Mental Health and Violence in Children and Adolescents



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KEYWORDS

Mental health
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KEY POINTS

- Children with mental illness are at increased risk for violence victimization, and, although most children with mental illness are nonviolent, there are specific types of mental illness that may be associated with the development of violent behavior.
- Children exposed to violence have an increased risk of developing mental health symptoms thereafter regardless of whether violence exposure is direct (eg, assault, adolescent relationship aggression, or abuse) or indirect (eg, intimate partner violence or community violence).
- Pediatric clinicians can use validated screening tools to assess for violence exposure and mental health symptoms among children, and, for those children who screen positive, clinicians should provide referrals to trauma-informed, culturally competent, and evidencebased therapies.

The relationship between mental health and violence in children is complex. It is known that some children with mental health conditions may be at higher risk for violence victimization or violence perpetration. Alternatively, violence exposure and victimization may themselves precipitate adverse mental health outcomes.

Mental health conditions are common among US children. Approximately 1 in 6 children in the United States has a mental health disorder.^{1,2} Suicide is the second leading cause of death among children ages 10 to 14 and the third leading cause of death for adolescents and young adults ages 15 to 24.³ During the coronavirus disease 2019 (COVID-19) pandemic, leading pediatric professional organizations declared a national emergency in youth mental health.⁴ During this time, firearm sales reached

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the highest level ever recorded in US history,⁵ and firearm-related pediatric hospital encounters increased significantly.⁶ The pandemic also brought with it a higher burden of family violence⁷ and increased severity of child abuse-related injuries.⁸ With rising rates of mental health disorders and violence in children, examination of the relationship between the two is timely.

Moreover, the authors acknowledge that similar upstream risk factors and environmental circumstances may increase the risk for violence involvement and the risk of adverse mental health outcomes⁹ as seen in children who have experienced adverse childhood experiences (ACEs) and children from communities with a history of structural marginalization.¹⁰ It is critically important for pediatric clinicians to recognize how various individual and community-level factors may place a child at risk for adverse mental health outcomes, in addition to violence victimization and/or perpetration. Thus, in this article, the authors aim to examine the complex interplay between mental health and violence in children.

MENTAL HEALTH AS A RISK FACTOR FOR VIOLENCE VICTIMIZATION AND PERPETRATION

Mental Health and Violence Victimization

Most people with mental illness are more likely to be victims of violence than perpetrators.^{11,12} Adults with serious mental illness experience an 11-fold higher rate of violence victimization than the general population, even after adjusting for demographic differences.¹³ Among children and adolescents, mental health problems also increase the risk of violence victimization. For example, 1 study conducted using a national probability sample of 1467 children ages 2 to 17 found that children with high levels of co-occurring internalizing and externalizing symptoms have increased exposure to several forms of violence victimization, including peer victimization, maltreatment, and sexual victimization. This increased risk of victimization persists after controlling for earlier victimization and adversity.¹⁴ Among children with mental health symptoms, the type of victimization varies by age, with elementary schoolage children experiencing more peer victimization and adolescents experiencing higher rates of sexual victimization.¹⁴

Mental Health and Violence Perpetration

Most people with mental illnesses are nonviolent. Although higher rates of violence perpetration have been identified among people with serious mental illness, the rate of violent behavior only increases from 2% for the general public to 5% for adults with serious mental illness.¹⁵ In adjusted models, severe mental illness alone did not predict future violence, although co-occurring severe mental illness with substance use and past history of violence are independently associated with future violence.¹⁶ Notably, only a small proportion of all violent acts are committed by people with mental illness. For instance, a study of violent incidents in the United States over a 1-year period found that only 3% of violent offenders had schizophrenia.¹⁷ Similarly, an analysis of violent incidents in England and Wales from 2015 to 2016 estimated that 5.3% were committed by people without mental illness.¹⁸ Clearly, most violent acts are carried out by people without mental illnesses.

