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Self Regulation and Behaviour in Early Learners

Angie Rosati, PhD.

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Overview

- Behaviour as a Neurophysiological Phenomenon
  - The Neurophysiology of Stress
  - Reframing Stress
- Self Regulation and Self Control
  - Stress Behaviour vs Misbehaviour
- Relationships and Regulation
  - Stress Buffering / Coregulation
- Shanker Self Reg

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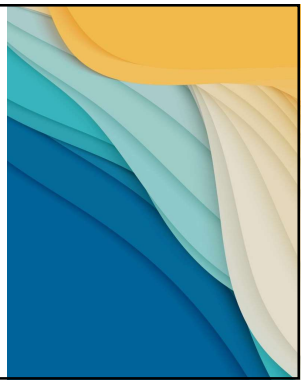
Crises of Challenging Behaviour

- Rise in challenging behaviour (Offord Centre for Child Studies, 2017; Scholastic, 2012)
- Children being expelled from early education settings at unprecedented rates (Gilliam, 2018)
- Rising educator stress - educators report that stress related to managing disruptive behaviour is one of the most difficult and disliked aspects of job



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Default View of Behaviour: Character Lens

- Kids are "good" or "bad" – rooted in ancient Greek philosophy and deeply entrenched in our thinking
- Bad kids need to learn to control behaviour and impulses in order to be good
- Bad behaviour is subconsciously viewed as "weakness" in the child
- This deeply entrenched ***framework shapes what we see and what we do/how we respond to children***

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Rethinking Child Behaviour

Through a Neurophysiological Lens

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Behaviour is about *biology*, not character.

All behaviour is a *downstream* effect of one's neurophysiological systems.
We must go *upstream* to find the roots.

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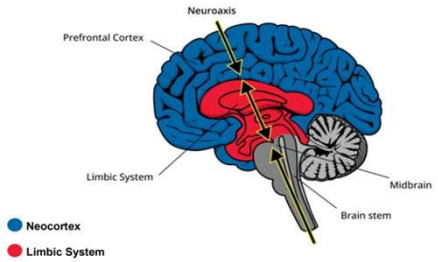
The Triune Brain



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The Stress Response

Sympathetic Nervous System (SNS)
(Adrenaline) (Cortisol)

Parasympathetic Nervous System (PNS)

When we experience a stressor/threat, the *stress response* is triggered.

- **The heart beats faster** – pushing blood to vital organs; pulse rate/blood pressure go up - breathe more rapidly
- **Extra oxygen sent to the brain,** increasing alertness; senses become sharper (hypervigilance).
- **Release of blood sugar** (glucose) into bloodstream, supplying energy to all parts of the body.

SNS is energy consuming and PNS acts to counter **to maintain homeostasis/conserve energy**

Gas and brake systems

These systems are automatic.

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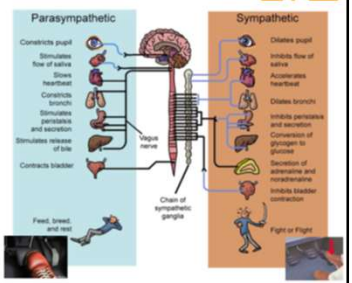
1. Causes sweeping changes in the functioning of the body

2. These systems are incredibly energy consuming – deplete energy and ability to focus.

=behaviour change



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Stress Response is Adaptive: A Survival System *Alters the Priorities of the Brain*

TURNED ON

- Adrenalin - heart rate, breathing, blood pressure
- Sweat glands
- Endorphins
- Hypervigilance- alertness and reactivity
- Cortisol

TURNED OFF

- Digestion
- Immune system
- Cellular repair
- Prefrontal cortex (!)
- Hearing (muscles in inner ear constrict difficulty hearing human voice) (!)

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Not all stress is bad!

