#10020 UNDERSTANDING CHILDHOOD TRAUMA: THE BRAIN— UNDERSTANDING THE EFFECTS OF CHILDHOOD TRAUMA

MAGNA SYSTEMS, INC., 2002 Grade Level: Adult 29 Minutes 1 Instructional Graphic Included





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Funding for the Captioned Media Program is provided by the U.S. Department of Education

TRAUMA

- What is Childhood Trauma?
- Significant Event Childhood Trauma
- The Brain: Effects of Childhood Trauma
- Identifying and Responding to Trauma in Children Up to 5 Years of Age
- Identifying and Responding to Trauma in Ages Six to Adolescence
- Domestic Violence and Childhood Trauma
- Trauma and Healing
- A Parents Guide to Identifying and Responding to Childhood Trauma



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The Workbook topics listed here are integrated with the video modules of the Understanding, Identifying and Responding to Childhood Trauma series.

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TRAUMA

A Guide to Study

Each section of the individual module in this workbook contains the following: Overview, Questions To Consider, Vocabulary, Instructional Objectives, and Self-Test.

The OVERVIEW establishes the framework for the total module.

The QUESTIONS TO CONSIDER can help focus the student's attention while viewing the video.

The VOCBULARY contains words used in each module.

The INSTRUCTIONAL OBJECTIVES set forth what the student will be able to accomplish upon completion of the module.

The SELF-TEST is a check to progress. The answers are found in the self test answer key.

The Video Modules of Understanding Childhood Trauma: Strategies and Solutions and the Workbook Chapters which are an integral part of the series, were produced by Linkletter Films.

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Biography

Bruce D. Perry, M.D., Ph.D.

Dr. Perry is the Medical Director, Provincial Programs in Children's Mental Health for the Alberta Mental Health Board. In addition he continues to lead the ChildTrauma Academy, a training and research institute he founded in 1990. From 1992 to 2001, Dr. Perry served as the Trammell Research Professor of Child Psychiatry and Chief of Psychiatry for Texas Children's Hospital at Baylor College of Medicine in Houston, Texas.

Dr. Perry, a native of Bismarck, North Dakota, was an undergraduate at Stanford University and Amherst College. He attended medical and graduate school at Northwestern University, receiving both M.D. and Ph.D. degrees. Dr. Perry completed a residency in general psychiatry at Yale University School of Medicine and a fellowship in Child and Adolescent Psychiatry at The University of Chicago.

Dr. Perry has conducted both basic neuroscience and clinical research. His neuroscience research has examined the effects of prenatal drug exposure on brain development, the neurobiology of human neuropsychiatric disorders, the neurophysiology of traumatic life events and basic mechanisms related to the development of neurotransmitter receptors in the brain. His clinical research and practice has focused on high-risk children - examining long-term cognitive, behavioral, emotional, social, and physiological effects of neglect and trauma in children, adolescents and adults. This work has been instrumental in describing how childhood experiences, including neglect and traumatic stress, change the biology of the brain - and, thereby, the health of the child.

A focus of his work over the last five years has been the development of innovative clinical and systemic programs and practices based upon emerging concepts regarding child development and neurodevelopment. These programs are in partnership with multiple sectors of the community and in context of publicprivate partnerships which help catalyze systemic change within the primary institutions that work with high risk children such as child protective services, mental health, public education and juvenile justice.

Dr. Perry is the author of over 180 journal articles, book chapters and scientific proceedings and is the recipient of numerous professional awards and honors, recently including the T. Berry Brazelton Infant Mental Health Advocacy Award and the 2000 Award for Leadership in Public Child Welfare from the National Association of Public Child Welfare Administrators

Coping with Traumatic Events: Terrorist Attacks in the United States Special Comments for Teachers and School Personnel

Bruce D. Perry, M.D., Ph.D.

