

Trauma, Substance Use and the Brain

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Regulate



Relate



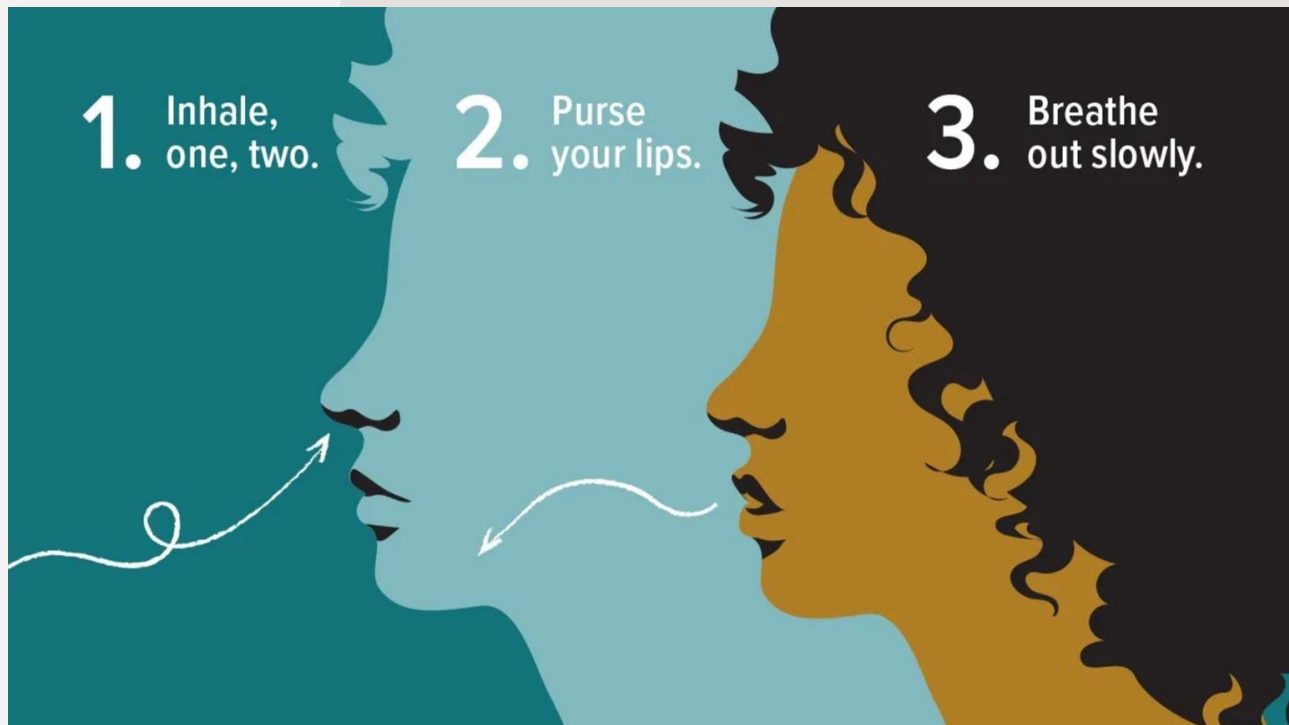
Reason





Regulate

You are invited
to ground into
this space
however feels
accessible and
safe to you in
this moment.





Relate

One word that
describes you work.



Prompts for Reflection

We must continually ask:



- how might this **help**?



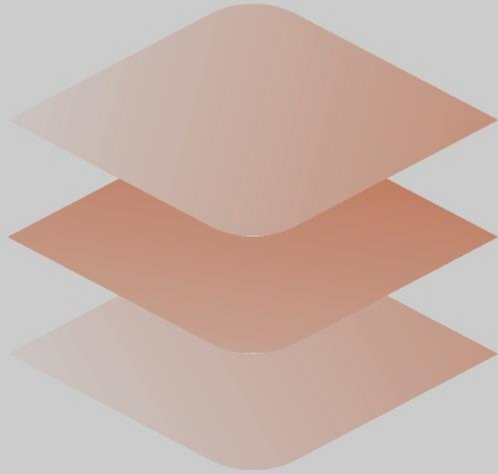
- how might this **hurt**?



