VIDEO PRESENTATION: “I’m afraid”
WE CAN ALL RELATE TO FEAR OR BEING AFRAID

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.
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.

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/
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?
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

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

STRESS SENSITIZATION

According to Milad et al. (2009)

Stress sensitization = failure of the extinction of conditioned fear

In other words, living in a constant state of fear, learned maladaptive behavior... may lead to stress sensitization

THE BRAIN & FEAR CONDITIONING

PREFRONTAL CORTEX

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

Corpus callosum

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)
THE BRAIN & FEAR CONDITIONING

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

Corpus callosum

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.

DR. ALISHA MORELAND-CAPUIA, JANUARY 9TH 2015 WHAT WORKS CONFERENCE
Studies by Shin et al. (2009 and 2010) show...

- Changes in how the Medial Prefrontal Cortex (MPFC) and the Anterior Cingulate Cortex could modulate the Amygdala response (a checks and balance loss)

- Decreased responsiveness to the MPFC and the ACC led to disinhibition of the Amygdala

- Another way to understand the fear response unchecked, unwoven....

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

Psychopathy

Susceptibility to Aggression

Cognitive impairments/disorganization

Aggression in psychosis, deviant behaviors

Emotional sensitivity/dysregulation

Trauma history

Aggression triggered by trauma in PTSD

Increased blood flow with fear acquisition versus control in abuse-related PTSD

- Orbitofrontal cortex
- Superior temporal gyrus
- Left amygdala

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

3-Year-Old Children

Normal

Extreme Neglect

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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
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)

- Change the way systems engage clients – being concerned with “what happened?” instead of “what is wrong.”
- Institute Trauma-Informed systems of care
- Launch Trauma-Informed Institutions/Organizations
- Create Trauma-Informed people
QUESTIONS??????

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