Through a Child’s Eyes:
The Impact of Traumatic Experiences

Amy B. Mack, LMSW
Denise Wheatley, MA
Kalamazoo, MI
Goals

- Provide information
- Create understanding
- Challenge to grow
Let’s Start with a

Work Stress Assessment
The next picture has 2 identical dolphins in it. It was used in a case study on stress levels at St. Mary's Hospital.

Look at both dolphins jumping out of the water. The dolphins are identical. A closely monitored, scientific study revealed that, in spite of the fact that the dolphins are identical; a person under stress would find differences in the two dolphins. The more differences a person finds between the dolphins, the more stress that person is experiencing.

Look at the photograph and if you find more than one or two differences you need to go on a holiday.
Child Trauma Think Tank
Six year old girl: “When my mother would fight with her boyfriend I would put my brother (age 9 with CP) on my back and take him up the stairs so he would be safe. It was my job to keep him safe because he could not walk.”
Nine year old whose mother was in a wheelchair: “I would watch my dad to see if he went to the neighbors. If he did I knew he was drinking. When he came home I would plug in my lasers to make sure my mom was safe. He could not get through the lasers. He could not hurt my mom.”
• So what do we do with these children’s statements?

• How do we intervene or do we?

• Historically our response has been……..
## Societal Avoidance

### Parental
- Fear of removal of children
- Embarrassment
- Fear of Retaliation/harm

### Professional
- Wariness of offending families that are identified
- Unaware of how to help
- Unfamiliar with services available
• First empirical study not until early 1980’s

• Few longitudinal studies conducted on children expose to violence
• Understanding children exposed to domestic violence
What is Trauma?

- **Overwhelming** event or events that render a child helpless, powerless, creating a threat of harm and/or loss.

- **Internalization** of the experience that continues to impact perception of self, others, world, and development.
What is Complex Trauma?


Experiences of *multiple* traumatic events that occur within relational system

- Sequential and / or simultaneous occurrences of child maltreatment
- Often chronic and occurring early in childhood
Bad stuff keeps happening!!

• What happens if a child has to “hold their breath” because of not knowing what will happen next????????????????????????

• What happens to you when you are worried about danger around you??????

• What happens when things stay confusing you are not sure what will happen next?
Trauma in Domestic Violence

- Chronic nature of violence
- One event may not stand out
- Violent episodes may not present life threatening events
Child’s perception of the traumatic stressor in DV (Pynoos, 1999)

- Overestimations of the danger
- Preoccupied worry
- Intrusive thoughts about oneself and family members
- Cognitive distortions: Alternate between minimizing and maximizing information
WHENEVER I TAKE MY BATH...

...I ALWAYS PUT MY DUCKY IN FIRST.

FOR COMPANIONSHIP?

TO TEST FOR SHARKS
Impact on Academic Performance

- Impaired concentration
- Lower achievement
- Significantly lower scores on verbal, motor, and cognitive skills (Kinar, 2001)
Co-occurrence between child abuse and domestic violence

• 40% to 70% of a sample of children also experience physical abuse (Appel, 1998; Fantuzzo & Mohr, 1999)

• 30% to 40% of child welfare caseloads involve families with DV (Edleson, 1999)

• Evidence of DV more likely to have new referral during the 6 months following case closure than families without DV.

• 80% rereferral rate
Recognizing the Enormity

- 20 to 40% of children exposed to domestic violence before 18.

- Studies of mothers in domestic violence situations report that between 75 to 100% of their children have witnessed the violence (Wildin, 1991).
• Children’s experience with serious forms of domestic violence

  – “a type of war zone”. Sometimes they feel they can predict the attacks and sometimes the aggression is unexpected. This leaves them with a sense of danger and uncertainty” (Rossman & Ho; 2000).
War Zone

