



MODULE

5

Stress and Self-Regulation

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BUILDING
RESILIENCE WITH
INFANTS AND
YOUNG CHILDREN

Enhancing ECE
Knowledge and Practice
Related to Trauma,
Stress and Mental
Health



Land Acknowledgment

We would like to begin by acknowledging that the land on which we are situated is the traditional territory of many nations including the Mississaugas of the Credit, the Anishinaabe, the Haudenosaunee and the Huron-Wendat Peoples. It is home to many diverse First Nations, Inuit and Métis Peoples.

Mothercraft College of Early Childhood Education is located in Toronto, a name derived from a Mohawk word, Tkaronto, meaning “the place in the water where the trees are standing.”

As we gather here to deepen our shared understanding through teaching, learning and research, we acknowledge and give respect to the First Peoples who have lived here before us, to those who continue to live and thrive here, and to those whose knowledge, experience and wisdom will be an integral part of our learning. In the spirit of peace, friendship and respect, we offer our gratitude for the journey we will be taking together.

We also wish to acknowledge the role that colonization has played in creating division and inequality between Indigenous and non-Indigenous people and that many lives continue to be affected. We are committed to educating ourselves about Truth and Reconciliation and to taking action, individually and professionally, to promote justice and hope for all children and families.

Mothercraft College of Early Childhood Education developed this Land Acknowledgment through a process of deep reflection.

For those joining from other territories, please take a moment to acknowledge the ancestral lands on which you are situated. Helpful information can be found at: www.native-land.ca

Africentric Land Acknowledgment

As people of Afrikan descent,
we offer this land recognition in solidarity with the Indigenous
peoples of Turtle Island
in the efforts and deliberate intentions toward decolonization.
We acknowledge the land of Turtle Island,
that was never meant to be owned.
We recognize that most of the land
that was entrusted to the Indigenous peoples, was in some
cases shared by choice,
but all too often taken by force.
We recognize the historical colonialism,
and the ongoing colonialism,
that has led to the present-day situation
where land acknowledgements
are offered in place of land.

As people of Afrikan descent,
many of us have come here by choice,
while many are here as a result of historical force.
We acknowledge the complexities
where we were promised land
that was never given,
By those whose it never was to give.
As people of Afrikan descent,
we acknowledge the land of Turtle Island that sustains us,
express deep gratitude to its Indigenous peoples, and pledge to
honour our dignity and divinity that ultimately connects us all.

© by Kaye Johnson, 14 October 2020, used with permission

This Land Acknowledgment was provided by our Anti-Black Racism team members: Carolee Crooks, Nicole Cummings-Morgan, Diane Daley, Stephanie Jones, and Carlene Nembhard

Infants and young children need to know

Attune

How do warm and caring interactions with trusted adults help me to regulate what I think, feel and do?

Identify

What can adults do to help me discover how the world outside affects the feelings I have inside?

Communicate

How do my cues tell adults the kinds of responses I need in order to feel comforted when I am in distress?



Adults need to demonstrate

Attune *How does paying attention to a child's cues, and responding with sensitivity, help a child learn to self-soothe?*

