Post-Traumatic Stress Disorder in Children and Adolescents

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PTSD: Topics We’ll Cover Today

- A working **definition** of post-traumatic stress
- A **brief history** of the diagnoses related to trauma
- What can **cause** traumatic stress in children
- **Prevalence** of traumatic stress among children
- **Risk factors** for developing PTSD
- **Behavioral indicators** that a child has been traumatized
PTSD: Topics We’ll Cover Today

- **Co-occurring effects** of trauma on children
- **Evidence-based treatments** for PTSD
- **Demonstration** of one treatment called “EMDR”
- **Supporting the traumatized child in the classroom**
- Creating a **web of support** to reduce trauma effects in the school community
A Working **Definition** of Post-Traumatic Stress

- PTSD is a psychological reaction to a traumatic event or events. The symptoms of PTSD fall into three categories:
  - Reliving
  - Avoidance
  - Hyper-arousal
A Brief History of the Diagnoses Related to Trauma

- PTSD is a relatively new diagnostic category in the history of psychology.
- At that time the DSM had a limited view of what could cause PTSD, defining it as developing from an experience that anyone would find traumatic, leaving no room for individual perception or experience of an event.
- This definition was expanded when the DSM III was revised in 1987, and the DSM IV (APA 1994) provides even broader criteria.
The currently accepted definition as presented in the DSM IV also accepts that PTSD develops in response to events that are:

- Threatening to life or bodily integrity
- Witnessing threatening or deadly events
- Hearing of violence to or the unexpected or violent death of close associates
Precipitating Experiences

Events that could qualify as traumatic, according to the DSM IV, include:

- Combat
- Sexual and physical assault
- Being held hostage or imprisoned
- Terrorism
- Torture
- Natural and man made disasters
- Accidents
- Diagnosis of a life threatening illness
What Can Cause Traumatic Stress in Children

A diagnosis of PTSD means that an individual experienced an event that involved a threat to one's own or another's life or physical integrity and that this person responded with intense fear, helplessness, or horror.

*Drawing by a boy in Kosovo depicting a witnessed mass execution, 1999*
What Can **Cause** Traumatic Stress in Children

There are a number of traumatic events that have been shown to cause PTSD in children and adolescents. Children and adolescents may be diagnosed with PTSD if they have survived natural and man made disasters such as:

- Floods
- Violent crimes such as kidnapping, rape or murder of a parent
- Sniper fire, and school shootings
- Motor vehicle accidents, such as automobile and plane crashes
- Severe burns
- Exposure to community violence
- War
- Peer suicide
- Sexual and physical abuse
A Note Regarding Sexual Trauma

- PTSD can also develop in children who have experienced sexual molestation, even if this is not violent or life-threatening.

- The DSM IV adds, "The disorder may be especially severe or long lasting when the stressor is of human design (e.g. torture, rape)." (APA 1994)
Where History and Prevalence Meet: Vets and Children

During the ten years of the Vietnam war, over 3 million young men and women served in Vietnam. Of these 3.14 million young adults, over 1 million developed PTSD at some point over the next 20 years.

In contrast, each year in the United States, five million children are exposed to abuse, violence and other traumatic events. Unlike the veterans from Vietnam, most of these children don’t rotate out of the war zone after a year. Millions of these children live year after year in the violent and terrorizing world of domestic or community violence, physical and sexual abuse.
Where History and Prevalence Meet: Vets and Children

Vietnam vs Childhood Trauma: Ten Year Comparison

Vietnam Era (1964-1974) vs Childhood Trauma (1975-1985)
Prevalence of traumatic stress among children

A few studies of the general population have been conducted that examine rates of exposure and PTSD in children and adolescents. Results from these studies indicate that:

- 15 to 43% of girls and 14 to 43% of boys have experienced at least one traumatic event in their lifetime.
- Of those children and adolescents who have experienced a trauma, 3 to 15% of girls and 1 to 6% of boys could be diagnosed with PTSD.
Prevalence of traumatic stress among children

Rates of PTSD are much higher in children and adolescents recruited from at-risk samples.