- At moderate levels, stress increases executive function (blue brain)
- As stress rises above moderate levels, activity in the blue brain is reduced and activity in red brain is increased associated with reactive motor and emotional responses

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We all respond to stress differently. Where does our response to stress come from?

- ***Highly individual***
  - Temperament/genetics
  - Prenatal exposure to stress
  - Early caregiving; co-regulation, attunement or lack thereof
  - Trauma
- **A "kindled" stress response (due to biology, early trauma, chronic stress) makes some children *more reactive* to stressors.**

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Rethinking Stress and its Relation to Behaviour

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What is Stress?

- A stressor is anything that challenges the Autonomic Nervous System (ANS) to "turn on" the Stress Response
- Stressors can be positive or negative, overt or hidden, physiological or psychological, internal or external
- Stressors are highly individual – based on one's history and biology

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The Domains of Self-Reg

Self-Reg looks at the stresses that arise in 5 core domains of experience:

Each of these domains has its own unique stressors, but they are all interlocked in such a way that stress in any one domain can exacerbate stress-reactivity in another.

When one is caught in a ***stress-cycle***, stressors have a ***multiplying effect*** on each other. This can lead to problems in behaviour, mood, attention, and health.

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Significant Stressors in 2024

Lack of Sleep

Nature Deficit

Family Stress

Lack of Community

Social Media

Video Games

Junk Food and Super stimulants

Overscheduling

Covid

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Prolonged stress increases cortisol

Research shows that excessive cortisol impairs cognitive and socio-emotional functioning

- Cognition:
  - Executive function, visual and verbal memory, working memory
- Socio Emotional:
  - Peer relations, self-regulation and conduct

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Behavioural Signs of an Over-Activated Stress Response

- **Heightened impulsivity**
- **Difficulty ignoring distractions**
- **Inattention**
- **Problems in mood (sees everything negatively)**
- **Oppositional Behaviour**
- **Defensive Behaviour**
- **Erratic mood swings**
- **Trouble listening**
- **What student is saying doesn't make sense**
- **Hyperarousal/Hypoarousal**
- **Freeze**

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Reframing Self Regulation

447 definitions of self-reg in the literature.

Neuroscience invites us to reconsider Self Regulation as our ability to manage stress.

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CHILDREN (AND ALL OF US) REGULATE AUTOMATICALLY.

- This can be adaptive or maladaptive.
- Children regulate as their energy and history allows
- Can get "caught up" in maladaptive patterns of regulation – these feel good in the moment but end up causing more stress (e.g. eating chips, technology)
- A child's capacity for adaptive regulation depends on:
  - ***The amount of stress they are experiencing.***
  - ***The nature of their stress response.***
  - ***Co regulation experiences (an adult who helps them to recognize stress and introduce adaptive strategies)***

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Self-Control vs Self-Regulation

SELF-CONTROL
Is about mental effort to inhibit impulses

VS

SELF-REGULATION
Is about how we manage stress

at least **447** definitions of self-regulation in the research literature

but **446** of these definitions are variations on self-control

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Self control is a blue brain function.
Self control is not possible in a heightened stress response state. The nervous system is depleted and focused on survival. Stressors must be alleviated for adaptive, calm behaviour to be "released".

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Is it Misbehaviour or Stress Behaviour?

If it's Misbehaviour

- Individual can chose to act a certain way
- Is aware shouldn't act "that" way
- Could have chosen/acted differently

If it's Stress Behaviour

- Individual did not *choose* to act a certain way
- Behaviour caused by limbic and sub-limbic processes
- Extremely difficult for individual to control this behaviour

Stress behaviour results from the stress "backpack" outweighing resources.

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What we see determines how we respond…
and what we see is determined by our own stress response.

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What to Do? Relationships and Regulation

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Humans are biologically designed to draw energy from one another and to restore energy through one another.