- 1. Talk about these events in class in factual and focused ways. It is appropriate to talk about these events in the classroom. But it is not appropriate to turn each class into an unstructured group therapy session. There should be open, honest, and accurate discussion in classes that is directed and contained by a teacher. Once this initial period of grief has subsided, try to keep discussions focused on aspects relevant to the content of your curriculum. You should not ignore it: children never benefit from 'not thinking about it' or 'putting it out of their minds.' But your students will be better served if they take an aspect of this and discuss it in focused, thoughtful and rational ways. In history talk about extremism in other key world events; in Social Studies talk about various cultural/religious views of death. Now, this does not mean you should ignore the emotional impact of this; just don't feel that you have to become an expert in trauma psychology to help your students.
- 2. Find out what the children think and feel. An important first step in talking about this event is to find out what the children think and feel. Many of the children will have distorted information. Young children, for example, often make false assumptions about the causes of major events. These distortions can magnify his sense of fear and make him more likely to have persisting emotional or behavioral problems. Correct misperceptions with accurate but age-appropriate explanations.
- 3. Don't over focus on these events: resume normal patterns of activity at school as soon as possible. In the immediate post-event period, children and adults often over-focus on traumatic events. The horror of this event, the pervasive media coverage and the many discussions can actually saturate a child's capacity to process and move forward in a healthy way. Make the classroom a safe place to get some structured relief from this emotional barrage. By focusing on school work, a child's over-worked stress-response system can get a little rest period.
- 4. Take a child's lead on when, what and how much to say. After you have some sense of what your students know, and you have clarified any distortions, let them take the lead during your informal discussions about this topic. Students may ask you many difficult questions, "How long can you live if you are trapped like that?" You do not need to be too detailed or comprehensive in your answers. If you let children direct unstructured discussions by their questions you will find that you will have many, many short discussions and not one "big" talk. These little discussions make it easier for students to digest this huge emotional meal.
- 5. Don't feel that you have to have all the answers. Some aspects of this will forever remain beyond understanding. You can explain that you just don't know and that sometimes we will never know why some things happen. Help teach your students that hate can lead to senseless cruelty. And that you, we all, learn to live with some unknowns. When you share your struggles

with the child, their own struggles become easier.

- 6. **Reassure the children about safety.** Many children and many adults are frightened. This event has shattered our sense of safety. Your students may have fears about personal safety but more likely will be worried about parents flying, going to work in public places or working in high-rise buildings. Reassure your students. Your home and community are safe. Steps are being taken to make things safer. Remind them that only a few hateful people did this.
- 7. Inform parents and children about the risks of children watching too much media coverage. Watching the images of this over and over not only won't help child. In fact, it may make this worse for them. Young children are very vulnerable to this. Children six and under may actually think that there have been hundreds of buildings collapsing. Tell children and parents to limit their viewing of the media coverage with explicit images. Ultimately, the goal is to decrease the traumatic power of these images and that is very difficult when the images permeate the media.
- 8. Anticipate increased behavioral and emotional problems and decreased capacity to learn. When children feel overwhelmed, confused, sad or fearful, they will often "regress." And so do adults. You may see a variety of symptoms in your students: these include anxiety (or fearfulness), sadness, difficulty concentrating, sleep problems, increased impulsivity or aggression. These symptoms are usually short-term (days or weeks) and tend to resolve with reassurance, patience and nurturing. When children feel safe, they will be most likely start to "act their age."
- 9. Some children will be more vulnerable than others. Not all children will react to these events in the same way. Some children may seem disinterested and no changes in their behaviours will be noticed. Other children may have profound symptoms that seem out of proportion to their real connection to these events. We can not predict how a given child will react but we do know that children with pre-existing mental health or behavioural problems are more likely to show symptoms. We also know that the closer a child is to the actual traumatic event (i.e., if a loved one was injured or killed) the more severe and persisting the symptoms will be. The high-risk children in your class are high risk for having increased problems following this event.
- 10. Your reactions will influence children's reactions. Children sense emotional intensity around them and will mirror the emotional responses and interpretations of important adults in their life. That includes their teachers. Younger children will try to please you - sometimes by avoiding emotional topics if they sense that it may upset you. Try to gauge your own reactions. If you find yourself crying or being very emotional, it is fine. Just make sure that you try to tell your students why you cried. It is reassuring to children to know they are not alone with their feelings. Make sure they hear, many times, that even though it may be upsetting it is still important to share feelings and thoughts with each other.
- 11. **Don't let anger be misdirected.** A major mistake following these events would be to let hate win. Don't let the frustration, anger and rage that this event produces to be misdirected. Only a small, hateful group of people did