- The rates of PTSD in these at-risk children and adolescents vary from 3 to 100%. For example, studies have shown that as many as 100% of children who witness a parental homicide or sexual assault develop PTSD.

- Similarly, 90% of sexually abused children, 77% of children exposed to a school shooting, and 35% of urban youth exposed to community violence develop PTSD.
Risk Factors for Developing PTSD

Family support and parental coping have also been shown to affect PTSD symptoms in children. Studies show that children and adolescents with greater family support and less parental distress have lower levels of PTSD symptoms. There are other factors that affect the occurrence and severity of PTSD:

- Interpersonal traumas such as rape and assault are more likely to result in PTSD than other types of traumas.
- If an individual has experienced a number of traumatic events in the past, those experiences increase the risk of developing PTSD.
Risk Factors for Developing PTSD

There are three factors that have been shown to increase the likelihood that children will develop PTSD. These factors include:

- The severity of the traumatic event
- Parental reaction to the traumatic event
- Physical proximity to the traumatic event.
Risk Factors for Developing PTSD

Other risk factors to consider:

- **GENDER** -- Several studies suggest that girls are more likely than boys to develop PTSD.

- **ETHNICITY** -- While some studies find that minorities report higher levels of PTSD symptoms, researchers have shown that this is due to other factors such as differences in levels of exposure.

- **AGE / DEVELOPMENT** -- It is not clear how a child's age at the time of exposure to a traumatic event impacts the occurrence or severity of PTSD. While some studies find a relationship, others do not. Differences that do occur may be due to differences in the way PTSD is expressed in children and adolescents of different ages or developmental levels.
‘Reliving’ as a symptom of PTSD

PTSD symptoms include: Reliving, Avoidance, and Hyper-arousal

Reliving means re-experiencing the event or parts of the event in one or more ways, such as:

- Flashbacks
- Recurrent dreams
- Physical sensations
- Illusions
Avoidance as a Symptom of PTSD

Avoidance refers to a tendency to avoid reminders of the event.

Symptoms may include:

- Avoidance of activities, places or people
- Avoidance of thoughts or feelings
- Survivor guilt
- Loss of interest in daily activities
- Difficulty maintaining healthy relationships
Hyper-arousal and PTSD

Hyper-arousal refers to higher levels of arousal and symptoms such:

- Agitation
- Substance abuse
- Memory loss
- Sleep disorders
- Dizziness
- Trouble concentrating
- Trouble managing anger
PTSD is an anxiety disorder, so overstimulation of the nervous system manifests itself most often in four behavioral reactions common to humans and animals:

- Flight
- Freezing in place
- Fighting
- The Fourth “F”
Nervous System Arousal is the Key Ingredient

- PTSD disrupts the functioning of those afflicted by it, interfering with the ability to meet their daily needs and perform the most basic tasks
- Trauma continues to intrude on the lives of people with PTSD as they relive the life-threatening experiences they have suffered
- Autonomic Nervous System hyper-arousal is at the core of PTSD and the driving force behind phenomena such as dissociation, freezing and flashbacks
Acute Trauma affects child neurology
Nervous system exhaustion can lead to dissociation
Likelihood of Dissociation or Hyper-Arousal Varies

DISSOCIATIVE/AROUSAL BALANCE

Dissociation

<table>
<thead>
<tr>
<th>Dissociation</th>
<th>Arousal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Females</td>
<td>Males</td>
</tr>
<tr>
<td>Young Children</td>
<td>Older Children</td>
</tr>
<tr>
<td>Torture/Pain</td>
<td>Observer</td>
</tr>
<tr>
<td>Inescapable Helplessness</td>
<td>Action Active Role</td>
</tr>
</tbody>
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BD Perry MD, PhD
PTSD results in hyper-arousal that over-stimulates the nervous system.

