings suggest that preventing maltreatment, addressing risk factors among maltreated youth in and outside of the child welfare system, and preventing access to firearms among maltreated youth may be effective in reducing the incidence of gun violence among those who have experienced child abuse, neglect, and family violence. However, it is vital to address these concerns without casting unwarranted suspicion on maltreated youth, the vast majority of whom navigate their challenges with resilience and do not engage in violent behaviors. The findings, research, and implications summarized below can provide a starting point for promoting positive outcomes for maltreated youth at risk.

| Gun Violence Perpetrated Against Others | | |
| --- | --- | --- |
| **Key Findings** | **Research** | **Implications** |
| Child maltreatment is likely a risk factor for later perpetration of gun violence. | There is well-established evidence that:<br><br>• Child maltreatment increases the risk of delinquency, criminality, & violent crime<br>• Physical and sexual abuse increase the risk of chronic offending (sexual abuse may have the most significant impact)<br>• Trauma during childhood is a key risk factor for perpetration of violence<br><br>Additional studies have found:<br><br>• Witnessing domestic violence is strongly predictive of violent behavior, violent crime, and gun arrests<br>• Childhood maltreatment in the form of physical abuse, sexual abuse, and witnessing domestic violence (DV) increases the risk of threatening another with a gun or weapon.<br>• Having been physically abused (and/or) witnessing DV at home increases the risk of exposure to gun violence (GV), and exposure to GV increases the risk of perpetrating gun use in the future.<br>• Youth who commit firearm violence are more likely to have experienced child welfare investigations and substantiation of maltreatment.<br>• Family of origin violence increases the risk of family violence in adulthood<br>• Child maltreatment may predict intimate partner violence (IPV) perpetration | ✓ Preventing child maltreatment may help reduce gun violence<br>✓ Screening maltreated youth for trauma and violence risk, may help identify those at risk of gun violence.<br>✓ Engaging in gun violence prevention efforts with maltreated children may help reduce gun violence<br>✓ Special attention should be paid to interventions for children who have witnessed domestic violence<br>✓ Interventions focused on the prevention of IPV may be valuable for youth who have witnessed DV<br>✓ Trauma-informed interventions involving behavioral therapy models may help reduce the risk of gun violence among maltreated youth.<br>✓ Enhancing protective factors shown to reduce youth violence may help reduce the risk of gun violence among maltreated youth |
| Abuse (physical and sexual) and any history of physical violence within a family may increase the likelihood of weapon-carrying | There is well-established evidence that:<br><br>• Weapon carrying is a risk factor for perpetrating violence<br>• There is an association between physical and/or sexual abuse and adolescent weapon carrying, mediated by a perceived need for self-defense<br><br>Additional studies have found:<br><br>• History of physical violence in the family increases the risk of gun carrying in adolescence<br>• Early childhood sexual abuse in girls may be related to weapon-carrying<br>• Adults who were exposed to DV as a child were more likely to routinely carry a gun | ✓ Interventions with sexually abused girls that incorporate personal safety alternatives may reduce weapon carrying<br>✓ Public and community-based programs enhancing protective factors and addressing a youths' sense of safety may help reduce weapon carrying<br>✓ Interventions focused on the effects of DV may reduce weapon carrying in adulthood |

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| Involvement in the child welfare system may be a risk factor for gun violence | There is well-established evidence that:<br><br>• Youth involved in the child welfare system are more likely to become involved in the juvenile justice system than youth in the general population<br>• Out-of-home placement and placement instability increases the risk of juvenile justice (JJ) involvement<br><br>Additional studies have found:<br><br>• Youth who commit firearm violence are more likely to have experienced child welfare investigations, substantiation of maltreatment, and out-of-home placement.<br>• Out-of-home placement may increase the risk of gun violence | ✓ Screening children for trauma symptoms and risk of violence within the child welfare system can help identify youth who would benefit from intervention<br>✓ Programs to prevent the need for child welfare involvement may help reduce the risk of violence among maltreated youth<br>✓ Violence and gun violence prevention interventions for youth involved in the child welfare system may help reduce the risk of gun violence<br>✓ Therapeutic foster care for maltreated youth with serious emotional or behavioral issues may help reduce violent outcomes among youth in care.<br>✓ Programs and services that enhance protective factors among youth in care can buffer the risks associated with maltreatment |
| The relationship between child maltreatment and violence/gun violence is mediated by numerous factors | There is evidence that:<br><br>• Child maltreatment is more likely to lead to delinquent behavior in boys<br>• The likelihood of JJ involvement increased for girls as their level of child welfare system involvement progressed.<br>• Black youth are more likely than white youth to have juvenile justice involvement (but not necessarily more likely to engage in delinquent behavior)<br>• Poverty is associated with delinquency among maltreated youth<br>• Becoming involved with child welfare for the first time as an adolescent increases the risk of juvenile justice involvement<br>• Chronic and repeated maltreatment is a significant predictor of delinquency and criminal behavior<br>• The more types of abuse experienced, the higher the likelihood of threatening others with weapons<br>• Substance abuse has been strongly linked with gun violence; mental illness, however, has not. | ✓ Boys may be prioritized for screening and violence prevention interventions<br>✓ Disproportionality and disparity within child welfare decision-making should be addressed<br>✓ Assisting families with accessing financial supports to reduce poverty may reduce delinquency among maltreated youth<br>✓ Child abuse prevention efforts should focus on reducing repeated maltreatment<br>✓ Screening for substance abuse and providing treatment services may reduce gun violence among maltreated youth |

| Gun Violence Perpetrated Against Self (Suicide) | | |
|---|---|---|
| **Key Findings** | **Research** | **Implications** |
| Child maltreatment, particularly physical and sexual abuse, is a risk factor for suicidal ideation and attempts among youth and adults | There is well-established evidence that:<br><br>• Maltreatment increases the risk of suicide in youth and adults<br>• Physical and sexual abuse are particularly strong predictors of suicidal ideation attempts<br>• Severity and chronicity of maltreatment, increase the risk of suicidality.<br>• Polyvictimization is a strong predictor of suicidal ideation among youth. | ✓ Screening for suicide risk among maltreated youth may help reduce suicide<br>✓ Prioritizing maltreated children who have experienced physical abuse, sexual abuse, chronic maltreatment, and polyvictimization for suicide prevention interventions may reduce suicide |
| Being involved in the child welfare system increases the risk of suicide among children and youth. | There is substantial evidence that:<br><br>• Being reported to CPS for alleged maltreatment, having maltreatment substantiated, and being in foster care all increase the risk of suicide<br>• Spending more time in out-of-home care and experiencing more placement changes increase the risk of suicidality.<br>• Youth in group homes are more likely to experience suicidal ideation than youth in other types of out-of-home care.<br>• Older youth in out-of-home care and those who have aged out of care are more likely to experience suicidal ideation/attempts.<br><br>There is some evidence that:<br><br>• Children in foster care are more likely to plan or attempt suicide through hanging or suffocation rather than use of firearms. | ✓ Preventing the need for out-of-home care and avoiding group care whenever possible may help reduce the risk of suicide<br>✓ Universal screening for suicidality within the child welfare system may help prevent suicide<br>✓ Ensuring early referrals to community-based suicide prevention programs for maltreated youth identified as at risk for suicidality can help prevent suicide<br>✓ Ensuring evidence-based treatments are available to youth in care may help reduce suicide. |
| **Access to Firearms** | | |
| **Key Findings** | **Key Research** | **Implications** |
| Access to firearms increases the risk of gun violence and suicide among youth | Some studies have shown:<br><br>• Having access to a gun as a child is associated with higher levels of criminality and suicidality.<br>• Access to firearms in the home increases weapon carrying<br>• Adolescents with access to firearms have higher odds of suicidal ideation/attempts<br>• Maltreated male adolescents with access to firearms were more likely to consider suicide than those without such access | ✓ Screening for firearm access among maltreated youth may help reduce gun violence<br>✓ Safe storage education among families and caregivers involved in the CW system may reduce gun violence |

# INTRODUCTION

## Gun Violence in the United States

Gun violence[8] in the United States has become a rapidly growing public health crisis.[9] A report released by the Johns Hopkins Bloomberg School of Public Health Center for Gun Violence Solutions revealed that in 2021, the United States reached a deeply troubling record of 48,830 gun deaths. This sobering statistic includes almost 21,000 gun homicides — the most ever recorded. Also in 2021, the firearm suicide rate reached its highest level since the Centers for Disease Control (CDC) began tracking these deaths in 1968.[10] To put these numbers into perspective, consider that the total number of U.S. military deaths in the Vietnam war, a violent conflict that spanned two decades, was 58,220. The year with the highest rate of U.S. military casualties in Vietnam was 1968, which saw 16,899.[11] The post-9/11 wars, which also spanned two decades, provide another point of comparison. As of April 2024, there have been 7,078 U.S. military casualties in Iraq, Afghanistan, and other related conflicts.[12] The annual number of firearm fatalities in the United States at this point in our history, tragically, dwarfs the numbers of military casualties from our most recent violent conflicts.

The tragedy of this public health crisis in the United States extends beyond the high death toll exacted by gun violence every year. For every person killed by gun violence, two more are injured.[13] Physical injuries, such as spinal cord and brain injuries, can profoundly impact gun violence victims for the rest of their lives. In addition to the physical injuries

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[8] For the purposes of this paper, gun violence includes violence against others and violence against oneself. Violence using a firearm that is perpetrated against others includes acts such as homicide and assault with a deadly weapon. Violence using a firearm against oneself includes suicide and attempted suicide.

[9] American Medical Association. (2016, June 14). AMA calls gun violence "a public health crisis". AMA. https://www.ama-assn.org/press-center/press-releases/ama-calls-gun-violence-public-health-crisis

[10] Johns Hopkins Bloomberg School of Public Health - Center for Gun Violence Solutions. (June 2023). *U.S. Gun Violence in 2021: An accounting of a public health crisis. An annual report from the Johns Hopkins Center for Gun Violence Solutions*. Retrieved on April 29, 2024 from https://publichealth.jhu.edu/sites/default/files/2024-01/2023-june-cgvs-u-s-gun-violence-in-2021-v3.pdf

[11] National Archives. Vietnam War U.S. Military Fatal Casualty Statistics - Electronic Records Reference Report. Retrieved April 29, 2024, from https://www.archives.gov/research/military/vietnam-war/casualty-statistics

[12] U.S. Department of Defense, & American Battlefield Trust. Number of military fatalities in all major wars involving the United States from 1775 to 2024 [Graph]. In *Statista*. Retrieved April 29, 2024, from https://www.statista.com/statistics/1009819/total-us-military-fatalities-in-american-wars-1775-present/

[13] Schnippel, K., Burd-Sharps, S., Miller, T. R., Lawrence, B. A., & Swedler, D. I. (2021). Nonfatal firearm injuries by intent in the United States: 2016-2018 hospital discharge records from the Healthcare Cost and Utilization Project. *Western Journal of Emergency Medicine, 22*(3), 462-470 at p. 462. from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8203029/pdf/wjem-22-462.pdf

and death caused by gun violence, the psychological trauma caused by being a victim or a witness of gun violence can ripple throughout a lifetime, resulting in chronic mental health conditions, such as depression and Post Traumatic Stress Disorder (PTSD).

Especially concerning is the impact on the most vulnerable members of our society: children and youth. Today, firearm injury is the leading cause of death for children ages 1-19. More children die from guns than from car accidents or cancer.[14] But this hasn't always been the case. The staggering 41.5% increase in the pediatric firearm death rate between 2018 and 2021 brings to the forefront the intensifying threat this issue poses to the youngest members of society. Further, pronounced disparities are evident in this crisis, as Black children experience significantly higher rates of firearm mortality than their White peers. Moreover, socioeconomic factors play a meaningful role in the gun violence epidemic; children living in poverty are disproportionately affected, with increased firearm mortality rates closely associated with higher levels of poverty and lower socioeconomic status.[15]

Among children and teens, homicide is the most common form of gun-related death.[16] Suicide ranks as the second leading cause of death among adolescents, with firearms accounting for a staggering 44% of suicide deaths among adolescents ages of 14 and 18 between 2015 and 2020.[17] The lethal nature of firearms makes suicide attempts involving guns far more deadly when compared to other means—90% of all suicide attempts involving firearms are fatal.[18] This is particularly concerning for adolescents, as Kemal et al. found that approximately 70% of adolescent firearm-related suicide attempts involve guns accessed from their own homes.[19]

The immediate consequences of gun violence—physical injury and mortality—are only the most visible outcomes. The enduring trauma from gun violence exposure casts long shadows over a child's life, potentially affecting their psychological health, educational attainment, and social development. Long-term consequences can manifest as "sleep disturbances, anger, social withdrawal, post-traumatic stress, diminished academic

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[14] Johns Hopkins, pp. 4-6.

[15] Roberts, B. K., Nofi, C. P., Cornell, E., Kapoor, S., Harrison, L., & Sathya, C. (2023). Trends and disparities in firearm deaths among children. Pediatrics, 152(3), e2023061296, p. 5.

[16] Johns Hopkins, p. 12.

[17] Kemal, S., Krass, P., Brogan, L., Min, J., Quarshie, W. O., & Fein, J. A. (2023). Identifying suicide risk in adolescents with firearm access: Screening in the emergency department. Journal of Adolescent Health, 23(1), p. 165. https://doi.org/10.1016/j.acap.2022.05.011

[18] Johns Hopkins, citing Azrael D & Miller M. (2016). Reducing suicide without affecting underlying mental health: Theoretical underpinnings and a review of the evidence base linking the availability of lethal means and suicide. The International Handbook of Suicide Prevention. p. 10. https://doi.org/10.1002/9781118903223.ch36

[19] Kemal et al., p. 165.

performance, lower career ambitions, increased delinquency, risky sexual behaviors, substance abuse, and a desensitization to violence."[20]

Given the alarming impact of gun violence across all facets of our society, it is crucial to address this issue through a public health approach. This approach emphasizes prevention, early intervention, and the examination of systemic factors. Key to this approach is the identification of risks and patterns, enabling the development of valuable data-driven interventions.[21] To that end, this white paper explores the question of whether child maltreatment and experience within the child welfare system contribute to the risk of perpetrating gun violence against others or oneself later in life. To the extent that it does, this paper suggests responses that have the potential to reduce the risk and promote better outcomes for victims of maltreatment and our communities at large.



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[20] Reich, K., Culross, P. L., & Behrman, R. E. (2002). Children, Youth, and Gun Violence: Analysis and Recommendations. The Future of Children, 12(2). Princeton University. p. 11. Retrieved from https://www.jstor.org/stable/1602735

[21] Johns Hopkins, p. 26.

# Child Maltreatment and Child Welfare

Children and youth who encounter the child welfare system often endure multiple forms of trauma, starting with maltreatment—abuse or neglect—potentially followed by the upheaval of being separated from their families. Studies show a host of negative outcomes related to these experiences of childhood trauma; however, there is a significant gap in the literature examining whether there is a relationship between these early traumas and gun violence, either self-directed or against others, both in childhood and later in life.[22]

While there is a notable lack of research specific to childhood maltreatment as a potential risk factor for gun violence, there is a body of research that provides insights into risk factors associated with violence more generally, and child maltreatment figures prominently in the literature. Researchers note a strong correlation between childhood trauma and violent behavior.[23] The "cycle of violence" theory suggests that children who experience victimization, such as abuse or neglect, face a heightened risk of engaging in violence through adulthood. Further, studies show that survivors of childhood trauma frequently develop altered perceptions related to violence, leading to increased risk factors for violence such as weapon ownership, impulsivity, and aggression.[24]

This white paper examines the intricate relationship among childhood trauma, maltreatment, experience in the child welfare system, and the risk of engaging in gun violence, with the objective of helping to identify effective interventions to reduce gun violence risk. It is essential to acknowledge that while understanding these dynamics is crucial for developing targeted interventions, it is a delicate balance to address these concerns without casting unwarranted suspicion on foster youth and other maltreated youth, the vast majority of whom navigate their challenges with resilience and do not engage in violent behaviors. As Heyman and Smith noted, "... the cycle of violence is hardly a sealed fate. The most typical outcome for individuals exposed to violence in their families of origin is to be nonviolent in their adult families."[25] Nevertheless, child welfare system involvement represents a critical juncture for potential intervention for youth at risk, and specific strategies aimed at preventing gun violence within this framework are notably scarce.

