When the Levee Breaks:
Understanding Traumatic Stress in Children

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Childhood trauma is widely acknowledged to be a leading cause of a large range of physical, biological, and psychological illnesses and impairments in both children and adults. Traumatic stress impacts brain development, which ultimately affects a child's learning, emotions, behaviour, social interactions, and relationships. Social support, prevention, and early intervention are the most effective ways to increase the chances of children thriving and becoming happier and healthier adults. This article is meant to shed some light on childhood trauma; understanding the potential causes and effects of traumatic stress is one step in working together to achieve a better quality of life for current and future generations.

What is Trauma?

Trauma can be defined as an event, series of events, or set of circumstances that is experienced by an individual as physically or emotionally harmful or life threatening. Trauma can also have cumulative and long-lasting negative effects on one's functional, mental, physical, social, emotional, and/or spiritual well-being. **Trauma is not just the deeply distressing or disturbing experience(s); it's what happened to you + how you perceived it + how you responded to it (what happens inside of you) = beyond your capacity to handle it.**

Not only can traumatic stress alter your DNA, trauma can also cause epigenetic changes, which are modifications to gene expression that can be passed down through generations. This means that what happened to your parents and grandparents might make you/your generation more genetically vulnerable to stress and developing traumatic stress as a result of your experiences.

Research shows that the more adverse experiences (ACEs) an individual has, especially in childhood, the more likely these experiences will cause traumatic stress with worse short and long-term outcomes on both mental and physical health. A higher number of ACEs significantly increases the risk of developing heart disease, cancer, addictions, substance abuse, chronic pain, obesity, post-traumatic stress disorder (PTSD), social isolation, mood disorders (e.g., anxiety, depression), financial problems, poor body image and eating habits, and death at an earlier age.

ACEs may include the following:

- Abuse: psychological/emotional, physical, and sexual
- Being a victim or witness to school and/or community violence
- Bullying
- Food and/or shelter insecurity (related to family income)
- Forced displacement
- Historical/ intergenerational trauma

- Household dysfunction: domestic violence and parental substance abuse, mental illness, incarceration, and separation and/or divorce
- Natural or manmade disasters (e.g., wildfires, flooding)
- Neglect: physical and psychological/emotional
- Prolonged grief or separation
- Serious accident, illness, or medical procedure
- System-induced trauma (e.g., racism, discrimination, oppression)
- War, terrorism, or political violence

Symptoms of Traumatic Stress

Common symptoms of traumatic stress in children may include:

- Anxiety (e.g., generalized, separation, social)
- Deficient sense of personal identity and competence
- Low mood: sadness, depression, excessive crying, irritability
- Intrusive memories, flashbacks, and/or nightmares
- Inattention or appearing "zoned-out," detached, distant
- Fear, withdrawal, freezing, and/or avoidance
- Feelings of shame, guilt, and/or failure related to the event(s)
- People-pleasing and perfectionism causing distress
- Poor self-esteem and confidence
- Physical complaints: stomach-ache, headache, general aches and pains
- Sleep disturbances: difficulty falling or staying asleep, waking up
- Anticipatory behaviours: hyperactivity, aggression, avoidance, freezing
- Externalizing behaviours: defiance, impulsivity, explosive anger (temper tantrums), disregard for rules and consequences, noncompliance with authority figures, recklessness, self-harm, overreactions, and bullying

At school, children who have had traumatic experiences are more likely to demonstrate:

- Decreased: executive functioning, information processing, language development, abstract reasoning, attention, comprehension, memory, concentration
- Lower academic achievement and performance
- Difficulty acquiring new skills or taking in new information
- Inability to be present in the moment: easily distracted, zoning out
- Failure and/or difficulties completing homework and assignments
- Less class participation
- Poor school attendance, increased incidence of suspensions and discipline referrals, lower perceived engagement, and less likely to pursue post-secondary education

Trauma and Neurodiversity

Children and adults with neurodevelopmental disorders (e.g., Learning Disabilities, ADHD, Autism Spectrum Disorder, etc.) are more likely to experience traumatic situations, and develop symptoms of traumatic stress as a result. Research also continues to find that individuals with ADHD typically have exposure to more ACEs in their lifetime compared to individuals without ADHD.

Current research has highlighted several factors that increase a neurodivergent individual's risk of developing traumatic stress, such as:

- **Cognitive, Physical, and Social Vulnerability:** Cognitive impairments, physical limitations, and difficulties with social skills and interactions increase one's susceptibility to bullying, abuse, neglect, exploitation, and/or manipulation.
- **Communication Challenges:** Difficulties with verbal expression impacts the ability to discuss negative experiences or seek help when needed.
- **Sensory Sensitivities:** Previous sensory issues can lead to distress and/or a perceived sense of threat to personal safety in situations that might not be traumatic for others.
- **Risk-Taking Behaviors:** Individuals with ADHD are more likely to engage in risk-taking behaviours that could lead to accidents, injuries, and/or situations that are traumatic for them.
- **Exacerbation of Existing Symptoms:** Traumatic stress can make pre-existing symptoms of impairment (e.g., inattention, impulsivity, dysregulation) worse/ harder to manage and potentially harder to treat.