Over-stimulation results in agitation until the nervous system is overwhelmed.

The cycle can repeats itself from trigger to trigger until treatment or time reduces the impact.

Arousal increases

ANS exhaustion

New Trigger
Trauma affects memory

❖ One of the key functions of nervous tissue is to store information. All areas of the brain store information related to the functions they mediate.

❖ The symptoms of PTSD are stored throughout the brain in these various systems and areas. Re-exposure to cues associated with the trauma (e.g., sights, sounds, and smells) can elicit these stored “memories” and result in the signs and symptoms of PTSD.
Trauma also affects memory

- The **Cortex** stores **cognitive information** – names, faces, and facts
- The **Limbic System** can store **emotional information** -- fear, pleasure, sadness
- **Motor-vestibular** memories such as typing, playing the piano or riding a bike are stored throughout the brain
- In the **Brainstem**, the anxiety or arousal states associated with a traumatic event can be stored
Hyper-Arousal and Trauma do NOT Occur for all Trauma Survivors

- Not everyone experiencing traumatic events develops PTSD
- PTSD is a complex psychobiological condition that can emerge in the wake of life-threatening experiences when normal psychological and somatic stress responses to a traumatic event are not resolved and released
- PTSD is readily treatable and the person can make a full recovery to normal functioning.
Behavioral Indicators That a Child Has Been Traumatized: 

Very Young Children

Very young children may present with few PTSD symptoms. This may be because eight of the PTSD symptoms require a verbal description of one's feelings and experiences.

Instead, young children may report more generalized fears such as:

- Stranger or separation anxiety
- Avoidance of situations that may or may not be related to the trauma
- Sleep disturbances
- Preoccupation with words or symbols that may or may not be related to the trauma
Behavioral Indicators That a Child Has Been Traumatized: 

Very Young Children

These children may also display posttraumatic play in which they repeat themes of the trauma.

In addition, children may lose an acquired developmental skill (such as toilet training) as a result of experiencing a traumatic event.
Behavioral Indicators That a Child Has Been Traumatized: Elementary School-Aged Children

Clinical reports suggest that elementary school-aged children may not experience visual flashbacks or amnesia for aspects of the trauma. However, they do experience "time skew" and "omen formation," which are not typically seen in adults.

- **Time skew** refers to a child mis-sequencing trauma related events when recalling the memory.
- **Omen formation** is a belief that there were warning signs that predicted the trauma. As a result, children often believe that if they are alert enough, they will recognize warning signs and avoid future traumas.
Behavioral Indicators That a Child Has Been Traumatized: Elementary School-Aged Children

- School-aged children also reportedly exhibit **posttraumatic play or reenactment** of the trauma in play, drawings, or verbalizations.
- Posttraumatic **play is different from reenactment** in that posttraumatic **play is a literal representation** of the trauma, involves compulsively repeating some aspect of the trauma, and does not tend to relieve anxiety. An example of posttraumatic play is an increase in shooting games after exposure to a school shooting.
- Posttraumatic **reenactment**, on the other hand, is more flexible and involves behaviorally recreating **aspects of the trauma** (e.g., carrying a weapon after exposure to violence).
Co-occurring effects of trauma on children

- Besides PTSD, children and adolescents who have experienced traumatic events often exhibit other types of problems. Children who have experienced traumas also often have relationship problems with peers and family members, problems with acting out, and problems with school performance.

- Perhaps the best information available on the effects of traumas on children comes from a review of the literature on the effects of child sexual abuse.
Co-occurring effects of trauma on children

- In this review, it was shown that sexually abused children often have problems with:

  - Fear
  - Self-destructive behavior
  - Anxiety
  - Feelings of isolation and stigma
  - Depression
  - Poor self-esteem
  - Anger and hostility
  - Difficulty in trusting others
  - Aggression
  - Substance abuse
  - Sexually inappropriate behavior
Co-occurring effects of trauma on children

Along with associated symptoms, there are a number of psychiatric disorders that are commonly found in children and adolescents who have been traumatized.

