THE INTERSECTION OF FEAR, TRAUMA, VIOLENCE & A PATH TO HEALING

Dr. Alisha Moreland-Capuia, M.D.
Diplomate of Psychiatry and Neurology
Assistant Professor of Public Psychiatry, OHSU
Exec Dir, OHSU Avel Gordly Center for Healing

Dr. Alisha Moreland-Capuia
Outline

- Explore the intersection of fear, trauma and violence and the path to healing
- Review Adverse Childhood Experiences
- Analyze Trauma Informed Care/Practices and Approaches
By the end of this lecture, you should be able to:

- Comprehend the physiology of fear
- Define trauma
- Understand the intersection between fear, trauma and violence
- Appreciate fear conditioning and stress sensitization
- Recognize Adverse Childhood Experiences
- Appreciate the relationship between trauma-informed practices and empathy
• Afraid of the dark as children
• Afraid of the light as adults

• Fear is a natural response shared by all human beings. The fear response stems from all human’s natural proclivity towards survival.
DEFINING FEAR TO UNDERSTAND TRAUMA
Brainstem: “survival center” - the primitive brain

Brain stem contains centers that regulate several functions that are **vital for survival**; these include blood pressure, heartbeat, respiration, digestion, and certain reflex actions.


Dr. Alisha Moreland-Capuia
Fear: a natural response

THALAMUS
Giant switchboard, directs information to other parts of the brain

HIPPOCAMPUS
Sensory cortex and AMYGDALA—gives context to the situational and emotional aspects of fear

HYPOTHALAMUS
Fight-or-Flight response is activated.

FRONTAL & TEMPORAL LOBES
Higher cortical areas where the experience of dread happens

Dopamine is released & can cause panicked, irrational behavior

http://ridiculouslyefficient.com/this-is-your-brain-on-fear-infographic/
Dr. Alisha Moreland-Capuia
The fear response is meant to be time limited, once the fear trigger is eliminated, the fear response should subside. What happens when you live in a constant state of fear?

Dr. Alisha Moreland-Capuia
What happens when fear is unwoven??
FEAR CONDITIONING THROUGH STRESS SENSITIZATION & KINDLING

• PATHWAY 1: Lanius et al. (2010)

Absence of Impoverished Early Environment, childhood Maltreatment

Acute Traumatic Event

Repeated Re-experiencing of Fear/Traumatic Memory

Sensitization/Kindling

General Emotion Dysregulation


Enhancement of a response. Lower threshold for the response. In other words, a condition that makes the response more robust and more likely to occur.
EARLY LIFE VULNERABILITIES

• PATHWAY 2: Lanius et al. (2010)

Genetic Factors

Early impoverished environment/childhood maltreatment

Inadequate Development of Emotion Arousal Regulatory Systems

Inability to regulate physiological arousal to fear, anger, guilt, shame-evoking events

General Emotion Dysregulation

Exposure to traumatic events later in life

Further exacerbation of emotion dysregulation & development of PTSD

Other important factors:

Caregiver attachment

Parental care and HPA-Axis

THE BRAIN & FEAR Conditioning

PREFRONTAL CORTEX

- Planning complex cognitive behavior
- Personality expression
- Decision making
- Moderating social behavior

MEDIAL PREFRONTAL CORTEX (MPFC)

- Involved in decision making AND
- Retrieval of remote long term memory
- Theorized to help us learn associations between context, location, events and corresponding adaptive responses (namely emotional)

Dr. Alisha Moreland-Capuia
AMYGDALA

- Responsible for processing of memory, decision making and emotional reactions
- Modulates memory consolidation (which happens over time)
- Has a role in aggression

Amygdala activity at the time of encoding information correlates to the retention for that information.

Translation:
We all tend to remember what happened to us when there is a robust emotional response attached to the memory of the event.
The brain & fear conditioning

Anterior Cingulate Cortex (ACC)
- Responsible for autonomic function (i.e. blood pressure, heart rate)
- Early learning
- Problem solving
- Rational cognitive functions
- Reward anticipation
- Decision making
- Empathy
- Impulse control
- Emotion

Dorsal aspect of the ACC is connected to the Prefrontal Cortex and plays a role in cognition.

Ventral aspect of the ACC is connected to the Amygdala and plays a role in emotion.

Corpus callosum

Dr. Alisha Moreland-Capuia
Natural fear response unchecked = traumatization

“Traumatization occurs when both internal and external resources are inadequate to cope with external threat.”

-Van der Kolk, 1989
Traumatization unchecked can lead to aggression

- Aggression (instrumental) in antisocial personality disorder
- Cognitive impairments/disorganization
- Aggression in psychosis, deviant behaviors
- Psychopathy
- Trauma history
- Aggression (reactive) in borderline personality disorder
- Emotional sensitivity/dysregulation
- Aggression triggered by trauma in PTSD


Dr. Alisha Moreland-Capuia
Increased blood flow with fear acquisition versus control in abuse-related PTSD

Yellow areas represent areas of relatively greater increase in blood flow with paired vs unpaired US-CS in PTSD woman alone, $z>3.09$, $P<0.001$

Dr. Alisha Moreland - Capuia
ADVERSE CHILDHOOD EXPERIENCES
ADVERSE CHILDHOOD EXPERIENCES (ACE’s)  
Felitti & Anda 1998

Mechanisms by Which Adverse Childhood Experiences Influence Health and Well-being Throughout the Lifespan

Dr. Alisha Moreland-Capuia
ACE DESIGN

- N = 17,000
- Caucasian
- Middle and Upper Class
- College Educated
- Employed
- San Diego, California Residents
- Had health coverage – all belonged to the Kaiser Permanente Health Maintenance Organization
ACE STUDY FINDINGS

- First done in 1998, with up to 57 spin off studies done up until as recent as 2011

- The ACE study demonstrated a link between Trauma and Chronic Disease that develop over the adult life span and increased proclivity for emotional dysregulation
ACE STUDY FINDINGS

- Childhood trauma was very common, even in employed white middle-class, college-educated people with great health insurance.