Most children with mental health conditions are not violent, but some types of mental illness have been associated with some forms of aggressive behavior. Child oppositional defiant and antisocial behaviors have been associated with violence and aggression, but many studies on this relationship have been limited to specific high-risk populations (such as justice-involved youth) or do not adequately account for shared family and community factors.¹⁹ In 1 study, half of justice-involved youth were found to have substance use disorders; over 40% met criteria for disruptive behavior disorders, and more than 20% of girls met criteria for a major depressive episode.²⁰ In a longitudinal community-based study in Chicago, oppositional defiant problems were the only mental health condition that significantly predicted future violence, after adjusting for individual-, peer-, family-, and neighborhood-level variables.²¹ In considering these results, it is important to recognize that clinician and systemic biases contribute to the overdiagnosis of oppositional defiant disorder among children of color, whereas these behaviors may actually be related to trauma exposures or alternative mental health diagnoses.^{22,23}

One approach to understanding the complex relationship between mental health conditions and violence involves studying sibling pairs, who share similar genetics and environments. In a large population-based sample of US youth, ACEs were significantly associated with childhood antisocial behavior, adolescent delinquency, and young adult violent victimization in bivariate analyses.²⁴ However, after using sibling comparisons to adjust for unmeasured common genetic and shared environmental confounders, siblings exposed to more ACEs did not demonstrate higher levels of antisocial behavior, delinquent behavior, or risk for future victimization. This suggests that shared familial and environmental factors may underpin child outcomes.

Autism spectrum disorder (ASD) can in some situations be associated with aggression; it is important to note that this aggression most often impacts within-family functioning and well-being.²⁵ In a sample of 1584 children and adolescents with ASD enrolled in the Autism Treatment Network, 53% were reported to have aggressive behaviors.²⁶ In inpatient medical units, episodes of acute agitation occur during as many as 12% of hospitalizations by children with ASD.²⁷ Specific therapeutic strategies such as functional behavioral assessment, reinforcement strategies, and functional communication training may reduce the frequency and intensity of aggressive behaviors among children with ASD.²⁸ Pharmacologic treatments, particularly second-generation antipsychotic agents, may also be of some benefit in reducing aggression among children with ASD.²⁸

Assessment of Violence Risk and Prevention

To prevent violence perpetration among children with mental health disorders, tools are needed to identify risk. To this end, some tools have been developed to predict violence within health care settings and schools. Among children admitted to inpatient psychiatric units, the Brief Rating of Aggression by Children and Adolescents (BRA-CHA) accurately and reliably predicts the risk of violence during hospitalization.^{29,30} It consists of 14 items (12 historical and behavioral items and 2 clinical observations) scored by emergency department staff before admission. Efforts have also been made to predict risks of school violence. For instance, an analysis of structured interviews with students using natural language processing and machine learning demonstrated capacity to predict risks of school violence.³¹ Such risk assessment tools are not yet widely used.

Once a child has been identified as at risk for violence perpetration, effective preventive interventions are needed to mitigate risk. Improved access to mental health services is likely to be important, as half of children with mental health disorders in the United States do not receive needed treatment or counseling from mental health professionals.² Additionally, evidence-based violence prevention interventions have been developed for families, schools, and communities.³² Examples include programs to enhance parent-child bonding and to promote community-based mentorship.³² Multiple interventions targeted to various developmental stages and levels (both individual- and population-based) may be needed to prevent violence.³³

MENTAL HEALTH FOLLOWING EXPOSURE TO VIOLENCE

Adverse mental health outcomes following exposure to violence are common in youth.^{34,35} It is important to consider the nuanced ways in which direct and indirect exposures to violence affect youth. Direct violence exposures are defined as personal experiences of violence victimization through threat or injury.³⁶ Examples of direct violence exposures in children include assault, adolescent relationship aggression, and child abuse. Indirect violence exposures are defined as witnessing violence, hearing violence (eg, gunshots heard in the neighborhood), or losing a family member or peer as a victim of violence.³⁶ Examples of indirect violence exposures in children include intimate partner violence and community violence. All violence exposures, whether direct or indirect, may lead to mental health sequelae in youth, although effects may differ based on the type of exposure.^{36,37}

