

## **Children Exposed to Violence and Other Adverse Experiences, Trauma, and the Brain**

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## **Presentation Outline:**

- **Effects of Family Violence & Trauma on Children**
- **Attachment and Developmental Issues**
- **Post Traumatic Stress Disorder (PTSD)**
- **The Brain: How It All Fits Together**
- **Adverse Childhood Experiences (ACEs) – The Link**
- **Implications and Suggestions for Practice**

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Recent research has shown a connection between brain development, childhood maltreatment, family violence and trauma. Our understanding of the effects of these types of adverse childhood experiences on the brain has expanded. This presentation will discuss brain development and the various types of multiple victimization experienced by children that often leads to later aggressive behavior and impulsivity due to the interaction of the brain and psychosocial factors. The influence of trauma on the brain and development makes it much more difficult to focus on just one issue when assessing or treating these children or victims of various forms of intimate partner violence.

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## **It is Estimated...**

**In about 40-60% of the homes where a parent is being maltreated, the child is also a victim of abuse,**

**and vice versa.**

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## **INTIMATE PARTNER VIOLENCE (IPV) AND ITS POTENTIAL EFFECT ON CHILDREN**

It is normal for a child growing up in a home with domestic violence to manifest a multitude of symptoms. These include emotional, cognitive, social, and physical effects of exposure to IPV, and possible externalizing or internalizing behaviors.

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## **ISSUES FOR CHILDREN IN VIOLENT HOMES AND COMMUNITIES**

### ***THE CHILDREN FEEL***

<b>Powerless</b>	because they can't stop the violence;
<b>Confused</b>	because it doesn't make sense;
<b>Angry</b>	because it shouldn't be happening;
<b>Guilty</b>	because they think they've done something wrong;
<b>Sad</b>	because it's a loss;
<b>Afraid</b>	because they may be hurt, they may lose someone they love, others may find out;
<b>Alone</b>	because they think it's only happening to them.

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## **Children are Affected**

### ***Emotional Effects***

- Feelings of helplessness, worthlessness
- Constant fear of: abandonment, expressing emotions, the unknown, and personal injury
- Shame – “I caused it”, or “I should have been able to stop it”
- Grief for family and personal losses
- Lack of good attachment bonds

## **Children are Affected**

### ***Cognitive Effects***

- Lack of sense of consistency and predictability;
- Feeling of incompetence;
- Difficulty encoding new information;
- Cause and effect relationships ill-defined;
- Difficulty concentrating;
- Poor school functioning.

## Children are Affected

### ***Social Effects***

- Isolation from friends and relatives
- Difficulty in trusting, especially adults
- Poor anger management and problem-solving skills
- Passivity with peers or bullying towards peers; play with peers gets exceedingly rough

## Children are Affected

### ***Behavioral Effects***

- Stress disorders and psychosomatic complaints
- Increased social isolation and withdrawal
- Aggressiveness and/or poor impulse control
- School problems (refusal to go, truancy, poor performance) or perfectionism and overachievement

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**Children who have been traumatized may demonstrate impairments in the following developmental areas:**

**Attachment:** social isolation and difficulty relating to and empathizing with others

**Biology:** impairments in movement and sensation, hypersensitivity to physical contact, problems with coordination, balance, and body tone, unexplained physical symptoms, and increased medical problems

**Mood Regulation:** difficulty regulating emotions, trouble knowing and describing feelings and internal states, communication difficulties

**Dissociation:** experiencing feelings of detachment or depersonalization, withdrawal of attention to outside world, demonstrate amnesia-like state

**Behavioral Control:** poor impulse control, self-destructive behavior, aggression against others, sleep disturbances, and eating disorders

**Cognition:** problems focusing on and completing tasks in school, difficulty planning and anticipating, difficulty understand own contribution to what happens to them, learning difficulties, and problems with language development