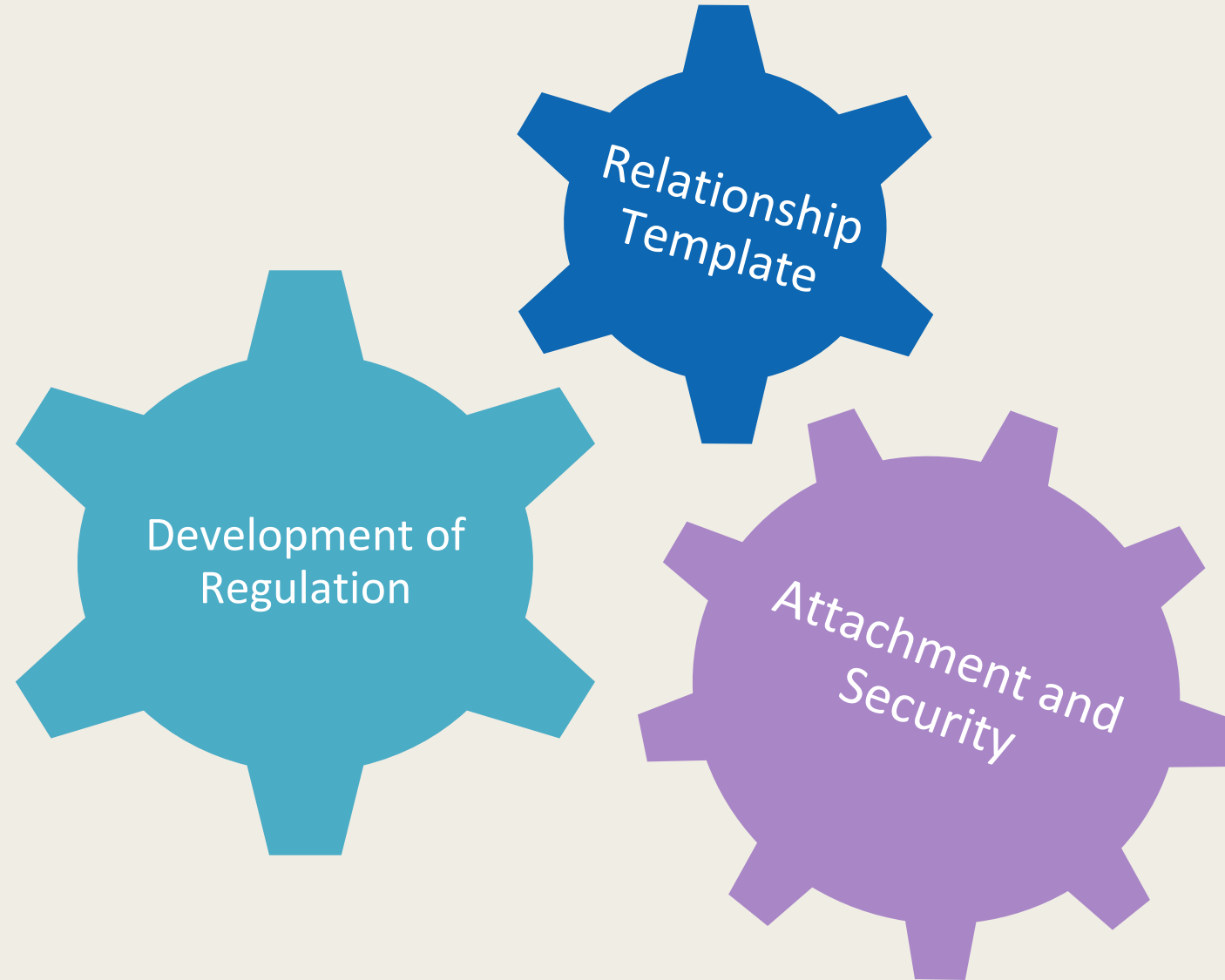
Identify *When I name different emotions for a child, and give them strategies for calming, how does this teach a child to recognize and manage their own feelings?*

Connect *When I support a child and co-regulate, how does this help them to understand their experience, including their thoughts, feelings and actions?*



In this module, you will learn about

1. The role of ECEs in helping infants and young children develop regulation
2. How ECEs can recognize their role in helping to calm stress behaviours in infants and young children
3. How co-regulating stress behaviours promotes the development of self-regulation in infants and young children

