



POLYVAGAL THEORY

A Simple Explanation of Brain Science & Trauma
as it Applies to Prison Inmates

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- Claire Bodkin did a meta-analysis of research on the prevalence of trauma of Canadian inmates (American Journal of Public Health, March, 2019)
 - Physical abuse – Combined 57.7%
 - Sexual abuse – Women 50.4%, 20.8%
 - Emotional abuse – Combined 51.5%
 - Neglect – Women 51.5%, Men 42.0%
 - General trauma - Women 65.7%, Men 35.5%

Trauma of Inmates

- Polyvagal Theory explained by Stephen Porges to describe how trauma impacts the body through the autonomic nervous system
- Expounded on by Deb Dana, social worker
- Consolidated graphically by Meaghan Moore
- Used to help explain EMDR (Eye Movement Desensitization and Reprocessing)

Polyvagal Theory

- Polyvagal Theory involves the role of the autonomic nervous system in shaping clients' experiences of safety and affecting their ability for connection
- Poly – many + vagal – vagus nerve connecting brain, heart, and gut

Polyvagal Theory

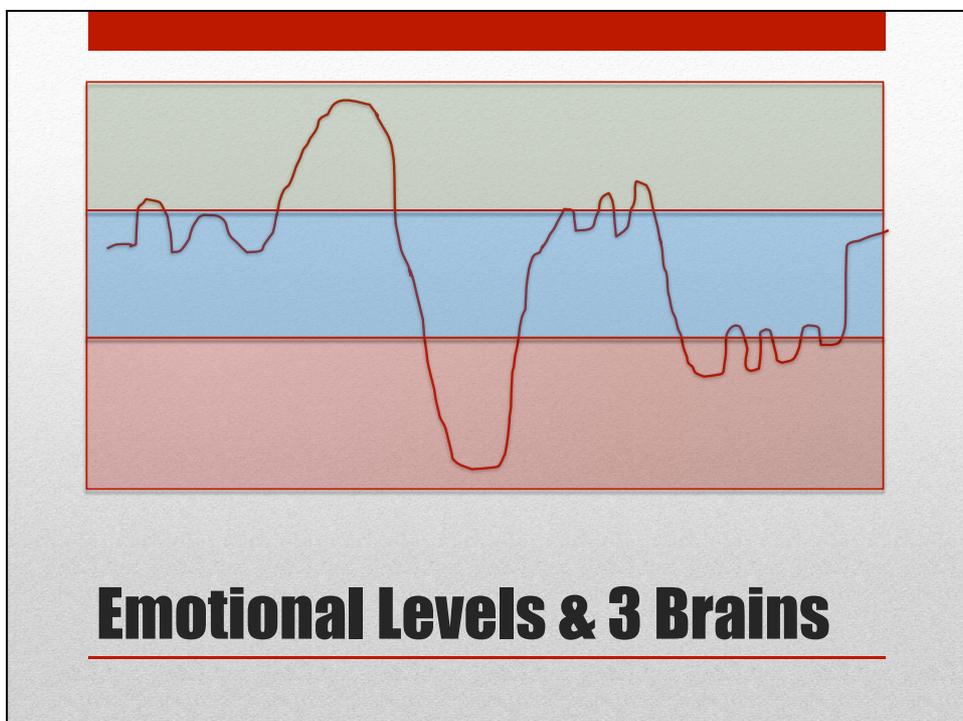
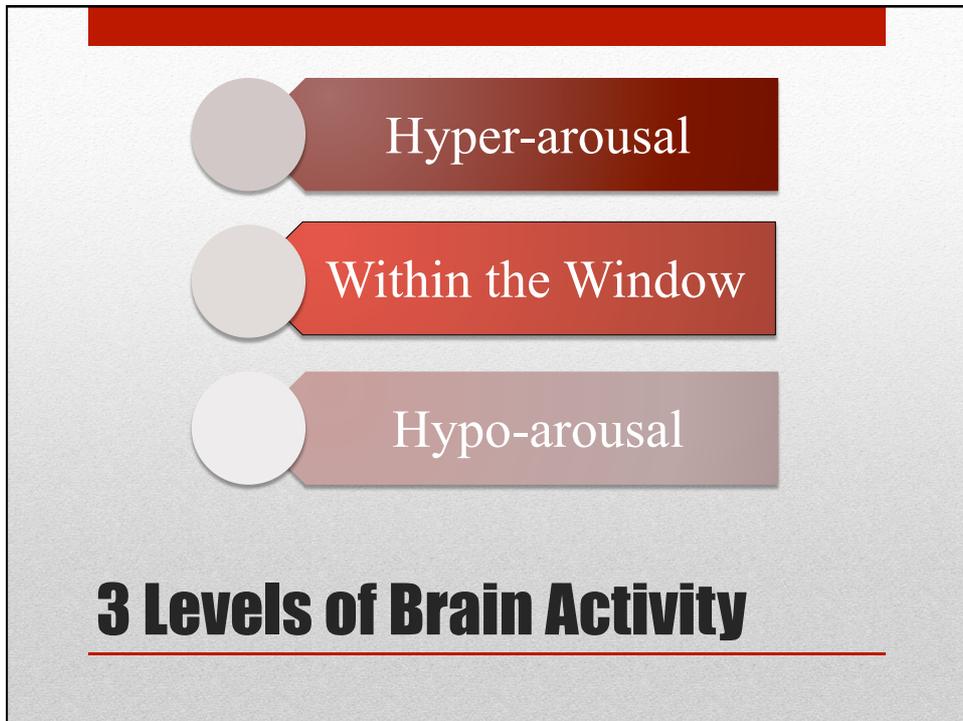
3 principles:

- Hierarchy: 3 pathways operate in order of evolutionary order from oldest to newest, the dorsal vagus (immobilization), the sympathetic nervous system (mobilization), and the ventral vagus (social engagement and connection)
- Neuroception: the autonomic nervous system responds to cues of safety, danger, and life-threat from within our bodies, in the world around us, and in our connections to others
- Co-regulation: co-regulation is a biological imperative and need that must be met to sustain life; through reciprocal co-regulation of our autonomic states, we feel safe to move into connection and create trusting relationships

Polyvagal Theory

- Ventral Vagal
- Safe
- Social
 - Sympathetic
 - Mobilized
 - Fight or flight
 - Dorsal Vagal
 - Immobilized
 - Collapsed

Autonomic Ladder



- Brain Stem – Dinosaur brain – oldest part (including Amygdala), instinctual, automatic functions
- Cerebellum – Animal brain – next to develop in childhood, bodily movements and balance
- Cerebrum – Human brain – last to develop in late teens, right/left brain, higher analytical functions

3 Brains

- Sympathetic nervous system response
- Social engagement system is turned off
- Fight, Flight, Freeze, and Attach Cry responses
- Overwhelm of intensity and energy
- Feels too big, loud, urgent, out of control, or panicked
- Not able to report from a prefrontal cortex / thinking brain in a relatively present or aware manner

Hyper-arousal

Fight

- Rage
- Clenching fists and/or jaw
- Furrowing of brow
- Narrowing of eyes, with dilated pupils
- Racing heart
- Increased respiration
- Sweating

Flight

- Darting of eyes
- Increased urgent moment in feet and/or hands
- Racing, disorganized, very distracted, or avoidant thoughts
- Impulsivity

What Individual or Others See

Attach Cry

- Urgency to connect
- Searching eyes
- A sense of frantic reaching or grabbing with body/eyes/voice

Freeze (active)

- Immobility
- Still, immobile, but rigid body
- Lack of movement but high energetic intensity

What Individual or Others See

- Social engagement system (ventral vagal) online, including the noticing self
- Able to report from a relatively present and aware place
- Might include all of: anger, sadness, joy, calm, or a wide range of emotions
- Can be aware of self (including body, emotions, & thoughts), others, and context simultaneously
- Responses seem to relatively 'fit' the context

Within the Window

- Parasympathetic nervous system (dorsal vagal) response
- Social engagement system is turned off
- Submit/Feign death/'Low freeze'
- Drain of energy, numbness, lack of intensity, distant, shut down, 'gone', passive, extreme withdrawal
- Not able to report from prefrontal cortex/thinking brain in a relatively present or aware manner

Hypo-arousal

Submit/Feign Death

- Numbness throughout the body
- A sense of not feeling real
- Tingling in extremities
- Feeling 'out of body'
- Extreme energy drop
- Difficulties accessing thoughts, emotions, body sensations, movement, and 'self'\Feeling of fuzziness/vagueness

What Individual or Others See

Hyper-arousal:

- Self-soothing strategies
- Meditation and breathing exercises
- Affect tolerance techniques
- DBT, ACT, MBSR, EMDR

Therapeutic Interventions

In the Window:

- Problem solving
- Self-awareness techniques
- Goal-setting
- Insight-oriented approaches
- CBT, BSFT, Narrative Therapy

Therapeutic Interventions

Hypo-arousal

- Body-oriented approaches
- Sensorimotor therapies
- Art-based interventions
- EMDR, DBT, ECT

Therapeutic Interventions

- Consider whether client is able to ‘stay in the window’ and benefit from more cerebral therapies
- When client slips out ‘out of the window’ bring them back in before anything else
- Always consider impact of trauma and its influence on brain functioning
- Widen range of therapies depending on trauma history of clients

Final Conclusions

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Thank You