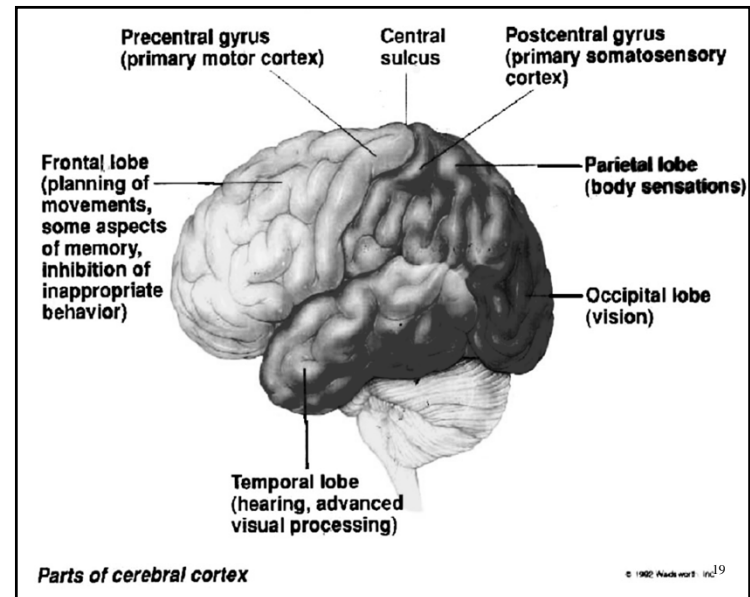
**Self-Concept:** lack a continuous, predictable sense of self, suffer from disturbances of body image, low self-esteem, shame, and guilt

## ADVERSE, TRAUMATIC CHILDHOOD EXPERIENCES

BEHAVIORAL/  
PSYCHOSOCIAL/  
DEVELOPMENTAL  
EFFECTS

PHYSIOLOGICAL/  
BIOLOGICAL/  
STRESS SYSTEMS  
NEUROBIOLOGICAL/  
NEUROPSYCHOLOGICAL  
EFFECTS

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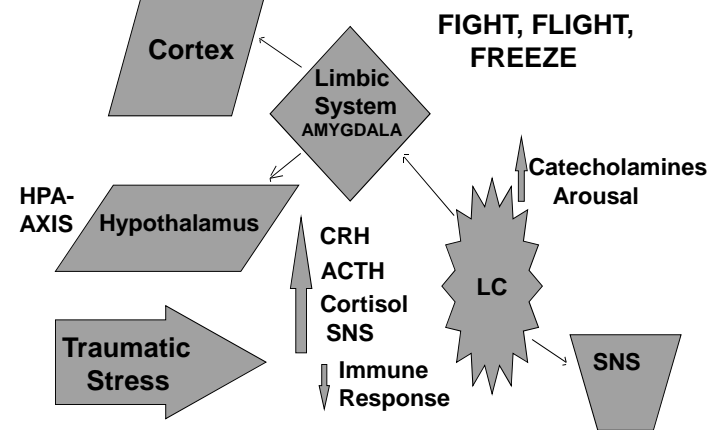
## Shifting Developmental Activity Across Brain Regions

Brain Region	Age of Greatest Developmental Activity	Age of Functional Maturity	Key Functions
Neocortex	Childhood	Adult	Reasoning, problem solving, abstraction, secondary sensory integration
Limbic	Early Childhood	Puberty	Memory, emotional regulation, attachment, affect regulation, primary sensory integration
Diencephalon	Infancy	Childhood	Motor control, secondary sensory processing
Brainstem	In utero	Infancy	Core physiological state regulation, primary sensory processing

From Perry, 2001

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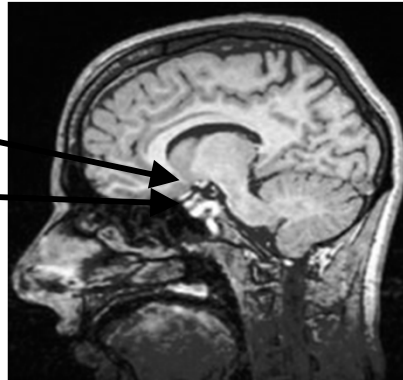
## Trauma and Biological Stress Systems



