Some Neurobiological additions to Claudia’s presentation…

Shelley Uram, M.D.,
DFAACAP

PART 1
The Neurobiology Foundation

Simplicity vs Accuracy…

Roots of Trauma and Addiction;
Let’s go to “Square 1”…

Pain/Pleasure Principle

All living organisms are “hard-wired” to avoid pain of any type, e.g., physical, emotional, etc.

Almost all mammals go an extra step, to seek pleasure.
When our nervous system (which is reflected in the body, emotions, and thinking) is REGULATED, we experience pleasure, i.e., a sense of well-being, “all-is-right”, peaceful (even in the face of problems.)

When our brainstem (as reflected in our body & emotions) is DYSREGULATED, we experience discomfort or pain, e.g., anxiety, panic, trouble relaxing, restless, trouble with sleep/appetite, chronic pain, hostility, depression, “spacey”, shut down, low energy, etc.

If we are chronically dysregulated long enough, we tend to become “stuck” in a dysregulated state, regardless if the original “pain” is still present or not.

For many people, the self-medicating evolves into an addiction, and takes on a life of its own.

The self-medicating can be with a substance, co-dependence, food, sex, work, staying busy, gambling, extreme sports or activities, etc.

Now we have 2 HUGE problems!

A dysregulated nervous system

Addictions, with all of their complications

PSYCHOLOGICAL TRAUMA is one of the most common causes of dysregulation of the human nervous system, body, emotions, and thinking.

Trauma is usually the “SEED” of addiction.
Whole aspects of our personalities develop from dysregulated nervous systems; including more trauma reactions, addictions, dysfunctional social skills, etc.

In families where parents are dysregulated, they can be addicted, violent, neglectful, etc. The children become dysregulated and their survival brain areas are frequently “on fire” (fight, flight) and/or shut down (freeze).
Many of them had parents with the same or similar problems.
Many of them will raise their children to have the same or similar problems.

Let’s take a look at Therese’s (brainstem) regulation…
revisiting Claudia’s slides →

Depression Anxiety
Speculate about the state of her parents' brains…
Dad – “Violent alcoholic”
Mom – Codependent, physically abused by husband, stands by as husband abuses children

How well-regulated might their brainstems be?

Attachment in Therese
Early attachment is heavily related to the brainstem.
e.g., a parent needs to have regulated affect to “be there” for the child to attach and bond.
Intergenerational transmission of trauma in Therese and others, takes place through the affect dysregulation of traumatized/addicted parents, who can’t “be there”.

Attachment in Therese (cont.)
To make matters worse, we are wired to “run to” loving caregivers, and “move away from” pain.
What happens when our caregivers are the ones harming us?
→ Freeze and dysregulation

Can a parent with a poorly regulated brain raise a well-regulated child?
Usually not, unless there is at least SOMEONE, SOMEWHERE that the child is positively introjecting.

Would Therese be a “good enough” parent?
Our “intentions” are heavily based in PFC function.
The propensity for an addict and/or Complex PTSD patient to behave poorly with their children is from the UNCONSCIOUS, ancient brain areas.
So, “intentions” don’t carry much weight.
What are some likely causes of Therese’s dysregulation?

How does Therese self-medicate?

What addictions have formed from her self-medicating?

Notice the challenge in breaking a multi-generational pattern.

Three Story “House”…

LEVEL 1: BRAINSTEM. This is the brain we see in babies (somato-sensory) 
These become “Out of wack” in trauma/addictions (“Dysregulated”) 
- “Stay alive and procreate” 
- 300 million years old 
- no thought or language 
- basic “housekeeping” of the body 
- awareness/arousal 
- self-regulation (ANS/affect/behavior/schedules/heart rhythms…)
- affective arousal system (allows us to be in the “here and now”, not “there and then”. PARENTS are the primary affect regulators for children.)
- sleep
- eating
- breathing
- chemical balance
- body rhythms including heart rhythm.
- body organization
- Little connection with Prefrontal Cortex (so talking won’t regulate or change it.)

Heart Rate Coherence (HRC)

Why is this SOOO important?!?