- PTSD
  - Fight
  - Flight
  - Freeze
SYMPTOMS OF CHILD ABUSE

LOSS OF MEMORY →

BLOCKAGE →

LIPS ARE SEALED ←

HELPLESS ←

DEAD ZONE ←

PENT UP ANGER →

LOSS OF MOBILITY →
Domains of Complex Trauma

- Self Concept
- Cognition
- Behavioral Control
- Attachment
- Biology
- Affect Regulation
- Dissociation
- Affect Regulation
- Self Concept
Clinical Realities of Complex Trauma
Traumatic impact to the children

- Attachment
- Hypervigilance
- Distrust
- Betrayal
- Powerlessness
- Self Blame
Attachment
Attachment perspective

- Child likely to respond with disorganized attachment when parent simultaneously source of safety and danger (Hesse & Main, 2006)

- Attachment is dynamic and dependent on circumstances
Hypervigilance
10 year old boy: “I keep a key to the door under my rug in case I need to lock my siblings and myself in the room to protect us from our stepfather. One time I had to hide my siblings in the room while I ran to get help from the neighbors. Stepfather chased me down and dragged me home before I could get help.”
Distrust
Eleven year old boy: “I have it all planned out. I KNOW my mom says it will be safe, but I just don’t know. When we go back to my mom I know exactly what to do if he comes back. I already have it planned. I will take my sisters upstairs. We will let him come in. In the middle of the night we will get my mom and we will leave the house. We will go to Detroit to find him.”
Betrayal
How the non offending mother may unknowingly betray

- Functioning of the non-offending caregivers
  - may not be able to provide security
  - mothers tend to be quicker and more impulsive with their children
  - underestimate their children’s distress (Chemtob & Carlson, 2004)
Powerlessness
Six year old girl: “Everywhere I go I see him. I am so scared. My foster mother tells me that he can’t find me, but I know he can. He knows everything. He will always find us. I worry about what he is doing to my mother.”
Self Blame
IT’S ALL MY FAULT
I SHOULD HAVE
I’M BAD
IF ONLY I HAD
I DID IT
I COULD HAVE
I DESERVED TO BE BEATEN
I LET THEM RAPE ME

GUILT
Self Blame

warm milk
Let’s now look at the big picture...

the Brain-Behavior Connection!!
But first...  
Let’s talk about child development
Core principles of child development
Building the brain over time
Building the brain
From simple to complex:
Hierarchy of brain function

- **Brain-stem**
  - All sensory input enters here

- **Diencephalon**

- **Limbic**
  - Abstract Thought
  - Concrete Thought
  - Affiliation w/ mate
  - Attachment
  - Sexual Behavior
  - Emotional Reactivity
  - Motor Regulation
  - Arousal
  - Appetite / Satiety
  - Sleep
  - BP / Heart Rate
  - Respiratory Drive
  - Body Temperature

**Perry 2006**
Building the Brain

Brain develops in sequential fashion: from simple to complex

- Neocortex
- Limbic
- Diencephalon
- Brainstem

Development begins here
Building (& Rebuilding) the Brain

Neural systems can be changed...
but some systems are easier to change

Neocortex
Limbic
Diencephalon
Brain-stem

Complexity
Plasticity & Ease of change
Neurobiology of Development

• Brain “sculpts” itself in response to the environment **AT THE SAME TIME** it is developing (via genetic blueprints)
Relationships & Attachment: Active Ingredients of Development
Interpersonal Neurobiology

• Any meaningful relationship can positively change the structure of the brain
  – Mother-infant
  – Friendship
  – Marriage
  – Psychotherapy (Individual/Family/Play)
  – Case Management

(Cozolino, 2006)
Normal Stress: The Brain & Body Working Together

The Brain

The Nervous System

Alarm System (amygdala)

Filing Center (hippocampus)

Thinking Center (prefrontal cortex)
extreme stress / trauma
The Alarm Takes Control

the brain

the nervous system

Alarm System (amygdala)
Filing Center (hippocampus)
Thinking Center (prefrontal cortex)
**SOS: Three Steps to Focusing**

**Step #1: SLOW DOWN**
Take a time out; sit comfortably; allow one thought at a time; pay attention to the natural rhythm of your breathing.

**Step #2: ORIENT YOUR SELF**
Notice your surroundings – where you are and who is with you; Focus on something of interest that you can see or hear.