- Direct link between childhood trauma and adult onset of chronic disease, as well as depression, suicide, being violent and a victim of violence;

- Auxiliary types of trauma increased the risk of health, social and emotional problems.

- There was always more than one trauma experience in the participants.
ACE STUDY FINDINGS

- 2/3 of the 17,000 persons in the ACE Study had an ACE score of at least **one**
- **87%** of those had more than one
- **Eighteen** states have completed their own ACE surveys and have demonstrated results similar to the Felitti and Anda’s original study
- More recent a Philadelphia ACE study has been done which includes the impact of **racism**

Dr. Alisha Moreland-Capuia
Prior to your 18th birthday (important point to be made here – the age at which we do the ACE survey)

Did a parent or other adult in the household often or very often... Swear at you, insult you, put you down, or humiliate you? or Act in a way that made you afraid that you might be physically hurt?
No___If Yes, enter 1___

Did a parent or other adult in the household often or very often... Push, grab, slap, or throw something at you? or Ever hit you so hard that you had marks or were injured?
No___If Yes, enter 1___

Did an adult or person at least 5 years older than you ever... Touch or fondle you or have you touch their body in a sexual way? or Attempt or actually have oral, anal, or vaginal intercourse with you?
No___If Yes, enter 1___

Did you often or very often feel that ... No one in your family loved you or thought you were important or special? or Your family didn’t look out for each other, feel close to each other, or support each other?
No___If Yes, enter 1___

Did you often or very often feel that ... You didn’t have enough to eat, had to wear dirty clothes, and had no one to protect you? or Your parents were too drunk or high to take care of you or take you to the doctor if you needed it?
No___If Yes, enter 1___

Was a biological parent ever lost to you through divorce, abandonment, or other reason?
No___If Yes, enter 1___

Was your mother or stepmother:
Often or very often pushed, grabbed, slapped, or had something thrown at her? or Sometimes, often, or very often kicked, bitten, hit with a fist, or hit with something hard? or Ever repeatedly hit over at least a few minutes or threatened with a gun or knife?
No___If Yes, enter 1___

Did you live with anyone who was a problem drinker or alcoholic, or who used street drugs?
No___If Yes, enter 1___

Was a household member depressed or mentally ill, or did a household member attempt suicide?
No___If Yes, enter 1___

Did a household member go to prison?
No___If Yes, enter 1___

Now add up your “Yes” answers: _ This is your ACE Score
Health Risks

Childhood Experiences vs. Adult Alcoholism

% Alcoholic

18
16
14
12
10
8
6
4
2
0

ACE Score

0
1
2
3
4+

Dr. Alisha Moreland-Capuia
Mental Health

Childhood Experiences Underlie Chronic Depression

% with a lifetime history of depression

ACE Score

0 1 2 3 >=4

Women
Men

Dr. Alisha Moreland-Capuia
Adverse Childhood Experiences vs. Smoking as an Adult

Health Risks
TRAUMA INFORMED APPROACHES: A PATH TO HEALING

TRAUMA INFORMED APPROACHES AS A WAY TO HELP GET FOLKS OUT OF THE BOTTOM PART OF THEIR BRAIN

OPENING UP THE PRIVILEGE TO OPERATE IN TOP CORTICAL PART OF THEIR BRAIN

Dr. Alisha Moreland-Capuia
What does it mean to be trauma-informed?

- Understanding the neurobiological, social, and psychological aspects of trauma (as outlined in prior slides)
- Changing the way you pose questions: instead of “what’s wrong?” ASK “what happened?”
- Check underlying assumptions
Being trauma-informed

- Builds greater capacity for empathy (increases one's capacity to mentalize)
- Restores a sense of basic humanity
- Inherently renders you culturally-responsive
Exercise in Empathy Building
Dr. Maya Angelou

‘I am a human being, therefore nothing human can be alien to me.’
Why the Rocky moment?

• Rocky is just like....

• Without intervention: fear-laden, traumatized, aggressive Children become fear-laden, traumatized, aggressive Adults
Recommendation(s)

- Build Trauma-Informed people in order to ....
- Build Trauma-Informed systems of care
- Change the way systems engage clients – being concerned with “what happened?” instead of “what is wrong.”
- Create trauma-informed workspaces

**TIC Non-residential assessment**

**TIC Residential Assessment**

- Mindfulness

Dr. Alisha Moreland-Capuia
https://www.youtube.com/watch?v=2_fDhqRk_Ro
QUESTIONS?????

Contact information
a.moreland@stanfordalumni.org
amoreland@voaor.org
morelana@ohsu.edu