The impact of OT on healing attachment trauma

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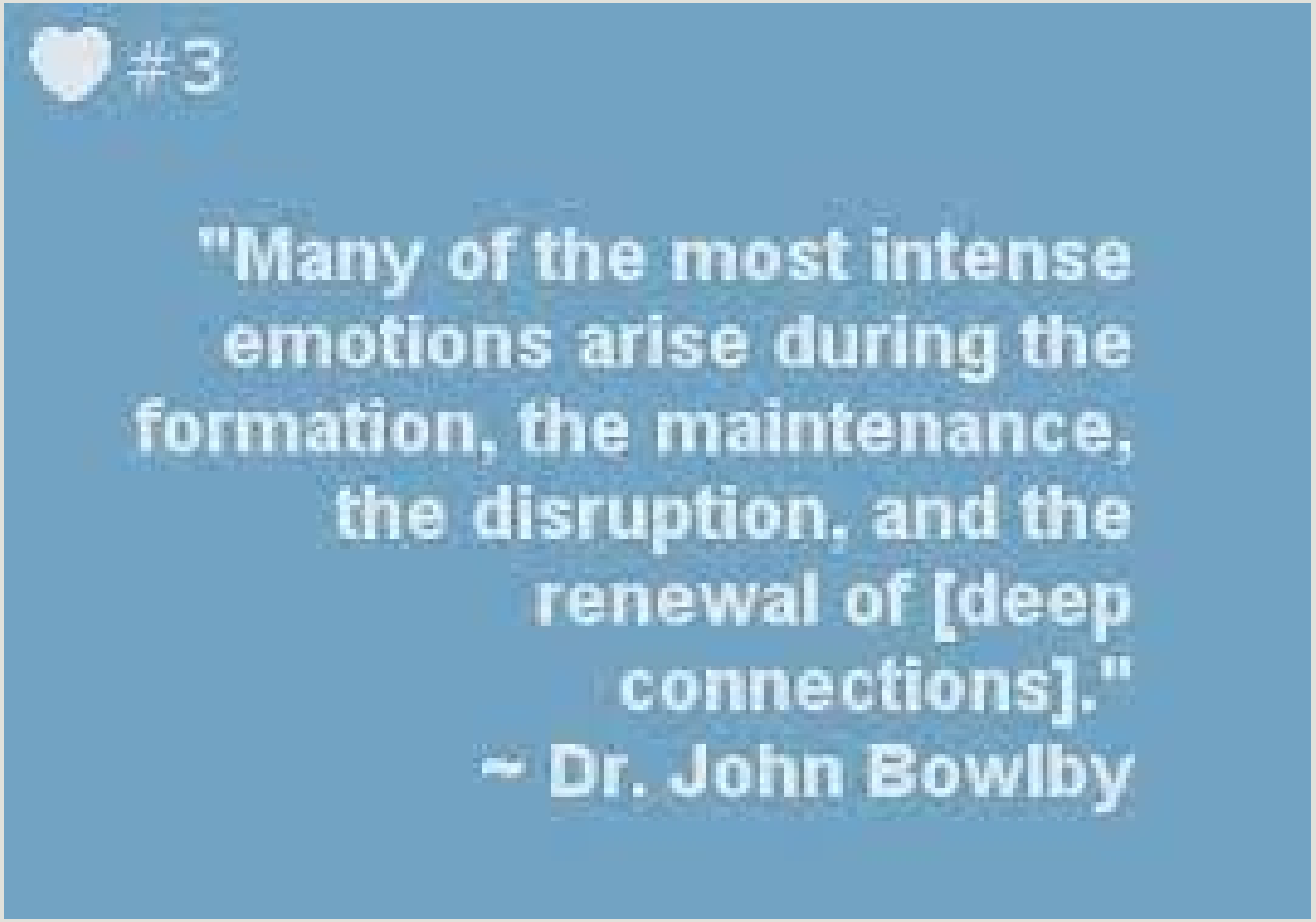
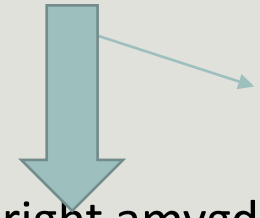
Attachment


#3
"Many of the most intense emotions arise during the formation, the maintenance, the disruption, and the renewal of [deep connections]."
~ Dr. John Bowlby

What does trauma look like on the inside ?

- Decreased Language from reduced activity in Broca's area.
- Decreased cerebral blood flow in individuals with PTSD
- Preverbal trauma can also have reduced activity in Broca's area.
- Increased blood flow to limbic limbic system



- CBF increased in left amygdala and decreased in right amygdala during sad mood

  Left amygdala blood flow also increases with fear and anxiety

- =

What does trauma look like on the outside ?

- Trauma is not SPD but may look like it
- Trauma is not autism but may look like it
- Trauma is not ADHD but may look like it

- However a child with trauma may have all or one of the above.
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DX-Trauma, Stress, and Deprivation Disorders

DC:0-5 Children	DSM-5
Posttraumatic Stress Disorder	Posttraumatic Stress Disorder
Reactive Attachment Disorder	Reactive Attachment Disorder
Disinhibited Social Engagement Disorder	Disinhibited Social Engagement D/O
Other Trauma, Stress, and Deprivation Disorder	Unspecified Trauma- and Stressor-Related Disorder
Reaction to Severe Stress, Unspecified	

Other Dx – ADHD and mood disorders

DSM-5 Diagnostic Criteria for PTSD

- **Highlights of the diagnosis related to children**

- Exposure to actual or threatened death, serious injury, or sexual violence in one (or more) of the following ways: experience , witness , learn about violent event , repeated exposure
- Presence of one (or more) of the following intrusion symptoms associated with the traumatic event(s), beginning after the traumatic event(s) occurred:
- Recurrent, involuntary, and intrusive distressing memories of the traumatic event(s). **Note:** *In children older than 6 years, repetitive play may occur in which themes or aspects of the traumatic event(s) are expressed.*