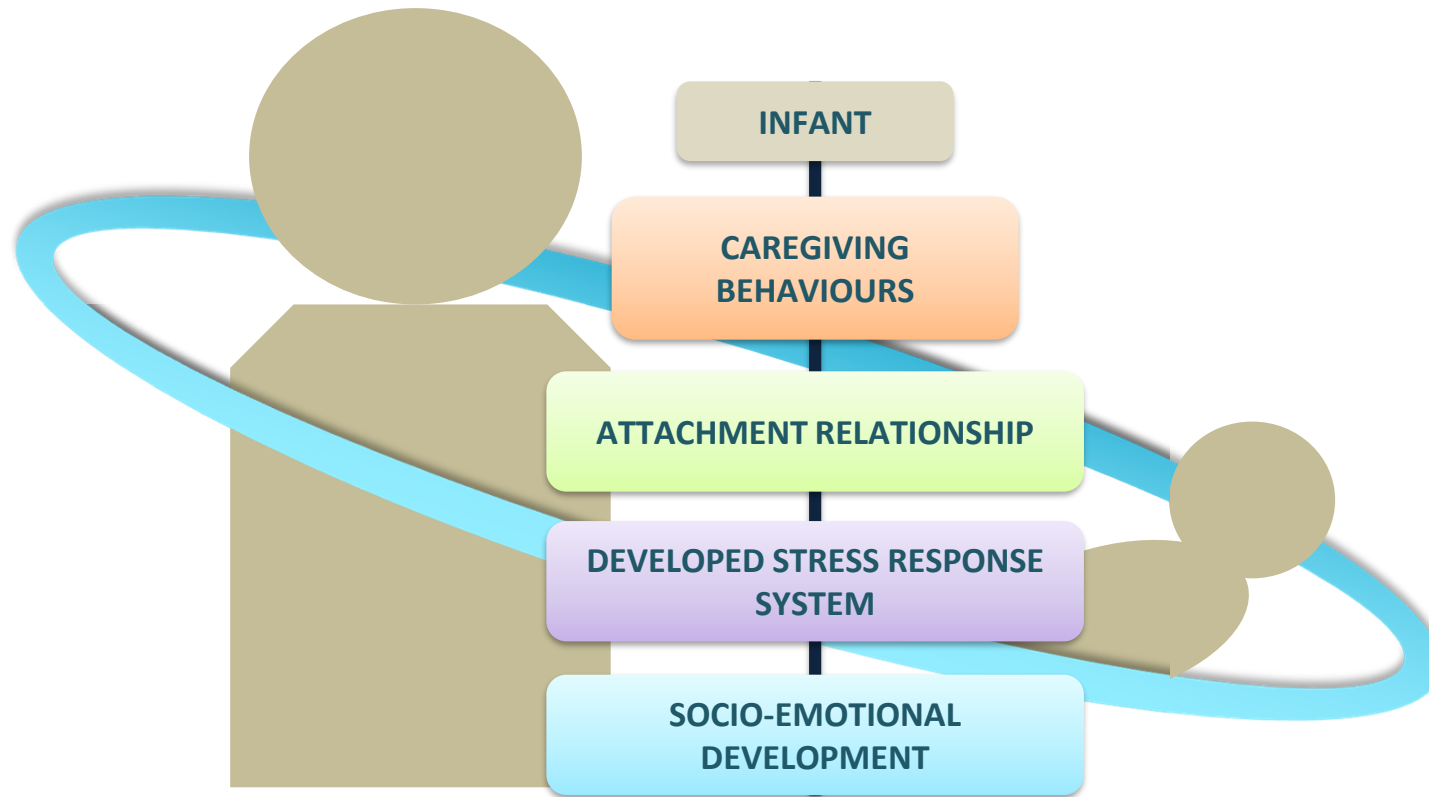


Tasks of Childhood

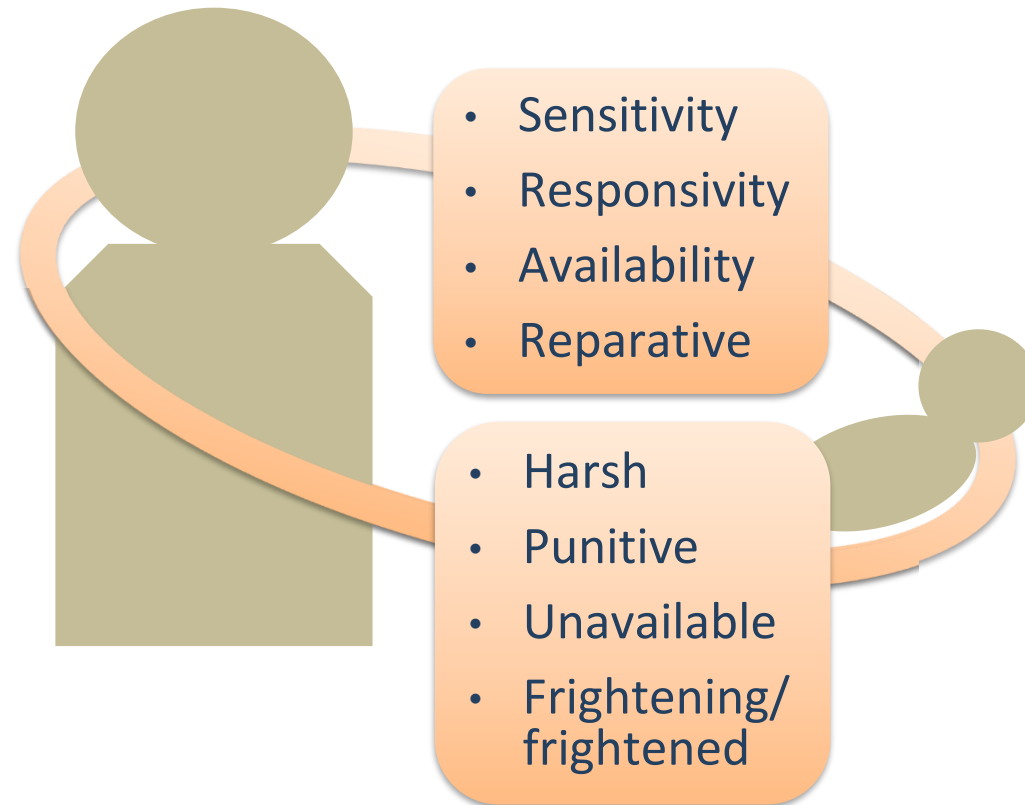
1. Develop a strong and secure attachment relationship
2. Learn to modulate external sensory input
3. Learn to identify internal affective states – positive and negative
4. Effectively communicate needs and get needs met
5. Effectively adapt to changing world ... problem solve