- how might **identity influence impact**?

Prompts for Awareness

What does trauma informed practice look like:



• intrapersonally?



• interpersonally?



• organizationally?

Objectives

- Define trauma and trauma informed care.
- Consider the relationship between trauma and substance use
- Identify how trauma informed care can impact engagement.
- Identify challenging behaviors and consider trauma and SUDS

Context



What Is Trauma?

- Trauma is defined in the dictionary as a deeply distressing or disturbing experience.
- Anything that overwhelms one's ability to cope.

Event

- *Events* & circumstances cause trauma

Experience

- A person's *experience* of the event determines whether it's traumatic

Effect

- *Effects* of trauma include adverse physical, social, emotional, spiritual consequences

Types of Trauma

- Systemic
- Collective
- Individual
- Intergenerational
- Historical

Trauma Informed Care



A program, organization, or system that is trauma-informed:



Realizes the widespread impact of trauma and understands the multiple paths for recovery;



Responds by fully integrating knowledge about trauma into policies, procedures, and practices;



Recognizes the signs and symptoms of trauma in clients, families, staff, and others involved with the system;



Seeks to actively **resist re-traumatization.**



Why Is TIC Important?



Trauma is pervasive & can happen to anyone, however under-resourced and disproportionately impacted populations experience trauma in compounding ways.



The service system can often be activating or re-traumatizing. Trauma affects how people approach services.



Service providers & organizations are not immune to the impacts of trauma & toxic stress.

Why TIC is important also...

“In amygdala to amygdala conversations, the person with the least amount of power is most impacted.”

Mandy Davis, PhD

Trauma-Informed
Care is about...

ENGAGEMENT

What do you
need to
engage?



Substances & Trauma



- 90% of adults experience trauma in the US and 10% meet criteria for PTSD (Kilpatrick 2013)
- 50-75% of individuals have experienced a potentially traumatic event (Kessler, 2000; Green et al, 2000, Elliott 1997)
- Nearly half of people with PTSD also have a substance use disorder. (Pietrzak, et al, 2010)
- 3 out of 4 people with SUD have experienced trauma in their lives (Mills, et al, 2006)
- 71% reported at least one traumatic event in their lifetime; SUD prevalence 3 times higher in trauma-exposed versus not. (WHO, 2022)

Intrusion: Reliving memories of a traumatic event through nightmares, flashbacks, and intrusive thoughts.

Arousal/Hyperarousal: A persistent state of high physiological and psychological reactivity, including hypervigilance, irritability, difficulty sleeping, and poor concentration.

Numbing/Hypoarousal: A mechanism of emotional detachment, restriction of affect, loss of interest, and disconnection from others, often used to cope with overwhelming distress.

