The Epidemiology of Violence Exposure in Children

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KEYWORDS

• Epidemiology • Violence • Pediatrics • Adverse childhood experiences • Trauma

KEY POINTS

- Violence impacts many American children each day in a variety of forms.
- The COVID-19 pandemic exacerbated the rates of many violence exposures for children.
- The burden of violence unfairly impacts children of color and lesbian, gay, bisexual, transgender, and questioning youth, in large part due to systemic injustice.
- Pediatricians can and must take a role in recognizing, assessing, and treating violence exposure in children.

BACKGROUND

Violence, as defined by the World Health Organization, is "the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment or deprivation".[1] Violence in all its forms impacts children across the United States each day and is consistently one of the leading causes of child and adolescent mortality.[2] At least 2700 children ages 0 to 18 years died of homicide in 2020, and an estimated additional 160,000 children were injured by violence that same year.[3,4] Research estimates that 60% of all American children will experience at least one form of violence in the home, school, or community each year.[5,6] The different forms of violence experienced by children, such as community violence, intimate partner violence (IPV), and adolescent relationship abuse (ARA), child maltreatment, and bullying, are often interconnected and share similar root causes (**Fig. 1**).[7]

The impact of violence on children, including long-term outcomes, is becoming more and more clear.[8,9] Violence impacts children's physical health through acute

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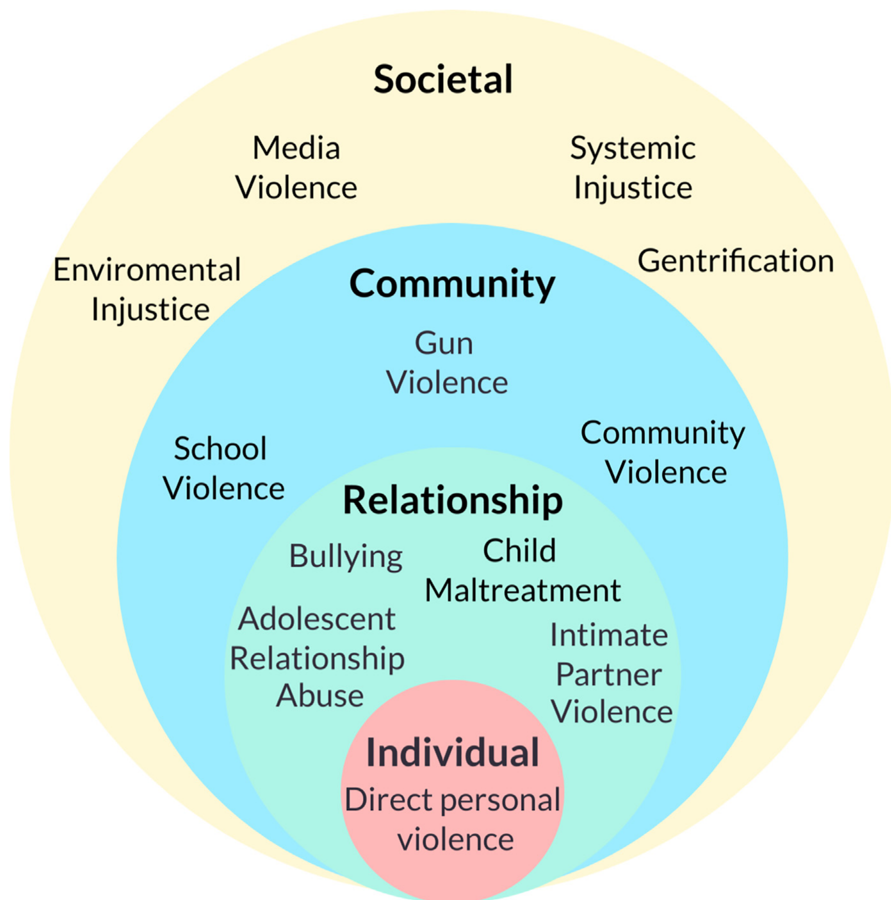

Fig. 1. Violence exposure in children on the social ecological model.