Lillas & Turnbull 2009

Security & Regulation Formulation

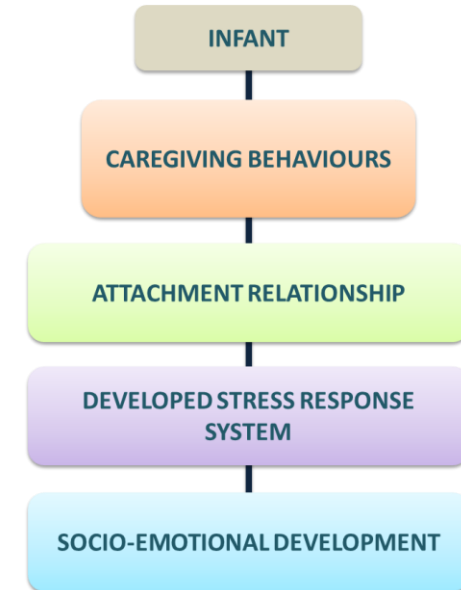
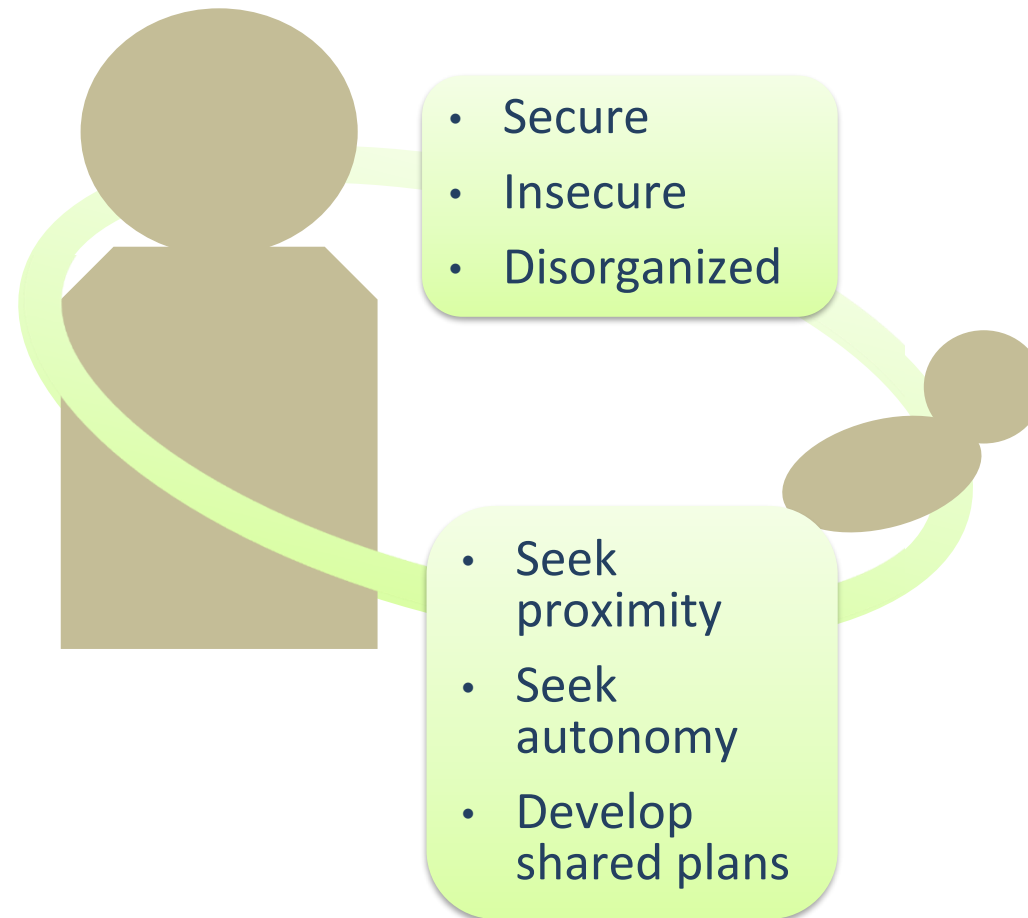