Firearm Violence

Firearm injuries are associated with short- and long-term mental health sequelae among youth.³⁴ In 1 retrospective cohort study, over a quarter of youth with a firearm injury were diagnosed with a new mental health condition in the year after injury.³⁸ Compared with youth who sustain other types of traumatic injuries (ie, motor vehicle collisions), youth with firearm injuries have 1.5 times higher odds of developing new mental health diagnoses in the year after injury.³⁹ The most common mental health disorders that arise among youth after firearm injuries are substance-related and addictive disorders and trauma- or stressor-related disorders.^{38,40} In particular, firearm-related injuries are strongly correlated with subsequent development of post-traumatic stress disorder (PTSD) in youth.^{34,41} Youth with nonfatal firearm injuries also experience significant increases in mental health service utilization and expenditures following injury.^{42,43}

Childhood exposure to firearm violence has been associated with the development of externalizing symptoms,⁴⁴ such as aggressive and disruptive behaviors, as well as internalizing symptoms,^{45,46} such as anxiety and depression. Studies have suggested that younger children exposed to firearm violence may exhibit more internalizing symptoms, whereas older children may exhibit more externalizing symptoms.³⁶ The effects of exposure to firearm violence may differ based on age and developmental stage. One study found that younger children (ages 2–9 years) developed PTSD symptoms from indirect exposures (eg, hearing gun shots), while older children (ages 10–17 years) did not develop significant PTSD symptoms unless they were direct victims of gun violence.⁴¹

Child Abuse

ACEs, including childhood physical, sexual, and emotional abuse, are strongly correlated with adverse mental health outcomes during childhood and into adulthood. One systematic review and meta-analysis found that adults who experienced multiple ACEs were more likely to have depression, anxiety, suicide attempts, problematic alcohol use, and problematic drug use.¹⁰ The cumulative effect of maltreatment among children has also been demonstrated, with increased mental health symptom severity as children experience more types of maltreatment.⁴⁷ Children who experience abuse have a high prevalence of PTSD, with reported incidence rates of up to 50% to 90%.⁴⁸ These children are also more likely to exhibit both internalizing and externalizing symptoms.^{48,49} For example, a meta-analysis found that sexual and physical abuse are strongly associated with development of major depressive disorder (MDD) before age 18.³⁵ Experiences with childhood maltreatment throughout the life course appear to have independent and additive effects on children's mental health.

Adolescent Relationship Aggression

Adolescent relationship aggression (ARA) is highly prevalent among adolescents, with rates of 9% to 20% reported in nationally representative samples, and it is associated with subsequent mental health risks.^{50–52} In particular, both boys and girls who experience ARA have increased risk of suicide attempts, while girls are also 2 times as likely to have severe depressive symptoms following ARA.^{50,52} One study found that girls with depression and a history of ARA victimization were 61% more likely to attempt suicide than nonvictimized girls with depression.⁵³ Additionally, adolescents who experience more distinct forms of ARA (eg, sexual, physical, or psychological) are more likely to have adverse mental health outcomes, including depressive symptoms, suicide attempts, and substance abuse.^{54,55} Given the prevalence of ARA among adolescents, pediatric clinicians may consider screening for ARA exposure to increase recognition of at-risk youth.⁵⁶

Intimate Partner Violence

The negative impact of intimate partner (domestic) violence (IPV) on youth mental health outcomes is well described. In a meta-analysis of psychosocial outcomes, 63% of children exposed to IPV had worse emotional health outcomes compared with nonexposed children.⁵⁷ Youth who witness severe IPV are almost 3 times more likely to develop conduct disorder,⁵⁸ twice as likely to develop MDD,³⁵ and over 4 times more likely to have symptoms of anxiety.⁵⁹ Exposure to domestic violence provides a key example of how indirect violence exposure can be associated with pediatric mental health outcomes.

