Regulation

Observation Understanding & Response

Donna Smyth

Australian Childhood Foundation

1

2

Learning Outcomes

1. Understand what is meant by self-regulation, and how it is impacted by complex trauma
2. Consider self-regulation from a developmental framework
3. Explore what dysregulation may look like in the school setting, and how we might respond
4. Discover strategies to promote students' self-regulation capacity

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3

Session Outline

- What is self-regulation?
- The impact of complex trauma
- DOMAINS OF REGULATION
  - Assessing regulation capacity
  - Responding to regulation needs
  - Building regulation capacity

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4

Self regulation: (v): the ability to monitor and control our own behaviour, emotions, or thoughts, altering them in accordance with the demands of the situation.

J.Cook (2014)

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5

Regulation Domains

- Emotional
- Cognitive
- Physiological
- Relational
- Behavioural

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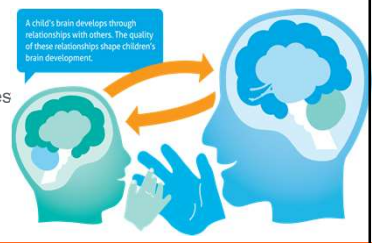
6

Impact of complex trauma on the development of self-regulation

- Neurobiological impact
- Physiological Impact
- Early care-giving experiences
- Ongoing environmental influences



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7

Trauma and the brain

Hypothalamus
Links the nervous system to the endocrine system via the pituitary gland. It synthesizes and secretes hormones to control body temperature, hunger, thirst, fatigue, sleep, and circadian cycles.

Corpus Callosum
Bridge between the 2 hemispheres. Chronic stress can damage and thin down this bundle of neurons

Prefrontal cortex
Responsible for executive functions, such as judgement, reasoning, and self awareness. Trauma reduces capacity for PFC to moderate automatic responses

Thalamus
Sensory receptor within the diencephalon. Receives and passes on sensory data to be further processed by other areas of the brain

Amygdala
Survival response centre within the limbic lobe that becomes enlarged and more sensitive the more it is activated through responding to threats

Hippocampus
Consolidates memory by providing the context/ sequential data for episodic memories. Goes offline in the face of trauma - memory is not encoded properly.

Cerebellum
Balance and coordination, motor skills may be impacted by trauma

Image source: ©2018 ACT

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8

Physiological Impacts - *Dysregulated Arousal*

Ogden, Minton, Pain 2006

Fight or Flight hyper-vigilant, action-orientated, impulsive, emotionally flooded, reactive, defensive, self-destructive

Freeze Physically immobilized, frozen, tense musculature

Sympathetic Hyper-arousal

Social Engagement

Window of Tolerance

AROUSAL

Submit Collapsed, weak, defeated, flat affect, numb, empty, helpless, hopeless

Parasympathetic Hypo-arousal

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9

Early Care-giving experiences

- We learn the building blocks of self regulation through sensitive, attuned, co-regulatory experiences

10

Ongoing environmental influences

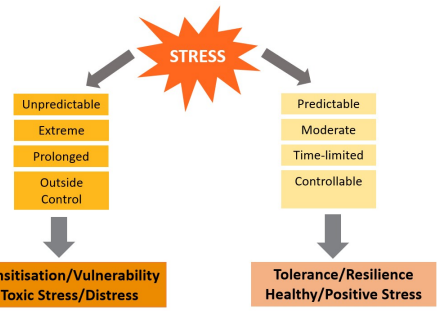
Many children continue to live in high stress environments:

- Ongoing parental substance use / mental health
- Exposure to domestic violence
- Unpredictability
- Basic needs met inconsistently
- Unstable placements
- Difficult contact visits with parents
- Separation from siblings

11

Toxic Stress & Uncertainty

Also known as:
"the 2020 effect"



12

Regulating Emotions

- Normal developmental expectations
- Indicators of dysregulation
- Capacity building

13

Regulating Emotions

Normal Developmental Expectations

- What can we expect at what age?

Indicators of Dysregulation

- Age-appropriate vs problematic

My Zones Tool Box

Blue Zone	Green Zone	Yellow Zone	Red Zone
When I feel...	When I feel...	When I feel...	When I feel...
Sad Tired Sick Bored	Happy Calm Focused	Frustrated Worried Silly Excited	Mad Angry Afraid
I can...	Behaviors	I can...	I can...

