

What is trauma? DSM-5 and the ACEs Perspective.

The DSM-5TR defines *trauma* as exposure to “actual or threatened death, serious injury, or sexual violence.” Exposure to a traumatic event may be direct, impacting the person, or indirect, impacting someone known to that person. An example of indirect exposure to a traumatic event learning from a someone about a tragic accident involving a family member or friend.

Post-traumatic stress disorder, or PTSD, is a mental health condition and diagnosis given to someone who has difficulty recovering from a traumatic event (direct or indirect) or from ongoing exposure to repeated, highly stressful experiences. PTSD is prevalent across age groups in the United States. According to one source, an estimated 4.7% of adults experience PTSD in a given year. Statistics point to a higher risk for PTSD among adult women, but both men and women can experience PTSD at some point in their lives (Goldstein, et al., 2016). Research also shows that approximately 10% of children and adolescents under age 18 have been diagnosed with PTSD, with girls four times more likely than boys to develop the disorder (Tamir et al., 2024). Because trauma and PTSD can occur at all stages of the lifecourse, rapid assessment and early intervention is encouraged.

According to the DSM-5TR, a diagnosis of PTSD requires that an individual experience symptoms of trauma across four clusters: intrusion, avoidance, negative alterations in cognition and mood, and hyperarousal. The diagnosis also requires that symptoms persist for at least a month, cause clinically significant distress or impairment, and not be attributed to other underlying causes, such as the misuse of drugs or alcohol or chronic medical condition. Symptoms such as flashbacks, sleep disturbances, and avoidance behaviors are common in trauma survivors and are not necessarily diagnosable as PTSD unless they last for an extended period and impact daily functioning. Over time and through clinical research, the DSM has become more sensitive to the ways in which children manifest symptoms of PTSD differently than adults, which aids diagnosis and treatment.

Adverse Childhood Experiences (ACEs) refer to a broad range of potentially traumatic household events that occur before the age of 18, including child abuse and neglect, parental mental illness, substance abuse in the family, incarceration of a family member, and parents’ divorce (CDC, 2024). Research shows that ACEs frequently co-occur, meaning that they can occur at the same time or occur in rapid succession to one another (CDC, 2024 ; Felitti et al., 1998). Moreover, studies have demonstrated that exposure to four or more ACEs substantially increases the likelihood of a child’s experiencing later challenges, as discussed below (Felitti et al., 1998; Sack & Murphew, 2018).

ACEs are unevenly distributed in the U.S. population, with children of color disproportionately affected (Sack & Murphew, 2018). ACEs are rooted in adverse community environments, characterized by poverty, racial discrimination, poor housing, and violence (Ellis & Dietz, 2017).

Outcomes of ACE exposure. In adulthood, individuals with high ACE exposure (four or more ACEs) are vulnerable to a range of physical and mental health problems, including hypertension, cardiovascular disease, cancer, and depression (National Center for Injury Prevention and Control, 2019), as well as behavioral outcomes including heavy drinking, problematic drug use,

and both interpersonal and self-directed violence (Hughes et al. 2017 Merrick et al., 2019). This may be due to biological changes that can occur at the time of exposure and wear and tear on the body that can occur with ongoing and high stress levels (Berens, et al., 2017). Notably, the consequences of ACE exposure can extend across generations, placing the children of adults with high ACE exposure at high risk themselves (Herrenkohl, et al 2021). It's one of the reasons why researchers who study lifecourse patterns of abuse and violence emphasize the need for early intervention (Herrenkohl, et al 2021)

Developmental Consequences of ACEs and Trauma

Trauma appears in many forms, and its effects are evident at different life stages (Koslouski et al., 2023). In the next section, we elaborate on the manifestations of trauma as they relate to developmental processes and milestones.

Part 2. Developmental Patterns of Trauma

From a developmental perspective, trauma responses emerge from continuous stressful interactions between the child and their environment. How children react to trauma is shaped by their social context, relationships, and broader societal conditions. Over time, trauma responses reflect both the enduring effects of earlier adversity and the influence of new forms of adversity that accrue over the lifecourse.

As children develop, changes in developmental tasks, capacities, and social demands intersect with ecological forces that can increase or lessen their risk of long-term harm and impairment (Cicchetti & Toth, 2005; Masten & Cicchetti, 2010). Understanding stage-specific socio-emotional and behavioral reactions to trauma can help practitioners deliver appropriately targeted interventions and support to those who need them (Cicchetti & Toth, 2005; Masten & Cicchetti, 2010).

Early Childhood (0–5 years)

In early childhood, social and emotional manifestations of trauma include intense separation anxiety, emotional lability, heightened startle responses, and excessive dependence on, or avoidance of, caregivers. Sleep and eating disturbances, regressive behaviors such as bedwetting, repeated re-enactment of threatening scenes in play, distressing nightmares without clear associations, and increased disruptive behavior are also possible (Scheeringa et al., 2003; Scheeringa et al., 2008; Scheeringa et al., 2012; Euser et al., 2010; Joinson et al., 2016; De Young, 2011).

These patterns reflect the developmental tasks and limits of early childhood. Because language and cognitive functions are still developing during this life stage, young children cannot easily make sense of, or put into words, what they are feeling or what they have experienced. As a result, they rely heavily on caregivers for “co-regulation” – a process by which caregivers help children make sense of their experiences and modulate their emotional reactions and behaviors. In early childhood, co-regulation is largely adult led, whereas for older children the process becomes more distributed (Fogel, 1993).