**Step #3: SELF - CHECK**
How much stress? How much control?

**Stress Level:**
- Low Stress: 1 2 3 4 5 6 7 8 9 10 High Stress

**Personal Control:**
- No Control: 1 2 3 4 5 6 7 8 9 10 Complete Control
When development **veers** off course...
A New Paradigm: Reframing Our Understanding when Child Brain Development Veers Off Course
The Brain-Behavior connection: Three primary components

- **Genetics**
  - What you inherit from both parents

- **Intrauterine environment**
  - During pregnancy

- **Extrauterine environment**
  - After pregnancy
Influence of Prenatal Alcohol Exposure
Fetal Alcohol Syndrome

FAS is among the *most common* of the known causes of cognitive impairment.

Alcohol is *much more* damaging to the brain than meth.
FASD: Critical Facial Abnormalities

- Palpebral fissure (small eyes)
- Thin upper lip
- Smooth philtrum
Severe brain damage caused by prenatal alcohol exposure

Severe FAS

Normal Brain

5-day old infants

photo: Clarren, 1986
**Corpus Callosum**

- Connects the two brain hemispheres
- Allows the left side to communicate with the right side
- Allows the individual child to calm down during/after “meltdown”
- Is often damaged by prenatal alcohol exposure/ traumatic stress exposure
Corpus callosum abnormalities in FASD

Mattson, et al., 1994; Mattson & Riley, 1995; Riley et al., 1995
“Trauma Trumps Everything!!!”

Sandra Bloom, MD
Traumatic Stress & the Child’s Developing Brain

- Research reveals a **strong link** between all types of *child abuse /neglect* and the subsequent development of *psychiatric illness in adulthood*
Traumatic Stress & the Child’s Developing Brain

- Early childhood traumatic stress to the developing brain results in:
  - Physical “hard wired” brain changes that:
    - Cause abnormal functioning
    - Contribute to problematic behaviors
    - Contribute to developmental delays
    - Result in child being unable to realize potential
Our Data

• Sample of 211 children assessed by CTAC over the past two years
  
• 103 had no domestic violence
• 108 had domestic violence
• Neurodevelopmental impact of substance abuse and trauma in children / adolescents

• Multiple neurodevelopmental areas involved:
  – Attention
  – Language
  – Memory
  – Motor Skills
  – Et al…
Attention
"Attention is at the center of human performance"

William James (1890)
NEURODEVELOPMENTAL FINDINGS

Attention

N=89

Percentile

No Delay

Moderate-Major Delay

N=89

No Substance Exposure

Substance Exposure
NEUROBEHAVIORAL FINDINGS

Attention

T-Score

N=85

T-Score Norm
Clinical Significance

N=85

Substance Exposure
Language
Language

- Critical medium for *receiving* information
  - Receptive Language
- Major vehicle for *transmitting* ideas, feelings, & information to others
  - Expressive Language
- Essential element for social interaction and influence
  - Pragmatic Language
- Quite fragile and prone to damage by prenatal alcohol and/or traumatic stress exposure
NEURODEVELOPMENTAL FINDINGS

Receptive Language

![Bar chart showing receptive language percentile for no delay and moderate-major delay with and without substance exposure.](chart.png)

- **No Delay**
  - No Substance Exposure: 40
  - Substance Exposure: 14

- **Moderate-Major Delay**
  - No Substance Exposure: 60
  - Substance Exposure: 86

N=89
NEURODEVELOPMENTAL FINDINGS

Expressive Language

N=89

Percentile

No Delay

Moderate-Major Delay

No Substance Exposure

Substance Exposure

N=89
Memory
Memory

- Learning without memory is inconceivable
- Closely collaborates w/ other ND functions
- Memory **capacity** ↑↑ w/ age, but...
- Memory **demands** also ↑↑ and reach apex in childhood / adolescence (esp. c/w adults)
- Memory **NOT** a simple / unitary concept
- Also quite fragile to prenatal alcohol / traumatic stress exposure
  - Legal implications of poor memory
NEURODEVELOPMENTAL FINDINGS