One commonly co-occurring disorder is major depression.

Other disorders include:
- Substance abuse
- Other anxiety disorders such as separation anxiety, panic disorder, and generalized anxiety disorder
- Externalizing disorders such as attention-deficit/hyperactivity disorder, oppositional defiant disorder, and conduct disorder
Evidence-based Treatments for PTSD

Although some children show a natural remission in PTSD symptoms over a period of a few months, a significant number of children continue to exhibit symptoms for years if untreated. The most common forms of treatment for PTSD include:

- Cognitive-Behavioral Therapy (CBT)
- Play therapy
- Psychological first aid
- Twelve Step approaches
- Eye Movement Desensitization and Reprocessing (EMDR)
- Medications
Cognitive-Behavioral Therapy (CBT)

A review of the adult treatment studies of PTSD shows that this is the most effective approach for treating children. CBT for children generally includes the child directly discussing the traumatic event (exposure), anxiety management techniques such as relaxation and assertiveness training, and correction of inaccurate or distorted trauma related thoughts.
Cognitive-Behavioral Therapy (CBT)

Although there is some controversy regarding exposing children to the events that scare them, exposure-based treatments seem to be most relevant when memories or reminders of the trauma distress the child. Children can be exposed gradually and taught relaxation so that they can learn to relax while recalling their experiences. Through this procedure, they learn that they do not have to be afraid of their memories. CBT also involves challenging children's false beliefs such as, "the world is totally unsafe." The majority of studies have found that it is safe and effective to use CBT for children with PTSD.
Cognitive-Behavioral Therapy (CBT)

CBT is often accompanied by **psycho-education** and **parental involvement**. Psycho-education is education about PTSD symptoms and their effects. It is as important for parents and caregivers to understand the effects of PTSD as it is for children.

Research shows that the better parents cope with the trauma, and the more they support their children, the better their children will function. Therefore, it is important for parents to seek treatment for themselves in order to develop the necessary coping skills that will help their children.
Play therapy

Play therapy can be used to treat young children with PTSD who are not able to deal with the trauma more directly.

The therapist uses games, drawings, and other techniques to help the children process their traumatic memories.
Psychological first aid has been prescribed for children exposed to community violence and can be used in schools and traditional settings.

It involves clarifying trauma related facts, normalizing the children's PTSD reactions, encouraging the expression of feelings, teaching problem solving skills, and referring the most symptomatic children for additional treatment.
Twelve Step approaches

This type of approach has been prescribed for adolescents with substance abuse problems and PTSD
Eye Movement Desensitization and Reprocessing (EMDR)

Another therapy, EMDR, combines cognitive therapy with directed eye movements.

While EMDR has been shown to be effective in treating both children and adults with PTSD, studies indicate that it may be the cognitive intervention rather than the eye movements that accounts for the change.
Medications

Drugs have also been prescribed for some children with PTSD. However, due to the lack of research in this area, it is too early to evaluate the effectiveness of medication therapy.
Demonstration of One Treatment Called “EMDR”
Supporting the Traumatized Child in the Classroom

Teachers can help a child suspected of post traumatic stress disorder by:

- Gently discouraging reliance on avoidance; letting the child know it is all right to discuss the incident
- Talking understandingly with the child about their feelings
- Understanding that children react differently according to age - young children tend to cling, adolescents withdraw
- Encouraging a return to normal activities
- Helping restore the child's sense of control of his or her life
- Seeking professional help
Creating a **Web of Support** to Reduce Trauma Effects in the School Community

- School support staff
- Family
- Professional
- Peers
- Community Events
- Internet
Experiences to share with traumatized students

Questions

Additional resources