DMSV PTSD

- Recurrent distressing dreams in which the content and/or affect of the dream are related to the traumatic event(s). ***Note:*** *In children, there may be frightening dreams without recognizable content.*

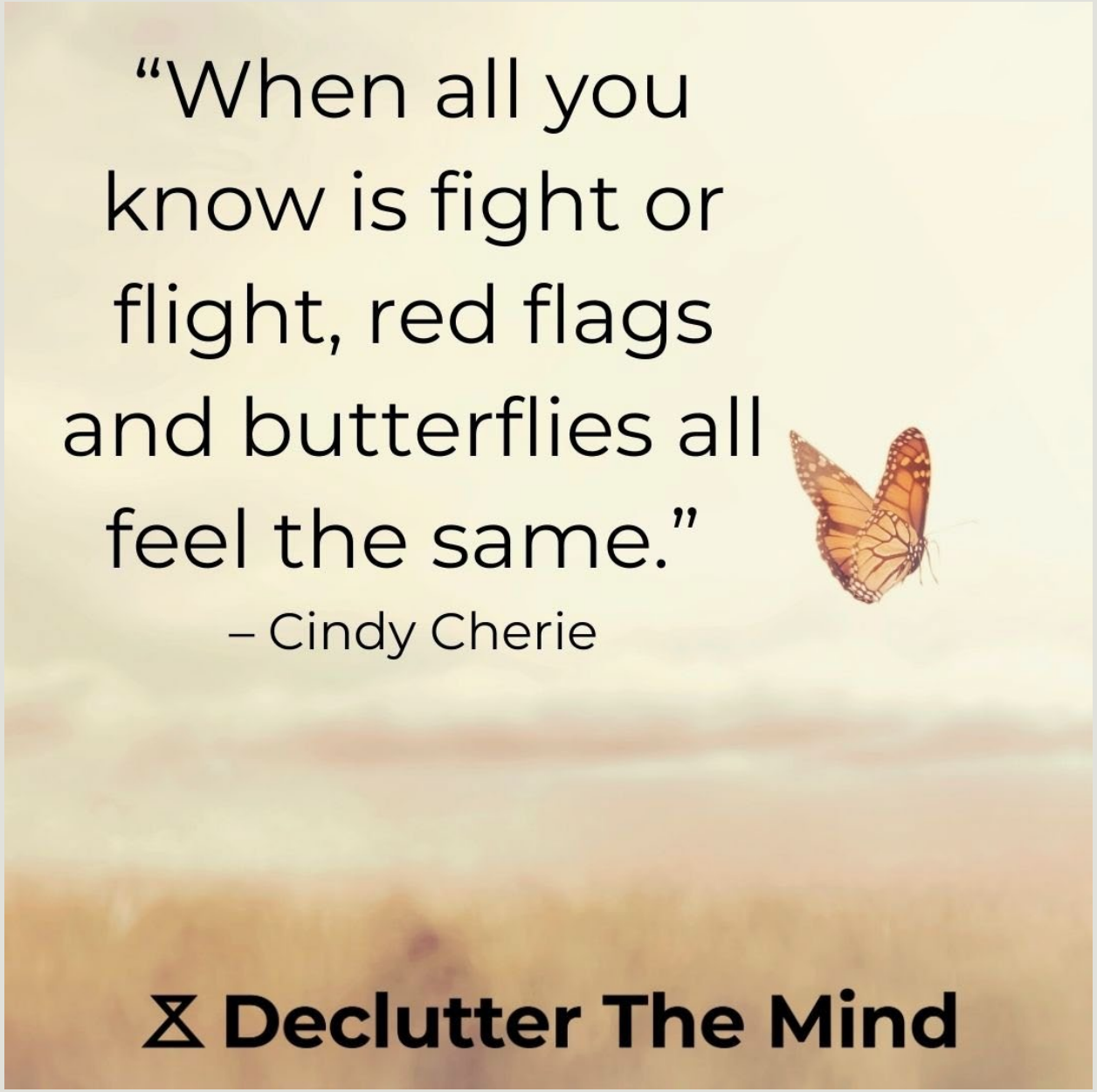
- Dissociative reactions (e.g., flashbacks) *children may use trauma play.*

Attachment Theory

- Attachment is a deep and enduring emotional bond that connects one person to another across time and space (Ainsworth, 1973; Bowlby, 1969).
- Attachment does not have to be reciprocal. One person may have an attachment to an individual which is not shared. Attachment is characterized by specific behaviors in children, such as seeking proximity with the attachment figure when upset or threatened (Bowlby, 1969).
- Attachment behavior in adults towards the child includes responding sensitively and appropriately to the child's needs. Such behavior appears universal across cultures. Attachment theory provides an explanation of how the parent-child relationship emerges and influences subsequent development.

