TRAUMA-INFORMED RECOVERY: MICRO AND MACRO SYSTEMS CHANGE

TRAUMA INSTITUTE OF NEW JERSEY
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ADJUNCT FACULTY INSTRUCTOR
DEPARTMENT OF PSYCHIATRY
RUTGERS ROBERT WOOD JOHNSON MEDICAL SCHOOL

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Consultants of T.I.N.J.

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Jill Williams, MD  Director of Addiction Psychiatry; Professor Rutgers Robert Wood Johnson Medical School

Tracey Shors, PhD  Distinguished Professor in the Department of Psychology and Center for Collaborative Neuroscience at Rutgers University. MAP Training

Brandon Alderman, PhD  Assistant Professor in the Department of Exercise Science and Sport Studies at Rutgers University. His laboratory is focused on investigating the effects of exercise on neurocognitive and physiological resilience. MAP Training

Julie Carbray, PhD  FPMHNP, PMHCNS, APN  Clinical Professor University of Illinois-Chicago Medical School; Chair APNA Clinical Psychopharmacological Institute; Administrative Director Pediatric Mood Disorders Clinic University of Illinois-Chicago College of Medicine
“..a mind will find only according to its own distortion.”

Jiddu Krishnamurti

Secondary Traumatic Stress Therapeutic Workers

Meta-Analysis of Risk Factors for Secondary Traumatic Stress in Therapeutic Work with Trauma Victims.

Therapeutic Workers

Vs.

Therapists
TRAUMA ASSESSMENT BY DCF OF NJ
DONALD SULL PHD
MIT SLOAN SCHOOL OF MANAGEMENT
(HARVARD BUSINESS REVIEW MARCH 2015)
NHS HUMAN SERVICES 10K EMPLOYEES

MASSACHUSETTS LESSONS: HEATHER FORKEY MD

• MIDDLE MANAGERS
• SUPERVISION
• LATERAL INTEGRATION
• SUPPORT ON INITIAL PUSHBACK
• LACK OF TRAUMA RESOURCES
• ORGANIZATIONAL TRAUMA
“If you get the ‘What’, then you will get the ‘How’.”

Thomas Hora MD
Hungarian Metapsychiatrist
What do we mean by “trauma”
OPERATIONAL DEFINITION OF TRAUMA
5 Yr. SAMHSA Recovery to Practice
National Grant

FIDELITY
REPEATABILITY
INSTANT IMPLEMENTATION

APPLICATION UNDER STRESS
Neurobiology of Helplessness

TRAUMA: Any life event occurring in a relative state of helplessness—a car accident, the sudden death of a loved one, a frightening medical procedure (...)—can produce the same neurophysiological changes in the brain as do combat, rape or abuse.

Robert Scaer M.D.
Neurologist, Traumatologist, Medical Director of Internationally recognized Pain Management Center at Mapleton Rehabilitation Center, Community Hospital Boulder, Colorado
TRAUMA = PERSISTENT ACUTE STRESS RESPONSE ONE CANNOT AVOID, EVADE OR CONTROL
Three Levels of Stress Response

Positive
Brief increases in heart rate, mild elevations in stress hormone levels.

Tolerable
Serious, temporary stress responses, buffered by supportive relationships.

Toxic
Prolonged activation of stress response systems in the absence of protective relationships.

Center on the Developing Child  HARVARD UNIVERSITY
ANTICIPATORY STRESS IS REAL STRESS

- Blood Pressure
- Heart Rate
- Vascular Damage
- Inflammation
- Metabolic Syndrome

Robert Sapolsky PhD
Stanford University
Neuroscientist
NEUROPHYSIOLOGICAL
NEUROENDOCRINE
FRAMING OF BRAIN DEVELOPMENT

CORTISOL
ESTROGEN
TESTOSTERONE
GENETIC TRANSCRIPTION
### How States Become Traits

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Increasing Threat
Abstract thought
Concrete thought
Affiliation
"Attachment"
Sexual Behavior
Emotional Reactivity
Motor Regulation
"Arousal"
Appetite/Satiety
Sleep
Blood Pressure
Heart Rate
Body Temperature
FRACTURING OF GLOBAL IDENTITY: DESTRUCTION OF LINEAR VISCERAL AND COGNITIVE NARRATIVES

• Chaos Narrative: No map or destination

• Story of Atrocity/Language of Abomination
  (Herman J. Trauma and Recovery. New York: Basic Books, 1997.)