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[22] Wamser-Nanney, R., Nanney, J. T., Conrad, E., & Constans, J. I. (2019). Childhood trauma exposure and gun violence risk factors among victims of gun violence. Psychological Trauma: Theory, Research, Practice, and Policy, 11(1), 99-106. https://doi.org/10.1037/tra0000410

[23] Wamser-Nanney et al., pp. 100–106.

[24] Wamser-Nanney et al., pp. 100–101.

[25] Heyman, R. E., & Smith Slep, A. M. (2020). Do Child Abuse and Interparental Violence Lead to Adulthood Family Violence? Journal of Marriage and Family, 64, 864–870, at p. 870.

# Methodology

To explore the potential relationship between child maltreatment, child welfare system involvement, and gun violence, this white paper presents a review of relevant literature on the topic. The following questions guided our research:

On the **Connection Between Child Maltreatment and Later Perpetrating Gun Violence**:

(a) Is there a connection between experiencing childhood maltreatment and later perpetrating gun violence on others?

(b) Is there a connection between experiencing child maltreatment and later perpetrating gun violence on oneself (i.e., suicide by firearm)?

On the **Impact of the Child Welfare System:** Does involvement in the child welfare system, especially placement in out-of-home care (i.e., foster care), impact any relationship between childhood maltreatment and gun violence?

On **Mediating Factors:** Are there factors that strengthen or weaken any relationship between childhood maltreatment and subsequent perpetration of gun violence?

An initial scan of relevant literature suggested that very few studies exist examining child maltreatment and gun violence specifically. However, there was a significant body of research examining connections between child maltreatment and perpetration of violence more generally in both adolescence and adulthood. Furthermore, there were early indications that numerous studies established a strong connection between child maltreatment and suicide. Finally, several studies addressed the impact of child welfare system involvement, including the experience of foster care, on perpetrating both violence against others and against oneself. Criteria for the subsequent literature review were developed in response to these initial observations.

Experts in related areas, including child welfare data analysis, were consulted for review of research questions as well as recommendations for databases and specific publications to examine. A search for relevant reports and government documents was conducted through Google. A search was conducted for published studies using Google Scholar as well as the following databases: JSTOR, Pub Med, PsychINFO, PsychArticles, ERIC, SAGE, and ScienceDirect. A further search was conducted on GVPedia, a database of research specific to gun violence.

Initial search terms included *gun violence* in combination with *abuse*, *neglect*, *child welfare*, *child protective services*, or *foster care*. The search broadened to include *firearm*

or *gun* in combination with *child maltreatment*, *abuse*, *neglect*, or *foster care* (additionally *in care*, *out of home*, *group home*, *placement*). Additional searches included the stem of *suicide\**, *weapon carrying*, and *gun use*, each in combination with *child maltreatment*, *abuse*, *neglect*, or *foster care* (additionally *in care*, *out of home*, *group home*, *placement*).

Results were limited to articles published between 2000–2023, in the United States, with full text available. To be included in this white paper, studies had to examine child maltreatment, which included abuse (physical, emotional, or sexual), neglect, and domestic violence in the home and gun violence specifically, or violence generally, including suicide. Studies were screened out if not peer-reviewed. However, non-peer-reviewed journal articles and grey literature (i.e., data reports, government documents, and policy literature) were reviewed for relevant background information.

# BACKGROUND AND CONTEXT

Having established the focus and guiding questions of this white paper, it is critical to have a better understanding of child maltreatment, the child welfare system, and gun violence. This section will provide additional context about gun violence, including the impact of demographics and what is currently known about risk factors. There is also information about the types of child maltreatment, as well as the prevalence and outcomes of child welfare system involvement, as this forms an important foundation for understanding the potential link between childhood maltreatment and later perpetration of gun violence against oneself or others.

## Gun Violence in Context

### Race and Ethnicity

While the impact of gun violence is alarming across all demographics, there is a disproportionate burden borne by certain racial groups. Research has consistently shown racial disparities in gun violence, with Black youth and young adults at a significantly higher risk of falling victim to or perpetrating gun violence compared to their White counterparts. While fatalities related to firearm violence-related injuries have been increasing among all children, a recent study found that the rate of firearm homicides, in particular, was 11 times higher for Black children compared to their White peers.[26] Studies have found that Black men between the ages of 18 and 34 are at the highest risk for being both victims and perpetrators of gun violence.[27] In fact, homicide is the leading cause of death for Black men aged 15 to 24, with firearms being used in 72% to 90% of these homicides.[28] Shockingly, more Black men in this age group die of homicide than the next 19 causes of death combined.[29]

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[26] Roberts et al., p. 4.

[27] Wamser-Nanney et al., 2019, p. 100.

[28] Gaylord-Harden, N. K., Alli, J., Davis-Stober, C. P., & Henderson, H. (2022). A trauma-informed approach to understanding firearm decision-making among Black adolescents: Implications for prevention. Preventive Medicine, 165, Article 107305. https://doi.org/10.1016/j.ypmed.2022.107305, at p. 2 citing Currie, E., 2020. A Peculiar Indifference: The Neglected Toll of Violence on Black America. Metropolitan Books.

[29] Gaylord-Harden et al., p. 2, citing Currie.

Though the starkest disparities are evident among Black youth and young adults, other races and ethnicities experience disparities as well. Hispanic/Latino males and females face higher rates of firearm homicide compared to their White counterparts, with Hispanic/Latino males being 2.8 times more likely and Hispanic/Latino females being "1.3 times more likely to die by firearm homicide than their White counterparts." American Indian / Alaska Native people were 3.5 times as likely to die by firearm homicide than their White counterparts.[30]

> *"Race may act as a risk marker — 'a characteristic or condition that is associated with known risk factors but exert no causal influence of its own — as opposed to being a causal factor of violent behavior." – Emmert & Lizotte*

When discussing racial and ethnic disparities in rates of gun violence, it is essential to consider the myriad of structural and systemic factors that impact these rates. As one study notes, "It is critical to contextualize the racial disparities in gun violence in terms of structural inequities as opposed to racial differences. Frameworks such as the 'cradle-to-prison' pipeline explain the structural disadvantages present for many African-American youths residing in disadvantaged urban areas and how these inequalities may lead to violent behavior."[31] Furthermore, "Race may act as a risk marker — 'a characteristic or condition that is associated with known risk factors but exert no causal influence of its own — as opposed to being a causal factor of violent behavior."[32] Thus, addressing racial disparities in gun violence requires a comprehensive approach that tackles the underlying structural and systemic inequities that create conditions conducive to violence and that drive disparate treatment within systems.

## Geography

In addition to the racial disparities, there are notable regional differences in the rates and patterns of gun violence. These differences are due in part to socioeconomic factors, demographics, and varied gun policies.[33] Several recent studies have noted that the South

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[30] Johns Hopkins, p. 16.

[31] Wamser-Nanney, et al., 2019, p. 100 citing Children's Defense Fund. (2009, February 19). Cradle to Prison Pipeline Campaign. Washington, DC: Author. Retrieved from http://www.childrensdefense.org/child-research-data-publications/data/cradleprison-pipeline-summary-report.pdf

[32] Emmert, A. & Lizotte, A., Weapon Carrying and Use Among Juveniles, in The Handbook of Juvenile Delinquency and Juvenile Justice. John Wiley & Sons, Incorporated. Krohn, M. D., & Lane, J. (Eds.) (2015), p. 581 (citing Centers for Disease Control and Prevention). .https://doi.org/10.1002/9781118513217

[33] Johns Hopkins, p. 20.

has a disproportionately large number of gun deaths. Specifically, the Southern region of the United States accounts for nearly half of all firearm deaths, irrespective of intent.[34] Further, a 2023 report by Johns Hopkins noted that the highest gun death rates tend to be in the South or Mountain West.[35] Additionally, though urban areas are often associated with gun violence, studies have found that rural counties tend to have higher per capita rates of gun violence.[36] Recent studies also reveal trends in suicide deaths involving firearms. High suicide rates are found in the rural Northwest and the Southeast.[37] There also exist regional differences in gun policies. Several studies have found that states with weaker gun violence prevention laws tend to have higher rates of firearm-related deaths and injuries.[38]

## Other Demographics

Studies have shown differences in gun violence experiences based on gender and socioeconomic factors. Research indicates that men are more likely to be victims of gun-related homicides, while women are more likely to be victims of gun-related domestic violence.[39] Both firearm homicides and firearm suicides are higher among men.[40] Furthermore, individuals from lower-income communities often experience higher rates of gun violence.[41] These gender and socio-economic disparities in gun violence exposure can lead to long-lasting psychological trauma, economic hardship, and a perpetuation of the cycle of violence within affected communities.

## Risk Factors for Perpetrating Gun Violence

It is important to acknowledge, at the outset, that for decades the CDC was restricted from using funding to study the problem of gun violence. As a result, "…there is limited work using longitudinal data to identify and specifically examine risks for gun violence and, importantly, to test how the development of risk factors within individuals predicts gun violence during adolescence and young adulthood."[42] Nevertheless, some research exists

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[34] Boeck, M.A., Strong, B. & Campbell, A. Disparities in Firearm Injury: Consequences of Structural Violence. Curr Trauma Rep 6, 10–22 (2020), at p. 16. https://doi.org/10.1007/s40719-020-00188-5

[35] Johns Hopkins, p. 20.

[36] Boeck, et al., p. 17.

[37] Boeck, et al., p. 16.

[38] Boeck, et al.,  p. 18; Johns Hopkins, p. 20.

[39] Boeck, et al., p. 15.

[40] Boeck, et al., p. 11.

[41] Boeck, et al., p. 14; Roberts, et al., p. 7.

[42] Rowan, Z. R., Schubert, C. A., Loughran, T. A., Mulvey, E. P., & Pardini, D. A. (2019). Proximal predictors of gun violence among adolescent males involved in crime. *Law and Human Behavior, 43*(3), 250–262,  p. 251. https://doi.org/10.1037/lhb0000327.

suggesting risk factors associated with gun violence. Individual factors include prior violent behavior, violence exposure, and substance use.[43] Prior victimization, including exposure to trauma, is related to gun carrying and gun behaviors.[44] Community factors include high levels of community socioeconomic distress and low levels of socioeconomic status.[45] Furthermore, firearm access has been identified as a significant risk factor for gun violence.[46]

Given the paucity of literature specifically examining risk factors for gun violence, experts note the value of consulting research that examines risk factors related to violence more generally. Recognizing that there is no established profile of who will perpetrate gun violence, researchers suggest that the same factors that increase the risk of aggression may be relevant to gun violence risk.[47] It has been suggested that, "…the presence of established risk factors for violent behavior likely increase one's risk for involvement in gun violence and therefore should be examined in the context of understanding gun violence."[48] Similarly, the Office of Juvenile Justice and Delinquency Prevention (OJJDP) literature review examining gun violence among youth offers that "while little research has yet to be conducted on specific risk factors for youth gun violence, the risk factors associated with serious youth violence are relevant to any discussion of youth gun violence."[49]

> *"…the presence of established risk factors for violent behavior likely increase one's risk for involvement in gun violence and therefore should be examined in the context of understanding gun violence." – Wamser-Nanney et al.*

When considering risk factors for violence, OJJDP notes that "the more individual, family, peer, school, and community risk factors present in a youth's life, the greater the

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[43] The Educational Fund to Stop Gun Violence, The Public Health Approach to Gun Violence Prevention (2020), p. 8. Retrieved on April 24, 2024 from: https://efsgv.org/report/the-public-health-approach-to-gun-violence-prevention-november-2020/.

[44] Wamser-Nanney, R. (2021). Understanding gun violence: Factors associated with beliefs regarding guns, gun policies, and gun violence. Psychology of Violence, 11(4), 349-353, p. 350.

[45] Mattson, S. A., Sigel, E., & Mercado, M. C. (2020). Risk and protective factors associated with youth firearm access, possession or carrying. American Journal of Criminal Justice, 45(5), 844-864, p. 846. https://doi.org/10.1007/s12103-020-09521-9.

[46] Mattson et al, p. 847.

[47] Mattson et al., p. 846–847.

[48] Wamser-Nanney et al., 2019,  p. 100.

[49] Office of Juvenile Justice and Delinquency Prevention. (2016). Literature review: Gun violence and youth, p.5. https://ojjdp.ojp.gov/model-programs-guide/literature-reviews/gun_violence_and_youth.pdf.

probability of youth violence."[50] Likewise, according to the American Psychological Association (APA), "... violence is associated with a confluence of individual, family, school, peer community, and sociocultural risk factors that interact over time during childhood and adolescence."[51] For example, Mattson highlights research identifying a number of risk factors for youth violence, including neurological factors, substance abuse, poor school performance and experiences, poverty, deviant peer associations, living in high-crime communities, and importantly, "violence victimization, high-stress or neglectful family contexts, [and] negative parenting practices."[52]

Despite the range of relevant risk factors, the APA recognizes a history of violent behavior is "the most consistent and powerful predictor of future violence."[53] Similarly, researchers have noted that a significant predictor of violence is prior aggression, which has been linked to behavioral impulsivity as well as cognitive processes and beliefs that normalize the use of violence to prevent victimization when threatened. Studies have shown that "childhood trauma is a risk factor for aggression throughout the lifespan."[54] Most relevant to this white paper, studies show that among youth, risk factors for violence include emotional distress and violence exposure.[55]

Additionally, researchers suggest that focusing on weapon-related behaviors can be informative when considering potential risk factors for gun violence. For example, much research has focused on risk factors for gun carrying, which is "the assumed primary precursor to involvement in gun violence."[56] However, the authors caution that "although research investigating patterns of gun carrying is an important contribution toward reducing gun violence, individuals who engage in firearm use likely represent a small subset of those that opt to carry."[57]

# Child Maltreatment in Context

This white paper seeks to explore the complex relationships between childhood trauma, child maltreatment, foster care experiences, and the risk of perpetrating gun violence both

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[50] Office of Juvenile Justice and Delinquency Prevention, pp. 5–6.
[51] American Psychological Association, Gun Violence: Prediction, Prevention, and Policy, APA Panel of Experts Report (2013), p. 1.  https://www.apa.org/pubs/reports/gun-violence-report.pdf
[52] Mattson et al., p. 846.
[53] American Psychological Association, p. 1.
[54] Wamser-Nanney et al., 2019, p. 100.
[55] Office of Juvenile Justice and Delinquency Prevention, p. 6.
[56] Rowan et al., p. 251.
[57] Rowan et al., p. 251.

during childhood and later in life. These related, yet distinct concepts are defined and explained below.

## Trauma

According to the National Child Traumatic Stress Network (NCTSN), "Trauma occurs when a child experiences an intense event that threatens or causes harm to his or her emotional or physical well-being."[58] Trauma is often associated with Adverse Childhood Experiences (ACEs), which the CDC defines as "potentially traumatic events that occur in childhood, including violence, abuse, and growing up in a family with mental health or substance use problems"[59] Studies show that almost two-thirds of adults have experienced at least one ACE.[60] While not all youth who experience trauma or ACEs necessarily experience maltreatment, this paper focuses on trauma and ACEs involving maltreatment specifically whenever possible.