Disrupted Attachment

- Foster Care
- Medical procedures
- Extended separation from a parent- military, incarceration, illness


“When all you know is fight or flight, red flags and butterflies all feel the same.”
– Cindy Cherie
⧖ Declutter The Mind

The 8 sensory systems of attachment

- The 8 sensory systems
- Tactile
  Proprioceptive
  Interoceptive
  Vestibular
  Taste
  Smell
  Sight
  Auditory

Our exteroceptive senses

- Proprioception- The senses of position and movement of our limbs and trunk, the sense of effort, the sense of force, and the sense of heaviness.
- Vestibular-receptors tells accelerations, how the head is rotating and translating and its orientation in space. The messages never stop and cannot be turned off. Even when we are completely motionless, they signal the relentless pull of gravity. Perhaps because of their constant monologue, the vestibular sensation is different to the other senses. There is no overt, readily recognizable, localisable, conscious sensation from these organs. They provide a silent sense. They are the balance organs of the inner ear.
- Tactile- Our tactile sense keeps us in touch with our environment. Our sense of touch is derived from a range of receptors in our skin that take messages about pressure, vibration, texture, temperature, pain and the position of our limbs and pass it through our nervous system to the brain.
- Visual , Auditory , Olfactory , Gustatory

Interoceptive sense

- Interoception-this sense is hard at work all of the time, monitoring your entire body—body parts like your heart, lungs, stomach, bladder, muscles, skin, and even your eyeballs—and collecting information about how these body parts *feel.* For example, interoception collects information which helps your brain identify how your stomach feels: does it feel empty, full, gassy, nauseous, tingly or something else?(Kelly-Mahler .com) The act of sensing, interpreting, and integrating information about the state of inner body systems can be related to different elements such as interoceptive attention, detection, discrimination, accuracy, insight, sensibility, and self-report.

More interoception

- **Interoception helps identify feelings based on internal visceral state**
- (Craig, 2003; Critchley et al., 2004; Wiens, 2005)

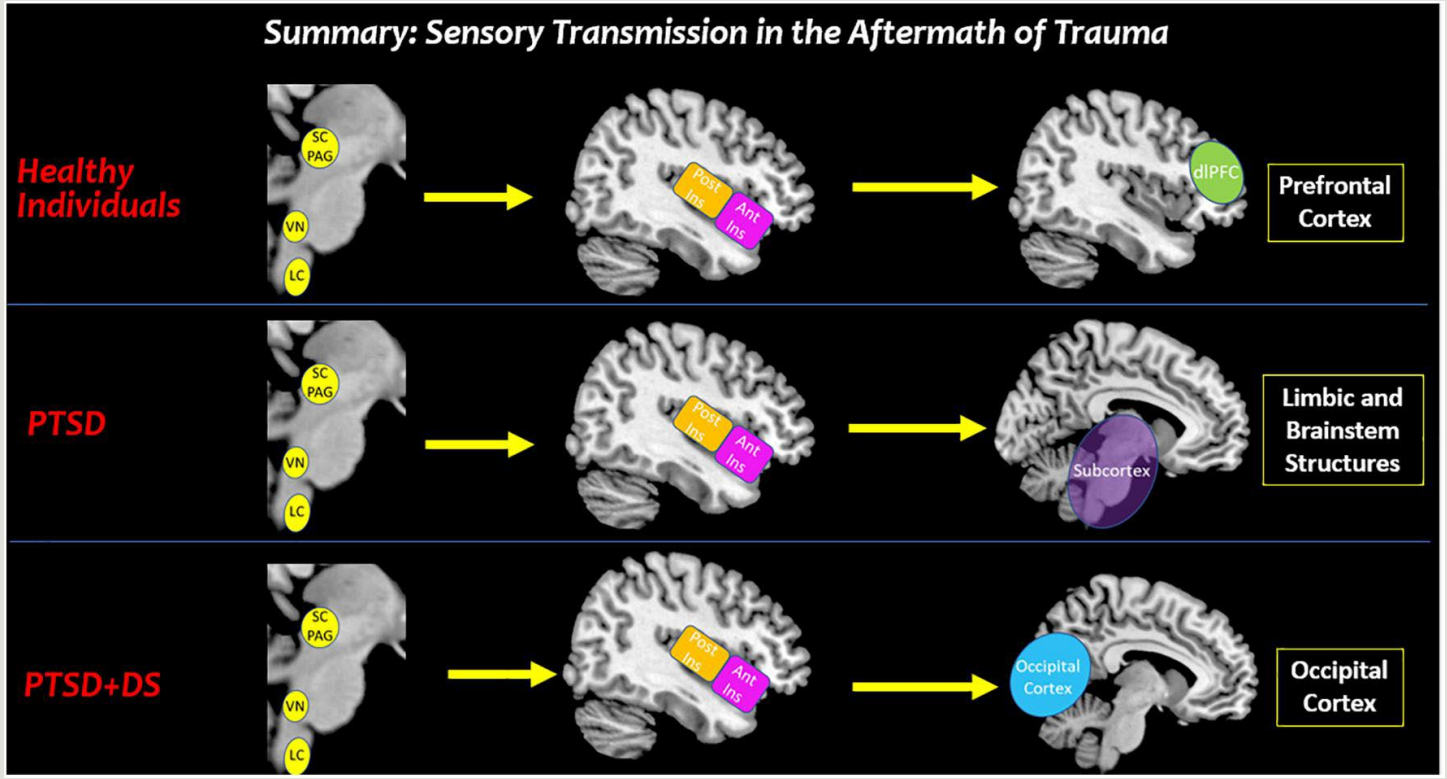
- **External and Internal sensations are critical for driving the neural processes that help guide adaptive behavioral responses to our surroundings.**

Brainstem sensory processing.