**Brain activity of children exposed to IPV on fMRI Scans same as soldiers exposed to violent combat – increase in Amygdala and Anterior Insula when viewing pictures**

Anterior Insula

Amygdala



E. J. McCrory, et al (2011), *Current Biology*, 21 (23) – University College London

### **Summary of Means for Heart Rate throughout Protocol**

Abuse Type	HR1	HR2	Recovery
Exposure to DV	87.4	94.4	84.3
Physical/Sexual Ab.	84.7	85.9	81.7
None	80.5	80.2	79.1

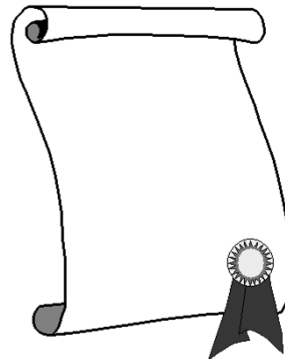
*HR1 = heart rate 1, taken during baseline; no stressor.*

*HR2 = heart rate 2, taken during the stressor.*  
*Recovery = heart rate, taken after relaxation again.*

From Stride & Geffner, 2005

## **Executive Function**

- **General organization and planning**
- **Ability to solve problems**
- **Regulation of activity**
- **Regulation of mood**



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### **Categories of Adverse Childhood (ACE) Experiences** V. J. Felitti, M.D., & R. F. Anda, M.D., 2003 – CDC & Kaiser Study

	Category Prevalence (%)
<b>Abuse, by Category</b>	
Psychological (by parents)	11%
Physical (by parents)	28%
Sexual (anyone) - Contact	22%
Emotional Neglect	15%
<b>Household Dysfunction, by Category</b>	
Substance Abuse	27%
Mental Illness	17%
Mother Treated Violently	13%
Imprisoned Household Member	5%

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## Adverse Childhood Experiences Score

Number of categories of adverse childhood experiences

**ACE score  
Prevalence**

0	36%
1	26%
2	16%
3	10%
4 or more	12%



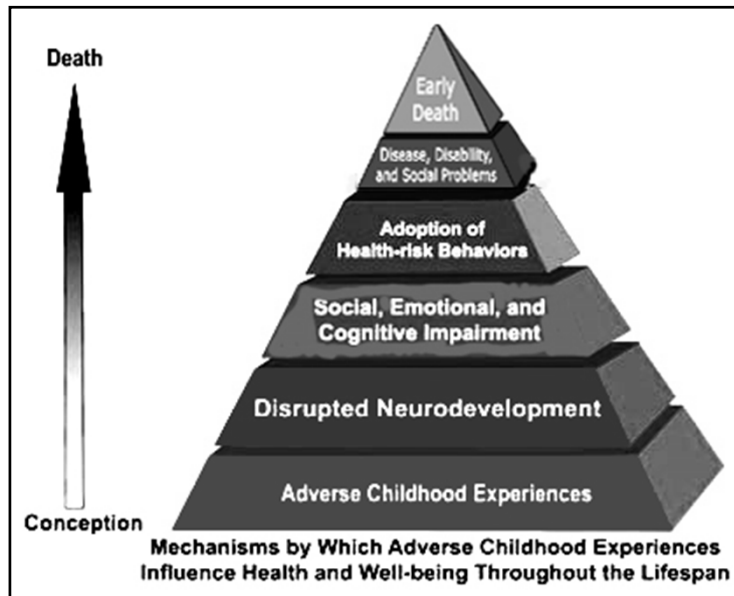
- More than 60% have at least one ACE, and almost 1/4 have 3 or more ACEs

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## Evidence from ACE Study Suggests:

Adverse childhood experiences are the most basic cause of health risk behaviors, morbidity, disability, mortality, and healthcare costs.