## Maltreatment

The World Health Organization (WHO) defines child maltreatment as "the perpetration of physical, sexual, and psychological violence and neglect of infants, children, and other adolescents aged 0-17 years by parents, caregivers, and other authority figures."[61] The term maltreatment includes child abuse or neglect, which the federal Child Abuse Prevention and Treatment Act (CAPTA) defines as "any recent act or failure to act on the part of a parent or caregiver that results in death, serious physical or emotional harm, sexual abuse, or exploitation, or an act or failure to act that presents an imminent risk of serious harm."[62] In 2021, an estimated 600,000 children were victims of child abuse or neglect.[63]

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[58] Federation of Families for Children's Mental Health & National Child Traumatic Stress Network. (2003). What is child traumatic stress? Claiming Children, Fall 2003. Retrieved from https://www.samhsa.gov/sites/default/files/programs_campaigns/childrens_mental_health/what-is-child-traumatic-stress.pdf.

[59] Centers for Disease Control and Prevention. (2019, November). Vital Signs: Adverse Childhood Experiences (ACEs) - Preventing early trauma to improve adult health. Retrieved on April 14, 2024, from https://www.cdc.gov/vitalsigns/aces/pdf/vs-1105-aces-H.pdf.

[60] Swedo EA, Aslam MV, Dahlberg LL, et al. Prevalence of Adverse Childhood Experiences Among U.S. Adults — Behavioral Risk Factor Surveillance System, 2011–2020. MMWR Morb Mortal Wkly Rep 2023;72:707–715, p. 708.

[61] World Health Organization. (2022). What is child maltreatment? In Responding to child maltreatment: A clinical handbook for health professionals, pp. 2–6. World Health Organization. http://www.jstor.org/stable/resrep44202.5.

[62] Child Welfare Information Gateway. (2022). Definitions of child abuse and neglect. U.S. Department of Health and Human Services, Administration for Children and Families, Children's Bureau, p. 1. Retrieved on 04/24/2024 from https://www.childwelfare.gov/topics/systemwide/laws-policies/statutes/define/

[63] U.S. Department of Health & Human Services, Administration for Children and Families. (2023) Child Maltreatment 2021, p. xi, https://www.acf.hhs.gov/sites/default/files/documents/cb/cm2021.pdf.

Child abuse can take various forms, including physical, emotional, or sexual abuse. Physical abuse is "typically defined by bodily assaults inflicted by an older person, which have the potential to or do cause injury"[64] Emotional abuse, which can be more subjective and difficult to categorize, has been described as "a repeated pattern of caregiver behavior or a serious incident(s) that convey to children that they are worthless, flawed, unloved, unwanted, endangered, or only of value in meeting another's needs."[65] Emotional abuse can be particularly damaging, as it impacts the child's developing nervous system, changing the brain "specifically in regions associated with understanding and controlling emotions and recognizing and responding to the feelings of others."[66] Sexual abuse is generally defined as "unwanted sexual contact or inappropriate sexual conduct that does not involve contact (e.g., verbal sexual harassment, exhibitionism) between an older person and a child; coercion is frequently used but is not necessary to be considered abuse."[67] Lastly, neglect, the most common type of maltreatment,[68] is defined as "the failure of the caregiver to meet a child's basic physical needs …or psychological and emotional… needs."[69]

For the purposes of our examination, exposure to domestic violence, even when the child is not physically injured, is considered an example of child maltreatment. Community violence, where a child witnesses gun violence in their neighborhood, for example, may be an example of an ACE, but for the purpose of this paper, is not considered child maltreatment.

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[64] Miller, A. B., Esposito-Smythers, C., Weismoore, J. T., & Renshaw, K. D. (2013). The relation between child maltreatment and adolescent suicidal behavior: A systematic review and critical examination of the literature. Clinical Child and Family Psychology Review, 16, 146–172, p. 147. https://doi.org/10.1007/s10567-013-0131-5, citing Malinosky-Rummell and Hansen (1993).

[65] Dye HL. Is Emotional Abuse As Harmful as Physical and/or Sexual Abuse? J Child Adolesc Trauma. 2019 Dec 10;13(4):399–407, p. 400. doi: 10.1007/s40653-019-00292-y. PMID: 33269040; PMCID: PMC7683637.

[66] Dye, p. 400.

[67] Miller et al., p. 147, citing Finkelhor, D. (1994).

[68] Lantos, H., Wilkinson, A., Winslow, H., & McDaniel, T. (2019). Describing associations between child maltreatment frequency and the frequency and timing of subsequent delinquent or criminal behaviors across development: Variation by sex, sexual orientation, and race. BMC Public Health, 19(1), 1306, p. 2. https://doi.org/10.1186/s12889-019-7655-7

[69] Miller et al., p. 147, citing Crouch, J. L., & Milner, J. S. (1993).

# The Child Welfare System

Children who are maltreated may encounter the child welfare system. According to one researcher, "9.1 out of 1000 children have experienced maltreatment that resulted in their involvement with the child welfare system."[70] The child welfare system investigates allegations of abuse or neglect and provides services to children and their families, sometimes in their own homes. The child welfare system also includes foster care, a temporary, court-monitored out-of-home placement service provided by States when it is deemed unsafe for a child to remain or return home to their parents or caregivers. In 2022, 570,000 children were in the U.S. foster care system.[71] Certain racial and ethnic groups, specifically Black children and American Indian and Alaska Native children are overrepresented in the child welfare population.[72] Racial disparities are present at every point within the child welfare process, from initial reporting to placement in foster care.[73] Although the child welfare system exists to protect children from maltreatment, it is also associated with particularly poor outcomes among youth who become involved. Some research suggests that children in foster care are at increased risk for mental health issues and that this adverse outcome persists through adulthood.[74] Additional research establishes negative outcomes for youth who remain in foster care until adulthood, including increased rates of homelessness, poverty, and criminality.[75]

Because so many maltreated children encounter the child welfare system, whether they enter foster care or not, this system provides potential touchpoints for these vulnerable children, youth, and their families, offering opportunities for innovative interventions to prevent negative life outcomes associated with maltreatment.

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[70] Lantos et al., p. 2.

[71] U.S. Department of Health and Human Services, Administration for Children and Families, Children's Bureau. (2022). Adoption and Foster Care Analysis Reporting System (AFCARS), FY 2013–2022. Retrieved from https://www.acf.hhs.gov/cb/report/trends-foster-care-adoption.

[72] Child Welfare Information Gateway. (2021). Child welfare practice to address racial disproportionality and disparity. U.S. Department of Health and Human Services, Administration for Children and Families, Children's Bureau, p. 3. Retrieved on April 24, 2024 from https://cwig-prod-prod-drupal-s3fs-us-east-1.s3.amazonaws.com/public/documents/racial_disproportionality.pdf?VersionId=7LTDL0gwLvxg1T1O YzJONN9hX_PfeL2D.

[73] Child Welfare Information Gateway, 2021, p. 3.

[74] McKenna, S., et al. (2021). Experience of child welfare services and long-term adult mental health outcomes: A scoping review. Social Psychiatry and Psychiatric Epidemiology, 56(7),1115–1145.

[75] Lindner, A. R., & Hanlon, R. (2024). Outcomes of youth with foster care experiences based on permanency outcome – Adoption, aging out, long-term foster care, and reunification: A systematic review. Children and Youth Services Review, 156, 107366, at pg. 2. Retrieved on April 24, 2024 from: https://www.sciencedirect.com/science/article/pii/S0190740923005625?via%3Dihub.

# LITERATURE REVIEW FINDINGS

Exploring childhood maltreatment as a potential risk factor for gun violence is crucial for developing effective prevention strategies. Examining relevant research can help identify key areas for intervention and develop data-driven approaches that target the specific needs of maltreated children and youth. This understanding can inform the development of policies, programs, and practices to reduce the risk of gun violence perpetration and victimization among this vulnerable population. Moreover, insights gained from this research can guide the creation of collaborative efforts between community organizations, child welfare agencies, mental health professionals, and other experts to provide comprehensive support for maltreated children, youth and their families. Ultimately, a deeper understanding of the relationship between childhood maltreatment and gun violence can lead to more effective, targeted interventions that promote the safety and well-being of children and youth while addressing a significant public health concern.

## Child Maltreatment & Gun Violence Against Others

### Evidence of a Direct Association

Although the review of existing literature yielded very limited research directly examining child maltreatment as a risk factor for perpetration of gun violence against others, the few available studies provide some evidence that: (1) child maltreatment, including witnessing domestic violence, is associated with increased risk of threatening others with a gun,[76] gun violence risk factors and gun arrests;[77] and (2) youth who commit firearm violence are

*"Gun violence is not a simple, discrete category of crime; it shares characteristics with other forms of violence, and it can be a product of an array of cultural, social, psychological, and situational factors." ~ American Psychological Association*

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[76] Casiano, H., Mota, N., Afifi, T. O., Enns, M. W., & Sareen, J. (2009). Childhood maltreatment and threats with weapons. Journal of Nervous and Mental Disease, 197(11), 856-861, p. 859.

[77] Wamser-Nanney (2019), see also: Casiano, p. 856, See also: Bingenheimer, J. B., Brennan, R. T., & Earls, F. J. (2005). Firearm violence exposure and serious violent behavior. Science, 308(5726), 1323-1326. Retrieved on April 24, 2024 from http://www.jstor.org/stable/3841569

more likely than other individuals to have experienced child welfare investigations, substantiation of child maltreatment victimization, and out-of-home placement.[78]

A 2019 study by Wamser-Nanney et al., examined whether witnessing domestic violence and community violence is related to gun violence risk factors. The study looked at a small sample of hospitalized victims of firearm injury in New Orleans.[79] This was the "first examination of the relationships between specific childhood trauma ecologies, domestic violence and community violence, gun violence involvement, and several indicators of gun violence risk."[80] The study found that exposure to domestic violence is strongly predictive of violent crime and gun arrests. The study highlights that while both domestic violence and community violence are linked to higher levels of previous gun violence involvement, domestic violence has a more consistent and significant relationship with these outcomes compared to community violence, which showed only marginal connections.[81]

The study further indicated that childhood trauma, particularly from domestic violence, significantly correlates with cognitive variables relevant for aggression, providing insights into potential mechanisms such as observational learning[82] and attention biases to threats,[83] both of which may influence future gun violence behaviors. This means that children who witness or experience violence in their homes may be more likely to learn and imitate aggressive behaviors, and they may also be more prone to perceiving situations as threatening, even when they may not be.

While the study's findings play an important role in informing our understanding of the potential relationship between child maltreatment and gun violence, it must be viewed in light of its limitations. The study used a small sample size (n= 72) and relied on self-reported data, which may not fully capture the trauma's breadth and depth. The study was not longitudinal and provides no data on gun violence in which subjects may have engaged after their interview.[84]

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[78] Sumner, S. A., Maenner, M. J., Socias, C. M., Mercy, J. A., Silverman, P., Medinilla, S. P., Martin, S. S., Xu, L., & Hillis, S. D. (2016). Sentinel events preceding youth firearm violence: An investigation of administrative data in Delaware. American Journal of Preventive Medicine, 51(5), 647-655, p. 653. https://doi.org/10.1016/j.amepre.2016.07.021

[79] Wamser-Nanney, et al., 2019, p. 100.

[80] Wamser-Nanney, et al., 2019, p. 104.

[81] Wamser-Nanney, et al., 2019, p. 104.

[82] Wamser-Nanney, et al., 2019, p. 104, citing Huesmann, L. R. (2018).

[83] Wamser-Nanney, et al., 2019, p. 104, citing Pine, D. S., Mogg, K., Bradley, B. P., Montgomery, L., Monk, C. S., McClure, E., Kaufman, J. (2005).

[84] Wamser-Nanney, et al., 2019, p. 104.

A 2009 study by Casiano et al. examined the association between physical abuse, sexual abuse, and witnessing domestic violence with the act of threatening another individual with a gun or weapon. The study, using data from the National Comorbidity Survey Replication (NCS-R), included 5,692 respondents over the age of 18 representing the 48 contiguous states. Through logistic regression analyses, researchers found that these forms of childhood maltreatment were significantly associated with threatening others with a gun. The analysis controlled for potential confounding variables such as age, sex, race, socioeconomic status, and mental disorders.[85] Notably, "witnessing domestic violence appears to have a strong association with future aggressive behavior with a gun."[86] Furthermore, the number of types of childhood maltreatment experienced has a significant impact on the lifetime rate of threatening others with guns and other weapons. The study found an increased likelihood of threatening others with a gun among those having experienced multiple types of abuse.[87]

The authors note limitations of the study, including the fact that the study collected data through a community survey, which excludes groups like non-English speakers and individuals experiencing homelessness. Additionally, the public use files upon which the study relied did not include data on psychosis or personality disorders, which may have had an impact on some of the associations. Further, the study did not include neglect as a type of childhood maltreatment. Finally, there were more respondents who endorsed sexual abuse compared to physical abuse, which is not typical.[88] Despite these limitations, the study provides valuable insights and suggests a relationship between early exposure to child maltreatment and later violent behaviors, particularly those involving weapons.

> *"...witnessing domestic violence appears to have a strong association with future aggressive behavior with a gun." ~ Casiano et al*

Finally, a study by Bingenheimer et al. provides some insight into the nexus between maltreatment and exposure to gun violence. The study defines "exposure to gun violence" as not only direct experiences of gun threats or actual shootings but also witnessing gun violence.[89] The study found that children who were exposed to gun violence were more likely to have been physically abused and to have witnessed domestic violence in their

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[85] Casiano et al., p. 856-858.

[86] Casiano et al., p. 860.

[87] Casiano et al., p. 860.

[88] Casiano et al., p. 859.

[89] Bingenheimer et al., p. 1323.

households than those who were not exposed, and that those exposed to gun violence were more likely to perpetrate gun use in the future; however, there was no specific discussion of a direct link between those physically abused who were exposed to gun violence and then committed future gun use.[90]

While these studies provide compelling evidence that experiencing abuse and witnessing domestic violence are associated with an increased risk for violent crime and gun arrests, it is important to note that most individuals who experience abuse and are exposed to domestic violence are resilient and do not engage in violence. This indicates that other factors play an important role in mitigating or exacerbating the risk.[91]

Along with child maltreatment, some research explored contact with the child welfare system specifically as a risk factor. Research by Sumner et al. found that youth who commit firearm violence are more likely than other individuals to have experienced child welfare investigations, substantiation of child maltreatment victimization, and out-of-home placement. In the child welfare system, substantiation refers to a finding by child protective services that the allegations of child maltreatment are supported by sufficient evidence.[92]

Using administrative data from Delaware, Sumner et al. found that 34.7% of individuals who later perpetrated firearm violence had histories of maltreatment investigations compared to 7.9% of controls.[93] The findings also revealed 15.7% of individuals who later perpetrated gun violence had their victimization substantiated compared to 2.8% of controls, and 8.6% of individuals who later perpetrated gun violence had experienced out-of-home placement (foster care) compared with 1% of the control group.[94] Given the significant differences in child welfare involvement between individuals who later perpetrated gun violence and the control group, these findings suggest that targeting interventions and support services toward children who have been the subject of maltreatment investigations, substantiated victimization, or out-of-home placement could have a meaningful impact on preventing gun violence.

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[90] Bingenheimer et al., p.1326.

[91] Wamser-Naney et al., 2019, p. 104 noted "...as so few individuals exposed to domestic violence as children go on to engage in violence, it is clear that other mediating factors (e.g., parenting variables, school functioning, peer relationships) are important to take into consideration" Citing American Psychological Association, 2013; Huesmann, 2018.

[92] As noted above, not all children with substantiated maltreatment go into out of home care; some remain with their families while services are provided to reduce the risk of further maltreatment and ensure the child's safety.