- Sensory information is relayed to the brainstem
- If the child feels safe the sensory information can be effectively relayed to areas of the cortex
- However, if a child feels unsafe incoming sensory information may cause fluctuations in arousal that evoke survival-based active and passive defensive responses

- How Processing of Sensory Information From the Internal and External Worlds Shape the Perception and Engagement With the World in the Aftermath of Trauma: Implications for PTSD Sherain Harricharan1,2 Margaret C. McKinnon1,2,3and Ruth A. Laniu

Sensory transmission in the aftermath of trauma



Evidence of sensory and trauma

- Dysfunction of **interoception** is increasingly recognized as an important component of different mental health conditions, including anxiety disorders, mood disorders, eating disorders, addictive disorders, and somatic symptom disorder

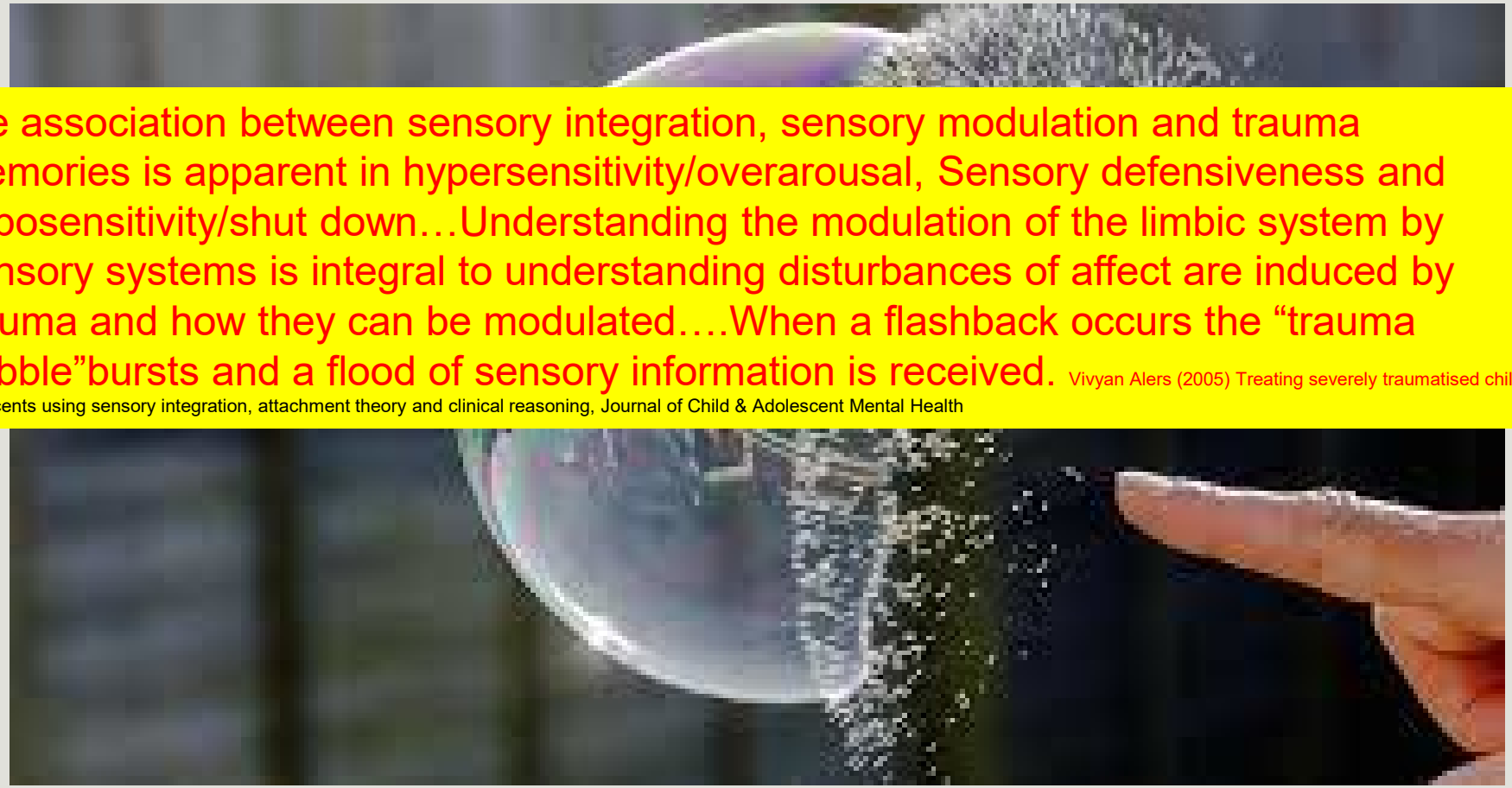
- .sKhalsa, S. S., Adolphs, R., Cameron, O. G., Critchley, H. D., Davenport, P. W., Feinstein, J. S., Feusner, J. D., Garfinkel, S. N., Lane, R. D., Mehling, W. E., Meuret, A. E., Nemeroff, C. B., Oppenheimer, S., Petzschner, F. H., Pollatos, O., Rhudy, J. L., Schramm, L. P., Simmons, W. K., & Zucker, N. (2017, December 28). *Interoception and mental health: A roadmap*. Biological Psychiatry: Cognitive Neuroscience and Neuroimaging. Retrieved March 28, 2022, from https://www.sciencedirect.com/science/article/pii/S2451902217302343

- **Proprioception-Evidence** based practice suggests interventions which provide safe, relational, playful, regulatory directed, and repetitive sensory/motor qualities, geared to the developmental age of the child, will best meet child and family needs. Optimally meeting the needs of these children and their caregivers with a neurobiologically based approach requires a multidisciplinary team approach. .Ryan, K., Lane, S. J., & Powers, D. (2017). A multidisciplinary model for treating complex trauma in early childhood. *International Journal of Play Therapy*, *26*(2), 111–123. https://doi.org/10.1037/pla0000044

Vestibular and PTSD

- The **vestibular system** integrates multisensory information to monitor one's bodily orientation in space, and is influenced by interoceptive awareness. Post-traumatic stress disorder (PTSD) involves typically alterations in interoceptive and bodily self-awareness evidenced by symptoms of hyperarousal, as well as of emotional detachment, including emotional numbing, depersonalization, and derealization. These alterations may disrupt vestibular multisensory integration between the brainstem (vestibular nuclei) and key vestibular cortical regions (parieto-insular vestibular cortex, prefrontal cortex). Accordingly, this study examined functional connectivity of the vestibular system in PTSD and its dissociative subtype