14

Building Capacity – *Regulating Emotions*

Co regulating strong emotions	Tune into cues from the child – know their triggers, reflect affect – mirroring, prosody, validate emotions, engage senses,
Enhancing positive emotions	Build opportunities for connection, provide small opportunities for fun and joyful experiences, model these, validate and name feelings – positive and negative
Promoting emotional literacy	During times of calm – when the cortex is online – teach the child about their emotions. Help them to see the patterns and triggers for them

15

Regulating Physiology

- The role of hormones
- Sensory processing
- Indicators of Dysregulation
- Building capacity

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17

Hormone Systems

- What do hormones do in our bodies?





- Developmental Trauma can include impact to the development and functioning of the Hypothalamus, interrupting its link to the endocrine system and how our body sends, receives and responds to hormone signals.
- These processes are also impacted by a lack of routine and daily rhythm
- Chronic stress = constant activation of HPA axis and cortisol flooding the system

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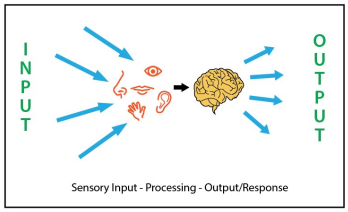
18

Sensory Processing

- Our brains develop pathways for how to ***receive, process and respond to*** sensations from our environment.
- Interruptions in any or all of these processes can cause a variety of difficulties in the school/learning environment



Sensory Input - Processing - Output/Response

Image taken from www.childsuccesscentre.com

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19

Indicators of Dysregulation

- ***Brainstorm and discuss:*** what signs or symptoms might we see in children that would indicate dysregulation in body systems?

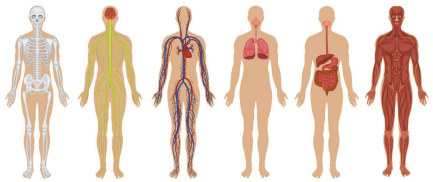

Image from: https://www.livescience.com/37009-human-body.html

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20

Building Capacity - *Regulating Physiology*

Implement routines	Implement consistent routines throughout the day to support hormone systems establishing rhythmic cycles
Promote awareness & response	Support students to practice *awareness of* and *response to* their physiological needs – thirst, hunger, stretching, etc – and don't be afraid to prompt!
Sensory experiences	Provide a range of sensory experiences throughout the day – become a keen observer and look for clues as to a child's preferred sensory modality, what seems to calm, and what seems to trigger. Facilitate conscious awareness of these sensations to help the child develop their own awareness, as this will help them develop the skills to regulate their own needs in this area.
Physical environment	Consider the physical learning and play environments – lighting, seating, pictures, smells, sounds, colours, textures, distractions, etc!

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21

22

Regulating Cognition – *Attention, Awareness & Concentration*

- Keeping the cortex online
- The role of the "Superior Colliculus"
- Focused attention and sensory attention
- Left and Right Brain
- Capacity Building

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Keeping the Cortex online

- Only possible if brain/body perceive safety and survival system can relax (therefore: meet safety needs as first priority).
- Encourage regular breathing exercises throughout the day – this not only calms the alarm system but also ensures enough oxygen is getting to the cortex
- Keeping our cortex online is HARD WORK! Include regular brain-breaks throughout the day and break up cortically-challenging subjects/tasks with creative/active tasks

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Superior Colliculus

- Sits just below the Thalamus. Triggers a behavioural response to environmental stimuli – primarily head and eye movements in response to sights and sounds.
- How might this function get in the way of learning?
- How can we utilise this function to enhance learning?

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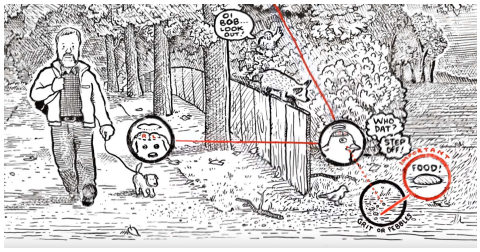
25

Left and Right Brain – Focused attention & broad awareness



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26

Capacity Building – *Regulating Cognition*

Promote regulation in other domains	All domains are interconnected. When you support other domains it supports cognition.
Use calm down or wake up activities	Tuning in to the child – where are they in their window? Do they require calming down or waking up?
Incorporate brain or body breaks	Regular breaks from executive functions – stretch, star jumps, drink of water, piece of fruit.
Sensory audit and support	Limit visual/auditory distractions. Provide targeted sensory support to boost attention/engagement