[93] Sumner et al., p.649.

[94] Sumner et al., p.651.

While the studies discussed in this section suggest child maltreatment is likely a risk factor for later perpetration of gun violence, it is important to again acknowledge that the research is limited; there are very few studies, and these studies have samples limited in size and region. However, a larger body of literature suggests indirect links between childhood maltreatment and gun violence. In the following section, we will examine these indirect connections and discuss how they contribute to our understanding of the complex interplay between child maltreatment and gun violence.

## Evidence of Indirect Associations

### Child Maltreatment & Weapon Carrying

Understanding the relationship between child maltreatment and weapon carrying can support the development of effective interventions to prevent gun violence among maltreated youth. The reviewed studies provide evidence of (1) an association between physical and/or sexual abuse and adolescent weapon carrying; (2) sexually abused adolescents being more likely than other youth to report a perceived need for a weapon for protection, though not necessarily a firearm; and (3) a history of physical violence in the family, including domestic violence, being highly correlated with gun carrying. These findings suggest that child maltreatment may increase the risk of weapon carrying, which in turn could contribute to an increased risk of gun violence perpetration or victimization.

Weapon carrying, defined as "carrying a gun, knife, or club," is a known risk factor for perpetration of violence.[95] Research shows that "youth who carry guns are significantly more likely to be involved in a violent crime situation than youth who do not carry a gun."[96] Furthermore, adolescence may be a particularly crucial period for addressing this issue, as "first-time handgun carrying is most likely to occur during mid-to-late adolescence, peaking around age 15."[97]

Studies have shown a connection between child maltreatment and weapon carrying, both in adolescence and throughout the lifespan. Using data from the "Linkages" study, a cross-sectional survey of 3,487 adolescents living in a high-risk community, Leeb (2007) found that experiencing physical abuse increases the likelihood of weapon carrying by 1.28 times in adolescents, regardless of gender and that "sexually abused adolescents may

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[95] Leeb, R. T., Barker, L. E., & Strine, T. W. (2007). The effect of childhood physical and sexual abuse on adolescent weapon carrying. Journal of Adolescent Health, 40(6), 551-558, p. 551. https://doi.org/10.1016/j.jadohealth.2007.01.006
[96] Gaylord-Harden et al., p. 2.
[97] Gaylord-Harden et al., p. 2.

be more likely than other youth to report perceived need for a weapon for protection."[98] Furthermore, Leeb's research suggested that "weapon carrying may be a specific high-risk behavior related to early childhood sexual abuse in girls." However, the study did not find a significant relationship between maltreatment and firearm carrying specifically, possibly due to the low number of adolescents reporting firearm carrying or the structure of the survey question. Furthermore, the study oversampled the Latino population and may not be generalizable to other populations.[99]

Similarly, a study by Duke et al. referenced a body of evidence showing an association between physical and/or sexual abuse and adolescent weapon carrying.[100] A study by Lewis also found that abuse history significantly correlates with weapon carrying in early adolescence, mediated by a perceived need for self-defense.[101] Youth with histories of physical abuse are almost three times more likely to carry weapons than youth who report no physical abuse in their past. Youth who report sexual assault demonstrate even higher odds, being 4.4 times more likely than those without a sexual assault history to report carrying weapons.[102] The researchers explain that the direct experience of abuse may increase misperceptions of hostile intent, leading abused youth to view weapons as necessary for protection, thus increasing the likelihood of weapon carrying or use.[103] Yexley found that any history of physical violence in a family was highly correlated with gun-carrying.[104] Furthermore, Wamser-Nanney (2019) found that adults who were exposed to domestic violence as a child were nearly three times more likely to routinely carry a gun compared to those who were not exposed.[105]

These findings demonstrate the critical role that child maltreatment plays in shaping attitudes toward weapons and increasing the likelihood of weapon carrying, both in adolescence and adulthood. The perceived need for self-protection, coupled with

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[98] Leeb et al., p. 556.

[99] Leeb et al., pp. 556–557.

[100] Duke, N. N., Pettingell, S. L., McMorris, B. J., & Borowsky, I. W. (2010). Adolescent violence perpetration: Associations with multiple types of adverse childhood experiences. Pediatrics, 125(4), e778-e786, p. e779.

[101] Lewis, T., Leeb, R., Kotch, J., Smith, J., Thompson, R., Black, M. M., Pelaez-Merrick, M., Briggs, E., & Coyne-Beasley, T. (2007). Maltreatment history and weapon carrying among early adolescents. Child Maltreatment, 12(3), 259–268. https://doi-org.sandiego.idm.oclc.org/10.1177/1077559507303402

[102] Lewis et al., p. 265.

[103] Lewis et al., p. 551.

[104] Yexley, M., Borowsky, I., & Ireland, M. (2002). Correlation between different experiences of intrafamilial physical violence and violent adolescent behavior. Journal of Interpersonal Violence, 17(7), 707-720, p. 714. https://doi.org/10.1177/0886260502017007001

[105] Wamser-Naney, et al., 2019, p. 103.

misperceptions of hostile intent, may drive individuals who were maltreated as children to view weapons as a necessary means of ensuring their safety.

## Child Maltreatment & Violence, Delinquency, and Criminality

There is substantial evidence linking child maltreatment to various forms of violent, delinquent, and criminal behavior, which in turn may contribute to an increased risk of gun violence perpetration. The research base establishing a link between maltreatment and violence, delinquency, and criminality largely originates from the work of Cathy Spatz Widom, who examined the "cycle of violence" theory. In her seminal 1989 study, Widom found that child abuse and neglect increased one's risk for an arrest as a juvenile by 53% and as an adult by 38%.[106] Widom further found individuals who had been maltreated were 38% more likely than non-maltreated individuals to have been arrested for a violent crime.[107]

*"At this time, it is not clear how much the larger aggression literature can be extrapolated to the topic of gun violence; however, this literature is an important starting place for beginning to understand gun violence" ~ Wamser-Naney et al, (p. 100).*

Although some researchers have noted issues with the theory—such as the varying uses of the term "cycle of violence" to refer to different types of maltreatment and violent outcomes[108]—numerous subsequent studies have confirmed the original findings.[109]

Recent studies exploring the cycle of violence were included in the literature for this white paper. These studies included findings that experiencing violence within one's family of origin increases the risk for adolescent violent behavior and adulthood family violence, including a correlation between child abuse and intimate partner violence (IPV) (Heyman; Yexley; Maas). In their study utilizing data from the 1985 National Family Violence Survey, Heyman and Smith used two sets of questions to determine exposure to family-of-origin violence. The first inquired about whether the subjects were victimized

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[106] Currie, J., & Tekin, E. (2012). Understanding the cycle: Childhood maltreatment and future crime. The Journal of Human Resources, 47(2), 509–549, p. 513. University of Wisconsin Press. https://www.jstor.org/stable/23214399

[107] Lansford, J. E., Miller-Johnson, S., Berlin, L. J., Dodge, K. A., Bates, J. E., & Pettit, G. S. (2007). Early physical abuse and later violent delinquency: A prospective longitudinal study. Child Maltreatment, 12(3), 233–245, p. 234. https://doi.org/10.1177/1077559507301841.

[108] Heyman & Smith, p. 864.

[109] Goodkind, S., Shook, J. J., Kim, K. H., Pohlig, R. T., & Herring, D. J. (2013). From child welfare to juvenile justice: Race, gender, and system experiences. Youth Violence and Juvenile Justice, 11(3), 249-272, p. 249. https://doi.org/10.1177/1541204012463409 see also Leeb et al., p. 552.

by parent-child aggression and the second inquired about exposure to interparental violence.[110] The study concluded that family-of-origin violence increases the risk for adulthood family violence, defined as adulthood child and partner abuse.[111]

In an extensive 2008 literature review, Maas, et al. found emerging evidence that childhood maltreatment may predict intimate partner violence perpetration, especially in females.[112] Specifically, Maas, et al. cite two key studies. The first study by Magdol, et al. traces physical and psychological IPV perpetration at age 21 to harsh disciplining (smacking or hitting the child with something or threatening to do so) and family conflict experienced in early childhood and mid-adolescence, especially in females. The second study by Fagan utilizes the National Youth Survey to demonstrate that physical abuse during adolescence significantly heightens the risk of severe IPV perpetration in early adulthood (ages 18-24).[113]

Fang, et al. used a longitudinal nationally representative data set (Add Health) to examine the direct relationships among three different types of maltreatment (neglect, physical abuse, and sexual abuse), youth violence perpetration or victimization, and young adult IPV perpetration or victimization.[114] The study found that in general, victims of child maltreatment were more likely to perpetrate future violence in the form of youth violence and IPV. The authors of the study went on to note that their findings reinforce the commonly held views that "preventing child maltreatment may be key to preventing the perpetration of youth violence and that interventions targeting youth violence may also serve to prevent later IPV perpetration or concurrent dating violence."[115] This is particularly relevant to gun violence given the high rate of gun homicide related to IPV. For example, a recent article noted that "More than half of all intimate partner homicides involve a firearm and firearms are frequently used by perpetrators of intimate partner violence (IPV) to injure and threaten victims and survivors."[116]

A 2002 study by Yexley, et al., found that "any history of physical violence in the family is highly correlated with having attempted suicide, fighting and gun-carrying in

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[110] Heyman & Smith, p. 866.

[111] Heyman & Smith, pp. 868–869.

[112] Maas, C., Herrenkohl, T. I., & Sousa, C. (2008). Review of Research on Child Maltreatment and Violence in Youth. Trauma, Violence, & Abuse, 9(1), 56–67, at p. 57. https://doi.org/10.1177/1524838007311105. Sage Publications.

[113] Maas et al., p. 62.

[114] Fang, X., & Corso, P. S. (2007). Child Maltreatment, Youth Violence, and Intimate Partner Violence. American Journal of Preventive Medicine, 33, 281-290, p. 282.

[115] Fang & Corso, p. 288.

[116] Tobin-Tyler, E. (2023). Intimate partner violence, firearm injuries and homicides: A health justice approach to two intersecting public health crises. The Journal of Law, Medicine & Ethics, 51(1), 64–76, p. 64. https://doi.org/10.1017/jme.2023.41

adolescence,"[117] and "the combination of being a direct victim and witnessing physical violence is more highly correlated with violent adolescent behavior than either type of victimization alone."[118] However, the study was limited, including only students in Minnesota (n = 133,794), and the sample was not diverse (83% White).[119] A literature review conducted by Sanchez, et al. in 2022 noted that "constant witnessing of violence in the home or in the community allows for psychological desensitization and observational learning of aggression and violence, which is a key mechanism for the development of violent behavior."[120] In addition, Duke et al. note an "increasing body of evidence that documents the association of youth interpersonal experience and witness of abuse on the increasing risk for violence perpetration in adolescence and adulthood"[121]

There is also a group of studies that tie ACEs to later violent behavior. The study conducted by Duke, et al. explored the relationship between multiple types of ACEs, including abuse and household dysfunction, and adolescent violence-related behaviors.[122] The study found that ACEs raise the risk of adolescent violence perpetration significantly.[123] Similarly, Wamser-Nanney (2019) noted previous research demonstrating that "exposure to traumatic events during childhood is a key distal risk factor for both victimization and perpetration of violence."[124] While these ACEs and trauma-related studies encompass a broader array of negative childhood experiences, they include maltreatment and household dysfunction as key components, contributing to our understanding of the connection between childhood maltreatment and later perpetration of gun violence.

The literature includes several studies that specifically examine physical abuse in childhood as a predictor of violent delinquency. Lansford, et al. conducted a longitudinal study of 574 children and youth from age 5 to age 21 in which they examined the link between early abuse (abuse in the first five years of life) and later violent delinquency.[125] The study found that physical abuse is predictive of subsequent violent delinquency with effects lasting through late adolescence. Moreover, the study found early physical abuse

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[117] Yexley et al., p. 714.
[118] Yexley et al., p. 716.
[119] Yexley et al., pp 710–711.
[120] Sanchez, C., Jaguana, D., Shaikh, S., McKenney, M., & Elkbuli, A. (2020). A systematic review of the causes and prevention strategies in reducing gun violence in the United States. American Journal of Emergency Medicine, 38(10), 2169–2178, p. 2176.
[121] Duke et al., p. e779.
[122] Duke et al, p. e778.
[123] Duke et al., p. e782.
[124] Wamser-Naney et al., 2019, p. 99.
[125] Lansford et al., p. 233.

can be predictive of not only later violent delinquency but also a more global pattern of violent and nonviolent dysfunction. Importantly, the Lansford study found that "children who are physically abused are more likely to develop biased patterns of social processing," such as attributing negative intentions to others and viewing aggression as acceptable.[126]

Lending additional support to the connection between physical abuse in childhood and violent delinquency, Fang & Corso found that childhood physical abuse and neglect significantly predict youth violence perpetration,[127] and Maas, et al. found physical maltreatment is a key predictor of youth violence.[128] Lantos, et al. examined the connection between maltreatment and later delinquent or criminal behavior.[129] The study found maltreatment was associated with higher frequencies of both violent and nonviolent offending, peaking at age 16 and persisting through adulthood.[130]

Although the research points to an increased risk of violent delinquency among maltreated youth, it bears repeating that the vast majority of maltreated youth will not engage in violent or delinquent behavior. In a prospective study, Vidal et al. found just under 3% of their cohort of maltreated children became formally involved with the juvenile justice system within six years of a Child Protective Services (CPS) referral.[131] However, as Goodkind et al. emphasized in their study, "While most maltreated youth do not end up in juvenile justice, maltreated youth comprise a large portion of juvenile justice involved youth."[132]

As it pertains to the risk of adult crime, Currie and Tekin found that children who experienced maltreatment, defined as inclusive of both abuse and neglect, are at least twice as likely to have engaged in crime as those who did not experience maltreatment.[133] The authors strike a careful balance in their assessment of the relationship between child maltreatment and future criminal behavior, noting, "While not everyone who is abused becomes a criminal, maltreatment is a major determinant of future criminal behavior."[134]

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[126] Lansford et al., p. 241.

[127] Fang & Corso, p. 285.

[128] Maas et al., p. 64.

[129] Lantos, H., Wilkinson, A., Winslow, H., & McDaniel, T. (2019). Describing associations between child maltreatment frequency and the frequency and timing of subsequent delinquent or criminal behaviors across development: variation by sex, sexual orientation, and race .BMC Public Health 19, 1306 (2019) at p. 2. Retrieved from https://doi.org/10.1186/s12889-019-7655-7

[130] Lantos et al, p. 7.

[131] Vidal, S., Prince, D., Connell, C. M., Caron, C. M., Kaufman, J. S., & Tebes, J. K. (2017). Maltreatment, family environment, and social risk factors: Determinants of the child welfare to juvenile justice transition among maltreated children and adolescents. Child Abuse & Neglect, 63, 7–18, p. 14.

[132] Goodkind et. al., p. 250.

[133] Currie & Tekin, p. 521.

[134] Currie & Tekin at  p. 533.

This statement is significant because it again acknowledges that most maltreated youth do not become involved in crime, while also highlighting the importance of understanding and addressing the increased risk that maltreatment can pose for some individuals.