Community Violence

The isolated influence of community violence exposure on youth mental health is difficult to measure, given significant overlap with other family and neighborhood characteristics.³⁶ Studies have demonstrated that closer geographic proximity to violent events is associated with increased mental health symptoms and greater mental health service utilization after an event.^{60,61} Youth who are chronically exposed to community violence may become desensitized and develop externalizing behaviors.⁶² Among Black, urban adolescents, community violence exposure has also been associated with subsequent suicidal thoughts and behaviors.⁶³ Notably, community violence, and, in particular, firearm violence, disproportionately impacts communities of color as a result of historic trauma, systemic racism, and selective disinvestment in these communities.⁶⁴ With acute and chronic sequelae, the mental health consequences of community violence among youth are longitudinal and multifaceted.

MENTAL HEALTH SERVICE UTILIZATION

Many children who are exposed to violence face barriers to accessing mental health services. One national study identified that 20% of adolescents have experienced personal victimization, yet only half of those adolescents accessed mental health services within a year of trauma.⁶⁵ Another nationally representative study showed that 16% of children have experienced high ACE scores (defined as 5 or more ACEs for ages 2–9

Table 1

Screening and diagnostic tools for post-traumatic stress disorder

Screening or Diagnostic Tool	Purpose	Symptom Domains	Completed By	Target Age	Number of Items	Average Time to Complete
Child Behavior Checklist (CBCL) ⁹⁰	Screening	Social functioning, anxiety, mood, externalizing symptoms	Parent/caretaker	6–18	120	15 min
Child Trauma Screen (CTS) ⁹¹	Screening	Trauma exposure, traumatic stress	Self	6–17	10	10 min
UCLA PTSD Reaction Index (UCLA PTSD RI) ⁹²	Screening/preliminary diagnosis	Traumatic stress, neglect	Self	6–18	48	10 min
Child PTSD Symptoms Scale – Self-Report Version for DSM-5 (CPSS-5-SR) ⁹³	Diagnostic	PTSD, daily functioning	Self	8–18	24	10 min

Abbreviation: PTSD, Post-traumatic stress disorder.