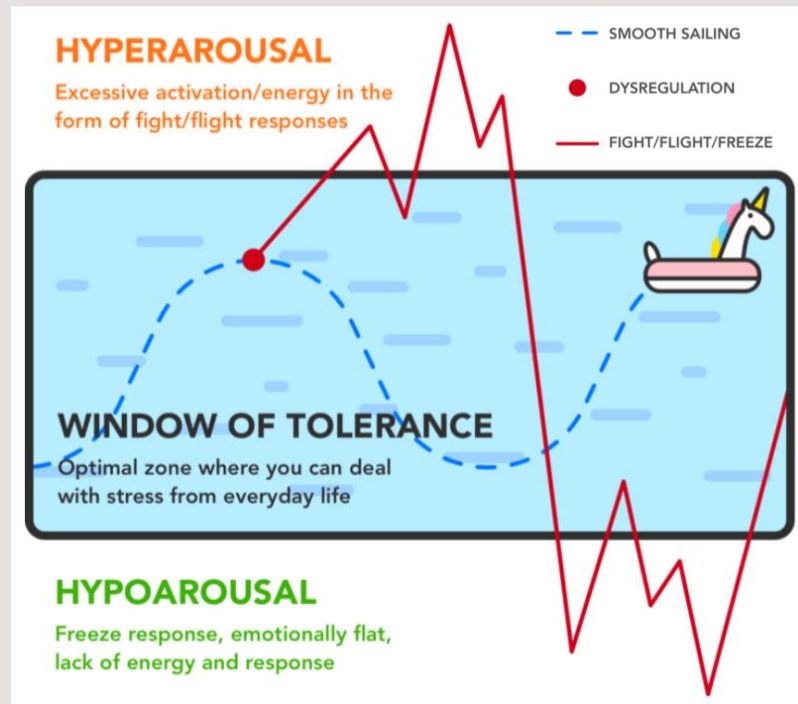
Hyper- Vs Hypo-Arousal

When Hyper-Aroused:

Practice techniques that settle mind & body (mindful breathing, going for a calming walk, listening to soothing music, etc.)

When Hypo-Aroused:

Practice techniques that stimulate mind & body (a brisk walk or exercise, stimulated the senses, engaging socially, listening to uplifting music, seeking mental health support, etc.)



Methamphetamine: Methamphetamine dependence is strongly correlated with childhood emotional and physical abuse, with increased trauma associated with earlier onset of use. PTSD, especially **hyperarousal** symptoms, is associated with a higher likelihood of relapse to methamphetamine use.

Cocaine: Cocaine use is associated with higher trauma exposure compared to other substances. Cocaine use can **exacerbate PTSD symptoms**, including physiological reactivity, irritability, and anger outbursts.

Alcohol: While used **to manage anxiety or aid sleep**, alcohol disrupts memory processing and actually causes more fragmented sleep. It is highly correlated with antisocial behavior and severe PTSD symptoms.

Cannabis: Cannabis is used to **blunt trauma-related nightmares or emotional reactivity**; however, it can worsen PTSD symptoms and lead to higher levels of violence and substance use, according to some studies

Challenging Behaviors

What are examples of challenging behaviors you experience in your work from those you serve?

Impact



Dr. Bruce Perry's Neurosequential Model

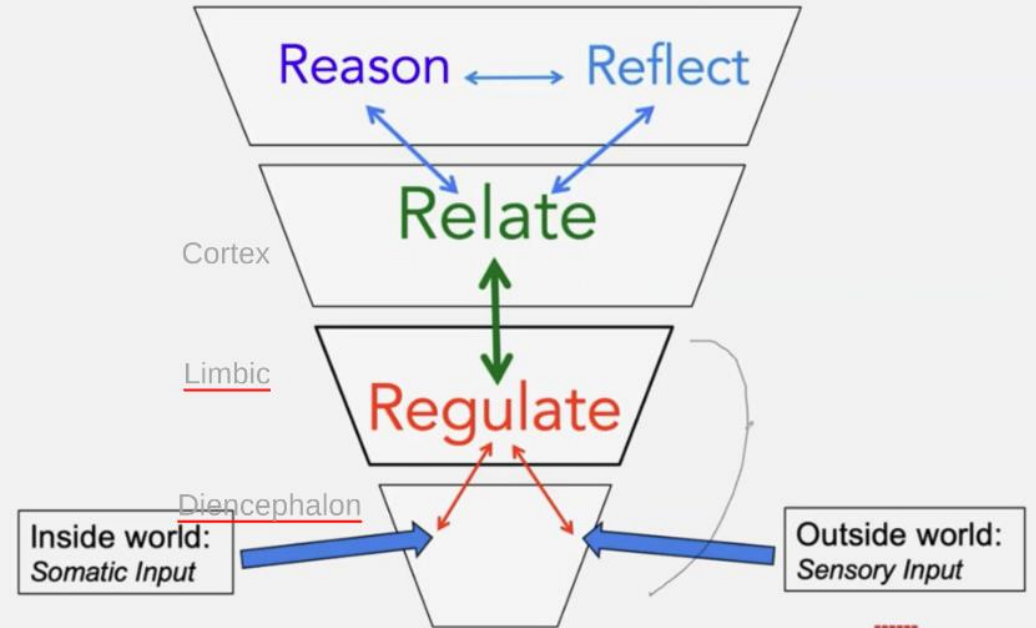
There is an Order:

Reason: Makes
meaning and new ways

Relate: Co-Regulates,
helps understanding and
perceptions

Regulate: Freeze,
Flight, Fight, Fright

Sequential Engagement & Processing



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NEUROSEQUENTIAL
NETWORK™

SUDs and Regulation

Prefrontal Cortex Impairment: Chronic drug and alcohol use damages the prefrontal cortex, which undermines the brain's "top-down" ability to manage impulse control and emotional states.