Caregiving Relationship



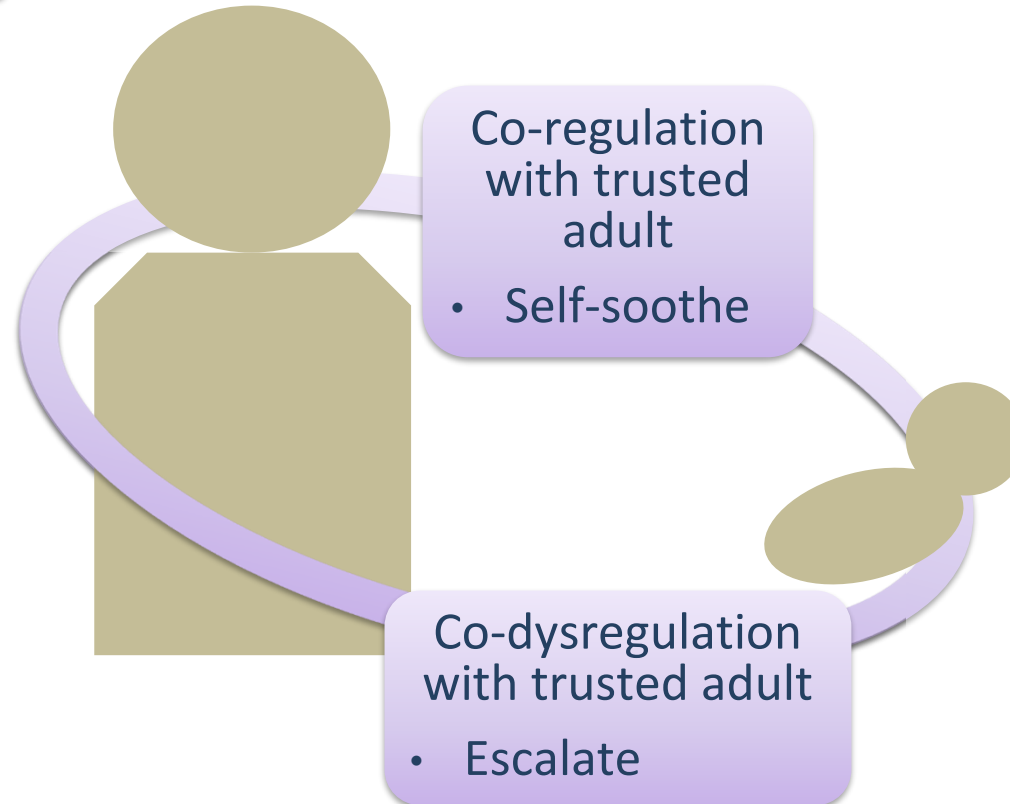
Developed Attachment Relationship

Care Getting Relationship

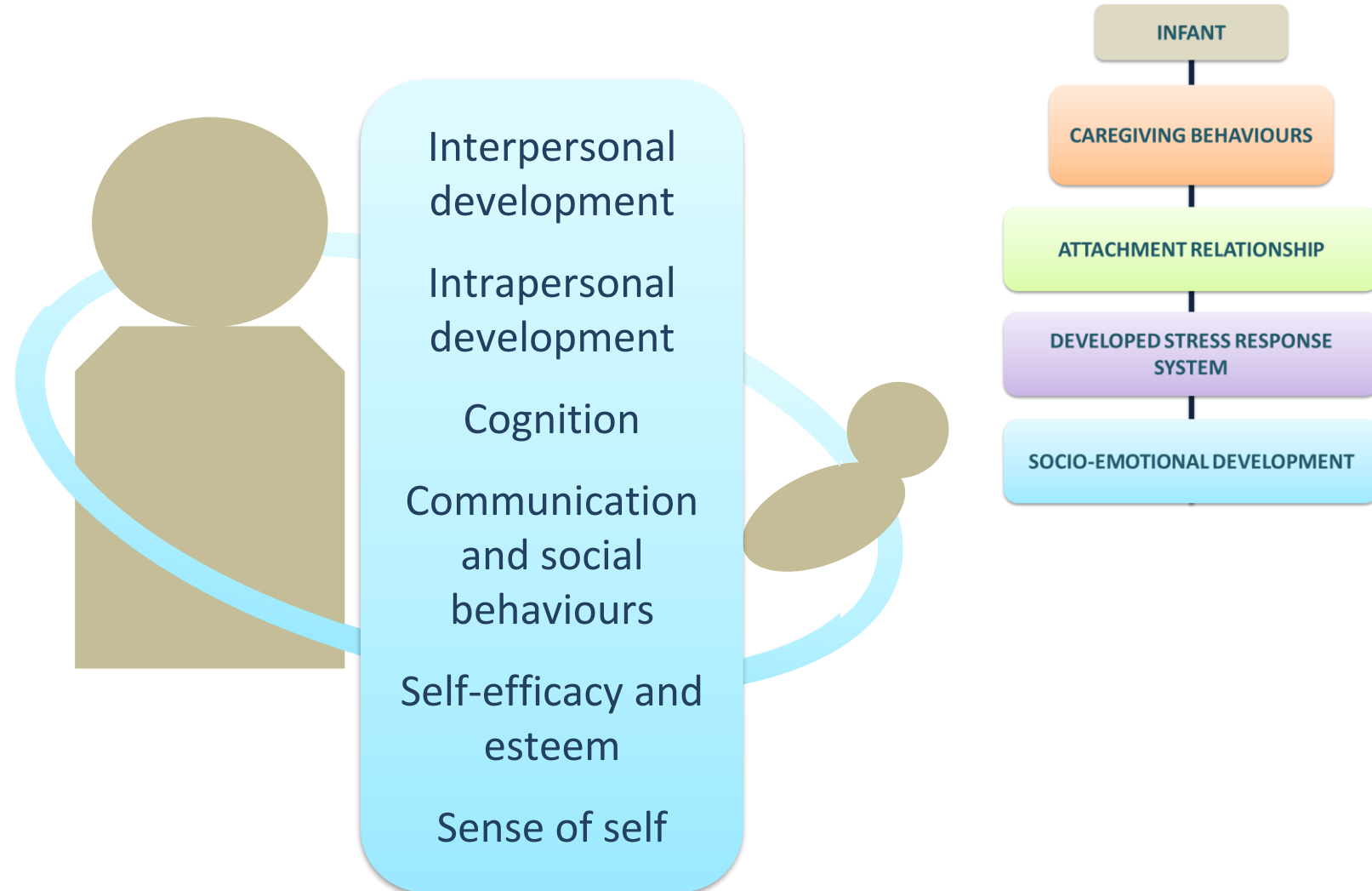


Developed Stress Response System

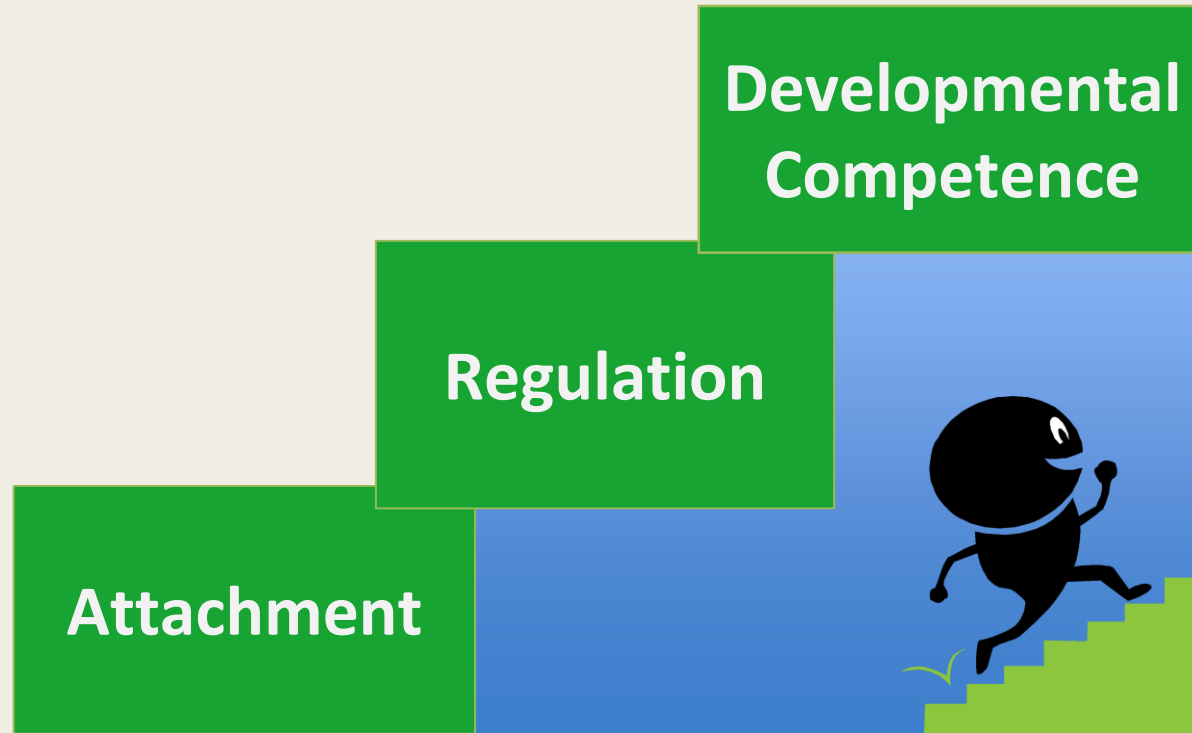
Care Getting Relationship



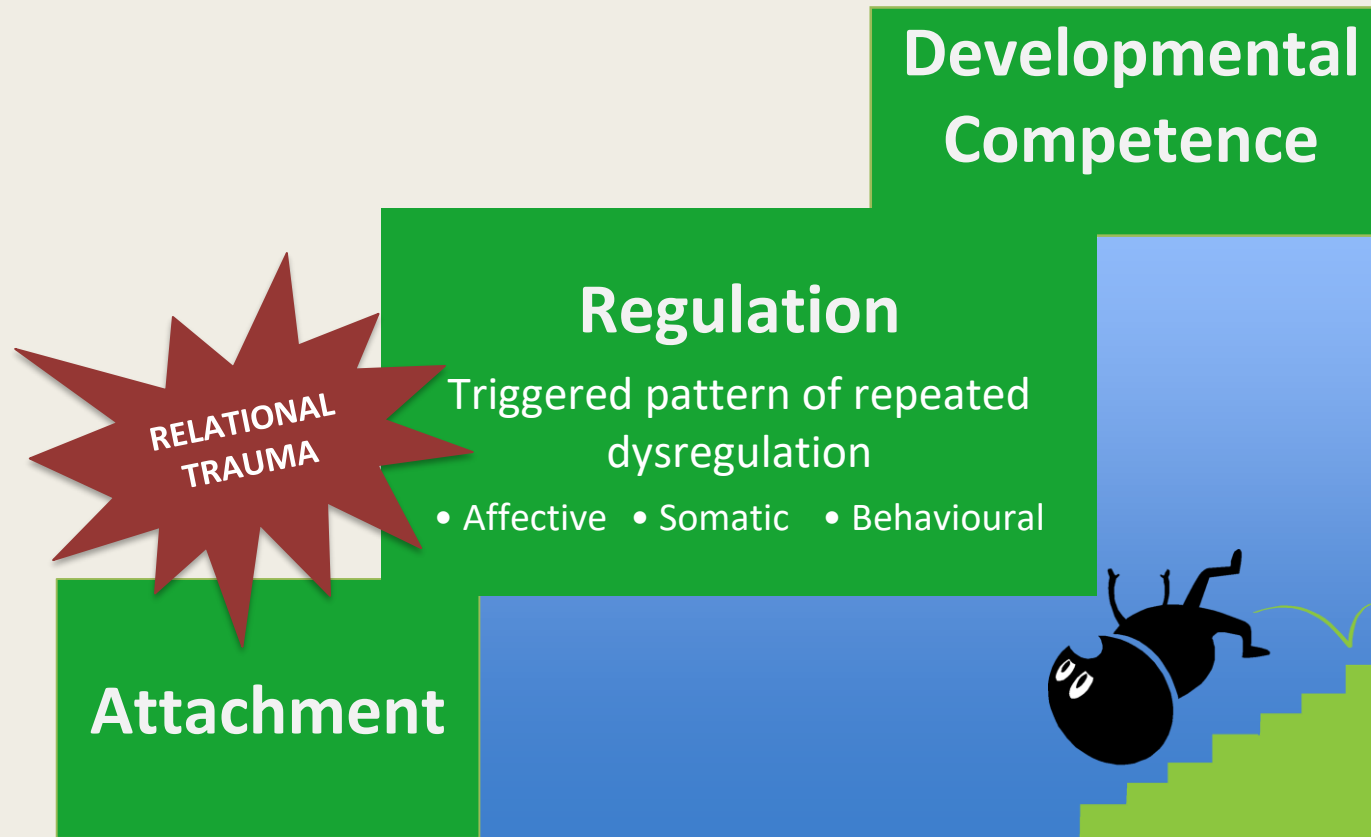
Socio-Emotional Development



Human Development



Complex Trauma Model



Video: Self-Regulation and Co-Regulation

Co-regulation precedes self-regulation

Changing balance between other-regulation and self-regulation as a child develops into an adult and as an adult ages

Development → Aging

Changing balance between other-regulation and self-regulation as a child develops into an adult. (From "Paths of Emotion and the Emergence of Attention-related Development," by R. J. Davidson, 2004, in *Emotion: Current Research and Future Applications*, ed. J. A. J. Cameron, S. C. McDemerter, & K. V. Rosenblum [Eds.], New York: Guilford Press. Copyright 2004 by The Guilford Press. Reprinted with permission.) Found on the Neurological Foundation's blog on page 28. Adapted by C. 10/11/2016.