Consistent and sensitive responses from caregivers are essential to helping children manage stress, feel secure, and move beyond their trauma (Water et al., 2009). When caregivers are unavailable or unable to care for and provide their children emotional support and guidance, the children can experience a host of social, emotional, and behavioral challenges throughout their lives (Bryant et al., 2002; Kerig, 2023) if protective relationships and environments outside the home are not accessible.

Middle Childhood (6–10 years)

In middle childhood, trauma can manifest emotionally as sadness, anxiety, social withdrawal, or low self-esteem, and behaviorally as inattention, hyperactivity, heightened avoidance, declining academic performance, and impulsive or disruptive classroom behaviors (Bryant et al., 2002; Perfect et al., 2016; McLaughlin et al., 2016). Although children at this life stage have more advanced language, memory, and self-regulation capacities than younger children, they still rely heavily on their parents and others for emotional support and reassurance (Brown et al., 2022; Gunnar & Hostinar, 2015; Bretherton, 1992; Dunn et al., 2018). At the same time, increasingly complex peer dynamics and educational demands place these children in situations where they must begin to draw on their own emerging skills and coping strategies to succeed.

Adolescence (11–17 years)

In adolescence, common social-emotional manifestations of trauma include depression, anxiety, mood instability, and reduced self-esteem (Perfect et al., 2016, McLaughlin et al., 2016). Adolescents with trauma histories may also engage in high-risk behaviors, such as drug and alcohol abuse, risky sexual practices, and self-harming behaviors to draw attention to their emotional distress and blunt emotional pain (Moore, 2017; Danielson et al., 2005). As in earlier developmental periods, trauma manifestations can arise from both current or past exposures to highly stressful adverse events.

Developmental changes in adolescence are more pronounced than in earlier life stages, with abstract reasoning, self-reflection, and identity formation becoming central tasks (Steinberg, 2005; Kilford et al., 2016; Mitchell et al., 2022; Zimmer-Gembeck, 2002). Given this, adolescents who experience trauma can be troubled by intrusive thoughts (unwanted, distressing memories or images), hyperarousal (persistent tension, heightened startle responses, sleep problems, and irritability), and difficulties with concentration (Bryant et al., 2002; Kerig, 2023). The growth of abstract reasoning and self-reflection during this life stage also makes adolescents more vulnerable to patterns of rumination, which involves dwelling on negative and highly troubling thoughts and experiences. Some may try to push away or suppress these negative thoughts, or treat them by using/abusing substances (Bryant et al., 2002).

Protective factors against the effects of trauma

Although ACEs and trauma are prevalent in children and adolescents, not everyone will develop severe or lasting problems. This highlights the importance of protective factors, which are the conditions or resources that buffer against negative consequences of trauma exposure and help promote adaptation and recovery. Protective factors can be present before a trauma occurs (e.g., secure attachments, strong social interaction and emotional regulation skills) or after it occurs (e.g.,

social support, adaptive coping) and typically more protection results in better outcomes for those who are impacted (Herrenkohl, et.al., 2018; Bethell et al., 2019).

Bronfenbrenner's social ecological model of child development is useful for understanding protective factors by placing them within different levels of the social ecology related to child development (Bronfenbrenner, 1979). At the individual level, children's skills, temperament, and resilience can help mitigate their responses to highly stressful events (Campodonico, et.al., 2021; Masten & Barnes, 2018). At a higher (microsystem level), supportive relationships with family members, mentors, and peers can play a central role in protecting children from the enduring effects of trauma and helping build their resilience to adverse events (Masten, 2014). At even higher levels of aggregation (mesosystem and macrosystem levels), cultural and societal factors are relevant. These include norms regarding the sanctity of childhood, strong cultural identities, and access to resources and services (e.g., mental health treatment) that can lessen the burden on families and provide children with the help they need (Hobfoll, et.al., 2009).

As is true of most risk factors, protective factors are both dynamic and cumulative. That is, they can change over the lifecourse and can have additive effects on child outcomes. Moreover, protective factors can buffer the immediate impacts of trauma, while also shaping recovery trajectories across subsequent life stages (Herrenkohl et al., 2021;). Studying protective factors can increase understanding of why trauma outcomes vary across individuals and inform the design of evidence-based prevention and intervention strategies.

Trauma-Informed Practice

Content in the sections above provide insights for trauma-informed practice, which centers on recognizing the effects of trauma and intervening to improve a child's functioning. In this final section, we briefly discuss the importance of embedding supportive practices and strategies in schools, families, and community systems that serve vulnerable populations.

Schools occupy a central role in children's lives. They are not only the primary sites of learning and social interaction, they are also settings where trauma may be more likely to be observed and identified. Thus, it is important to consider ways to embed trauma supports in schools (Thomas et al., 2019; Perfect et al., 2016 ; Watson et.al., 2025). In addition, it important for schools to consider the ways in which the environment fosters resilience. By providing safe, nurturing learning environments, helping children build strong relationships, and using inclusive pedagogical strategies, schools can help students manage trauma responses, promote academic success, and support their socio-emotional development, thereby laying the foundation for long-term health and resilience (Herrenkohl, et.al., 2019).

Trauma-informed practice also extends to families and communities. At the family level, strengthening caregivers' parenting capacities and emotional regulation skills helps provide children with a stable and safe environment and mitigates the adverse effect of trauma (Champine, et al., 2018). At the community level, cross-system collaboration among schools, healthcare, child welfare, and neighborhood programs, together with targeted initiatives such as mentoring and prevention programs, can reduce trauma exposure and enhance opportunities for recovery (Matlin et al.,2019). Through the coordinated efforts of families, schools, and

communities, a more robust support network can be built to mitigate the impact of trauma and promote children's long-term development and well-being.

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