Memory

Percentile

<table>
<thead>
<tr>
<th>No Delay</th>
<th>Moderate-Major Delay</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Substance Exposure</td>
<td>Substance Exposure</td>
</tr>
</tbody>
</table>

N=89
Neuromotor function
Neuromotor Function

- Intricately linked to other ND functions
- “Double jeopardy” when children with ND issues also have motor problems
- Developmental Output Failure (DOF)
  - Contributes to overall frustration for kids with issues:
  - “Don’t just tell me…show me & prove it!”
NEURODEVELOPMENTAL FINDINGS

Fine Motor

N=89

Percentile

No Delay

Moderate-Major Delay

No Substance Exposure

Substance Exposure

N=89
They were there and they were asking me questions and my dad didn't tell me... not to tell the truth, so I told them about all the bad stuff. And then when they called my (older) brother in next, he told them a whole different story. And when I went home that day, my dad yelled at me... because I told the truth and didn't lie. ... And then like ever since... when I talk to people like that he told me to lie.
Defiance
NEUROBEHAVIORAL FINDINGS
Rule Breaking

N=85

T-Score

T-Score Norm

Clinical Significance

N=85

Substance Exposure
8 year-old boy

“Mom and Dad has to do a drug test and then go to counseling. Why should they have to do all that when they was set up? I hate it. I don't think they was set up. I know they was set up.”
Aggression
NEUROBEHAVIORAL FINDINGS

Aggression

T-Score

T-Score Norm

Clinical Significance

N=85

Substance Exposure
Anger / Explosiveness
NEUROBEHAVIORAL FINDINGS

Externalizing Behaviors

N=85

T-Score

T-Score Norm | Clinical Significance
---|---
50 | 69

N=85

Substance Exposure
Social Problems
Rejection
Alienation

PEERS
Willfully Disobedient
Could if wanted too
Power Struggles
Survival Behavior
Spontaneous Fight or Flight

Caregiver/Teacher
Response

Caregiver/Teacher

Caregiver/Teacher

Increase Frustration
Enforcing More Rules
Cycle of Conflict Reinforced

More Resistive
Oppositional Behaviors Increase
Social Problems
Rejection Alienation
PEERS

Framework for Intervention
AGGRESSION

TENSION
Framework for Intervention
AGGRESSION

Willfully Disobedient
Could if wanted too

Survival Behavior
Spontaneous Fight or Flight

Developing Personal Safety
Through Prevention & Skill Building

Reduce Frustration
Affirm Feelings
Provide Appropriate Expression
Create Awareness
Recognize Child's Limitations
Recognition of Fears
Alternative Language/Behavior Expression
Cycle of Conflict Reduced
Social Problems

Rejection
Alienation

PEERS

Willfully Disobedient
Could if wanted too

Survival Behavior
Spontaneous Fight or Flight

Power Struggles

Increase
Frustration

Enforcing
More Rules

Cycle of Conflict
Reinforced

More Resistive
Oppositional
Behaviors Increase

Social Problems
Rejection
Alienation

Cycle of Conflict
Reduced

- Caregiver/Teacher Response
- Child

Developing Personal Safety
Through Prevention & Skill Building

- Caregiver/Teacher
- Child

Framework for Intervention
AGGRESSION

- Caregiver/Teacher

TENSION

- Affirm Feelings
- Create Awareness
- Recognition of Fears
- Alternative Language/Behavior Expression
- Cycle of Conflict Reduced

PEERS

Recognize Child’s
Limitations

Provide Appropriate
Expression

Reduce Frustration

- Caregiver/Teacher
- Child
E-Mail:

ctac@wmich.edu
“Uh-oh, Danny. Sounds like the monster in the basement has heard you crying again.... Let's be reaaaal quiet and hope he goes away.”
1000 Oakland Drive
3rd floor Unified Clinics
Kalamazoo, MI 49008
Ph: 269-387-7073
Fax: 269-387-7050
E-mail: ctac@wmich.edu

Website:
www.wmich.edu/traumacenter
www.nctsn.org
The End