Table 2 Selected examples of treatment approaches for children exposed to violence							
Overview	Target Age	Trauma Sub-type	Goals/Outcomes	Evidence Rating ^a			
An evidence-based treatment for children and adolescents impacted by trauma and their parents or caregivers A components-based treatment model that incorporates trauma- sensitive interventions with cognitive- behavioral, family, and humanistic principles and techniques	3–21	Sexual abuse, domestic violence, traumatic grief, disaster, terrorism, multiple or complex traumas	 Reduction in depressive, anxiety, post-traumatic stress symptoms Reduction in parental distress 	1			
CPP is based in attachment theory whose goal is to support and strengthen the child-caregiver relationship to restore the child's cognitive, behavioral, and social functioning	0–6	Loss or separation, community violence, medical conditions	 Reduction in behavioral problems Improvement in depressive and PTSD symptoms Improving change in attachment classification 	2			
A practice team of primary care and behavioral health clinicians work in concert to provide a systematic, cost-effective, and patient- and family- centered approach	0+	All types	 Improvement in clinical outcomes Early identification of symptoms 	NR			
	An evidence-based treatment for children and adolescents impacted by trauma and their parents or caregivers A components-based treatment model that incorporates trauma- sensitive interventions with cognitive- behavioral, family, and humanistic principles and techniques CPP is based in attachment theory whose goal is to support and strengthen the child-caregiver relationship to restore the child's cognitive, behavioral, and social functioning A practice team of primary care and behavioral health clinicians work in concert to provide a systematic, cost-effective, and patient- and family- centered approach	OverviewTarget AgeAn evidence-based3–21An evidence-based3–21treatment for childrenand adolescentsimpacted by trauma andtheir parents orcaregiversA components-basedA components-basedtreatment model thatincorporates trauma-sensitive interventionswith cognitive-behavioral, family, andhumanistic principles andtechniquesCPP is based in attachmenttheory whose goal is tosupport and strengthenthe child's cognitive,behavioral, and socialfunctioningA practice team of primaryA practice team of primarycare and behavioralhealth clinicians work inconcert to provide asystematic, cost-effective,and patient- and family-centered approach	OverviewTarget AgeTrauma Sub-typeAn evidence-based treatment for children and adolescents impacted by trauma and their parents or caregivers3–21Sexual abuse, domestic violence, traumatic grief, disaster, terrorism, multiple or complex traumasA components-based treatment model that incorporates trauma- sensitive interventions with cognitive- behavioral, family, and humanistic principles and techniquesTarget AgeTrauma Sub-typeCPP is based in attachment the child's cognitive, behavioral, and social functioning0–6Loss or separation, community violence, medical conditionsA practice team of primary care and behavioral health clinicians work in concert to provide a systematic, cost-effective, and patient- and family- centered approach0+All types	OverviewTarget AgeTrauma Sub-typeGoals/OutcomesAn evidence-based treatment for children and adolescents impacted by trauma and their parents or caregivers3–21Sexual abuse, domestic violence, traumatic grief, disaster, terrorism, multiple or complex traumas• Reduction in depressive, anxiety, post-traumatic stress symptoms • Reduction in parental distressA components-based treatment model that incorporates trauma- sensitive interventions with cognitive- behavioral, family, and humanistic principles and techniques0–6Loss or separation, community violence, medical conditions• Reduction in behavioral problems • Reduction in parental distressCPP is based in attachment the child's cognitive, behavioral, and social functioning0–6Loss or separation, community violence, medical conditions• Reduction in behavioral problems • Improvement in depressive and PTSD symptomsA practice team of primary care and behavioral health clinicians work in concert to provide a systematic, cost-effective, and patient- and family- centered approach0+All types• Improvement in clinical outcomes • Early identification of symptoms			

1207

Mental Health and Violence

(continued)									
Treatment Approach	Overview	Target Age	Trauma Sub-type	Goals/Outcomes	Evidence Rating				
	Model types are: consultation (formal and informal); colocation; and collaborative/ integrative (comanagement of cases)								
Hospital-based Violence Intervention Programs (HVIPs) ⁷⁰	Aim to reduce violent injury recidivism by providing intensive case management services to high-risk patients who were violently injured Holistically address risk factors for violent injury including mental health	Varies by program	Penetrating trauma, sexual trauma	 Reduce repeat injury Access to longitudinal mental health services Reduction in post- traumatic stress symptoms 	NR				
Structured Psychotherapy for Adolescents Responding to Chronic Stress (SPARCS) ⁹⁵	Manually-guided and empirically supported group treatment, primarily based on cognitive-behavioral principles. Teaches skills to improve resilience	12–21	Complex trauma, chronic traumas, chronic medical conditions	 Remaining in treatment Improvement in post- traumatic stress symptoms 	NR				

Abbreviation: PTSD, post-traumatic stress disorder.

^a California Evidence-Based Clearinghouse (CEBC) rating⁹⁶: 1. Well-supported by research evidence. 2. Supported by research evidence. 3. Promising research evidence. 4. Evidence fails to demonstrate effect. 5. Concerning practice. NR. not able to be rated.