• “...autobiographical memory deficits and emotional deficits and made life 'senseless'.”
Speaking the Unspeakable

“THE ORDINARY RESPONSE TO ATROCITIES is to banish them from consciousness. Certain violations of the social compact are too terrible to utter aloud: this is the meaning of the word unspeakable. Atrocities, however, refuse to be buried.”

— Judith Lewis Herman, *Trauma and Recovery*
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**Intense, prolonged, repeated, unaddressed;**
Child or family vulnerabilities, limited supports, devel. delays

**Social-Emotional buffering, Learned skills, Parent/Child Resilience, Early Detection, Effective Intervention**
Abstract thought
Concrete thought
Affiliation
"Attachment"
Sexual Behavior
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Fear/Immobility Cycle
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Increasing Threat
WITH WHOM ARE YOU WORKING WITH

ADVERSE CHILDHOOD EXPERIENCES STUDY (ACES)
ADVERSE CHILDHOOD EXPERIENCES STUDY (ACES)

- Physical abuse by a parent
- Emotional abuse by a parent
- Sexual abuse by anyone
- An alcohol and/or drug abuser in the household
- An incarcerated household member
- Someone who is chronically depressed, mentally ill, institutionalized, or suicidal
- Domestic violence
- Loss of a parent
- Emotional neglect
- Physical neglect

ACE Score and Intravenous Drug Use

N = 8,022      p<0.00  Fellitti, V.et al. (1998). The Adverse Childhood Experiences (ACE) Study. American Journal of Preventative Medicine, 14(4), 245-258.
Childhood Experiences Underlie Suicide

ACE Score and Hallucinations

Risk Factors for Adult Heart Disease are Embedded in Adverse Childhood Experiences

Source: Dong et al, 2004
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Increasing Threat
INTERPERSONAL NEUROBIOLOGY

LENGTH OF SENTENCES (PORGES-EXTENDED EXHALE)
PARALLELING (PERRY)
EYE CONTACT
FACIAL EXPRESSION
TONE OF VOICE
POSTURE
GESTURE
TIMING OF RESPONSE

DR. DANIEL SIEGEL MD
(TRAUMA, BRAIN & RELATIONSHIP: HELP CHILDREN HEAL. HTTPS://WWW.YOUTUBE.COM/WATCH?v=JYYEEMlMMb0)
A Shared Experience

• Physicians feel pain and relief of clients

ORIGINAL ARTICLE
Sharing pain and relief: neural correlates of physicians during treatment of patients

KB Jensen¹,²,³, P Petrovic⁴, C E Kerr⁵, I Kirsch⁵, J Raicek¹, A Cheetham¹, R Spaeth¹, A Cook¹, RL Golub¹,²,³, J Kong¹,²,⁷ and TJ Kaptchuk²,⁷

Patient–physician interactions significantly contribute to placebo effects and clinical outcomes. While the neural correlates of placebo responses have been studied in patients, the neurobiology of the clinician during treatment is unknown. This study investigated physicians’ brain activations during patient–physician interaction while the patient was experiencing pain, including a ‘treatment’, ‘no-treatment’ and ‘control’ condition. Here, we demonstrate that physicians activated brain regions previously implicated in expectancy for pain–relief and increased attention during treatment of patients, including the right ventrolateral and dorsolateral prefrontal cortices. The physician’s ability to take the patients’ perspective correlated with increased brain activations in the rostral anterior cingulate cortex, a region that has been associated with processing of reward and subjective value. We suggest that physician treatment involves neural representations of treatment expectation, reward processing and empathy, paired with increased activation in attention-related structures. Our findings further the understanding of the neural representations associated with reciprocal interactions between clinicians and patients; a hallmark for successful treatment outcomes.