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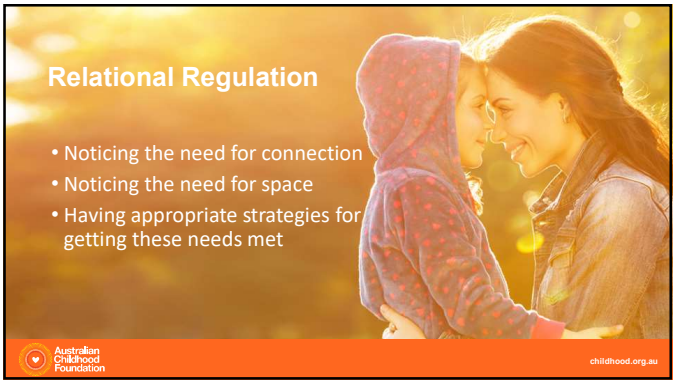
28



29

Regulating Behaviour

"Challenging behaviour occurs when the demands of the environment exceed a kid's capacity to respond adaptively."

Ross Greene

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32

What leads to dysregulated behaviour?

1. Dysregulation in other domains
2. Under-developed Impulse Control

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33

Capacity Building – *Regulating Behaviour*

1. Support regulation capacity in other domains
2. Support the development of Impulse Control

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34


Assessing Regulation Capacity
Key principles:
• Developmental process
• Context specific
• Interactive systems
• Fluid – not static
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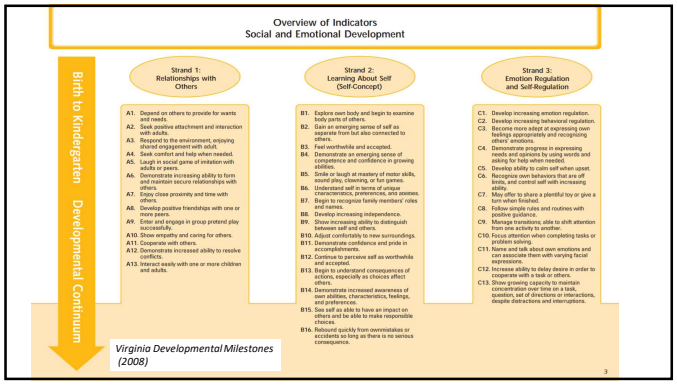
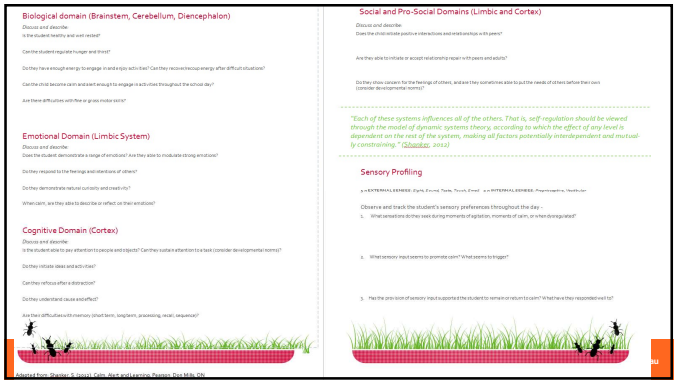
36