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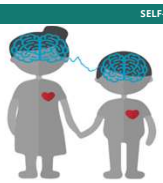
Limbic to Limbic Connection



- Subcortical channel of communication – brain to brain "hook up"
- Limbic brains are designed to read other limbic brains
- We can be a source of calm or stress depending on our own limbic state

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Experimental Studies: Relationships Buffer Stress

- **Childcare provider studies**: children's cortisol levels correlated with the sensitivity of caregiver (Dettling, Parker, Lane, Sebanc & Gunnar, 2000; Sims et al., 2005)
- **Foster Care Studies:** high cortisol children showed lowered levels relative to the amount of warm caregiving they received in the home (Fisher, Kim & Pears, 2009); training foster care providers to create warm and responsive environments reduces cortisol relative to children whose providers were not trained (Dozier, Peloso, Lewis, Laurenceau & Levine, 2008; Fisher, Stoolmiller, Gunnar, & Burraston, 2007)
- **Primary Educator Studies:** child stress and teacher stress highly correlated (Oberle and Schonert-Reichl, 2016)

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What does relational buffering of stress look like?

Sensitive, calm interactions that are "attuned" to child need.

Co-regulation.

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A *regulated* adult can regulate a dysregulated child.

A *dysregulated* adult can never regulate a dysregulated child.

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Lack of Coregulation 2024

Lack of co-regulating opportunities in early childhood will impact the developing stress response

...and lack of co-regulating opportunities in older children will impact regulation of stress response.

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Relationships are first point of self regulation. The more impoverished we are relationally, the more likely we are to relieve stress in maladaptive ways.

Sugar, salt, alcohol, dopamine producing activities (e.g. tech)

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What To Do? Shanker Self Reg

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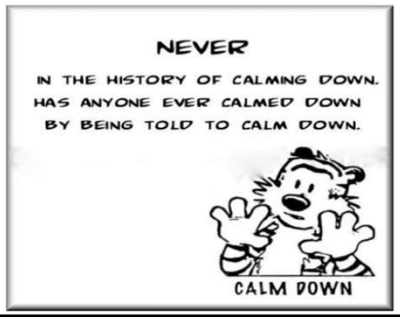

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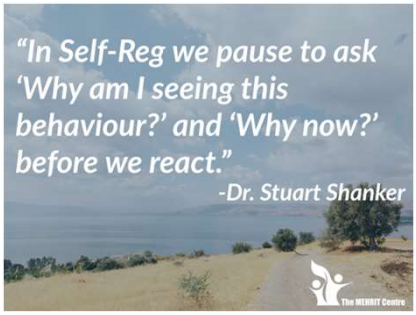

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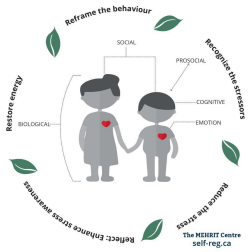
5 Steps

- **Reframe** the behaviour
- **Recognize** the Stressors
- **Reduce** the Stress
- **Reflect/**Enhance Stress Awareness
  - on signs of approaching the point of being overstressed
- **Respond**/Restore Energy
  - Develop personalized strategies to promote calm



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Reframing: Remember - Stress Influences Perception!

- When in red brain (limbic driven) we are more likely to see behaviour as negative
- This is because we are in "survival mode" sensitive to threat
- "Blue Brain" is offline
- Defensive mode
- In a stress state, we experience a different reality

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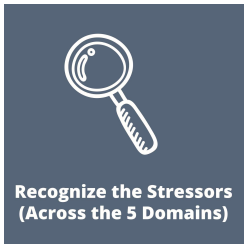

Recognize the Stressors (Across the 5 Domains)

- **Recognize** when something is a positive stress and when it is a negative stress: for ***this*** person at ***this*** moment.
- Be able to see when a child is caught in a stress cycle, and why.

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Reducing Stress: What Helps?