Sensory and trauma

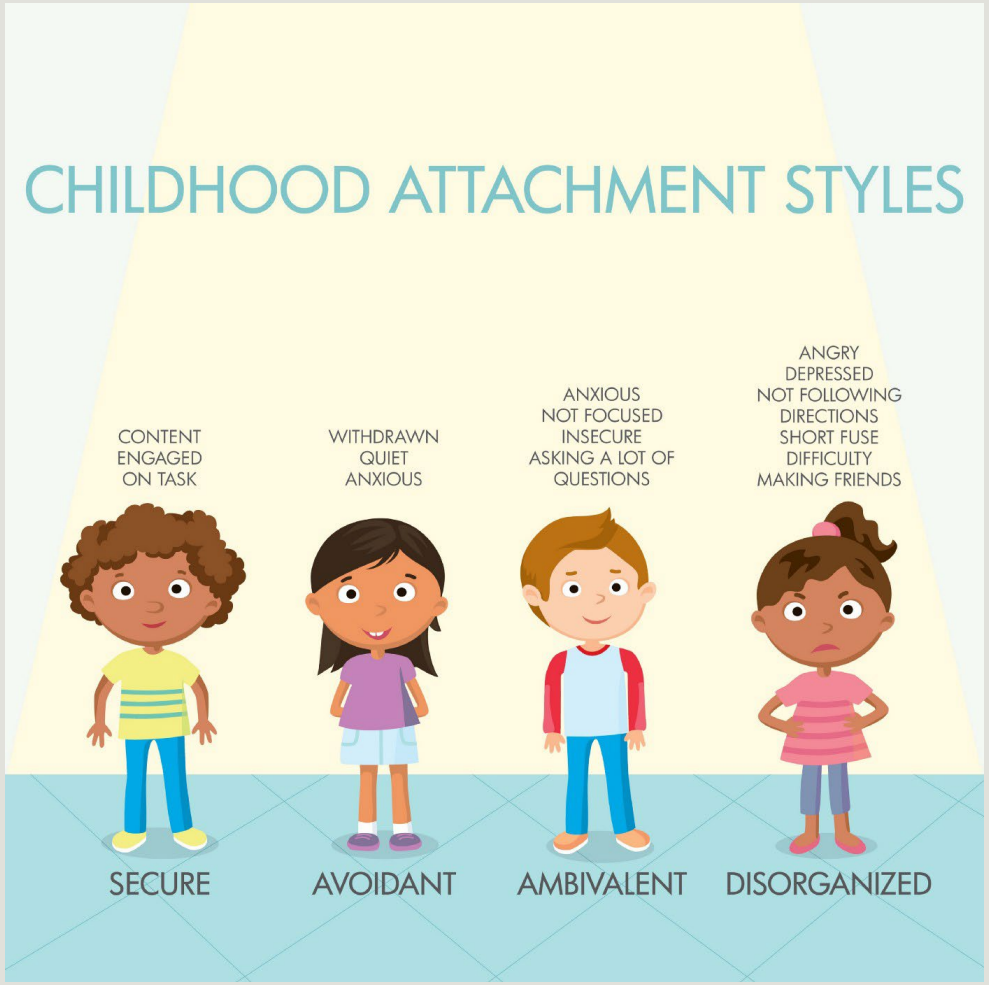


The association between sensory integration, sensory modulation and trauma memories is apparent in hypersensitivity/overarousal, Sensory defensiveness and hyposensitivity/shut down…Understanding the modulation of the limbic system by sensory systems is integral to understanding disturbances of affect are induced by trauma and how they can be modulated….When a flashback occurs the “trauma bubble”bursts and a flood of sensory information is received. Vivyan Alers (2005) Treating severely traumatised children and adolescents using sensory integration, attachment theory and clinical reasoning, Journal of Child & Adolescent Mental Health

Validity

- Sept/Oct 2014 AJOT American Journal of Occupational Therapy
- **Validity of Sensory Systems as Distinct Constructs**
- This study investigated the validity of sensory systems as distinct measurable constructs as part of a larger project examining Ayres's theory of sensory integration. Confirmatory factor analysis (CFA) was conducted to test whether sensory questionnaire items represent distinct sensory system constructs. Data were obtained from clinical records of two age groups, 2- to 5-yr-olds (*n* = 231) and 6- to 10-yr-olds (*n* = 223). With each group, we tested several CFA models for goodness of fit with the data. The accepted model was identical for each group and **indicated that tactile, vestibular–proprioceptive, visual, and auditory systems form distinct, valid factors that are not age dependent**. In contrast, alternative models that grouped items according to sensory processing problems

Attachment styles / integration



Low Registration	Sensory Avoiding
Sensory Seeking	Sensory Sensitive

SI and Attachment Continuum

- Avoidant (stimuli) Integrated Seeking
- Actively avoids needs additional input

- Avoidant Secure Anxious Disorganized

The Relationship Between Sensory Processing and Attachment Patterns: A Scoping Review