Overview of Indicators
Social and Emotional Development
Birth to Kindergarten Developmental Continuum
Strand 1: Relationships with Others
A1. Depend on others to provide for wants and needs.
A2. Seek positive attachment and interaction with adults.
A3. Respond to the environment, enjoying shared engagement with adult.
A4. Seek comfort and help when needed.
A5. Laugh in social game of imitation with adults or peers.
A6. Demonstrate increasing ability to form and maintain secure relationships with others.
A7. Enjoy close proximity and time with others.
A8. Develop positive friendships with one or more peers.
A9. Enter and engage in group pretend play successfully.
A10. Show empathy and caring for others.
A11. Cooperate with others.
A12. Demonstrate increased ability to resolve conflicts.
A13. Interact easily with one or more children and adults.
Strand 2: Learning About Self (Self-Concept)
B1. Explore own body and begin to examine body parts of others.
B2. Gain an emerging sense of self as separate from but also connected to others.
B3. Feel worthwhile and accepted.
B4. Demonstrate an emerging sense of competence and confidence in growing abilities.
B5. Smile or laugh at mastery of motor skills, sound play, clowning, or fun games.
B6. Understand self in terms of unique characteristics, preferences, and interests.
B7. Begin to recognize family members' roles and identity.
B8. Develop increasing independence.
B9. Show increasing ability to distinguish between self and others.
B10. Adjust comfortably to new surroundings.
B11. Demonstrate confidence and pride in accomplishments.
B12. Continue to perceive self as worthwhile and capable.
B13. Begin to understand consequences of actions, especially as choices affect others.
B14. Demonstrate increased awareness of own abilities, characteristics, feelings, and preferences.
B15. See self as able to have an impact on others and be able to make responsible choices.
B16. Rebound quickly from overmistakes or accidents so long as there is no serious consequence.
Strand 3: Emotion Regulation and Self-Regulation
C1. Develop increasing emotion regulation.
C2. Develop increasing behavioral regulation.
C3. Become more adept at expressing own feelings appropriately and recognizing others' emotions.
C4. Demonstrate progress in expressing needs and opinions by using words and asking for help when needed.
C5. Develop ability to calm self when upset.
C6. Recognize own behaviors that are off limits, and control self with increasing ability.
C7. May offer to share a plentiful toy or give a turn when finished.
C8. Follow rules and routines with verbal guidance.
C9. Manage transitions; able to shift attention from one activity to another.
C10. Focus attention when completing tasks or problem solving.
C11. Name and talk about own emotions and can associate them with varying facial expressions.
C12. Increase ability to delay desire in order to cooperate with a task or others.
C13. Show growing capacity to maintain concentration over time on a task, question, set of directions or interactions, despite distractions and interruptions.
Virginia Developmental Milestones (2008)

37


Biological domain (Brainstem, Cerebellum, Diencephalon)
Emotional Domain (Limbic System)
Cognitive Domain (Cortex)
Social and Pro-Social Domains (Limbic and Cortex)
"Each of these systems influences all of the others. That is, self-regulation should be viewed through the model of dynamic systems theory, according to which the effect of any level is dependent on the rest of the system, making all factors potentially interdependent and mutually constraining." (Shanker, 2012)
Sensory Profiling

38

Student:_____

Self-Regulation Data Collection	Demonstrates: Limited Skills	With Prompts (Visual/ Verbal)	Emerging Skills (1+ settings)	Functionally Independent (All settings)
Basic Foundational Skills				
Ability to communicate wants and needs				
Asks for help				
Accepts ending/transition with use of concrete tool (timer/schedule)				
Accepts 1-2 changes in schedule (flexibility)				
Ability to ask for a break				
Ability to wait for a short period of time				
Ability to identify 10 or more emotions in pictures				
Participates in calming activities				
Recognizes simple emotions in others				
Labels 7 emotions in self				
Emergent Understanding				
Attends to group activities				
Stays on task while engaged in activity				
Accepts helps from adults to aid in regulation				
Communicates anger, frustration or disapproval via verbal/visual means				
Communicates lack of understanding or need for clarification				
Accepts unexpected changes in plans				
Able to identify state of arousal and feelings (Zones)				
Can identify 5 triggers that lead to frustration or anxiety				
Identifies how one's behavior affects others feelings and thoughts				
Initiates use of tools/supports to regulate self				
Identifies what is the main problem given a conflict (gestalt thinking)				
Ability to classify the size of a problem (objectivity)				
Functional Confidence				
Accepts Authority from: Adults				
Peers				
Follows general rules of environment/situation				
Handles being corrected by others				
Self advocates in adverse situations				
Refuses requests of others appropriately				
Able to generate solutions to positively solve problems				
Ability to tolerate new demands				
Self-advocates needs, wants and desires				
Regulates voice and body to match environmental demands				
Negotiates compromise as part of conflict resolution				
Adjusts own behavior based on interpretation of nonverbals/environmental cues				
Proactively clears hurdles to maintain expected regulated state				

Adapted from H. Hanzlick, L. Petersen and L. Rogers' *Moving Toward Functional Social Competence* (2007)