In their 2017 compilation of studies, Herrenkohl et al. present findings that both physical and emotional abuse predict crime.[135] Herrenkohl, et al. also found that physical and sexual abuse increase the risk of chronic offending.[136] Furthermore, studies indicate that sexual abuse may have the strongest association with criminal behavior. Currie and Tekin found that although physical abuse, sexual abuse, and neglect all increase criminal tendencies, sexual abuse was shown to have the most significant impact .[137] Vidal et al. found that neglect "significantly predicted an increased risk of transition into the juvenile justice system after accounting for various child, family, and case characteristics, including incidents of other types of maltreatment."[138] The authors further noted that this finding is "consistent with research suggesting that neglect strongly predicted involvement in delinquent behaviors relative to other types of abuse among high-risk adolescents."[139]

The studies discussed in this section confirm that child maltreatment is an established risk factor for violence, delinquency, and criminality. Several psychological theories have been proposed to explain why childhood maltreatment may lead to violent and criminal behavior. These include Social Control Theory, which suggests that maltreatment disrupts social bonds and makes individuals more likely to offend; Social Learning Theory, which posits that victims of maltreatment learn and adopt patterns of violent or delinquent behavior through imitation and modeling; and Social-Psychological Strain Theory, which views maltreatment as a source of acute stress that can predispose a child to risky, self-destructive, or aggressive behaviors.[140] While these theories provide valuable insights into the potential mechanisms linking maltreatment and crime, further research is needed to fully understand the complex interaction of factors that contribute to this relationship. Ultimately, the research is clear that maltreatment increases the likelihood of violent behavior as well as weapon carrying. With weapon carrying recognized as a

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[135] Herrenkohl, T. I., Jung, H., Lee, J. O., & Kim, M. H. Effects of Child Maltreatment, Cumulative Victimization Experiences, and Proximal Life Stress on Adult Crime and Antisocial Behavior. National Institute of Justice, Office of Justice Programs, U.S. Department of Justice. NIJ Grant Number: 2012-IJ-CX-0023. Retrieved from https://www.ojp.gov/pdffiles1/nij/grants/250506.pdfz

[136] Herrenkohl et al., p. 14.

[137] Currie & Tekin, p. 535.

[138] Vidal et al., p. 15.

[139] Vidal et al.,  p. 15.

[140] Currie & Tekin, p. 511.

precursor to violence, these studies suggest that maltreated children may be at higher risk of engaging in or falling victim to gun violence.

## Child Welfare System Involvement & Gun Violence

The previous sections present the body of research establishing child maltreatment as a risk factor for various forms of violence, including nascent research suggesting a connection between child maltreatment and gun violence. Some maltreated children have the additional experience of encountering the child welfare system through investigation, agency involvement, court involvement, and out-of-home care. Although the system seeks to protect children and promote their well-being, involvement with the system can also be associated with negative outcomes.

From this perspective, it is instructive to explore what impact, if any, contact with the child welfare system, especially the experience of being in out-of-home care, may have on the risk of gun violence among maltreated children. The reviewed studies included three key findings: (1) in at least one study, having a child welfare placement was shown to increase the risk of firearm violence; (2) out-of-home placement increases the likelihood of juvenile justice involvement; and (3) multiple placements have been associated with a greater likelihood of delinquency and juvenile justice involvement.

A study by Sumner et al. yielded significant findings regarding the association between child welfare placement and the risk of perpetrating gun violence. Specifically, 10.4% of individuals involved in gun violence had experienced out-of-home placements, compared to just 1% among controls. This association points to experiencing child welfare placements as a potential risk factor within the broader context of life events that may lead to gun violence. However, there are two limitations to this study that indicate a need for further study to confirm findings and build on the results: (1) It is not clear whether individuals in the control groups were maltreated as children; this information would be beneficial in separating the experience of maltreated children

from the experience of children who were maltreated and then spent time in the child welfare system. (2) The study's scope was limited, focusing on 421 individuals in the case sample and 1,259 in the control sample from Wilmington, Delaware.[141]

There is a more established body of evidence indicating that youth involved within the child welfare system are more likely to become involved in the juvenile justice system than youth in the general population. As Goodkind et al. summarized "Some research has examined whether child welfare system involvement increases the likelihood that maltreated youth will end up in the justice system. While this research is inconclusive, we know definitively that child welfare-involved youth are more likely than youth in the general population to become involved with the juvenile justice system."[142]

Other studies specifically examine the relationship between out-of-home placement and involvement with the juvenile justice system. Research by Ryan and Testa demonstrates that placement in substitute care elevates the risk of delinquency.[143] Goodkind et al. cited previous research findings that "placement in out-of-home care increases the likelihood of juvenile justice involvement "[144] Researchers have found that the type and stability of placement may also have an impact on subsequent involvement with the juvenile justice system. At least one study has shown that youth placed in group homes (i.e., congregate care) were "more than twice as likely as youth placed in foster homes to have juvenile arrests."[145] Moreover, in their original research, Goodkind et al. demonstrated that "placement in out-of-home care increases the likelihood of juvenile justice involvement," as does placement instability.[146] Placement instability refers to movement between multiple placements for children in foster care, often within a short period of time.

Interestingly, both type and stability of placement may have a varying impact depending on gender. Research has found that boys experiencing both foster care and congregate care were more likely to be arrested as adults than boys who either remained home or were only placed in foster homes. In addition, placement instability has been shown to increase the risk of juvenile justice involvement for boys. Specifically, boys with one out-of-home placement had about the same risk of juvenile justice involvement as those not placed outside the home, but multiple placements increased their risk. On the other hand,

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[141] Sumner et al., p. 651.

[142] Goodkind et al., p. 250.

[143] Ryan, J. P., & Testa, M. F. (2005). Child maltreatment and juvenile delinquency: Investigating the role of placement and placement instability. Children and Youth Services Review, 27(3), 227–249, at p. 227. https://doi.org/10.1016/j.childyouth.2004.05.007

[144] Goodkind et al., p. 251.

[145] Goodkind et al., p, 251.

[146] Goodkind et al., p. 251.

for girls, being placed outside of the home doubled the risk of juvenile justice involvement, but additional placements did not increase this risk.[147]

Several hypotheses have been proposed to explain the link between out-of-home care and increased risk of juvenile justice involvement. Goodkind hypothesized that this is likely related to the fact that youth removed from home often have been the victim of more severe maltreatment.[148] Researchers have also suggested that this may be related to the trauma of being removed from home, especially if they lack stable attachments in their new placements. With regard to youth placed in group homes and their increased likelihood of having juvenile arrests, Ryan, Marshall, Herz, and Hernandez note that this relationship might be related to the effects of congregate care or the fact that children with more difficult behavior issues are those likely to be placed in such settings.[149] Notably, congregate care facilities have historically relied on law enforcement to intervene in behavioral issues, leading to a greater risk of arrest and detention. Understanding these potential mechanisms can inform the development of interventions that target the specific needs and risk factors of maltreated youth in out-of-home care.

*"Any account of gun violence in the United States must be able to explain both why males are perpetrators of the vast majority of gun violence and why the vast majority of males never perpetrate gun violence." ~ American Psychological Association*

## Other Influencing Factors

Determining whether an individual's experiences of child maltreatment and their experience in the foster care system might lead to an increased risk of gun violence perpetration requires an examination of mediating factors such as gender, race, poverty, age at which abuse occurs, chronicity and co-occurrence of maltreatment, access to and availability of firearms, and mental illness and substance abuse.

### *Gender*

A significant body of research provides insights into how gender may impact outcomes for maltreated children. Studies note these differences in several key areas relevant to the

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[147] Goodkind et al., pp. 251–252.
[148] Goodkind et al., p. 251.
[149] Goodkind et al., p. 251.

connection between maltreatment and violence. Reviewed studies found: (1) The link between child maltreatment and delinquent behaviors/ juvenile justice involvement appears stronger in boys than girls; (2) Sexual abuse appears to have different impacts on males and females; (3) Physical abuse in boys notably increases the risk of dating violence and weapon carrying; (4) Maltreated boys and girls may engage in different types of offenses and have different risk factors.

Several studies have found that child maltreatment is more likely to lead to delinquent behaviors in boys than in girls. As noted by Goodkind et al, "While gender is not significantly related to likelihood of child welfare involvement, it is the single largest predictor of juvenile justice involvement, in that boys have much higher rates of involvement than girls." [150] This may be due to the tendency of maltreated boys to "develop externalizing problems" while maltreated girls tend to "develop internalizing symptoms."[151] Further, "research suggests that boys engaged in more chronic problem behaviors than girls, resulting in an increased likelihood of involvement in the [juvenile justice system]."[152] Findings in this area were consistent with one differing trend of note: "the likelihood of juvenile justice involvement increased for girls as their level of child welfare system involvement progressed (from investigation, to in-home services, to out-of-home placement), whereas the level of child welfare intervention did not make a difference for boys."[153]

In addition to the gender differences in the link between maltreatment and delinquency, researchers have also found that sexual abuse leads to distinct outcomes for males and females. Vidal et al. point to research showing that "Sexual abuse was predictive of violent offending for boys but not for girls."[154] Similarly, Fang et al. found that direct predictors of intimate partner violence include childhood sexual abuse for males and physical abuse and neglect for females.[155] According to Duke et al. in a study published in 2010, a "history of physical and/or sexual abuse was a notably powerful risk factor for dating violence perpetration, weapon-carrying, and self-directed violence among boys."[156] However, in contrast, a study by Leeb, et al. found "25% of weapon carrying by girls was attributable to sexual abuse in early childhood," while researchers found "no relationship

[150] Goodkind et al., p. 253, citing Puzzanchera, Adams, & Sickmund (2010).
[151] Vidal et al., p. 9.
[152] Vidal et al., p. 9, citing Miller, Malone, and Dodge (2010).
[153] Goodkind et al., p. 253.
[154] Vidal et al., at p. 9, citing Asscher, Van der Put, and Stams (2015).
[155] Fang & Corso, p. 285.
[156] Duke et al., p. e783.

between sexual abuse and weapon carrying for boys."[157] The relationship between specific types of maltreatment and weapon carrying is of particular interest as it relates to future perpetration of gun violence, and more research is needed to better understand these dynamics.

Other gender differences include the finding by Lantos that males had consistently higher likelihood of offending than females across development, for both violent and nonviolent offenses.[158] Currie & Tekin found that "maltreated boys appear to be more likely to engage in armed robbery or assault, while maltreated girls are more likely to engage in burglary or theft."[159] Fang et al. found that family poverty increased violence risk for maltreated females, while only low parental education affected maltreated males. In addition, "living in a high-crime neighborhood significantly increased the risk of perpetrating youth violence for maltreated males, but the same was not true for maltreated females."[160]

## *Race*

The issue of how race impacts outcomes for maltreated youth is complex because there are historical and structural factors that come into play. These factors raise critical questions about the extent to which outcomes are related to child maltreatment, or to historical structural inequities present in our communities and built into our systems. For example, Lansford et al. found that abused children often develop hostile social information processing biases, and this effect is more pronounced in Black children. The researchers go on to note that additional factors like racism, residential instability, and inadequate care[161] potentially exacerbate the effects of experiencing physical abuse.[162] This complexity underscores the need to consider both individual and systemic factors in addressing maltreatment outcomes.

The intricacy of this issue is highlighted in the literature exploring the impacts of maltreatment on outcomes related to delinquent behavior and juvenile justice involvement. In their literature review, Goodkind et al. discuss factors that may contribute to overrepresentation of African American youth in the child welfare and juvenile justice system, such as socioeconomic status, increased surveillance to which African American families are subjected, and discrimination by police and other justice

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[157] Leeb et al., p. 551.

[158] Lantos et al., p. 4.

[159] Currie & Tekin, p. 527.

[160] Fang & Corso, p.285.

[161] Inadequate care - for example, African-American children are less likely than their European-American peers to receive mental health services. (Lansford, et al., p. 242)

[162] Lansford et al., p. 242.

system officials. Goodkind et al. continued, noting research indicates that "within samples of child welfare-involved youth, African American youth are more likely than White youth to have juvenile justice involvement."[163] However, Goodkind goes on to emphasize a study focusing on delinquent behaviors that found "no racial differences in the delinquent behaviors of a nationally representative sample of child welfare-involved youth (Grogan-Kaylor, Ruffolo, Ortega, & Clarke, 2008), providing evidence that racial differences in the justice system involvement of child welfare-involved youth are not merely a function of differences in behavior."[164]

> *"[A]ll youth – regardless of race/ethnicity – negatively respond to maltreatment."*
> *~ Lantos et al*

In their original research, Goodkind et al. found that Black youth were more than twice as likely as their White counterparts to have juvenile justice involvement; additional analysis revealed a "larger racial difference in the likelihood of juvenile justice involvement for boys than for girls."[165] However, researchers noted that most studies conducted on the movement of youth from child welfare to juvenile justice use official data sources (e.g., arrests, petitions, and incarceration) to indicate justice system involvement. These data sources are seriously limited because they reflect cases that come into contact with authorities, not necessarily differences in behavior. Therefore, as noted previously, "the racial differences indicated are likely to reflect, at least in part, racial disparities in the processing of youth and not necessarily actual behavior."[166] This may derive from implicit bias, which has been discussed in studies showing that "delinquent behavior among minority youth is more likely attributed to a character flaw and perceived to be dangerous so as to result in recommendations for harsher punishment."[167]

The challenges in disentangling the effects of maltreatment from the impact of systemic inequities highlight the need for further research and a more nuanced understanding of how race intersects with other risk factors for violence and gun violence.

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[163] Goodkind et al., p. 253.
[164] Goodkind et al., p. 253.
[165] Goodkind et al., p. 261.
[166] Goodkind et al., p. 262.
[167] Vidal et al., p. 16.

## Poverty

Poverty is another factor that can impact the likelihood of individuals who have experienced child maltreatment engaging in violent behaviors or gun violence. Duke et al. cite research indicating that poverty and poor contextual life circumstances such as residential transience, low neighborhood resources availability, and community violence, can facilitate a model for violent values and norms.[168] Vidal et al. also noted that poverty has been shown to relate to a great number of negative outcomes, including ongoing maltreatment, mental health issues, and delinquency. Poverty may have an even greater negative impact on maltreated children and adolescents because their experience of poverty may be ongoing for a significant period of time. Vidal found that in their sample of over 10,000 maltreated children, "Economic hardship characterized by receipt of public assistance significantly increased the risk of [child welfare to juvenile justice] transition among maltreated youth and adolescents."[169]

## Onset and Frequency of Maltreatment

The age at which abuse occurs can have a bearing on outcomes for maltreated youth. Ryan and Testa found that age at which maltreatment occurs is a significant predictor of delinquency, indicating that older children are at higher risk.[170] Similarly, Goodkind, et al. found that youth with child welfare cases opened when they were adolescents were more likely to become involved with the juvenile justice system than their peers who had child welfare cases closed at younger ages.[171] Ryan & Testa found that for males, experiencing a first placement at an older age increases the risk of delinquency.[172] Salzinger notes that "persistent maltreatment in childhood and adolescence has stronger negative consequences in adolescence, including delinquency, than does maltreatment occurring only in childhood."[173]

Research has shown that repeated exposure to maltreatment, as well as exposure to multiple forms of maltreatment, can further exacerbate the risk of negative outcomes, including criminality, violence, juvenile justice system involvement, and threatening others with guns.

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[168] Duke et al., p. e784.

[169] Vidal et al., p. 16.

[170] Ryan & Testa, p. 239.

[171] Goodkind et al., p. 264.

[172] Ryan and Testa, pp. 241–242.