biologic responses, like raising cortisol levels and disrupting sleep.[10] It can also deter behaviors that promote health, such as physical activity, due to safety concerns.[11,12] Exposure to violence of any kind also affects a child's mental health, contributing to the development of post-traumatic stress disorder, anxiety, and depression. Exposure to violence in childhood and adolescence can also have significant effects on the developing brain, particularly in infants and young children.[13] Unfortunately, experiencing violence as a child can sometimes lead to the perpetration of violence and involvement with criminal justice in the future. This "cycle of violence" has been evident in varying forms of violence exposure and across multiple communities.[14–17]

TYPES OF VIOLENCE EXPERIENCED BY CHILDREN

Intimate Partner Violence

IPV is abuse or aggression that occurs in a current or prior romantic relationship and can include multiple forms, such as physical violence, sexual violence, stalking, psychological aggression, financial coercion, cyber abuse/bullying, and isolation.[18] IPV is common, with an estimated 15.5 million children exposed to IPV each year through their parents' and caregivers' relationships.[19] Lifetime prevalence of IPV is high

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regardless of gender, with 47.3% of women and 44.2% of men reporting any sexual violence, physical violence, or stalking.[20] Women of color report higher rates of IPV than those who identify as White.[21,22] Marginalized communities, such as communities of color, immigrants, those living in poverty, sexual and gender diverse persons, and other communities, may experience IPV differently and may be more or less likely to report it for a variety of reasons.[23] This topic is explored in greater detail in the next article in this volume. During the COVID-19 pandemic, there was an increase in both the prevalence and severity of IPV, with having a toddler in the home being a significant risk factor for experiencing IPV.[24]

Adolescent Relationship Abuse

ARA, often called teen dating violence, refers to IPV that occurs directly in the relationship of the adolescent. ARA is common, with 1 in 12 adolescents experiencing physical dating violence, and another 1 in 12 experiencing sexual dating violence.[25] Among adolescents who had dated in the past year, 69% reported lifetime ARA victimization and 63% reported ARA perpetration.[26] Though ARA can affect all teenagers, female and lesbian, gay, bisexual, transgender, and questioning (LGBTQ) teenagers are more likely to experience all forms of ARA when compared with heterosexual peers (physical 43% vs 29%, psychological 59% vs 46%, cyber dating abuse 37% vs 26%, sexual coercion 23 vs 12%).[27,28] Adolescents are more likely to experience ARA online as well, through email, text, or social media sites.[29,30] ARA can also turn fatal, with 7% of adolescent homicides committed by intimate partners.[31] During the COVID-19 pandemic, rates of ARA stayed similar or even improved compared with pre-pandemic rates, perhaps due to school closures and social distancing.[32]

Community Violence

Community violence is violence that occurs between unrelated individuals who may or may not know each other, outside of the home.[33] Community violence is direct (personal victimization) or indirect (witnessing violence), with children more likely to experience indirect community violence.[33] Indirect violence exposure can include seeing violent acts, watching someone be threatened, or hearing gunshots.[34] Witnessing physical violence in communities is high, with 44% to 82% of children reporting seeing a non-relation be slapped, hit, or punched.[33] About 13% of children in the United States have seen someone threatened with a weapon in their communities and 41% have experienced indirect community gun violence, such as hearing gunshots.[35,36] Boys are more likely to experience direct community violence than girls and children of color are more likely to live in neighborhoods with high exposure to community violence.[31,33] Exposure to community violence can have significant effects on children's physical and mental health, as well as school performance.[37–39] During the COVID-19 pandemic, community violence increased in some communities, especially racial and ethnic minoritized communities, as measured by emergency department visits for all violent injuries.[40–42]

Gun Violence

Since 2019, gun violence, whether through homicide or suicide or accident, has been identified as the number one cause of death in children in the United States, overtaking motor vehicle accidents.[43] Per the Gun Violence Archive, more than 1600 children ages 0 to 17 years were killed by guns in 2022 and more than 4500 were injured.[44] The United States accounts for more than 90% of pediatric gun fatalities among similar peer countries.[45] Gun violence disproportionately impacts children of color, especially Black youth, who are significantly more likely to die of gun assaults than

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their White peers; firearms have been the leading cause of death in Black children since 2001.[46] Suicide by firearm is more common among White children, though rates are also rising among Black young adults.[47] Mass shootings, especially in schools, continue to be a uniquely American problem with upward trends in rates of mass shootings over the past 5 years.[48] During the COVID-19 pandemic, both children injured and killed by firearms and those exposed to firearm violence increased.[49–51] The racial disparity in gunshot injuries dramatically increased during the pandemic, with a 4 fold increase for Black compared with White children.[52] Firearm purchases also increased during the pandemic, leading to a large number of new families and children potentially exposed to firearms.[53]