Heightened Stress Reactivity: Substance abuse disrupts biological stress systems, leading to extreme emotional reactivity and a reduced capacity to tolerate negative moods without chemical relief.

Maladaptive Coping: Substance use often functions as a failed, short-term attempt to escape aversive internal states, which ultimately worsens long-term emotional dysregulation.

Substance use and mental health challenge often co-occur with unsafe environments and prolonged states of activation.

Four Impacted Functions

NEUROBIOLOGY



Four functions of the brain most impacted by trauma and toxic stress:



Executive Functions



Attention



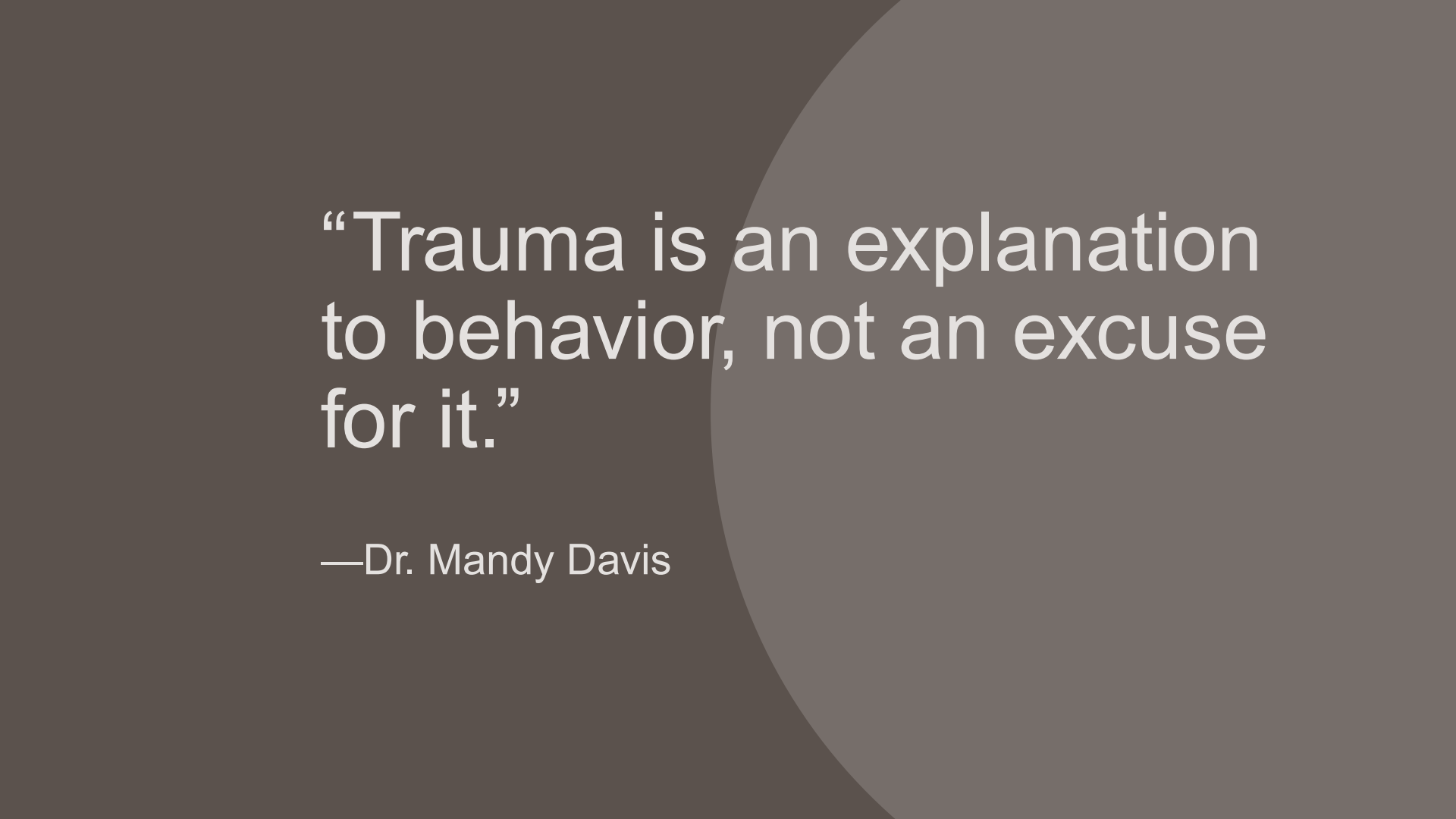
Sensory Awareness



Memory

Using a Trauma Informed Lens

- Shutdown read as defiance
- Shutdown read as calm
- Activation read only as aggression
- Hypervigilance read as substance use
- Fawning read as no follow through
- Forgetting to email, irritated about the beeping, can't decide.....



“Trauma is an explanation
to behavior, not an excuse
for it.”

—Dr. Mandy Davis

Applied





Challenging Behavior/Event

SCENARIOS 2-4

1. The BP has requested more powerful pain relief medications be used during birth. They are adamant that this plan be made now and are focused on this.
2. The BP continues to say “yes” to referrals for service and continues to not show up – or follow through.
3. The parent shows little interest in parenting. They do not participate in any classes offered or teaching moment and seem fine for the providers to do everything
4. The BP is constantly on their phone playing games. The TV is on more than not while they are often FaceTiming friends

**Non-trauma
related
explanations?**

**Trauma related
explanations?**

Strategies:

Focus on Regulation



Cues of Safety



What are cues to safety in your environment?

What ways do you co-regulate with patients?



5 Regulation Skills (if you are regulated!)

- **Tone, Pace and Volume**
- **Posture, Positioning, and Hands**
- **What Your Expression Communicates**
- **Resets – Transition pauses**