It is the product OF, and the doorway TO a regulated brainstem.
In trauma treatment, we ideally want to begin helping the brainstem/body regulate as soon as possible. The interventions for this do not have to be sophisticated or expensive... e.g., trauma-informed yoga, trauma-informed martial arts, Mindfulness practices, Heart-Rate-Coherence training, My Calm Beat, certain Breath work, etc...

Some formal therapies that help regulate the brainstem/body include EMDR, Somatic Experiencing (Peter Levine), Sensorimotor Psychotherapy (Pat Ogden), Neurofeedback, etc.

Medications can help, but don't generally heal PTSD. (I use them more for getting the patient into the working zone.)

Our thinking changes when our brainstem regulates; we have a larger perspective. We also develop an internal capacity to feel safe and calm; We have a sense of “all is well”.

IMPORTANT
When the body is calmed down, the brainstem is calmed down.
When the brainstem calms down, it becomes REGULATED.
When the brainstem is regulated, the next brain level can then be accessed much better for treatment.
So a calmed brainstem is the DOORWAY to successfully working in the LIMBIC BRAIN.

What interventions could be helpful for regulating Therese’s brainstem/body?

PART 2
LEVEL 2 of Brain: **LIMBIC BRAIN**. This is the brain we see in young children (and addicts, PTSD…) Emotional brain

- Who am I and what is my relationship to the world?

  - 200 million years old
  - No thought or language
  - drives
  - cravings
  - urges
  - Selfishness, resentments, self-serving, fears
  - strong emotions
  - strong desires (can be used for lower and higher brain functioning.)
  - strong intentions (can be used for lower and higher brain functioning.)
  - attachments/aversions
  - over indulging in x, y, or z
  - important perceptions and memories
  - “Judge and Jury”
  - core attitudes,
  - hard-wiring for trauma, including fight/flight/freeze. (connections between traumas & associated things, e.g., trauma and authority figures, sex and abuses)
  - “Broken record” – Emotions become “stuck” with too much unprocessed FFF

This is the time in child development when the “background hum” of how they perceive the world is established.

What was Therese’s experience of life like during those early years?

“Traumas” occur when any of our perceptions or experiences become “locked” together with a Fight, Flight or Freeze response.

When the brain is no longer able to “process” the traumas and they become log-jammed, we develop PTSD.

The body and emotions become “stuck” in FFF.

(Amygdala becomes up-regulated or down-regulated)
If the brainstem is dysregulated, the limbic function is also compromised (as well as the PFC).

Let’s revisit Claudia’s slide...

Trauma Repetition

1. Doing something self-destructive over and over again, usually something that took place in childhood and started with a trauma
2. Reliving a “story” from the past
3. Engaging in abusive relationships repeatedly
4. Repeating painful experiences, including specific behaviors, scenes, persons and feelings

These are mainly limbic symptoms!

When “triggered” from current sensory input, the “there and then” (amygdala) of the ORIGINAL trauma, hijacks our “here and now” (PFC).

The “triggering” is in the form of FFF responses (physical and emotional).

The PFC “makes up a story” to explain the FFF response in the body/emotions.
"Symptoms instead of memories"

(Implicit memories; not Explicit)

Explicit Memory – (breakfast memory) narrative memory, functional and cognitive memory, autobiographical memory. (Remembering the wound.)

Implicit Memory – subcortical bodily and emotionally charged memory STATES; NOT the “story”! They generally do not carry with them the internal sensation that something is being recalled. (Becoming the wound.)

DSM IV, 5 definitions of trauma vs Trauma + formative years (DTD) = Problems with mood/affect regulation Problems with attention and dissociation Difficulties with self-concept Difficulties with interpersonal relationships Changes in systems of meaning Somatization These create chronic ”pain”

Which of these does Therese manifest?

Third Story of the “House”...

PFC
Important!
Our PFC can understand what is happening, but has very little influence on it.

Most therapists confuse a patient's understanding of their problems, with actually healing. The emotional and bodily symptoms don't go away when someone understands their problems.

Before break, a few questions for clarification...