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## Common Principles Linking Children Exposed to Family Violence or Other ACEs Traumas

- Affect and impulse dysregulation – Aggression
- High levels of anxiety
- Rapid shifts in psychological state
- Disturbances in sense of self: low self-esteem, body image distortion, identity diffusion/fragmentation, attachment issues
- Attention, concentration, memory issues
- Self-destructive behaviors

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## **Executive Function Issues/Deficits for Offenders and Victims of Family Violence: A Biopsychosocial Approach**

- General organization and planning
- Ability to solve problems
- Regulation of activity/Impulsivity
- Learned aggression, power and control
- Low threshold for frustration/stress
- Closed head injuries or other neuropsychological impairments

## **In Summary .....**

- Abused children need to be carefully diagnosed to R/O disorders such as PTSD.
- Abuse and maltreatment, even without PTSD, may be associated with chemical and structural brain changes in children.
- While these changes are still under investigation, they appear to have real-life consequences for affect regulation, etc.
- Assessment can assist with diagnosis, prognosis, and educational recommendations.

Beers, S. R., & De Bellis, M. D. (2002). Neuropsychological function in children with maltreatment-related Posttraumatic Stress Disorder. *American Journal of Psychiatry*, 159, 483-486.

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## **3 Needed Approaches**

**Differential Diagnosis**

**Assessment-Based  
Intervention**

**One Size Intervention  
Does Not Fit All**

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## **Key #2 - Positive Power of Peers**

**Good peer relationships**

**Development of self-esteem and  
strong social skills**

**A sense of hope**

**High maternal empathy and support**

**Opportunities to help others**

**Respect for others, and empathy**

**Hobbies and other creative pursuits  
in which to find refuge**

**Development of some sense of  
control of one's life.**

## To Help Children Feel They are Making a Contribution:

### Required Helpfulness

- Positive peer relationship, especially when they can help or mentor another child
- Increasing Behavioral Successes

### Fostering a Sense of Mastery

- The child gets to answer questions or solve problems correctly in front of age mates.
- The parents/caregivers get a call at home letting them know the special thing that their child did that day, followed by a written note that can be saved.
- At least 1x per week, a picture is taken of a special accomplishment. It's put in a photo album and either a story is written about it, or a tape recording is made. Memories of successful experiences.

## Key #3 - Fostering a Sense of Mastery

- Helping to define one's identity around strengths and talent; success experiences are to mastery as repeated failure is to learned helplessness
- Caregivers and teachers can determine # of success experiences children/students have and in what areas
- Highlighting, nurturing and expressing strengths and talents, and things you feel passionate about

From Katz, 2003

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## Protective Processes That Can Offset the Effects of Multiple Childhood Risks

(Rutter, 1990, Werner & Smith, 1992, Werner, 1993)

1. Experiences That Reduce the Impact of Prevailing Risks:
  - A. Learning to see adversities in a new light
  - B. Reducing the amount of exposure to the risks of adverse conditions; buffers
2. Preventing a Chain Reaction of Negative Life Events; Creating Safety Nets
3. Experiences That Promote a Sense of Mastery
4. Opening the Door to Turning Point Experiences or Second Chance Opportunities

## Key #4 - Connecting Emotionally

### Institute on Violence, Abuse & Trauma (IVAT) at Alliant International University, San Diego

[www.ivatcenters.org](http://www.ivatcenters.org)

### Family Violence & Sexual Assault Institute (FVSAI)

[www.fvsai.org](http://www.fvsai.org)

### National Partnership to End Interpersonal Violence Across the Lifespan (NPEIV)

[www.npeiv.org](http://www.npeiv.org)

### *International Summit on Violence, Abuse & Trauma Across the Lifespan – August, San Diego, CA*

### *Hawaii Summit on Assessing, Treating & Preventing Child, Adolescent & Adult Trauma - March, Honolulu, HI*