Bullying

Bullying is defined as "any unwanted aggressive behavior by a youth or group of youths that are not siblings or current dating partners that involves an observed or perceived power imbalance that is repeated".[54] Bullying is physical, verbal, relational, or cause damage to the property of the victim. Bullying is associated with other violent behaviors and exposures and should not be thought of as just a normal part of childhood.[55,56] Bullying is unequally experienced, with LGBTQ children experiencing significantly more bullying than their heterosexual peers.[57] Bullying rates in American youth have stayed steady over the past 25 years, with about 20% of youth reporting bullying on school grounds.[25] Cyberbullying, or bullying that occurs online through email or social media, has risen as adolescents engage more with social media.[58] Cyberbullying can consist of offensive name-calling, spreading false rumors, receiving explicit images, stalking, physical threats, or having explicit images of themselves shared without their consent, with 46% of 13 to 17 year olds reporting at least one of those examples.[59] The COVID-19 pandemic seemed to disrupt both in person and cyberbullying as it prevented children from going to school, yet rates have begun to rise to pre-pandemic levels as children returned to school.[60]

Child Maltreatment

Child maltreatment, or child abuse and neglect, is defined as "any act or series of acts of commission or omission by a parent, caregiver or another person in a custodial role that results in harm, potential for harm or threat of harm to a child."[61] This can encompass physical abuse, sexual abuse, emotional abuse, or neglect. At least 1 in 7 children experience child maltreatment each year in the United States and there have been no significant changes in the rate of child maltreatment.[62] About one-third of all children will experience a child protective services (CPS) investigation before the age of 18 years, with the percentage being highest for Black children (53%).[63] This disparity in CPS investigations is likely due to both intrapersonal racism or individual biases and systemic racism that leads to unjust policies and practices.[64,65] These disparities are discussed in detail in Tolliver and colleagues' article, "Child Maltreatment," in this issue. During the COVID-19 pandemic, emergency department visits for child abuse evaluations decreased but hospitalizations stayed the same or even rose.[66] Some have hypothesized that less severe forms of child abuse that might have been identified by other mandated reporters, like school officials or daycare staff, were not reported due to lockdowns closing these institutions.

Media Violence

Exposure to media violence, which includes real or simulated violence in television, music, social media, and video games, is harmful to children's health and is associated with increased aggressive behaviors and fears.[67] School age children view media

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about 5 hours each day, while teenagers jump up to 7.5 hours, not including schoolwork or homework, though this time does include multi-tasking, such as listening to YouTube videos while getting ready in the morning.[68] Most young people see some form of violence in the media they consume each day.[69] More research is needed, however, to further investigate the media violence to which children are currently exposed, especially with new social media applications.[69] During the COVID-19 pandemic, media use among children and teens increased, which likely increased the amount of media violence those children were exposed to as well.[70] The influence of media violence on children will be discussed in the Michael Arenson and Heather Forkey's article, "Violence Exposure and Trauma-Informed Care," in this issue on Media Exposure and Violence.

DISCUSSION

Inequities of Pediatric Violence Exposure

One cannot fully discuss the epidemiology of violence without exploring the forces that drive the data. Exposure to violence and its impact are disproportionately distributed, with children of color and LGBTQ children often experiencing more violence than White, heterosexual peers.[27,50,51–70] For instance, Black and Hispanic youth report higher rates of ARA compared with White peers, and rates are even higher among those with intersectional identities (eg, sex or gender).[71–73] This disparity is most likely due to the systemic injustices that continue in the places where we work, live, and play. Minoritized populations are disproportionately exposed to poverty, racism, limited educational and occupational opportunities, and other aspects of social and economic disadvantages that contribute to violence.[74,75] These disparities are sustained due to the persistence of these societal disadvantages, and may even be exacerbated because exposure to childhood trauma and adversity is a risk factor for intergenerational violence victimization and perpetration.[76]

