

Abuse, Neglect and the Brain

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Many people are unaware of the lasting effects child abuse and neglect can have on children. Young infants, toddlers and children spend their developmental years and energies adapting their thinking and actions in order to survive in hostile or negligent environments. This investment in survival robs the body of its investment in healthful growth and emotional well-being and can manifest itself in psychological and physical changes. The latest studies in neurobiology show that the brain itself can be altered in structure and function.

The Scientific American article "Scars that Won't Heal: The Neurobiology of Child Abuse," reports that in the United States alone "over 3 million allegations of childhood abuse and neglect are received each year. Sufficient evidence is collected to substantiate more than a million instances."

Research links abuse and neglect in childhood with a greatly increased risk for the development of many problems both physical and psychological (depression, anxiety, suicidal thoughts, post traumatic stress, aggression, impulsiveness, delinquency, substance abuse, borderline personality disorder, etc.) that affect adult life and subsequently the development of the next generation of children. In addition Widom, et al. January 2007, found that the onset of depression for many of these children began in childhood.

Children raised in violent homes live inside prison walls with no escape route from pain. Most learn to be on guard at all times as a matter of survival. Some are in a perpetual state of fight or flight while others may disconnect from outward experiences and turn inward. Dr. Bruce Perry in "Understanding Traumatized and Maltreated Children," points out that though this state of arousal may be necessary in a violent home it is maladaptive once the child is in another environment, school for example. Stress hormones that trigger quick action at times of threat are continually circulating throughout the child's body over her/his lifetime causing many physical responses. And both Dr. Perry's article and the Scientific American article report that this chronic activation can cause actual changes in brain function and structure. "A child's interactions with the outside environment causes connections to form between brain cells," Martin Teicher MD, PhD, of McLean hospital explains in Cerebrum. "Then these connections are pruned during puberty and adulthood. So whatever a child experiences, for good or bad, helps determine how his brain is wired."

The McLean research team, with Dr. Teicher, identified abnormalities that can be caused by abuse and neglect. There is evidence that abuse may cause disturbances in the amygdala and hippocampus which influence memory and emotion and the cerebellar vermis, all areas that respond to stress hormones. There were also changes in the left hemisphere and the corpus collosum responsible for integration between the right and left hemispheres of the brain. "These changes are permanent," says Teicher. "This is not something people can just get over and get on with their lives."

Adults damaged by abuse or neglect as children often produce children of their own and whether the cycle of violence perpetuates or the parent is emotionally absent due to depression, etc. the children of the next generation may grow up in much the same way as the parent. The cycle of violence and suffering often continues.

Dr. Bruce Perry of the Child Trauma organization states:

If 20 million people were infected by a virus that caused anxiety, impulsivity, aggression, sleep problems, depression, respiratory and heart problems, vulnerability

to substance abuse, antisocial and criminal behavior, retardation and school failure, we would consider it an urgent public health crisis.

Yet, in the United States alone, there are more than 20 million abused, neglected, and traumatized children vulnerable to these problems. Our society has yet to recognize this epidemic, let alone develop an immunization strategy.

We as a society need to put more of our resources into ensuring that children are given basic rights. We must protect those who cannot speak for or protect themselves. We require education for driving a car; we need to require education to raise a young child. We need mandatory education for parenting on child development and the impact of neglect and trauma on children.

Dr. Perry offers a list of core strengths children need to develop in order to become healthy, caring and non-violent. These include developing the ability to form healthy emotional relationships, to self-regulate, to join and contribute to a group, and to be aware, tolerant, and respectful of her/himself and others. A history of child abuse and/or neglect can damage a child's ability to develop these strengths thus undermining a healthy adulthood and in turn influencing the next generation.

(Dr. Bruce Perry offers free classes on his website www.ChildTraumaAcademy.com These easy to understand classes will teach you about the brain and its function and how abuse and neglect affect the abused child's brain.)

Information Sources:

Teicher, Martin H. "Scars that Won't Heal: The Neurobiology of Child Abuse." *Scientific American*. Vol. 286, Number 3, pages 68-75; March 2002.

Teicher, Martin H. M.D., PhD., "Wounds that Time Won't Heal: The Neurobiology of Child Abuse." *Cerebrum*. Dana Press. Vol. 2, Number 4, pages 1-16; Fall 2000.

McLean Researchers Document Press Release. "Brain Damage Linked to Child Abuse and Neglect." December 14, 2000, Belmont, MA

Perry, Bruce, M.D., PhD., http://www.childtrauma.org/ourImpact/our_impact.asp (viewed January 9, 2007).

Perry, Bruce, M.D., PhD., "Understanding Traumatized and Maltreated Children." http://www.lfcc.on.ca/Perry_Core_Concepts_Violence_and_Childhood.pdf (viewed January 9, 2007).

Widom, Cathy Spatz, PhD; Dumont, Kimberly, PhD; Czaja, Sally J., PhD, "A Prospective Investigation of Major Depressive Disorder and Comorbidity in Abused and Neglected Children Grown Up." *Archives of General Psychiatry*. Vol. 64, Number 1, pages 49-56; January 2007.