39

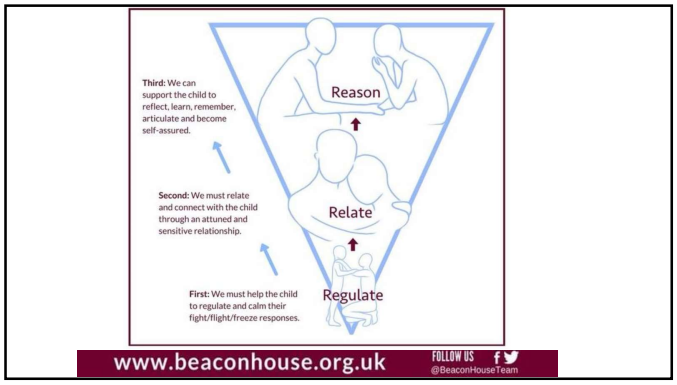
ZONES OF REGULATION PRE-QUESTIONNAIRE Date:_____ Identifier:_____

	1	2	3	4	5
Expresses basic emotions (Happy, mad, sad)					
Expresses more nuanced emotions (frustrated, disappointed)					
Expresses complex emotions (embarrassed, anxious, jealous)					
Notices when feeling uncomfortable emotions and utilizes effective strategies or seeks productive help (goes to get a drink, asks for help on a difficult question, seeks clarification, gets assistance before small problems turn big, utilizes social support, etc.)					
Student reacts appropriately to the emotions of others					
Student demonstrates an understanding that their behaviour affects the way that others think and feel about them					
Student demonstrates the ability to change their state (energy level) to match the context (e.g., can come in from recess and calm down in a reasonable timeframe)					
Student demonstrates or expresses an understanding of the things that bother them and the things that support their learning (e.g., knows that they can't do their work when it's really noisy, makes good choices to support their learning)					
Student takes action to support their own learning and participation					
Student is able to effectively participate in classroom activities 80% of the time.					
Student demonstrates or expresses pleasure from effective participation in school activities.					
Student demonstrates self-awareness of their current state (e.g., accepts or acknowledges when they are being silly, distracted, experiencing difficulty of frustration, accepts praise, etc.)...					
Student demonstrates emotional regulation in that their response/reaction is matched to the incident					
Student thinks before acting and prepares for success					
Student displays appropriate classroom behaviours 80% of the time.					

1- Does not demonstrate this skill
2- Does this infrequently or poorly
3- Does this just OK or sometimes
4- Demonstrates this skills most of the time
5- Very capable and does this often

40

41



42

Overview of Strategies to Build Capacity

EMOTIONAL
Build emotional literacy during moments of calm
Validate and CO-REGULATE strong emotions

PHYSIOLOGICAL
Increase awareness of bodily sensations/reactions
Support identifying & meeting physical needs
Provide a variety of purposeful sensory activities
Provide a range of micro-environments

BEHAVIOURAL
Assess and meet needs across other 4 domains
Develop impulse control

COGNITIVE
Use running themes to link content across subjects
Limit unnecessary distractions (visual and noise audit)

RELATIONAL
Tune into cues re tolerable levels of interaction
Support facilitated social interactions with peers

Children need permission, opportunities, resources and support to practice their regulation skills

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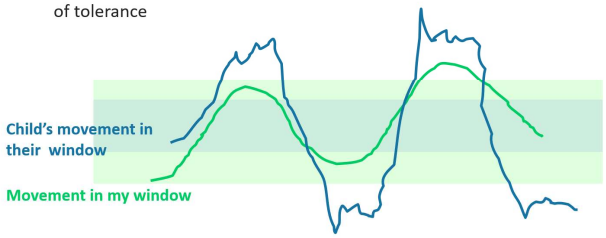
43

44

- When people are in relationship one's ability to regulate them self in relation to their window of tolerance will effect the other's ability to regulate them self in relation to their window of tolerance



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45

The Healthy Mind Platter

The Healthy Mind Platter for Optimal Brain Matter

46

Successful outcomes for children are achieved when they…

Engage in opportunities to experience, tolerate, express, regulate and integrate their feelings and experiences

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47

Recommended Reading/Viewing

Flora, I. (2011). Developing young children's self-regulation through everyday experiences. *Young Children.* pp 46-51.

Fried, L. (2011). Teaching teachers about emotion regulation in the classroom. *Australian Journal of Teacher Education, 36* (3).

Ponitz, C. et al. (2009). A structured observation of behavioral self-regulation and its contribution to kindegarten outcomes. *Developmental Psychology,* vol 45 (3), 605-619.

Shanker, S. , & Barker, T (2016). Self-Reg. Yellowkite Books: London

https://self-reg.ca/

http://www.livesinthebalance.org/educators-schools