- **Deliberate Patience and Giving Time (not silence)**

What impacts your baseline - regulation

- Shift work, repeated exposure to high-stress, the unpredictability of the job all shift baseline arousal over time — not just in the moment of a single incident.
- A nervous system that is already running “hot” from an earlier contact, a rough shift, or cumulative exposure has less room to absorb the next stressor before tipping into full activation.
- Vicarious trauma and compassion fatigue
- Past experiences
- Demand for services not available
- Moral Injury



TIC Lens: Workforce Wellness



Intrapersonal

- PTO
- Space for regulation
- Debrief
- Interventions
- Use of vacation days
- Regulation - right brain strategies



Interpersonal

- Skills to co-regulate
- Peer to Peer Support
- Protocols for responding to coworkers
- Time for connection
- Regulation - right brain strategies



Organizational

- Days off
- Safe spaces
- Human Resources
- Career/skill advancement
- Flexible scheduling
- Feedback
- Performance goals on TI/DEI/WW
- Modeling that "well" is desired

Organizational

- Hotspots
- TES
- Workforce Wellness (debriefs, consults, peer support, time to regulate..)
- Physical space reviews
- Implementation tool
- H.R. orientation and training
- Regulation self assessment

You are a powerful intervention

- Your own nervous system state is the first variable in every encounter — before practices, before words.
- Protecting your regulation over a career is a professional skill that needs organizational support behind it, not something you're expected to manage alone.

Deep gratitude for
all the healing and
buffering you do to
impact generations!

You are the buffer!



A reflective invitation:

Am I responding to what is in front of me or am I reacting based on a past experience?

- What am I noticing in my body right now?
- What meaning do I have about these feelings/sensations?
- Do these feelings remind of a previous time?
- What feels relevant today?
- How might this impact me right now?
- What do I need right now?

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