One reason these inequities exist is due to the concentration of poverty and minoritized populations in segregated neighborhoods. These neighborhoods were created out of the 1950s practice of redlining by the federal government's Home Owner's Loan Corporation, denying capital investment to "high-risk" neighborhoods, the majority of which were populated by low-income and minoritized communities.[77] Though redlining is no longer allowed, neighborhoods remain segregated as a result of those policies.[77] Firearm shootings are higher in neighborhoods that had been redlined, even when controlling for other confounders.[78] Redlining has been associated with environmental injustice, with affected neighborhoods having higher levels of lead and air pollution and less green space and parks.[79–81] Decades of racist policies have led to unsafe streets, not just from violence itself, but also just to walk as a pedestrian or drive a car.[82]

Yet attempts to rectify the effects of redlining may also have an impact on minoritized communities, specifically through gentrification. Gentrification involves neighborhoods that have historically experienced disinvestment and economic decline then experiencing reinvestment, with a higher socioeconomic status population migrating into that neighborhood.[83] As neighborhoods gentrify, violent incidents like firearm shootings shift to non-gentrified areas, likely further impacting displaced families of color.[84] Though there are limited data on the effects of gentrification on children, there is evidence that children experiencing gentrification of their neighborhood have increases in diagnoses of anxiety or depression.[85] Gentrification often increases the policing of the neighborhood as well to protect property and wealth.[86] Subsequent over-policing of Black communities leads to greater inequities

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in the justice system. Youth of color are more likely to die due to legal intervention than non-Hispanic White youth.[87] Being stopped by the police is a stronger predictor of post-traumatic stress disorder among Black college students than experiencing direct victimization by community violence.[88] Police presence in hospitals can lead to physical and mental health effects and provider mistrust.[89]

Health care's Role in Addressing Pediatric Violence Exposure

As pediatricians, we have a unique relationship with children and families who have been exposed to violence. The American Academy of Pediatrics has a comprehensive policy statement on the role of pediatricians in preventing youth violence, including being active in the domains of clinical care, advocacy, education, and research.[90] Families impacted by violence may not trust law enforcement or government help but may feel comfortable discussing their trauma with a medical provider.[91] We may even take care of these patients when they are acutely injured by violence. Therefore, it is imperative that we are ready to assess our patients for violence exposure and that we are familiar with community support resources.

Understanding the scope of violence and its impact on patients is a critical component of our practice as pediatricians. A previous way of measuring violence and trauma exposure in children has been by tracking the number of adverse childhood experiences (ACEs) that a child has experienced.[92] Yet these scores do not capture the depth or impact of trauma or violence on an individual or how different ACEs have differential impacts when combined. Additionally, the 10 original ACEs do not include other forms of violence that have been recognized as having impacts on long-term health, such as racism and discrimination, community violence, sexual assault, school violence, or bullying.[93] Therefore, ACE scores are less favored as a screening tool and should not be used to predict individual-level impact on a single patient.[94] Instead, there is a rising movement to provide universal information and resources.[95,96] This moves providers away from needing a disclosure to offer education and supports for those who have experienced violence. It is also important for pediatricians to understand the need to prevent retraumatization when patients seek medical care for any reason, not just violent injury. One way to accomplish this is to practice trauma-informed care (TIC), that is to assess, recognize, and respond to the effects of traumatic stress on our patients and families.[97,98] TIC practices will be discussed in greater detail in the study on "Violence Exposure and Trauma-Informed Care".

An additional role for pediatricians, given the inequities outlined above, is advocacy. Whether it means fighting for a new program to address violence, obtaining a grant to research these exposures, or making our health care systems more equitable and just, we can all find ways to advocate for our patients and families who have experienced and are experiencing violence.[99] We also must educate future pediatricians on how to incorporate advocacy into their daily practice.[100] We can consider how we can expand the reach of our advocacy beyond the walls into our hospitals and clinics, through both community and governmental involvement. It is only through this continued effort that we will be able to stem the effects of violence on our patients.

SUMMARY

Exposure to violence remains a significant issue for children in the United States. The COVID-19 pandemic exacerbated many of these exposures. Violence unequally impacts children of color and LGBTQ youth. Pediatricians can and must continue to advocate and intervene to decrease pediatric violence exposure and its effects.

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CLINICS CARE POINTS

- Remember that violence, in all its forms, affects many children in your practice.
- Universal screening and provision of resources can help support children and families who have experienced violence.

DISCLOSURE

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