[173] Salzinger, S., Rosario, M., & Feldman, R. S. (2007). Physical child abuse and adolescent violent delinquency: The mediating and moderating roles of personal relationships. Child Maltreatment, 12(3), 208-219, p.209. https://doi.org/10.1177/1077559507301839

Ryan & Testa found the number of substantiated maltreatment reports is a significant predictor of delinquency.[174] Further, Vidal et al. found that "repeated maltreatment and chronic maltreatment are critical risk factors for delinquent behaviors."[175] In their study published in 2012, Currie and Tekin found that multiple abuses increase the risk of later criminality.[176] Herrenkohl et al. found that chronic physical abuse is associated with an increased likelihood of subsequent criminal behavior.[177] A study by Lantos confirmed that increased frequency of maltreatment is associated with higher frequencies of offending.[178]

Maas et al. found that physical maltreatment is a key predictor of youth violence, and that compounded and severe abuse escalates the risk. Compounded, severe abuse refers to experiencing multiple types of maltreatment, such as sexual, emotional, and physical abuse.[179] Importantly, Casiano et al. found that the more types of maltreatment experienced, the higher the lifetime rate of threatening others with guns and other weapons. Specifically, "Those who had experienced the most types of abuse were also more likely to report threats made to others with weapons. This relationship appears to be strongest with regard to threats made specifically with guns."[180] Finally, Lewis noted the perceived need for self-protection, which stems from multiple traumas, may drive gun possession and the use of threats for individuals who have been abused.[181]

In addition to studies indicating that chronicity and co-occurrence of abuse and maltreatment are predictors of future violent behavior, and potential precursors to gun violence, several studies provide findings related to the impact of chronic and co-occurring trauma — which often includes maltreatment. According to Duke et al., 2010, risk of adolescent violence escalates cumulatively with ACEs.[182] Adolescents with four or more ACEs show a two- to ten-fold increase in violence and suicidality, with abuse and household dysfunction linked to a spectrum of violent outcomes, including bullying, dating violence, and weapon carrying.[183] Finally, Sumner, et al. found that individuals experiencing sentinel events, which are "incidents in an individual's life that occur before the commission of a firearm crime that may be a signal or marker for increased

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[174] Ryan and Testa, p. 239.
[175] Vidal et al., p. 15, citing Logan-Greene & Semanchin Jones (2015).
[176] Currie & Tekin, p. 533.
[177] Herrenkohl et al., p. 13.
[178] Lantos et al., p. 4.
[179] Maas et al., p. 57.
[180] Casiano et al., p. 860.
[181] Lewis et al., p. 265.
[182] Duke et al., p. e784.
[183] Duke et al., p. e782.

perpetration risk,"[184] across multiple life domains (health, economic, child welfare, juvenile services, educational) had a markedly higher likelihood of firearm violence perpetration, with 84.1% of those affected in all five domains being arrested for firearm violence.[185] The Sumner study does not directly address multiple forms of maltreatment, but it contributes to our understanding of the link between child maltreatment and gun violence by highlighting the range of adverse events commonly experienced by perpetrators of gun violence.

### Mental Illness and Substance Abuse

Although mental illness and substance abuse are commonly assumed to be associated with an increased risk of gun violence, the research in this area presents a more nuanced picture, meriting a closer examination. As Rowan explains, "most people with mental illness (exclusive of substance abuse) are no more likely to specifically engage in gun violence,"[186] In their study published in 2022, Sanchez, et al. found that the "vast majority of adolescents with mental health disorders did not report gun carrying."[187] The researchers went on to note that mental illness is more likely to lead to suicidality than to gun violence against others.[188] Finally, the study notes "little evidence exists that supports the notion that individuals diagnosed with mental illness are more likely to commit gun crimes."[189] However, studies have found a more substantial link between substance abuse and involvement in gun violence.[190] According to Rowen, for example, research has demonstrated that alcohol abuse raises the risk of gun possession, firearm suicide, and homicide.[191]

# Child Maltreatment & Firearm Suicide

Suicide is the "second leading cause of death among people ages 10–24 years in the United States (U.S.), and rates have increased in recent years (Centers for Disease Control and Prevention [CDC], National Center for Injury Prevention and Control [NCIPC], 2020)." [192] The overall rate of suicide by firearm in 2021 set a morbid record as the highest

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184 Sumner et al., p. 648.

185 Sumner et al., p. 653.

186 Rowan et al., p. 251.

187 Sanchez et al., p. 2171.

188 Sanchez et al., p. 2175.

189 Sanchez et al., p. 2169.

190 Rowan et al., p. 251, see also Sanchez et al., p. 2171.

191 Rowan et al., p. 251.

192 Osborne, M. C., Self-Brown, S., & Lai, B. S. (2022). Child maltreatment, suicidal ideation, and in-home firearm availability in the U.S.: Findings from the longitudinal studies of child abuse and neglect. International Journal of Injury Control and Safety Promotion, 29(1), 56–65, p. 56.

rate the CDC has ever documented.[193] Although there is scant literature examining a direct link between child maltreatment and later attempting suicide with a firearm specifically, there is a substantial body of research exploring the connection between child maltreatment and suicidal ideation, suicide attempts, and suicide in general.

As it pertains to youth, Kim et al. refers to child maltreatment as "arguably the most well-established predictor of youth suicides." Numerous studies support the statement.[194] Ruch et al. (2023) found that youth with a history of child maltreatment were associated with a three-fold increase in odds for suicide attempts. Additional studies have found more than a four-fold increase in odds.[195] Taussig et al. noted studies finding that "being the victim of child maltreatment increases the odds of suicidal ideation about 4-fold and the odds of attempts 3- to 13-fold in childhood and young adulthood"[196] Osborne et al. add to these findings, noting that "physically abused girls had over five times greater odds of suicide attempt compared with non-abused girls; for boys, the odds were over six times greater."[197]

Maltreatment in childhood also increases the risk of suicide among adults. According to a study by Angelakis, "A two- to three-fold increased risk for suicide attempts and suicidal ideation was identified in adults who experienced sexual, physical or emotional abuse as children compared with adults who have not experienced maltreatment during childhood."[198] Furthermore, victims of child sexual abuse were particularly at risk.[199]

Studies have consistently shown that physical abuse and sexual abuse are particularly strong predictors of suicidal ideation and attempts in individuals who have experienced child maltreatment.[200] These findings have been observed in both community and clinical samples, using various research methodologies.

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[193] Johns Hopkins, p. 7.

[194] Kim, J. (2020). Suicidal ideation in adolescence: The role of in-home firearm access and childhood maltreatment. Child & Youth Care Forum, 49(1), 121–149, p. 123.

[195]Ruch, D. A., Munir, A., Steelesmith, D. L., Bridge, J. A., & Fontanella, C. A. (2023). Characteristics and precipitating circumstances of suicide among youth involved with the U.S. child welfare system. Children and Youth Services Review, 144, 106749, p. 4.

[196]Taussig, H. N., Harpin, S. B., & Maguire, S. A. (2014). Suicidality among preadolescent maltreated children in foster care. Child Maltreatment, 19(1), 17–26, p. 17. https://doi.org/10.1177/1077559514525503

[197] Osborne et al., p. 56.

[198] Angelakis, I., Gillespie, E. L., & Panagioti, M. (2019). Childhood maltreatment and adult suicidality: A comprehensive systematic review with meta-analysis. *Psychological Medicine, 49*(7), 1057–1078, p. 1072. https://doi.org/10.1017/S0033291718003823

[199] Angelakis et al., p. 1072.

[200] Turner, H. A., Finkelhor, D., Shattuck, A., & Hamby, S. (2012). Recent victimization exposure and suicidal ideation in adolescents. Archives of Pediatrics & Adolescent Medicine, 166(12), 1149-1154. https://doi.org/10.1001/archpediatrics.2012.1549.  See also Miller, et al., (2013); Kim (2020); and Taussig (2014).

Studies have further found that severity, chronicity, and co-occurrence of maltreatment increase the risk that an individual who has experienced child maltreatment will develop suicidal ideation or attempt suicide.[201] Taussig et al cites a prospective study that found a "625% increase in suicide attempts seen in the emergency department among children with four or more official reports of maltreatment compared to those who had none." [202] Co-occurring maltreatment also emerged as a strong predictor of suicidality. For instance, Turner found polyvictimization, experiencing multiple forms of victimization,[203] was the most powerful predictor of suicidal ideation in 12–19-year-olds.[204]

Kim noted prior studies that suggest childhood maltreatment increases the risk of suicide by disrupting psychological and cognitive development during childhood and adolescence (Fergusson et al. 2000; Molina and Duarte 2006). Kim further notes "the most common outcome of childhood maltreatment is psychological distress, including depression and post-traumatic stress disorder (PTSD), which in turn increases suicide risk among adolescents." [205] Turner observed that abuse by caregivers — those on whom youth typically depend for safety, stability, and nurturance — may be especially likely to experience feelings of hopelessness, which a variety of studies have identified as being associated with suicidal behavior.[206]

In the context of child maltreatment leading to a heightened risk of suicidality, gender may also shape potential outcomes. The reviewed research indicated that generally, males take their lives at higher rates than females, with Kim referencing research suggesting males take their own lives at nearly four times the rate of females.[207] The research revealed similar findings related to maltreated youth. Kim, et al.et al went on to find that maltreated male adolescents with access to firearms at home were more likely to seriously consider suicide compared to those without such access. In contrast, access to guns does not significantly amplify suicidal thoughts among maltreated female adolescents, as they are less likely to consider firearms as a means for suicide.[208] Miller (2013) found "relatively consistent evidence to suggest that the association between both sexual and/or physical abuse and suicide attempts may be stronger for males relative to females" but

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[201] Taussig et al., p.18.

[202] Taussig, et al., p.18, citing Johnson-Reid, Kohl, & Drake (2012).

[203] Types of victimization examined in the study included: peer-perpetrated victimization, maltreatment, sexual assault, witnessing family violence, and exposure to community violence. Turner et al., p. 1151.

[204] Turner et al., pp. 1152–1153.

[205] Kim et al., p. 123.

[206] Turner et al., p. 1153.

[207]Kim, p. 124.

[208] Kim, p. 144.

also noted that suicide attempts, on the whole, are more common in females than males.[209] Ruch (2023) found that among youth who died by suicide in Ohio, "female decedents were significantly more likely to be involved in the child welfare system."[210] These seemingly contradictory findings highlight the need for further research to better determine the effect of gender on suicidality, particularly in maltreated children.

There is a substantial body of research establishing that children and youth who have spent time in foster care are more likely to attempt suicide than individuals who have not been in care.[211] Of course, not every child who is reported to Child Protective Services (CPS) will spend time in out-of-home care (foster care). In a significant study for the purposes of this examination, Palmer, et al. used linked birth, death, and CPS records to examine differences in suicide rates among children and youth with (a) no CPS history, (b) a report of alleged child maltreatment, (c) a substantiated report of child maltreatment, or (d) foster care placement. Palmer's results suggest that children and youth reported to CPS for alleged maltreatment face a heightened risk of death by suicide similar to youth who spent time in foster care.[212] Palmer's findings further indicate that children who were reported but never substantiated as a victim of child abuse or placed in foster care had three times the odds of suicide compared with children without any CPS involvement. In cases where children were substantiated as victims of child abuse, but were never placed in foster care, the odds of suicide were roughly five times that of children without any CPS involvement. Finally, Palmer found that children and youth who had been placed in foster care had nearly five times the odds of suicide compared with children without any CPS involvement.[213] Notably, the common thread in these cases is reports to CPS, which provide a potential opportunity to implement innovative interventions through this common touchpoint to mitigate the tragic outcomes related to suicide.

Further analysis reveals several other aspects of the child welfare system and foster care that influence the likelihood of suicidal ideation or suicide attempts among children and youth who come into contact with the system. These factors include the number of

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209 Miller et al., p. 160.

210 Ruch et al., 2023, p. 5.

211 Taussig et. al. and Ruch et al. See also: Evans, R., White, J., Turley, R., Slater, T., Morgan, H., Strange, H., & Scourfield, J. (2017). Comparison of suicidal ideation, suicide attempt and suicide in children and young people in care and non-care populations: Systematic review and meta-analysis of prevalence. Children and Youth Services Review, 82, 122–129. https://doi.org/10.1016/j.childyouth.2017.09.020. See also: Palmer, L., Prindle, J., & Putnam-Hornstein, E. (2021). A Population-Based Examination of Suicide and Child Protection System Involvement. Journal of Adolescent Health, 69(4), 465–469. https://doi.org/10.1016/j.jadohealth.2021.02.006

212 Palmer et al., pp. 466–467.

213 Palmer et al., p. 467.

referrals and time in care, type of placement, mental health concerns, and age. Taussig, et al. found that "suicide attempters had been in out-of-home care longer than those who had not attempted suicide and that more lifetime household transitions were associated with almost every index of suicidality." The type of out-of-home placement also appears to have an effect on suicidality. Anderson found that "youth in a group home were 7 times more likely to endorse suicide ideation than youth in kinship care and were 5 times more likely to endorse suicide ideation than those in foster care"[214] Mental health is another significant factor, with Anderson noting that youth who enter the child welfare system and are placed in out-of-home care may be at an increased risk for developing depressive symptoms, which in turn could increase their risk for suicide ideation.[215] Finally, age can play a role in suicidality, as Katz, et al. note that rates for suicidal ideation and attempts appear to be particularly high for child welfare-involved youth who are on the verge of or who have experienced emancipation from out-of-home care.[216]

Two studies reviewed for this white paper looked at the role of firearms in planning, attempting, or committing suicide among foster care youth. Ruch (2023) noted that "youth who died by hanging/suffocation and other means were significantly more likely to be involved with the child welfare system compared to those who died by firearms"[217] In their study on the prevalence of suicidal ideation, plans, and attempts among preadolescent maltreated children in foster care, Taussig found that no children reported "planning or attempting suicide via overdose or firearms."[218] While these studies did not find a link between firearms and suicide among maltreated children in foster care, the high lethality of firearms in suicide and the associated risk factors discussed previously highlight the need for further research in this area.

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[214] Anderson, H. D. (2011). Suicide ideation, depressive symptoms, and out-of-home placement among youth in the U.S. child welfare system. Journal of Clinical Child & Adolescent Psychology, 40(6), 790-796, p. 794. https://doi.org/10.1080/15374416.2011.614588

[215] Anderson et al., p. 795.

[216] Katz, C. C., Busby, D., & McCabe, C. (2020). Suicidal behaviour in transition-aged youth with out-of-home care experience: Reviewing risk, assessment, and intervention. Child & Family Social Work, 25(3), 611-618, p. 612. https://doi.org/10.1111/cfs.12733

[217] Ruch et al., 2023, p. 2.

[218] Taussig et al., p. 20.

# Access and Availability of Firearms

A substantial body of research provides compelling evidence that access to firearms heightens the risk of gun violence, including violence directed toward others and suicide. Generally, access to firearms increases the likelihood of suicide more than threefold, and it doubles the risk of homicide victimization.[219] Copeland et al. conducted a 20-year prospective study examining the associations between childhood gun access in the home and adult suicidality and criminality. The study found that having gun access as a child was associated with higher levels of adult gun owning and carrying, exposure to gun violence, criminality, and suicidality.[220] Additionally, though it was not the primary focus of their study, Leeb, et al. observed that access to firearms in the home increased reported weapon carrying among adolescents,[221] which is a notable finding because weapon carrying is a potential precursor to gun violence.

> *"Part of what enables youth to progress to more deadly forms of violence is related to their access to and the availability of firearms in their homes and communities." ~ Office of Juvenile Justice and Delinquency Prevention*

The Office of Juvenile Justice Delinquency Prevention (OJJDP) conducted a literature review in December 2016 examining gun violence and youth. The review determined that "the strongest and most consistent predictor of youth gun violence is the exposure to or a history of violence" and "access to and availability of firearms increase the likelihood of weapon-related violence among youth."[222] OJJDP also noted that availability and access to firearms allow youth engaging in violent behavior to escalate that behavior to more lethal gun violence. Finally, and critically for this examination of gun violence, "Youths who live in homes where firearms are present but not safely stored are more likely to be involved in some form of gun violence."[223]
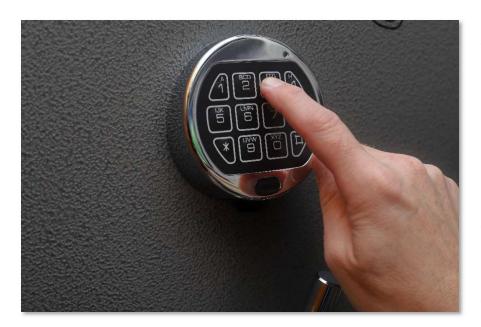
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[219] The Educational Fund to Stop Gun Violence, p. 7.