- **SAFE RELATIONSHIP**
- **kindness and patience – share/lend calm**
- **Soothing voice**
- predictability
- exercise
- nature

Note: Stress reduction/calming is different for everyone. Be careful about applying "one size fits all" strategies (e.g. meditation)

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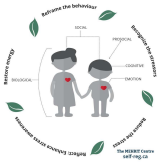
Reflect: Enhance Stress Awareness

- **Reflect**: on signs of an individual approaching the point of being overstressed ***AND*** the signs that *you* are approaching such a point.



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Respond: Develop Personalized Strategies to Promote Resilience and Restoration

- **Respond -** Help the child find opportunities to restore in the moment and overall to promote well being

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Keys Moving Forward

- **Transmit your calm**, not your dysregulation.
- **Borrow the calm of others**; recognize and avoid (when possible) dysregulated others.
- See "misbehavior" think **"stress behaviour".**
- Remember this is **not a program, it's a process;** a way of seeing and knowing.
- Recognize when you are **calm.**
- Recognize when you are **dysregulated.**
- Think like a researcher: **Why this, why now?**

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Two neuroscientific truths, if embraced system-wide, could change trajectories for children:

1. ***Behaviour is a signal of the nervous system***

2. ***A nervous system that is overloaded can be calmed through responsive, attuned relationships.***

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Educators make more minute-by-minute decisions than a brain surgeon…. And that's why you're going home so exhausted each day.

Dr. Tina Boogren

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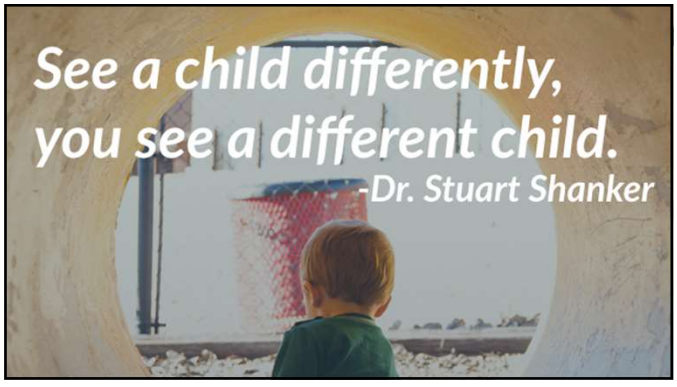

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Further Reading

- Stuart Shanker - Self Reg: How to Help Your Child and You Break the Stress Cycle
- Stuart Shanker - Reframed: Self Reg for a Just Society
- Mona Delahooke - Beyond Behaviours: Using Brain Science and Compassion to Understand and Solve Children's Behavioural Challenges
- Bruce Perry - The Boy Who Was Raised as a Dog
- Richard Louv - Last Child in the Woods
- Elaine Aron - The Highly Sensitive Person
- David Eagleman - The Brain: The Story of You / Incognito: The Secret Lives of the Brain
- Robert Thayer – The Origin of Everyday Moods: Managing Energy, Tension, and Stress
- Gabor Mate – The Myth of Normal: Trauma, Illness and Healing in a Toxic Culture
- Jonathan Haidt: The Anxious Generation

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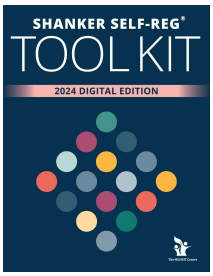
NOW AVAILABLE



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Our Self-Reg 2024 Toolkit for individuals and for teams of 25 includes **60 tools** that can be used to help infuse Self-Reg through day-to-day practice and assess Self-Reg progress and learning.

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Stuart's groundbreaking analysis of neuroscience research, along with practical examples and reflection tools, will help you to learn:

- How stress affects the brain
- How stress manifests in our minds and bodies
- How the to use the five steps of Self-Reg can build resilience
- The power and restorative impact of co-regulation.
- This book, along with The MEHRIT Centre's course Enhancing Resilience in Children and Youth will give you the keys to finding calm in yourself and in children and youth, no matter how much stress comes your way.

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