Is it traumatic stress, ADHD, or both?
Symptoms of traumatic stress and ADHD have many similarities, which can make it difficult to distinguish without understanding a child's developmental history. Importantly, while trauma can worsen symptoms of ADHD, and vice versa, there is no direct causal relationship between the two, and they can occur independently from one another. **ADHD ≠ Trauma**

Similarities between ADHD and traumatic stress:

- Both affect similar areas of the brain (e.g., prefrontal cortex)
- Influenced by genetics and gene-environment interaction:
    - ADHD has a tendency to "run in families": there is a significant hereditary contribution with ADHD heritability estimated around 60-90%
    - Trauma: genetic factors can influence an individual's chances of developing traumatic stress after an experience
- Prolonged toxic stress on a child's brain and body, both pre-and post-natal, has been associated with an increased risk of developing both ADHD and post-traumatic stress

Similar symptoms between ADHD and traumatic stress in children may include:

- Aggression
- Difficulty concentrating and learning in school
- Difficulty sleeping
- Disorganization
- Distractibility
- Emotional dysregulation
- Excessive feelings of guilt and shame
- Hyperactivity

- Impaired social skills and interactions
- Inattention
- Irritability
- Low self-esteem and self-confidence
- Poor impulse control
- Restlessness
- Risk-taking
- Sleep disturbances

Understanding a child's developmental history is important in guiding treatment plans, specifically when considering pharmaceutical options.

- **Stimulant medication can be an effective treatment for ADHD**, but if the child's symptoms are a result of traumatic stress, the stimulant medication could increase trauma-related anxiety, emotional distress, and physical agitation. Thus, it's important to ensure your physician and other treating professionals are provided with a full history of your child.

<u>Supportive Factors and Treatment:</u>

When children experience an adverse or distressing event or series of events, they don't always develop traumatic stress. In fact, the majority do not. Many factors impact the onset of traumatic symptoms, including resilience, genetics, social support, and whether the child has experienced traumatic events in the past. Protective factors at the individual, family, and community levels can help reduce the negative effects of a potentially traumatic experience.

An essential protective factor is the reliable and consistent presence of a positive, trusting, caring, and protective parent/caregiver, who can help protect the child against adverse experiences.

- Children thrive when they have a consistent adult resource who encourages them to talk about their experiences and provides them with reassurance that the adults in their lives are working to keep them safe.
- Through relationships with important attachment figures, children learn to trust others, regulate their emotions, and interact positively with the world.

A child's family and community can serve as protective factors:

- The culture of a child, their families, and their communities can provide support and resources that help protect against the negative outcomes of traumatic experiences.
- This includes teachers. Ensuring students' emotional and physical safety is the most fundamental principle for a trauma-informed approach. Establishing strong classroom-based relationships are an important step in healing disordered attachment styles, teaching emotional intelligence competencies and de-escalation strategies, and ultimately developing a sense of safety and belonging that allows for learning.

When traumatic stress in children is missed or misdiagnosed, they are unlikely to get the support they need to deal with the trauma. Children can heal from trauma by receiving help with their relationships with others, how they see the world, and how they view themselves or their future. There are a number of evidence-based therapies and treatments available, but of most importance is having social support and working with a professional who uses a trauma-informed approach.

Trauma is systemic, yet it's still being treated at the individual level. Too many generations of children grew up experiencing traumatic situations and were never able to find a safe person or place to talk about it, let alone try to heal it. It is never too late to seek help to try to heal old wounds; this will not only be beneficial to yourself and those around you, but it will have a positive and potentially life-saving effect on our future generations.

Additional Resources on Childhood Trauma:

Child Mind Institute: Is it ADHD or Trauma?
https://childmind.org/article/is-it-adhd-or-trauma/

How Adverse Childhood Experiences Affect Brain Development:
https://njpediatricneurosurgery.com/posts/news/how-adverse-childhood-experiences-ace-affect-brain-development/

National Child Traumatic Stress Network: What is Child Trauma?
https://www.nctsn.org/what-is-child-trauma/about-child-trauma

National Institute of Mental Health: Helping Children and Adolescents Cope With Traumatic Events:
https://www.nimh.nih.gov/health/publications/helping-children-and-adolescents-cope-with-disasters-and-other-traumatic-events

What is Trauma-Informed Care?
https://socialwork.buffalo.edu/social-research/institutes-centers/institute-on-trauma-and-trauma-informed-care/what-is-trauma-informed-care.html