[220] Copeland, W. E., Tong, G., Gifford, E. J., Easter, M. M., Shanahan, L., Swartz, M. S., & Swanson, J. W. (2021). Childhood gun access, adult suicidality, and crime. Pediatrics, 147(6), e2020042291, p. 6. https://doi.org/10.1542/peds.2020-042291

[221] Leeb et al., p. 556.

[222] OJJDP, p. 6.

[223] OJJDP, p. 6.

Studies have shown that access to lethal means, such as firearms, is a significant risk factor for suicide.[224] Kemal found that "Adolescents with firearm access have higher odds of suicidal ideation and prior attempts compared to those without firearm access..."[225] Swanson references a seminal 1993 study by Brent, which "estimated that living in a home with a firearm was associated with a fourfold increase in risk of death by suicide" and "later estimated that the attributable risk of suicide among children under 16 was greater for firearms than for major depressive disorder"[226] In their study examining data from the National Violent Death Reporting System (NVDRS), Ruch & Sheftall (2021) found that suicide by firearm was the second most frequent method of suicide for children. All children in the study who died by firearm obtained a gun stored unsafely in the home.[227] While two previously discussed studies (Ruch, 2023; Taussig, 2014) did not find a significant link between firearms and suicide among maltreated children in foster care, the overall body of research suggests that access to firearms in the home is a significant risk factor for suicide among children and youth.

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[224] Osborne et al., p. 60.

[225] Kemal et al., p. 1.

[226] Swanson, S. A., Eyllon, M., Sheu, Y.-H., & Miller, M. (2020). Firearm access and adolescent suicide risk: toward a clearer understanding of effect size. Injury Prevention. Advance online publication. https://doi.org/10.1136/injuryprev-2019-043605

[227] Ruch, D. A., Heck, K. M., Sheftall, A. H., Fontanella, C. A., Stevens, J., Zhu, M., Horowitz, L. M., Campo, J. V., & Bridge, J. A. (2021). Characteristics and precipitating circumstances of suicide among children aged 5 to 11 years in the United States, 2013-2017. JAMA Network Open, 4(7), Article e2115683, p. 6. https://doi.org/10.1001/jamanetworkopen.2021.15683

# RECOMMENDATIONS

The reviewed literature shed light on the complex relationship between child maltreatment and violence against others and oneself, including gun violence, with a focus on the role of the child welfare system and foster care within this context. With some evidence supporting the hypothesis that child maltreatment may be a risk factor for later perpetration of gun violence, as well as a significant body of research establishing maltreatment as a risk factor for suicide, violence, and criminality throughout the lifespan, dedicating resources toward several levels of preventive efforts is warranted.

First, primary prevention efforts should include preventing child maltreatment from occurring in the first place. At the same time, there must be efforts aimed at identifying and mitigating risk factors among existing maltreated youth through screening and targeted interventions. These goals are ideally achieved through a multidisciplinary approach that engages stakeholders and resources from various domains. Because findings from the literature review indicate that out-of-home placement increases the risk of delinquency, and because there is some limited evidence that those experiencing gun violence are significantly more likely to have experienced out-of-home placement, it may be prudent to prioritize children at risk of or in out-of-home placement for intervention. Finally, policies that prevent gun access among maltreated youth can reduce the risk of harm to self and others.

Many of the studies reviewed above included recommendations for reducing the risk of violence and suicide, and several of these recommendations are specific to or applicable to individuals who have experienced maltreatment and/or involvement with the child welfare system. This section explores these proposed interventions and discusses their potential effectiveness in preventing the tragic consequences of gun violence and firearm suicide.

## Preventing Child Maltreatment

Given the extensive body of research indicating that child maltreatment is a risk factor for violence in general, and the few initial studies indicating that child maltreatment may be a risk factor for gun violence specifically, it is advisable to focus on preventing child maltreatment as a strategy for preventing gun violence. The finding that witnessing domestic violence, in particular, is predictive of violent crime and firearm arrests highlights the need to ensure prevention efforts are not limited to preventing abuse and neglect, but also seek to prevent violence more broadly within the home and family.

Preventing child maltreatment as a gun violence prevention strategy has been suggested in the literature. For example, after demonstrating that child maltreatment is associated with making threats with weapons, Casiano suggests that "prevention efforts that reduce exposure to adverse childhood events could substantially reduce the prevalence of violent behavior in later life."[228] Similarly, Wamser-Nanney (2019) suggests that because "childhood trauma is likely an important antecedent to engagement in gun violence," childhood trauma should be a "prime prevention focus."[229] Leeb et al. concluded that because "certain forms of early [child maltreatment] may increase [weapon carrying] in adolescence" there is "a need for child abuse prevention and intervention programs."[230] Fang found that childhood physical abuse and neglect significantly predict youth violence perpetration[231] and went on to state that preventing child maltreatment could reduce youth violence and intimate partner violence perpetration.[232] Further, Fang recommended that "prevention efforts should occur early in life and should focus on multiple types of violence that occur in the developmental trajectory."[233]

Duke et al notes the importance of prevention and intervention approaches aimed at reducing various types of adverse childhood experiences, noting potentially valuable programs.[234] For example, nurse home visiting for high-risk mothers and the Triple P (Positive Parenting Program) have both been shown to prevent child maltreatment and increase positive outcomes for children. Nurse home visiting provides parents with regular visits from professionals who offer guidance and tools to help them bond with their child, develop parenting skills, and create a safe home environment.[235] Triple P is a parent training program that aims to reduce risk factors for child abuse and neglect by enhancing parental competence and correcting dysfunctional parenting approaches.[236] Ultimately, implementing programs proven to prevent or reduce child maltreatment could mitigate or eliminate the psychological, emotional, and developmental harms, discussed in this paper, that can have devastating impacts such as suicide, violence, or gun violence perpetration in adolescence and beyond.

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[228] Casiano et al., p. 860.
[229] Wamser-Nanney et al., p. 106.
[230] Leeb, et al., p.557.
[231] Fang & Corso, p. 285.
[232] Fang & Corso, p. 288.
[233] Fang & Corso, p. 289.
[234] Duke et al., p. e784.
[235] Casey Family Programs. (September 27, 2022). Are home visiting programs effective in reducing child maltreatment? Retrieved on April 28, 2024 from https://www.casey.org/home-visiting-programs/
[236] National Institute of Justice – Crime Solutions. (June 8, 2011). Program Profile: Triple P: Positive Parenting Program. Retrieved on April 28, 2024 from https://crimesolutions.ojp.gov/ratedprograms/80

# Screening

The practice of screening for risk factors is frequently recommended in the studies reviewed. By implementing screening practices in various settings, including the child welfare system, youth justice system, healthcare facilities, and other relevant contexts, professionals can identify at-risk individuals and provide timely interventions to help prevent the tragic consequences of gun violence and suicide. Given the early indications that child maltreatment may be a risk factor for gun violence, it may be prudent to implement screening for trauma, violence risk, mental health and substance abuse issues, suicidality, or gun access among individuals who have experienced maltreatment. However, caution must be exercised when implementing screening practices. As noted previously, most individuals who have experienced maltreatment and other traumas do not engage in violent behaviors. Therefore, screening must not be used to stigmatize or label individuals as violent. Instead, screening should be used only to ensure access to appropriate and trauma-informed services and resources for those who may be at risk of long-term negative outcomes due to adverse experiences.

## Screening for Trauma

The findings of the 2019 study by Wamser-Nanney indicate that "childhood trauma has a stronger relationship with gun violence than unarmed violence, which highlights the importance of childhood trauma in gun violence."[237] This insight suggests that screening for childhood trauma may be an important step in gun violence prevention. The child welfare, youth justice, and healthcare systems are all reasonable focal points for trauma screening efforts. However, because most individuals who have experienced trauma demonstrate resilience and are unlikely to engage in violence, screening should only be used to ensure "enhanced access to trauma-informed care for youth in families experiencing adversity."[238]

Screening for trauma can also be integrated into violence risk screening tools and practices. Gaylord-Harden et al. note that "There have been calls to include screening of posttraumatic stress symptoms in violence risk screening (Cunningham et al., 2009), consistent with research findings which identify posttraumatic stress disorder as a risk factor for subsequent firearm behavior. Through research that identifies how trauma may

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[237] Wamser-Nanney et al., 2019, p. 104.

[238] Salo, M., Appleton, A. A., & Tracy, M. (2022). Childhood adversity trajectories and violent behaviors in adolescence and early adulthood. Journal of Interpersonal Violence, 37(15-16), NP13978-NP14007, p. NP13998. https://doi.org/10.1177/08862605211006366

impact firearm decision-making, appropriate questions regarding trauma exposure and trauma symptoms can be included on screening instruments."[239]

## Screening for Violence Risk

Gaylord-Harden et al. recommend that "risk assessment or risk screening is an essential step for counselors and clinicians, trauma unit staff, educators, probation officers, etc. to determine the likelihood that an adolescent may engage in risky firearm behavior."[240] They note that most current emergency department violence prevention programs begin by first identifying which youth are at risk for violence.[241] Importantly, Mattson et al. found that "In the health care setting, screening positive for violence risk was also predictive of youth having potential firearm access and possessing or carrying a firearm."[242] Expanding upon the work in the health care setting, it may be advisable for probation departments and other public or community service agencies to consider screening program youth for violence if they have been identified as having experienced child abuse or neglect if they do not already do so.

## Screening for Mental Health and Substance Use

Sanchez et al. suggest that "better screening, improved access, and treatment for substance use and mental health disorders… can reduce the risk for self-harm and interpersonal violence."  They note that this is particularly true for adolescents who are impulsive and are therefore at higher risk of these harmful behaviors. They note that receiving effective treatment for substance abuse and mental health issues can reduce the risk of committing violent acts. They suggest that "Early recognition of mental health and social alienation should be identified by teachers, counselors, physicians, or families and be recommended to mental health professionals.".[243] For abused or neglected children, screening for mental health disorders and substance use can be done while the youth is receiving child welfare services or health services through the child welfare system.

## Screening for Suicidality

Screening is vital for detecting suicidality, suicidal ideation, or other risk factors associated with attempting suicide. Ruch et al. suggests that "youth involved with the child welfare system may benefit from universal screening and suicide risk assessment

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[239] Gaylord-Harden et al., p. 5.
[240] Gaylord-Harden et al., p. 5.
[241] Gaylord-Harden et al., p. 5.
[242] Mattson et al., p. 859.
[243] Sanchez et al., p. 2176.

that is integrated into standardized practice and policy within the child welfare system."[244] Taussig notes that despite high rates of mental health issues among children in foster care, very few receive mental health services. "Disparities in mental health service provision for children in foster care have been found by race/ethnicity, type of maltreatment, and placement type. ...Given these discrepancies, it is vital that all children are screened for suicide at entry to out-of-home care. This might be done upon entry into the system or as a part of primary care services at any point along the continuum of health care."[245] Taussig, et al. noted the concerning finding that two thirds of the caregivers of the most imminently suicidal children were not aware of the risk. The researchers suggest that informing caregivers of any identified risk is vital because they play a key role in minimizing suicide morbidity and mortality.[246]

Palmer et al. suggests that improved screening and ensuring that service referrals are made for allegedly maltreated youth can significantly impact suicide prevention efforts. However, they also acknowledge the challenges faced by many child welfare systems when it comes to screening children who come into their care, stating that "the sheer volume of children who are reported to CPS makes it highly unlikely that the front end of CPS can adequately investigate allegations of abuse and neglect (its primary charge), while also serving as an effective gateway to mental health services."[247] To address this issue, Palmer recommends "the most effective approach to suicide prevention is likely one that will strengthen CPS's ability to initiate referrals to community-based programs that have the potential to reduce adolescent suicide risk, while also emphasizing workforce training and awareness (i.e., understanding mental health) and cross-program information sharing to improve care coordination when appropriate."[248]

Other researchers suggest screening for suicidality in other settings or reaching a broader spectrum of potentially at-risk individuals. Miller recommends clinicians assess for current and past suicidal behavior among youth with a history of maltreatment. Miller emphasizes the importance of this assessment, noting that "Past suicidal behavior is the strongest predictor of future suicidal behavior thus an assessment for a history of suicide attempts is particularly important."[249] Furthermore, Miller recommends that "earlier intervention from professionals following child maltreatment is associated with a lower

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[244] Ruch et al., 2023, p. 5.
[245] Taussig et al., p. 24, citing Gardner et al., 2010.
[246] Taussig et al., p. 23.
[247] Palmer et al., p. 468.
[248] Palmer et al., p. 468.
[249] Miller et al., p. 167.

rate of lifetime suicide attempts among youth."[250] Similarly, Turner suggests including "comprehensive victimization assessment in adolescent suicide prevention and intervention efforts," and recognizing the significance of polyvictimization on suicidal ideation.[251]

### Screening for Gun Access

The literature reviewed highlighted the increased risk of both lethal violence and suicide where there is access to firearms among youth. These effects persist through adulthood.[252] Screening for access to firearms is already recommended in the pediatric healthcare setting, with evidence indicating that discussion with a pediatrician results in safer storage practices.[253] Because access to firearms has been shown to heighten the risk of gun violence, both self-directed and toward others, screening for gun access within the child welfare system may allow for targeted education about safe storage and practice that can reduce the ability of maltreated children to access firearms. This may reduce suicide among maltreated adolescents as well as later gun violence among individuals who have been maltreated as children.

## Interventions

In the reviewed literature, researchers recommended several youth-focused interventions in the areas of violence prevention and suicide prevention generally, which may be valuable in addressing the increased risk of violence among those who have experienced child maltreatment. Although many of the interventions discussed in the literature are not specific to gun violence prevention, the strategies highlighted may help reduce violence generally, ultimately contributing to a reduction in gun violence.

### Violence Prevention Interventions

Duke, et al. examined adolescent violence perpetration in relation to ACEs and recommended "skills-based behavioral therapy models that facilitate identification of negative or damaging thought patterns, evaluation of these patterns, and generation of alternative interpretations that are more hopeful…".[254] Gaylord-Harden et al. highlighted a recent emphasis on the role of stress and fear or anxiety in decision-making, particularly

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[250] Miller et al., p. 168.
[251] Turner et al., p. 1153.
[252] Copeland et al., p. 8.
[253] Oddo, E. R. (2023). Firearm Safety Screening in the Pediatric Hospital Setting: a Quality Improvement Initiative, Pediatric Quality and Safety, Issue 5, Volume 8, p. 1.
[254] Duke et al., p. e784.

among adolescents. As such, the researchers recommend a "trauma-informed approach to understanding decision-making for adolescents that examines traumatic stress and symptoms as covariates that influence their decision-making processes."[255] The researchers go on to recommend using a trauma-informed approach to develop and refine existing firearm prevention strategies such as motivational interviewing and decisional balance exercises for adolescents.[256]



Motivational interviewing, which helps youth identify and explore reasons to work toward change, when used in violence intervention programs, has been shown to reduce weapon carrying among adolescents injured by gun violence. Gaylord-Harden notes that "A trauma-focused motivational interview would allow adolescents to acknowledge their underlying motives for carrying or using a gun as a response to their traumatic experiences and work towards identifying alternative responses that elicit feelings of safety to enhance change in behavior."[257] Decisional balance exercises guide youth in identifying the benefits and risks of gun carrying as a method of enhancing engagement in interventions. It can be a particularly valuable strategy when using a trauma-informed

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[255] Gaylord-Harden et al., p. 2.
[256] Gaylord-Harden et al., p. 6.
[257]  Gaylord-Harden et al., p. 6.

approach that recognizes the impact of prior victimization on the youth's desire to feel less vulnerable and more protected.[258] These strategies may be valuable for probation officers and mental health practitioners when engaging with youth who have experienced child maltreatment.