this. No ethnic group or religion bear the brunt of these senseless destructive acts. Every religion and ethnicity has produced examples of extreme hateful and violent behaviours. Don't let the hate spread. Make sure your students understand that hurting more innocent people will only mean that terror wins.

12. Don't hesitate to get more advice and help. If you feel overwhelmed or if you see persisting problems with your students, don't hesitate to reach out for help. In most communities there are professionals and organizations that can answer your questions and provide the services your students need.

About the ChildTrauma Academy

The ChildTrauma Academy is a unique collaborative of individuals and organizations working to improve the lives of high-risk children through direct service, research and education. These efforts are in partnership with the public and private systems that are mandated to protect, heal and educate children. For more information see: <u>http://www.ChildTrauma.org</u>

3 The Brain: Effects of Childhood Trauma

Overview

Researchers have determined that severe and pervasive trauma has many negative effects on childhood brain development, particularly starting with the in-utero environment through five years of age. This is when the developing brain is organizing into its basic functioning template and various systems. Severe trauma will affect the natural ability of the higher parts of the brain to inhibit the lower more primitive parts of the brain. This is why traumatized children are often impulsive, reactive, prone to frustration, and cannot plan effectively.

A key to understanding how trauma affects the developing brain is that the brain develops and organizes as a reflective of developmental experience. Simply stated a calm and safe environment will influence brain development in positive and organized ways. Conversely, a traumatic and threatening environment will influence brain development in negative and unorganized ways. An example is a specific system in the brain being created to automatically respond to any new perceived threat. Brain activation by the environment, positively or negatively, will determine how the brain functions over a lifetime.

Adverse brain development also influences basic physical health, cognitive learning, and socialization skills. Because traumatic effects to the brain are extremely difficult to change after five years of age, prevention is the ideal. Infants generally require nurturing actions such as: touch, cuddling, and soothing. Older children require corrective means, such as: non-threating discipline, consequences, clear behavior expectations, and respect. All children need safety, predictability, and protection.

Questions To Consider

- 1. What is the primary requirement of brain development?
- 2. What is the primary brain organization of a traumatized child?
- 3. How does the brain change itself?
- 4. Why does the brain change itself?
- 5. How are brain organization and opportunities for positive change, increased?
- 6. What is the key principle of brain development?
- 7. What are the associations between the brain, traumatic memory, and survival?

Vocabulary

Neutral Cues Non-verbal information that triggers traumatic memory, such as: tone of voice, body posture, and facial expressions.

Dissociation The attempt to withdraw attention from the outside world and go into a safer interior world in the attempt to avoid traumatic thoughts and feelings.

The Alarm State The fight or flight reaction in a human being under perceived threat.

Threat The emotional feelings from past incidences in a child's life that have caused traumatic reactions.

Impulsivity A traumatized child's tendency to react to threat without consideration of consequences.

Hierarchical Structure In the brain, lower more primitive areas of the brain ascending to more complex areas of the brain.

Cognitive Learning The brain's ability to reason logically and process new information for learning retention.

Reactivity A quick response without reason and processing.

Positive Attachments Emotionally fulfilling and healthy relationships with others.

Adaptation The brain's and the organism's ability to change and better ensure survival.

remphate i ne first and original basic organization of the brain.

Sensory and Perceptual Experience The information gathered by the brain through the senses and reasoned thought.

Stress Response The fight or flight response to real or perceived threat.

Brain System Related sensory perception, experience, and processing in the brain.

Attachment The ability to be attached to, and love, others.

Atrophy The deterioration of a muscle due to inactivity.

Dysregulate The interruption of normal functioning.

Invested Adult A caregiver with the interest and means to assist a child to help facilitate change and healing.