Molecular Psychiatry (2014) 19, 392–398; doi:10.1038/mp.2012.195; published online 29 January 2013

Keywords: patient-provider; doctor-patient; placebo; pain; analgesia

Qualia vs Intentionality
(phenomenal consciousness vs representation of mental states)

…the difference between the patient’s experience of the disease and the doctor’s attention to the disease…

Arthur Kleinman, MD
Psychiatrist Harvard Medical School
Professor, Anthropology
Harvard University

Neurobiology of Helplessness

TRAUMA: Any life event occurring in a relative state of helplessness—a car accident, the sudden death of a loved one, a frightening medical procedure (…)—can produce the same neurophysiological changes in the brain as do combat, rape or abuse.

Robert Scaer M.D.

Neurologist, Traumatologist, Medical Director of Internationally recognized Pain Management Center at Mapleton Rehabilitation center, Community Hospital Boulder, Colorado
Cerebral Hemisphere—Insula Exposed

- Central sulcus
- Frontal lobe
- Parietal lobe
- Insula
- Occipital lobe
- Retracted temporal lobe

(c)
LIKE FATHER, LIKE SON?

• Bipolar 1 Disorder w/Psychotic Features
• Addiction
• Posttraumatic Stress Disorder
• Complex Trauma
• 2 Suicide Attempts
• 265 Pounds in 7th Grade
Absolute Shattering of the "Self"

- Physiological
- Cognitive
- Spiritual
- Social
- Familial
Diagnosis

- Bipolar Disorder 1
- Addiction
- Developmental Trauma
- Posttraumatic-Stress Disorder
- 2 suicide attempts-1 near lethal
My soul is lost, my friend
Tell me how do I begin again?

Bruce Springsteen
“My City’s In Ruins”
The Rising
An Integrated Perspective

ACE

Bipolar

Childhood Obesity

Alcoholism

Trauma

Drug Addiction

Suicide
Trauma-Informed Recovery

• **CLIENT**
• **ORGANIZATIONAL**

**ACCELERATION OF OUTCOMES**
MUTUALLY THERAPEUTIC DYADIC ATTUNEMENT (MTDA)
INTERPERSONAL ATTUNEMENT: THE WAY ONE PERSON ATTUNES IN AN OPEN AND EMPATHETIC WAY TO THE INTERNAL STATE OF ANOTHER.

INTERPERSONAL RESONANCE: THE WAY TWO OR MORE MINDS ALIGN THEIR STATES AND BECOME MUTUALLY INFLUENCED BY ONE ANOTHER.

DAN SIEGEL MD
CREATOR INTERPERSONAL NEUROBIOLOGY
Effect of extreme deprivation

Healthy Child  Neglected Child

Center for Educational Enhancement and Development
INTERPERSONAL NEUROBIOLOGY

LENGTH OF SENTENCES (PORGES-EXTENDED EXHALE)
PARALLELING (PERRY)
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FACIAL EXPRESSION
TONE OF VOICE
POSTURE
GESTURE
TIMING OF RESPONSE

DR. DANIEL SIEGEL MD

(TRAUMA, BRAIN & RELATIONSHIP: HELP CHILDREN HEAL. HTTPS://WWW.YOUTUBE.COM/WATCH?V=JYYEEMLMMb0)
Verbal De-escalation

When working with an agitated patient, there are 4 main objectives:
(1) ensure the safety of the patient, staff, and others in the area;
(2) help the patient manage his emotions and distress and maintain or regain control of his behavior;
(3) avoid the use of restraint when at all possible; and
(4) avoid coercive interventions that escalate agitation.

Safety
Proximity
Intimacy
Vulnerability

Point of Connection
POLYVAGAL THEORY: THERAPEUTIC DYAD

JUMPING TOGETHER

• Autonomic Nervous System

• Social Engagement System: Neuroception

• Pro-Social, Fight or Flight, Freezing/Imminent Death

• Interventions: Heart to Face, Heart to Voice, Heart to Eyes

Polyvagal Theory

• Physiological state characterized by ↑ vagal influence on HRV supports social engagement & bonding
• Any stimulus that ↑s feeling of safety can recruit neural circuits that support social engagement system and inhibit defensive limbic structures
• Neuroception enables social behavior by distinguishing safe from dangerous