Focusing on youth at risk of out of home placement, the use of therapeutic foster care for system-involved youth with serious emotional or behavioral issues, rather than residential group home care, has been shown to reduce violent outcomes for chronically delinquent youth. The programs utilize foster parents with special training to ensure youth receive intensive guidance and support in social and emotional development. The Task Force on Community Preventive Services found promising, although limited evidence, that "violent outcomes among juveniles in therapeutic foster care were reduced by a median of 72% compared with juveniles in group homes."[259]

Leeb examined the effect of childhood physical and sexual abuse on adolescent weapon carrying, which can be a precursor to gun violence. Researchers found that exposure to certain forms of early childhood maltreatment may increase weapon carrying among adolescents, particularly for females who experienced sexual abuse.[260] Key to the connection between child maltreatment and weapon carrying is whether the youth has a perceived need for a weapon in order to protect themselves. Researchers found evidence that sexually abused adolescents may be more likely than other youth to report a perceived need for a weapon for protection.[261] Researchers recommend that interventions provided to sexually abused girls should incorporate personal safety alternatives to weapon carrying."[262] More broadly, interventions that address the feelings of vulnerability among maltreated youth may reduce the rate of weapon carrying.

Unfortunately, however, "There is a striking paucity of information on universal, upstream, community-based interventions implemented earlier in life that could reduce the occurrence of high-risk firearm behavior, such as handgun carrying, among adolescents."[263] Nevertheless, researchers suggest that "[i]ntervening at earlier

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[258] Gaylord-Harden et al., p. 6.

[259] Task Force on Community Preventive Services, Recommendations to Reduce Violence Through Early Childhood Home Visitation, Therapeutic Foster Care, and Firearms Laws. 20050. American Journal of Preventive Medicine (28), p. 9.

[260] Leeb et al., p. 557.

[261] Leeb et al., p. 556.

[262] Leeb et al., p. 557.

[263] Rowhani-Rahbar, A., Oesterle, S., Gause, E. L., Kuklinski, M. R., Ellyson, A. M., Schleimer, J. P., Dalve, K., Weybright, E. H., Briney, J. S., & Hawkins, J. D. (2023). Effect of the Communities That Care Prevention System on Adolescent Handgun Carrying: A Cluster-Randomized Clinical Trial. JAMA Network Open, 6(4), Article e236699, p. 2. https://doi.org/10.1001/jamanetworkopen.2023.6699

developmental stages to reduce risk factors and strengthen protective factors for behavioral health problems" may improve outcomes throughout the lifespan.[264] As noted in the Handbook of Juvenile Delinquency: "To combat the influence of physical abuse, sexual abuse, and observed violence on juvenile weapon behaviors, policy-makers might pursue efforts to encourage or enhance therapy or counseling for children and adolescents following abusive experiences or witnessing violence."[265]

A key aspect of reducing the risk of violence is enhancing protective factors. According to OJJDP, "Protective factors are the events, opportunities, and experiences in the lives of youth that lessen or buffer against the probability of violence."[266] Specifically, identified protective factors to reduce youth violence include skill building in the areas of problem-solving and emotional regulation skills.[267] School readiness and academic achievement are also identified as protective factors.[268]

OJJDP notes that with regard to gun violence specifically, "parental and school connectedness may help youth overcome the debilitating effects of risks, such as exposure to violence and the access to and the availability of firearms."[269] Likewise, youth who report parental involvement in their lives are less likely to carry weapons.[270] As it pertains to maltreated youth, this supports the need for programs that address parenting skills and facilitate the development of healthy relationships between caregivers and children. Establishing and maintaining connections with prosocial peers is another protective factor[271] to support as a child engages with the child welfare system.

## Suicide Prevention Interventions

Due to the findings of several studies indicating that youth who enter the child welfare system, and particularly those in out-of-home placement, experience increased risk of suicide, several researchers suggest approaches to suicide prevention intervention specifically tailored for these youth. These include early intervention and social support as well as evidence-based treatments and cognitive-behavioral approaches.

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[264]Rowhani-Rahbar et al., p. 2.

[265] Emmert & Lizotte, p. 583.

[266] OJJDP, 2016, p.6, citing Resnick, Ireland, and Borowsky 2004.

[267]David-Ferdon, C., Simon, T. R., Hamby, S., Kacha-Ochana, A., Merrick, M. T., Simon, P., & Vivolo-Kantor, A. M. (2019). A Comprehensive Technical Package for the Prevention of Youth Violence and Associated Risk Behaviors. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention, p. 15.

[268]David-Ferdon et al., p. 15.

[269] OJJDP, 2016, pp. 7–8.

[270] Emmert & Lizotte, p. 582.

[271]David-Ferdon et al., p. 15.

Anderson's study examined the association between type of placement (in-home vs. out-of-home, and further classifications within each category), depressive symptoms, and suicide ideation among a sample of youth as they entered the child welfare system. The study noted that "youth who enter the child welfare system and are put in an out-of-home placement may be at an increased risk for depressive symptoms, which in turn may increase their risk for suicide ideation."[272] One of the key recommendations to reduce the risk of suicide among youth in the child welfare system and in out-of-home placement is monitoring youth for symptoms of depression and other mental health issues related to suicidal ideation to increase the opportunity for such youth to access treatment.[273]

Miller et al. and Ruch et al. (2023) both emphasize the importance of early intervention for preventing suicide among victims of child maltreatment. Ruch, et al. (2023) note the importance of early detection of youth at risk of suicide and early interventions, ideally implemented before suicidal thinking occurs.[274] Miller et al. suggest that intervention may be most successful if it focuses on building "strong social support networks and adaptive coping skills." The researchers further emphasize the importance of facilitating peer connections as youth transition between school settings, which may occur as a result of placement in out-of-home care.[275]

Miller et al. and Ruch et al. (2023) also highlighted the efficacy of evidence-based treatments and cognitive behavioral therapy (CBT). CBT helps "rework distorted cognitive processes and maladaptive behavior patterns that result from child maltreatment experiences and precipitate the onset of suicidal behavior."[276] Ruch, et al. (2023) referenced CBT as a promising intervention "with demonstrated efficacy for the treatment of youth involved with the child welfare system and youth suicidal behavior."[277] In addition, an empirically supported intervention based on cognitive-behavioral principles, Trauma-Focused Cognitive Behavioral Therapy (TF-CBT), may offer an integrated treatment for youth in the child welfare system with co-occurring trauma and suicidal behavior."[278]

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[272] Anderson et al., p. 795.

[273] Anderson et al., p. 795.

[274] Ruch et al., 2023, p. 5.

[275] Miller et al., p. 168.

[276] Miller et al., p. 168.

[277] Ruch et al., 2023, p. 5.

[278] Ruch et al., 2023, p. 5.

## Multidisciplinary Approaches

Developing and implementing strategies such as those discussed above is often a complex and resource-intensive endeavor. As Sumner notes, "....there exist significant barriers that cities and states face in real-world implementation of violence prevention activities...violence prevention activities often are implemented as domain-specific approaches (i.e., police department, child welfare) and there is a greater need for collaborative, cross-sectoral strategies."[279] Yexley, et al. suggests that "Multidisciplinary and multifaceted efforts to address preventive and interventive measures are imperative if we are to interrupt the intergenerational cycle of violence."[280] The child welfare system certainly plays a role, as does law enforcement, but this issue also impacts and is impacted by the health care sector, mental health care providers, and education, among other sectors. Parents and caregivers, policymakers, social workers, community advocates, lived experience experts, teachers, doctors, and counselors all must play a part in addressing this issue. By fostering collaboration and coordination among these various stakeholders, policymakers and community leaders can develop more comprehensive and effective strategies to prevent and address the complex issues of child maltreatment and gun violence.

## Access to Firearms

Kim, et al. notes: "It is well documented that, among gun-owning families, adolescents living in homes in which all firearms are stored unloaded and locked are at lower risk for suicide than those living in homes in which firearms are stored less securely."[281] Kim proceeds to recommend focusing on maltreated male adolescents for safe storage interventions. The researchers then highlight vital elements of an effective safe storage policy; the firearms must be "... stored unloaded, in a locked place, separate from ammunition, and/or secured with an extrinsic safety device."[282] Similarly, Osborne recommends supplementing behavioral parent training intervention programs for child abuse with firearm safe storage discussion and guidance as a way of preventing suicide among maltreated youth.[283]

Ruch & Sheftall (2021) provide further support, recommending safe storage policies to protect against suicide attempts. They note, "Even modest improvements in firearm

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[279] Sumner et al., p. 648.
[280] Yexley et al., p. 717.
[281] Kim, p. 145.
[282] Kim, p. 145.
[283] Osborne et al., p. 56.

storage practices may prevent up to 32% of youth firearm deaths."[284] The researchers proceed to expand on their recommendations, including "lethal means restriction interventions, educational programs, youth-focused firearm laws, and safe firearm storage awareness campaigns."[285] Regarding suicide prevention, "Universal routine screening paired with lethal means safety counseling in pediatric primary care settings is recommended by suicide prevention researchers and screening children during a primary care visit can also inform parents about potential problems requiring intervention and facilitate referrals to specialty mental health services." With the increased risk of suicide among maltreated youth, screening and safety counseling in child welfare settings may have a significant impact on reducing firearm suicides.

Notably, while most of the reviewed literature recommended safe storage as an approach to prevent access to firearms primarily as a means to prevent suicide, these safe storage policies could prevent gun violence in other situations as well. Implementing comprehensive safe storage policies and practices can reduce the risk of gun violence and suicide among children and youth who have experienced maltreatment, creating safer environments and promoting their overall well-being.

# Recommendations for Further Research

This report noted the limited body of research into the relationship between childhood maltreatment and gun violence in particular. The OJJDP literature review lends some support to this observation, and suggests: "Overall, given the paucity of research on risk and protective factors that directly affect youth gun violence, more attention should be paid to this area of research. Knowing what factors increase or decrease the risk for all forms of youth violence is necessary to the process of designing empirically based gun prevention strategies."[286] Additionally, Gaylord-Harden highlighted the need for research regarding "decision making and firearm behavior to better understand how adolescents make decisions to acquire, carry and use firearms."[287]

Sumner suggested that the value of their study, which is notably limited in size and scope, is to demonstrate "the feasibility and potential of using linked data to more comprehensively understand youth violence perpetration risk and ultimately better focus a package of evidence-based services to the most vulnerable youth in society"[288] Thus, our

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[284] Ruch et al., 2021, p. 6.
[285] Ruch et al., 2021, p. 6.
[286] OJJDP, p. 7.
[287] Gaylord-Harden, et al., p. 1.
[288] Sumner et al., p. 654.

understanding of important aspects of youth violence perpetration risk in this area may benefit from utilization of such data in future research.

In order to provide evidence-based approaches, additional research is needed to identify the effectiveness of prevention and intervention strategies. There remains uncertainty around prevention strategies to reduce childhood maltreatment and their effectiveness in ultimately preventing later violence. Furthermore, additional research is necessary to assess the effectiveness of interventions provided in the community and through child-serving systems. For example, there is evidence that "enhanced quality foster care" has led to improved mental and physical health outcomes, but it is unclear whether that translates to reducing violence and threats of violence.[289]

Given the documented racial and ethnic disparities related to child welfare, delinquency, and adult criminality, further research should explore contributing factors. Furthermore, given the disproportionate impact of gun violence on communities of color, further attention must be given to examining the effectiveness of efforts to combat the systemic issues that increase the risk of gun violence victimization and perpetration within these communities. As noted by Salo et al., "... efforts to address the systemic factors that allow childhood adversities to flourish, like structural racism and discrimination against communities of color and indigenous communities, inequalities in our educational system, and disparities in our criminal justice system are critically important to disrupt the "cycle of violence" in families and communities and to protect adolescents from engaging in harmful violent behaviors with serious long-term consequences."[290]

While the research reviewed in this report has provided valuable insights into the complex relationship between child maltreatment, foster care, violence, and gun violence, it is clear that there is still much work to be done. Addressing the gaps in understanding can produce a more comprehensive and nuanced understanding of this critical issue. This, in turn, will enable the development of more targeted, evidence-based interventions and policies to prevent gun violence and promote the well-being of children and youth who have experienced maltreatment.

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[289] Casiano et al., p. 860.
[290] Salo et al., p.22.

# CONCLUSION

This white paper examined the intricate connections between child maltreatment, experiences in foster care, and subsequent risk of gun violence. After reviewing and analyzing the literature, it appears that child maltreatment is a likely risk factor for gun violence perpetrated against self and others. Although the research exploring the connection between child maltreatment and gun violence is limited in quantity and scope, there is a well-established connection between child maltreatment and the risk of violent crime and suicidality. The additional research indicating that child maltreatment increases the risk of weapon-carrying and threats with guns suggests an increased likelihood of gun use among maltreated individuals. Furthermore, research specifically indicating that family-of-origin violence increases gun carrying in adolescence and intimate partner violence in adulthood—a circumstance that has a high rate of gun use—suggests a connection between maltreatment and later gun violence.

With regard to gun violence perpetrated against oneself, the clear connection between child maltreatment and suicide, and the clear connection between access to firearms and suicide, indicates significant risk among maltreated youth who have access to firearms. Although research indicates that attempts at suicide with firearms is less frequent among maltreated youth than other forms of attempted suicide it is well-established that access to a firearm increases the risk of the most lethal form of suicide attempt.

Involvement in the child welfare system may present an additional risk factor for maltreated youth, although the research on this connection is even more limited and less conclusive. Nevertheless, existing research suggests that those who experience the child welfare system tend to experience increased negative outcomes. Furthermore, at least one study found that youth who commit firearm violence are more likely than others to have experienced child welfare investigations, substantiations, and out-of-home placement. Research also indicates that children and youth who have been in foster care are more likely to attempt suicide compared to their peers who have not. Additionally, evidence suggests that children who have merely been reported to CPS—regardless of whether the allegations are substantiated—exhibit higher suicide risks than those with no CPS involvement.

The relationship between child maltreatment, foster care, and the risk of perpetrating gun violence is nuanced and outcomes can be influenced by several factors, either to mitigate or exacerbate risk. These include socioeconomic status, racial disparities, the onset and frequency of maltreatment, gender, and mental illness and substance abuse. Another highly relevant factor is access to firearms. This access has been shown to significantly

increase the risk of violent outcomes, especially in households with histories of maltreatment.

These findings suggest that policies, programs, and practices aimed at preventing maltreatment, addressing risk factors among maltreated youth in and outside of the child welfare system, and preventing access to firearms among maltreated youth may be effective in reducing the incidence of gun violence among the population of individuals who experienced child abuse, neglect, and family violence. However, further research should be undertaken to fill the significant gap in the existing literature. Specifically, researchers, academics, lawmakers, advocates, and the impacted children and youth would benefit from further longitudinal, peer-reviewed research on the connections between child maltreatment, foster care, and gun violence.

As a final note, it is important to reiterate that the research, findings, and recommendations in this white paper should not be used to cast unwarranted suspicion on those who have experienced the trauma of child maltreatment. It is undisputed that the vast majority of individuals who have experienced abuse, neglect, and the witnessing of family violence demonstrate resilience in the face of this adversity and do not go on to engage in violent behavior, including gun violence. The information presented here should serve to promote prevention of these adverse experiences and to positively support those who may need additional support, not to brand any victimized child as a future threat.

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