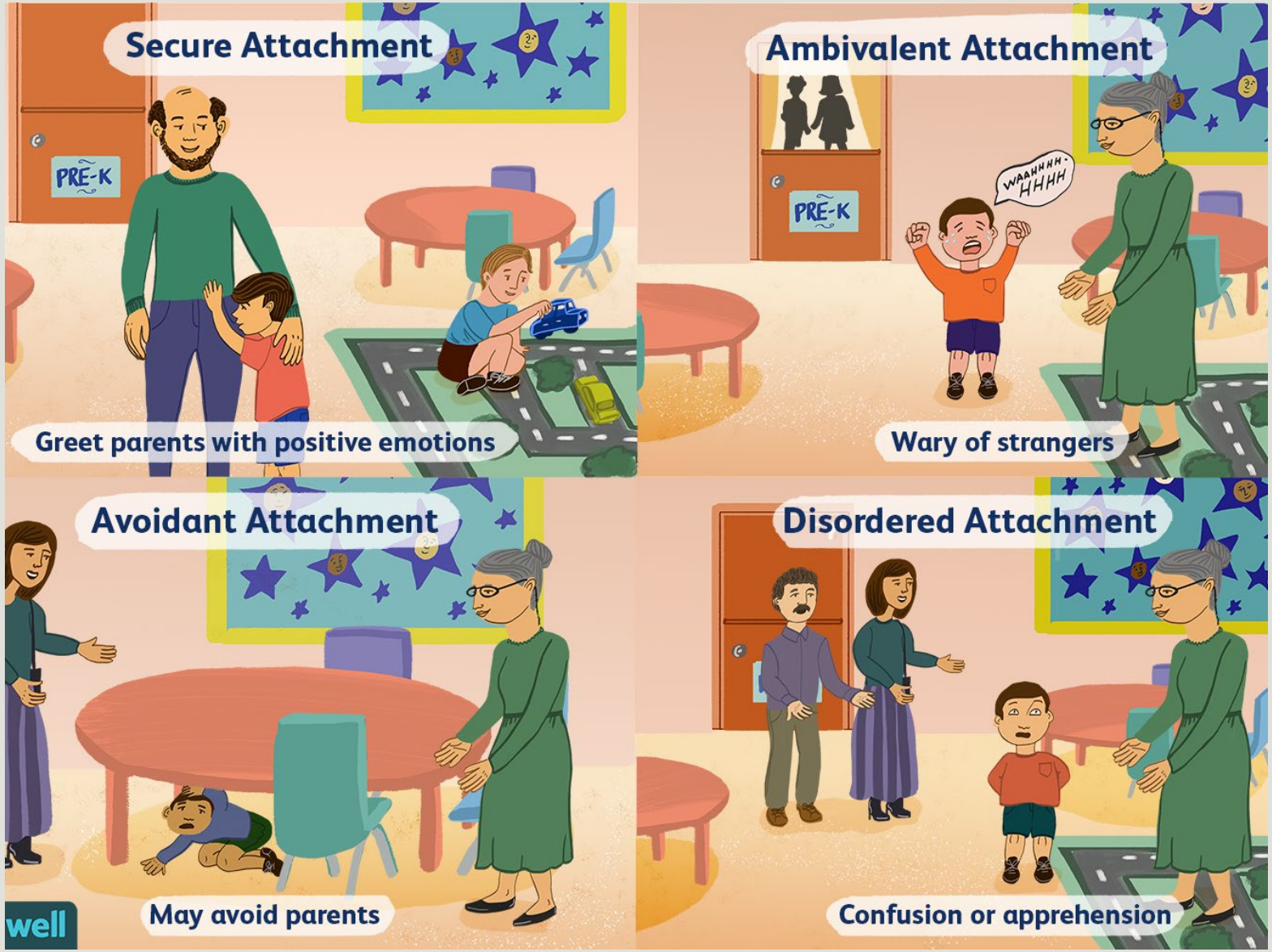
Canadian Journal of Occupational Therapy Lachlan Kerley, P. Meredith, P. Harnett Published 24 May 2022

Implications. **Findings indicate empirical relationships between sensory processing and attachment constructs in children and adults that warrant further investigation. Occupational therapists should consider both sensory processing and attachment patterns when planning interventions.**

Sensory variable	Attachment variable	Relationship	Sample	References
Sensory seeking	Attachment anxiety	−ve	Children/adolescents with persistent pain	Sinclair et al. (2020)
	Disorganized controlling	+ve	Children with behavioral/ emotional difficulties	Mubarak et al. (2017)
Registration	Attachment anxiety	+ve	Children/adolescents with persistent pain	Sinclair et al. (2020)
	Attachment avoidance	+ve	Children/adolescents with persistent pain	Sinclair et al. (2020)
Sensory avoiding	Disorganized controlling	+ve	Children with behavioral/ emotional difficulties	Mubarak et al., 2017)
Sensory modulation	Attachment security	+ve	Nonclinical children	Lavigne et al. (2015, 2016), Hopkins et al. (2013), Whitcomb et al. (2015)
	Attachment insecurity	−ve	Children with sensory processing disorder	Walbam (2019)
Tactile sensitivity	Attachment security	+ve	Nonclinical children	Hopkins et al. (2013)
	Attachment insecurity	−ve	Child with sensory processing disorder	Walbam (2019)
Movement sensitivity	Attachment security	+ve	Nonclinical children	Hopkins et al. (2013)
Low energy/weak	Attachment security	+ve	Nonclinical children	Hopkins et al. (2013)
Auditory filtering	Attachment insecurity	−ve	Children with sensory processing disorder	Walbam (2019)
Responsiveness to stimuli	Attachment insecurity	−ve	Children with sensory processing disorder	Walbam (2019)

Note: +ve and −ve denote a significant positive or negative relationship, respectively. No significant findings were observed in two of the nine studies with children/

Secure-regulated/integrated Avoidant/avoids sensory stimuli
Disordered/ambivalent =Dysregulated or Seeking



What is Attachment ?