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and 7 or more ACEs for ages 10–17), yet fewer than 50% had accessed mental health services within the last year.⁶⁶ Discrepancies in parent-child report of traumatic exposures may be 1 factor impeding identification of needs and referral for services.^{67–69} At times, violent injury can serve as the point of access to mental health services, as is the case with Hospital-Based Violence Intervention Programs (HVIPs),^{70,71} collaborative models,⁷² and school-based interventions.⁷³

Inequities in Access to Mental Health Services

Significant differences exist by race and ethnicity in the utilization of mental health services, with lower utilization among non-Hispanic Black and Hispanic children compared with non-Hispanic White children.^{74–76} Specifically among children who have experienced ACEs such as violence exposure, fewer Black children receive mental health services compared with White children.⁶⁶ Proposed mechanisms underlying these inequities include differences in insurance coverage,⁷⁷ institutional mistrust,⁷⁸ stigma,⁷⁹ cultural misalignment between providers and clients,⁸⁰ lack of awareness of available services,⁸¹ and differences in physician referrals.⁸²

Multilayered efforts are needed to improve equity in access to mental health services among children exposed to violence. At an individual level, clinicians should select therapies to address trauma symptoms that are aligned with each child's individual, social, and cultural needs.^{83,84} At a structural level, critical steps will include addressing structural determinants of health such as poverty, eliminating discriminatory practices, and increasing insurance access.⁸⁵

Screening for Trauma Exposure and Interventions

The role of primary care pediatric clinicians in identifying and addressing potentially traumatic events and PTSD symptoms cannot be overemphasized.⁸⁶ For traumaexposed youth, relational health and resilience can be improved through delivery of trauma-informed care, defined by the National Child Traumatic Stress Network as medical care in which all parties assess, recognize, and respond to the effects of traumatic stress on children, caregivers, and health care providers.⁸⁷ The framework of healingcentered engagement expands on this with a holistic strengths-based approach to healing that is focused on sustaining well-being.⁸⁸ Using trauma-informed care with a healing-centered approach, pediatric clinicians can learn about their patient's trauma exposure, assess for sequelae, and refer to mental health services when indicated. Several validated questionnaires have been developed to guide efforts to assess the impact of trauma (Table 1). Alternatively, pediatric clinicians can simply ask, "Has anything scary or concerning happened to you or your child since the last visit?"87 If screening suggests exposure to a potentially traumatic event or PTSD symptoms, a referral to trauma-focused cognitive-behavioral therapy⁸⁹ or other evidence-based therapies may be indicated (Table 2). Pediatric clinicians can also provide contained relaxation tools such as deep breathing, mindfulness exercises, and reassurance.⁸⁷

SUMMARY

In summary, the relationships between mental health and violence in youth are complex. Although some mental health conditions are associated with violence perpetration, most children with mental illness are nonviolent. In contrast, mental health conditions are a strong risk factor for violence victimization. In turn, children with a history of violence victimization are at higher risk for having mental health sequelae. Although the type of exposure to violence and age of exposure may influence symptom development, many children will develop internalizing and/or externalizing symptoms following direct exposures to violence. Importantly, indirect exposures to violence, such as intimate partner violence and community violence, can also lead to adverse mental health outcomes in children. Despite high rates of exposure to violence and mental health conditions among children, evidence-based mental health treatments for trauma- and stressor-related conditions remain underutilized, with notable inequities among Black and Hispanic children. It is critical that pediatric clinicians regularly screen youth for exposure to and risk for violence, as well as mental health symptoms, to ensure youth receive evidence-based, culturally competent, trauma-informed, and healing-centered mental health care.

CLINICS CARE POINTS

- Children with mental illness are much more likely to be victims of violence than perpetrators.
- Specific mental health conditions have been associated with violence and/or aggressive behaviors, although most children with these diagnoses are nonviolent.
- Children exposed to violence are at risk of developing mental health symptoms thereafter, regardless of whether exposure is direct or indirect.
- Younger children may have more internalizing symptoms following violence exposure, while adolescents may have more externalizing symptoms.
- Pediatric clinicians should practice trauma-informed care by learning about their patients' trauma exposure and associated mental health symptoms at each visit using validated tools when possible.
- For children who screen positive for mental health symptoms, pediatric clinicians should provide reassurance, simple interventions (ie, breathing exercises), and appropriate referrals to treatment.

CONFLICTS OF INTEREST DISCLOSURES

The authors have no conflicts of interest relevant to this article to disclose.

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