Instructional Objectives

- 1. Describe Dr. Perry's comments concerning how the brain creates systems to help a child cope with threat.
- 2. Describe how traumatic brain systems affect children in other areas of their lives.
- 3. Describe Dr. Perry's comments concerning the relationship between adverse childhood events and physical health.
- 4. Describe Dr. Perry's comments about brain organization.

Self-Test

1. What should a caretaker do if a traumatized child is not responding to layperson interactions?

2. What are the three primary caregiver interactions to promote healing for traumatized children?

3. What are some of the caregiver actions of the primary interactions to help promote healing?

4. Why do repressed childhood traumatic memories sometimes surface in adulthood?

5. What are some dissociation techniques employed by children?

6. Why do traumatized children often overreact in seemingly normal situations?

Self-Test (Continued)

7. What areas of the brain dominate the cognition of a child in the alarm state? What are the effects to the child?

8. What area of the brain dominates the cognition of a child from a safe environment? Why?

9. What are the associations between traumatic stress and physical health?

10. What is the significance of atrophy on brain development?

11. What is an example that suggests there are specific time periods for the development of optimal brain functions?

12. The brain organizes in response to what information?

13. How is the brain an historical organ?

14. What information do the basic senses provide to the brain?

15. According to Dr. Perry, what should a caregiver determine when bringing in professional help?

The Brain: Effects of Childhood Trauma Self-Test Answer Key

Questions To Consider:

- 1. Positive activation of the higher cognitive areas of the brain.
- A traumatized child's brain is arranged and weighted toward the stress response, also called the fight or flight reaction.
- 3. The brain continually changes what it does in response to new experiences.
- 4. The brain continually changes to better ensure survival of the organism.
- 5. The lower parts of the brain must be stimulated and activated.
- 6. The brain develops and organizes as a reflection of developmental experience.
- The brain creates sensory associations between threatening experiences and specific neutral cues in the environment, resulting in traumatic memory.

Instructional Objectives:

There are certain systems in the brain designed to help a child cope with threat. If those systems are on for a prolonged period of time, the parts of the brain that are mediating that response begin to change.

Traumatic brain systems also mediate other functions and alter perceptions. This results in children having mood problems, problems in regulating anxiety and arousal, perceptual problems, and basic problem solving difficulties.

The more adverse childhood events, the less healthy you are. Early identification of and intervention with traumatized children will aid in the prevention of emotional anguish, lost of potential, and physical distress.

As the brain is organizing, it's waiting for the world to tell it how to structure itself.

Self-Test

- 1. The child should be referred for professional evaluation and intervention.
- 2. Nurturing actions, safety actions, and corrective actions.
- Nurturing actions: touch, cuddling, soothing, and consistency. Safety actions: monitoring, verbal interactions, predictability, protection, and availability. Corrective actions: non-threatening discipline, clear behavior expectations, consequences, respect, and infinite patience.
- 4. The memories can be triggered by associated experiences and can be better dealt with as an adult.
- 5. Daydrearning, fantasy, distraction, pretending, and depersonalization.
- 6. Traumatic memory and the associated neutral cues.
- The lower sub-cortical and limbic areas of the brain. These areas focus on non-verbal information and scan the environment for possible additional threat.
- 8. The neo-cortex, the highest area of the brain where abstract learning occurs.
- A child in the alarm state will experience chronic fear that arouses the brain for a fight of flight reaction. This
 causes the brain to heighten and dysregulate body functions with more energy being consumed at a cost to the
 immune system.
- Like a body muscle that atrophies without exercise, specific parts of the brain will atrophy without positive life experiences.
- A child raised without exposure to verbal language will never develop the neural apparatus for optimal speech or language development.
- 12 The pattern, intensity, and nature of sensory and perceptual experience.
- 13. The brain stores our own life experience and the accumulated knowledge and experiences of prior generations.
- 14. The senses are always reading and responding to the environment to promote adaptation and help ensure survival.
- 15. Behaviors that are alarming or severely delayed, such as a child that doesn't speak or is really aggressive.

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