- Did you know attachment doesn't happen at birth ?
  Infants from 2-7 months begin to show a preference
  Attachment occurs with a primary caregiver between 7 months and 3 years
  Separation anxiety occurs between 14-18 months

NCTSN How to Conduct a Comprehensive Assessment of Complex Trauma (National Child Traumatic Safety Network

The NCTSN is funded by the Center for Mental Health Services, Substance Abuse and Mental Health Services Administration, US Department of Health and Human Services through the Donald J. Cohen National Child Traumatic Stress Initiative. This congressional initiative recognizes the profound, destructive, and widespread impact of trauma on American children's lives.

These are the ways to integrate sensory into the assessment

- The assessment of complex trauma is by definition “complex” as it involves both assessing children’s exposure to multiple traumatic events, as well as the wide-ranging and severe impact of this trauma exposure across domains of development. It is important that mental health providers, family members, and other caregivers become aware of specific questions to ask when seeking the most effective services for these children.
- The following are some key steps for conducting a comprehensive assessment of complex trauma:
- *Assess for a wide range of traumatic events. Determine when they occurred so that they can be linked to developmental stages.*
- Assess for a wide range of symptoms (beyond PTSD), risk behaviors, functional impairments, and developmental derailments.

Gathering info/assessment

- Gather information using a variety of techniques (clinical interviews, standardized measures, and behavioral observations.
- Gather information from a variety of perspectives (child, caregivers, teachers, other providers, etc).
- Try to make sense of how each traumatic event might have impacted developmental tasks and derailed future development. Note: this may be challenging given the number of pervasive and chronic traumatic events a child may have experienced throughout his or her young life.
- *Try to link traumatic events to trauma reminders that may trigger symptoms or avoidant behavior. Remember that trauma reminders can be remembered both in explicit memory and out of awareness in the child's body and emotions.* ***SENSORY MEMORIES***
- *The assessment should be conducted by a clinically trained provider who understands child development and complex trauma. Ideally, the assessment should involve a multi-disciplinary team. An ideal team would include a pediatrician, mental health professional, educational specialist, and, where appropriate, an* ***occupational therapist.*** *In residential, day treatment, and juvenile justice settings, a multi-disciplinary team might also include direct care staff familiar with the child.*

Can the Body Change the Score? Sept 2013(Journal of Family Violence)

- There is a compelling need for varied “trauma specific” treatment models for children and adolescents with complex trauma in residential treatment whose affect and behavioral dysregulation disrupts daily living and impedes treatment engagement. This conceptual paper introduces exploratory applications of sensory motor approaches to the treatment of affect and behavioral dysregulation. Sensory Integration, a specialization within occupational therapy (Ayres 1972, 2004) provides knowledge of the sensory motor systems and strategies for sensory modulation that addresses arousal regulation, which underlies this dysregulation. **The article describes three clinically supported approaches to the use of sensory modulation in residential treatment sites: use of sensory rooms**; use of sensory integration occupational therapists at residential treatment sites; and a trauma psychotherapy that utilizes sensory motor strategies to improve regulation and support trauma processing

- Warner, E., Koomar, J., Lary, B. *et al.* Can the Body Change the Score? Application of Sensory Modulation Principles in the Treatment of Traumatized Adolescents in Residential Settings. *J Fam Viol***28,** 729–738 (2013). https://doi.org/10.1007/s10896-013-9535-8.

OT MH/Sensory assessment

- Clinical observations of sensory processing (**OT610/SI610**)
- Sensory Profile (optional)
- Neurological signs = absence or presence
- Reflex Integration

Assessment continued

- Note behavioral concerns related to attachment and sensory such as:
- Sleep routine
- Following directions
- Quality of attachment
- Play with peers

  School performance
- Self care
- Developmental Assessment (Bayley's)
- Occupation – student, child, parent , worker

Sensory Trauma observations vs clinical observations of SPD

- Assess for neurological components (muscle tone ,bilateral coordination)
- Reflexes- Dx critieria for PTSD is an exaggerated startle response
- Observe adverse sensory responses related to trauma:
- -Pulls away from caregiver with touch
- -Shrieks
- -Lacks eye contact
- -Decreased neck flexion
- Hyper responsive
- Hyperverbal
- Head banging
- Dissasociation
- Compare Sensory Trauma to Clinical observations of sensory integration

Sensory treatment

- Understand
- Frequency
- Intensity
- Duration
- Of sensory input
- Although touch is the first sensory system to begin to develop in utero, the vestibular system (balance and motion)is actually the first fully functional system by 21 weeks. The vestibular system is key in self regulation. That's why some babies like to be rocked side to side , up and down or even back and forth using rotary input. Attachment is sensory . And disrupted attachment can be healed .

Treatment strategies

- Unstructured sessions
- Freedom to allow the child to be in their safe sensory space
- Explore sensory components of trauma without direct questions
- Increase sense of security using the child's preferred sensory language (active child – intensity)
- Multidisciplinary approach – understand strengths of each discipline

“To go bag” of treatment goodies

- Yoga Balls
- Body Sox , tunnels , tents
- Shaving cream
- My Safe and Cozy Space
- Play figures

Treatment

Intervention

Trauma

May have individual sessions

To explore sensory and coping responses but must check in with Primary caregiver and observe as needed

Attachment

Must have coregulation

WITH the primary caregiver (not you)

Case study

- J is a 1.6 year old male who has been in foster placement since (December). Previously, he lived with his biological mother and 2 siblings who have just turned 3 and 4 years old this month. Client was referred for services due to mother's history of DCFS involvement and general neglect. Mother denies any pre-exposure and stated he was born full term. Previous home residence was 1 room with sparse furnishings, with no bed, 1 dresser and 1 tv. An additional general neglect report was generated after giving birth but allegations were inconclusive. Biological mother expressed no concerns regarding development. Foster mother expressed concerns regarding self feeding and overall delayed development. Per record review J meets criteria for Parent-Child Relational Problem (V61.20/Z62.820) due to: poor quality of the parent-child relationship affecting client's development.

