Understanding the Biopsychosocial Impact of Trauma

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Prevalence of Trauma in the General Population
Lateral Ventricle Measures in an 11 Year Old Maltreated Male with Chronic PTSD, Compared with a Healthy, Non-Maltreated Matched Control

Hippocampus Volume Reduction in PTSD
Effective Treatment Must Account For:

1) A dysregulated nervous system

2) A social environment that cannot contain this dysregulation

Core Concepts of Development

1) The development of children unfolds along individual pathways whose trajectories are characterized by continuities and discontinuities, as well as by a series of significant transitions.

(Shonkoff & Phillips, 2000)
PTSD Rates

- 8-14% of PTSD rates in the general population and among certain disadvantaged groups may even be higher. (Kaplan et al., 1994; Kessler et al., 1995)
- Trauma victimizations studies show prevalence between 51-98% among persons with serious mental illness (SMI) in the public sector. (Goodman et al., 1997; Muesar et al., 1998)

309.81 PTSD Definition

- The development of characteristic symptoms, following exposure to a traumatic stressor involving direct personal experience or witnessing another persons’ experience of:
  - Actual or threatened death
  - Actual or threatened serious injury
  - Threat to physical integrity
Post Traumatic Stress Disorder

- Characterized by:
  - Re-experiencing the event
    - Intrusive thoughts, nightmares, or flashbacks that recollect traumatic images and memories
  - Avoidance and emotional numbing
    - Flattening of affect, detachment from others, loss of interest, lack of motivation, and constant avoidance of any activity, place, person, or event associated with the traumatic experience
2) The growth of self regulation is a cornerstone of early development that cuts across all behavioral domains.

(Shonkoff & Phillips, 2000)

State Change

22 year-old man with history of childhood physical abuse displayed aggressive behavior on psychiatric unit and was physically restrained.
12 year-old sexually abused girl in school when provoked by older male peer.

Parameters that change between state

- Affect
- Thought
- Behavior
- Sense-of-self
- Consciousness
Goal of Treatment

• Maintain Calm/Continuous/Engaged State

• Prevent Discontinuous States

• Build Cognitive Structures that allow choices

Between Stimulus and Response
Emotional Brain

Between Stimulus and Response

Stimulus
Between Stimulus and Response

Stimulus

Sensory Thalamus

Amygdala

Very Fast

Stimulus

Sensory Thalamus
Between Stimulus and Response

Stimulus → Sensory Thalamus → Cortex → Hippocampus

Amygdala

Very Fast

Slower

Response

LeDoux, 1996
Between Stimulus and Response

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(LeDoux, 1996)
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Stimulus → Sensory Thalamus → Cortex → Amygdala → Response

Very Fast

Social Environmental Intervention

Neuroregulatory Intervention

Psychotherapy

Psychopharmacology

LeDoux, 1996

Zoloft
Prozac
Paxil

Buspar
Wellbutrin
Celexa
Xanax

Currently on
Exit 58A-B

6/26/2014
Play

DORSAL CONTACTS

PINS
Play and Fear

(Panksepp, 1998)

Traumatic Mastery

• Many children have primarily experienced abusive and neglectful relationships

• Extreme behaviors within relationships can be seen as defensive or self-protective

• Traumatized children respond to their trauma history in the present. They are not able to discern that the context has changed

• This behavior must be seen as an attempt to master extremely difficult environments

• In this way, traumatized children are “doing the best that they can”
TAKE HOME IDEAS

• Set up calm and nurturing environments

• Teach staff to meticulously observe for ‘triggers’ – when someone is beginning to move from a calm, continuous state to a discreet state of emergency

• Train to caring and compassion

• Meticulously interview for triggers

• Adjust the environment
• Adjust what we do (i.e., look at ourselves and our behaviors and actions as the key for success)

CONCLUSIONS

• Response to traumatic stress is learned behavior, mediated by the brain & the social environment

• Traumatic stress brings the past to the present

• The survival response impacts the mind, body, behavior & speech “… the amygdala leads a hostile takeover of consciousness by emotion.” (LeDoux, 2002)

• To change the response, create new learning & skills:
  – Analyze & adapt
  – Buffer & bolster
  – Teach, support, & build that “cognitive wedge”