POLYVAGAL THEORY: THERAPEUTIC DYAD

SOCIAL ENGAGEMENT SYSTEM

• POSTURE
• BREATHE
• VOICE

(PORGES SW. THE POLYVAGAL THEORY: PHYLOGENETIC SUBSTRATES OF A SOCIAL NERVOUS SYSTEM. INTERNATIONAL JOURNAL OF PSYCHOPHYSIOLOGY 42 (2001) 123-146.)
Social Engagement System
Cranial Nerves V, VII, IX, X, XI
Ventral Vagal (X), Dorsal Vagal (X)
An Unique Face-Voice-Heart Connection

ppncenter.com
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Center for Pre and Perinatal Programs, LLC
**Emotional Energy Centers of the Body**

**Burden Area**
- Burdens & Responsibilities
- Carrying a heavy load
- Weight of the world on shoulders

**Throat Center**
- Self Expression Issues
- Lack of Trust
- Inability to speak feelings
- Lack of Nurturing

**Heart Center**
- Grief, Sorrow, Sadness, Loss
- Emptiness of Heart - Lack of Love
- Helplessness, Aloneness, Disillusionment
- Embarrassment, Shame, Humiliation
- Repressed feelings, Disappointment
- Genetic or Ancient memory
- Cruelty, Meanness

**Fear Center**
- Fears & Phobias
- Loss of Control / Fear of losing control
- Giving our power to another person
- Relationships

**Guilt/Shame/Unworthiness Center**
- Unacceptance
- Self-judgement; self-criticism
- Not deserving of the good life has for us
- Inability to accept and receive

**Old Stuff Center**
- Family Sexual Issues
- Childhood conditioning
- Violation of body or personal space
- Something done to us / Something taken from us without our permission
- Molestation, abuse, rape
- Impotence, frigidity

**Support Area**
- Lack of Financial Support

**Rejection Center**
- Abandonment
- Criticism, judgement by others
- Self-rejection
- Abandonment - pain in the heart

**Survival Center**
- Feeling we won’t survive a life-threatening incident
- Violations related to surviving (accidents, abuse, violence, rape)
- Impotence, frigidity
- First year of life / Basic Creativity

**Betrayal Center**
- Betrayed by someone we trusted
- Self-betrayal
Vagal Nerve Pathways

EXPERIENTIAL EXERCISES
GREGORIAN CHANTING

YES/NO TEST: REACTIVE VS. RESPONSIVE STATE
(SYMPATHETIC VS. PARASYMPATHETIC ACTIVATION)

BEE BREATH: PRANAYAMA BREATHING
EXTEND EXHALE
POLYVAGAL INTERVENTION
SELF REGULATE ANS

PROXIMAL ABANDONMENT: IT IS ALL IN THE EYES.

DR. ALLAN SCHORE
Culture of NO

Yes and NO

• Integrate or Regulate
• Reactive or Responsive
• Differentiation and Linkages
• Chaos or Rigidity
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— Judith Lewis Herman, Trauma and Recovery
Effective treatment is a matter of helping individuals keep the observing prefrontal cortex online as it simultaneously experiences the raw primitive sensations generated in the archaic portions of the brain (the limbic system, hypothalamus and brain stem.)

STILL FACE EXPERIMENT

HTTPS://WWW.YOUTUBE.COM/WATCH?V=APzXGEBZht0
VALIDATION THERAPY

• INTERPERSONAL RESONANCE
• INTERPERSONAL ATTUNEMENT
• VERBAL COMMUNICATION: PROSODY, SLOW, VOICE TO HEART
• NON-VERBAL COMMUNICATION
• AMYGDALA SQUELCHING: TOUCH SPECIFIC
• RELATION POVERTY: DR. BRUCE PERRY
• LANGUAGE OF THE OTHER: CORTICAL SHUTDOWN, IMPLICIT MEMORY

HTTPS://WWW.YOUTUBE.COM/WATCH?v=CrZXz10FcVM
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Social-Emotional buffering, Learned skills, Parent/Child Resilience, Early Detection, Effective Intervention
Breath-Body-Mind includes the following breathing practices

• Coherent Breathing
  – Rate: 3.5 to 6 breaths per minute
  – Equal inhalation and exhalation
  – Like natural breathing: quiet and gentle
• Breath Moving: imaginative
• Resistance Breathing on exhalation
• “Ha” Breath (briefly 2 to 5 minutes)
• 4-4-6-2 Counts Breathing

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MTDA Tool Belt