Case study , Bayley results

Subtest	Raw score	Scaled score	Percentile Rank	Dev. Age
Cognitive	31	1	.1	8 mos
Rec Language	10	2	1	6 mos.
Exp Language	13	5	1	11 mos
Fine Motor	29	6	4	12 mos
Gross Motor	43	5	5	12 mos
Social Emotional	16	1	.1	6 mos

Goal ideas

- Increased physical proximity to caregiver
- Decreased elopement and hiding behaviors
- Increased asking for help for self care
- Increased interoceptive cueing such as decreased bed wetting or school accidents
- Increased ability to play with peers

Proprioception

- BIG advocate of proprioceptive input to heal trauma

- Use of proprioceptive body sox
- Creates a calming space , decreased visual contact also recreates the womb experience
- The proprioceptive input connects tactile responses
- Tactile responses may be related to trauma so you can monitor intensity , localization and duration of input
- It’s important to heal the sensory system to decrease the traumatized neural connections

Vestibular

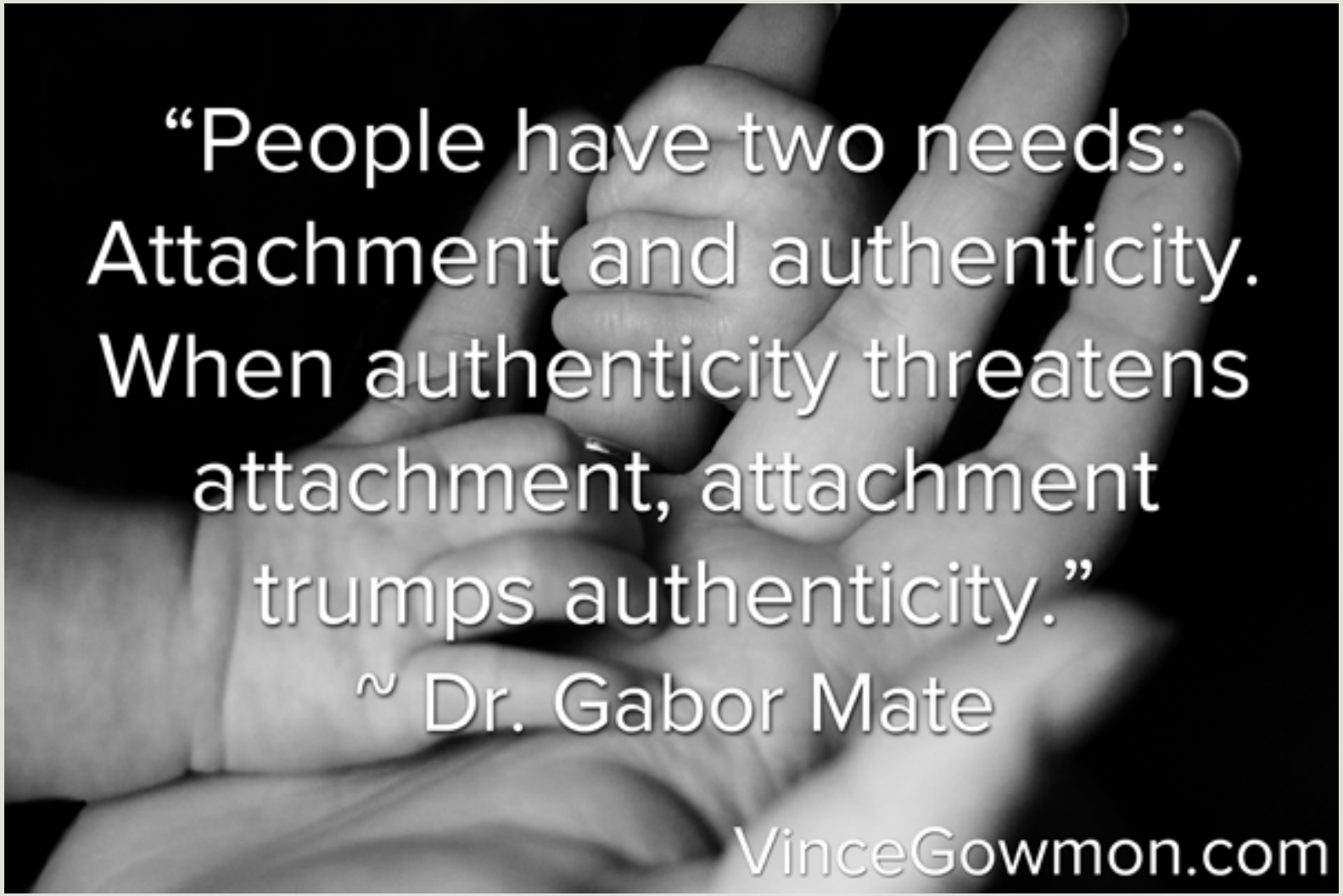
- Co regulation with vestibular
- Use of rocking on yoga ball to decrease hyper arching and allow tactile system to relax
- Use of co-regulated rolling
- Use of coregulated bouncing
- Use of inversion on ball- however can get a highly traumatized response so make sure
- you have good therapeutic relationship and understanding of child's history
- Repair

Trauma play

- Clinically observe child's play for disorganization , non developmentally
- appropriate and repeated play themes .

- Use of child directed play (sound familiar?) to encourage exploration and decreased theming
- Questions X example CS, A

- Use of sensory soothing play constructs such as kinetic sand , shaving cream and people.


“People have two needs: Attachment and authenticity. When authenticity threatens attachment, attachment trumps authenticity.”
~ Dr. Gabor Mate
VinceGowmon.com