Watch the video and ask yourself:

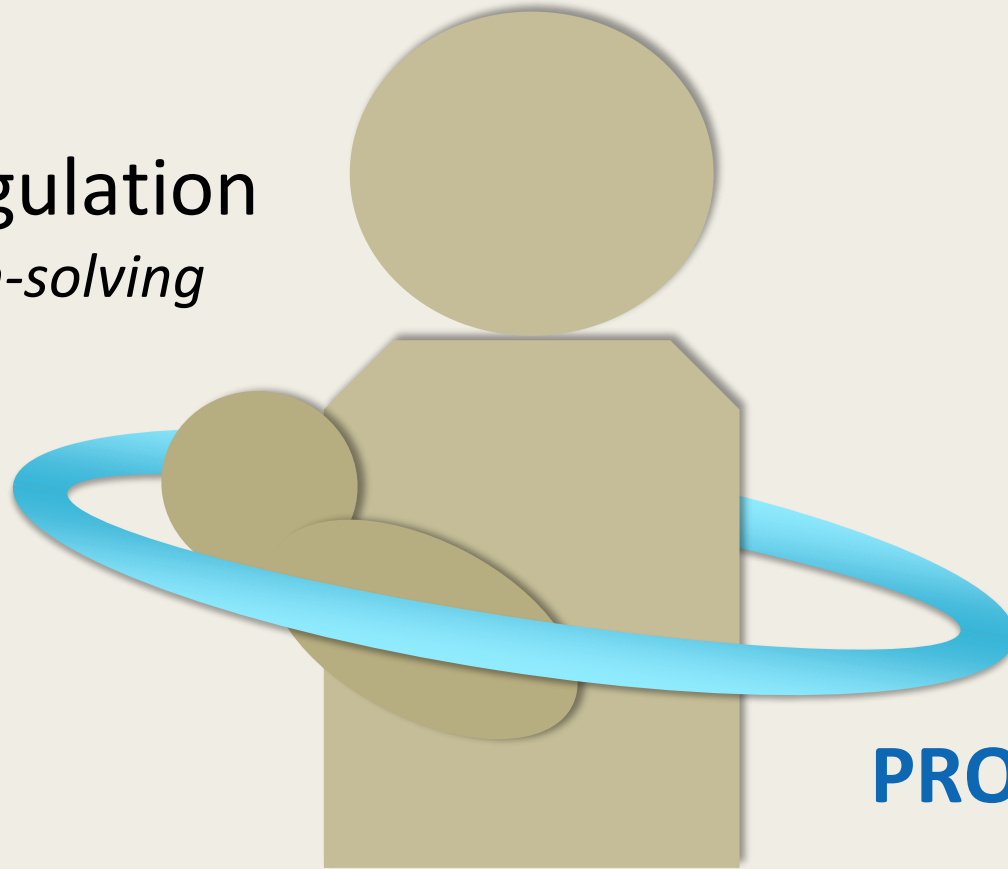
1. What role do adults play in helping children to self-regulate?
2. What kinds of internal and external sensations might children be experiencing when stressed?
3. What is involved in learning to self-soothe?

4 min 26 sec
Elm Tree Clinic

GOAL:

Self-Regulation

Problem-solving



PROCESS:

Co-Regulation

*organizing stress to solve
problems*

Emotional signs

agitation, feeling overwhelmed, difficulty returning to calm, feeling badly about yourself and/or others

Physical signs

tense muscles, rapid heartbeat, dry throat, grinding teeth, trouble with sleep

When stress shows up ...

Cognitive signs

worrying, racing thoughts, forgetfulness, trouble focusing, impulsivity, pessimism

Behavioural signs

changes in appetite, procrastinating, nervous behaviours like nail biting and fidgeting

When an ECE sees a child showing signs of stress, what can we do to help the child self-regulate?



stress
onset

Sarah Watamura, 2016



stress
activation

stress recovery
and
engagement

stress
onset

Sarah Watamura, 2016

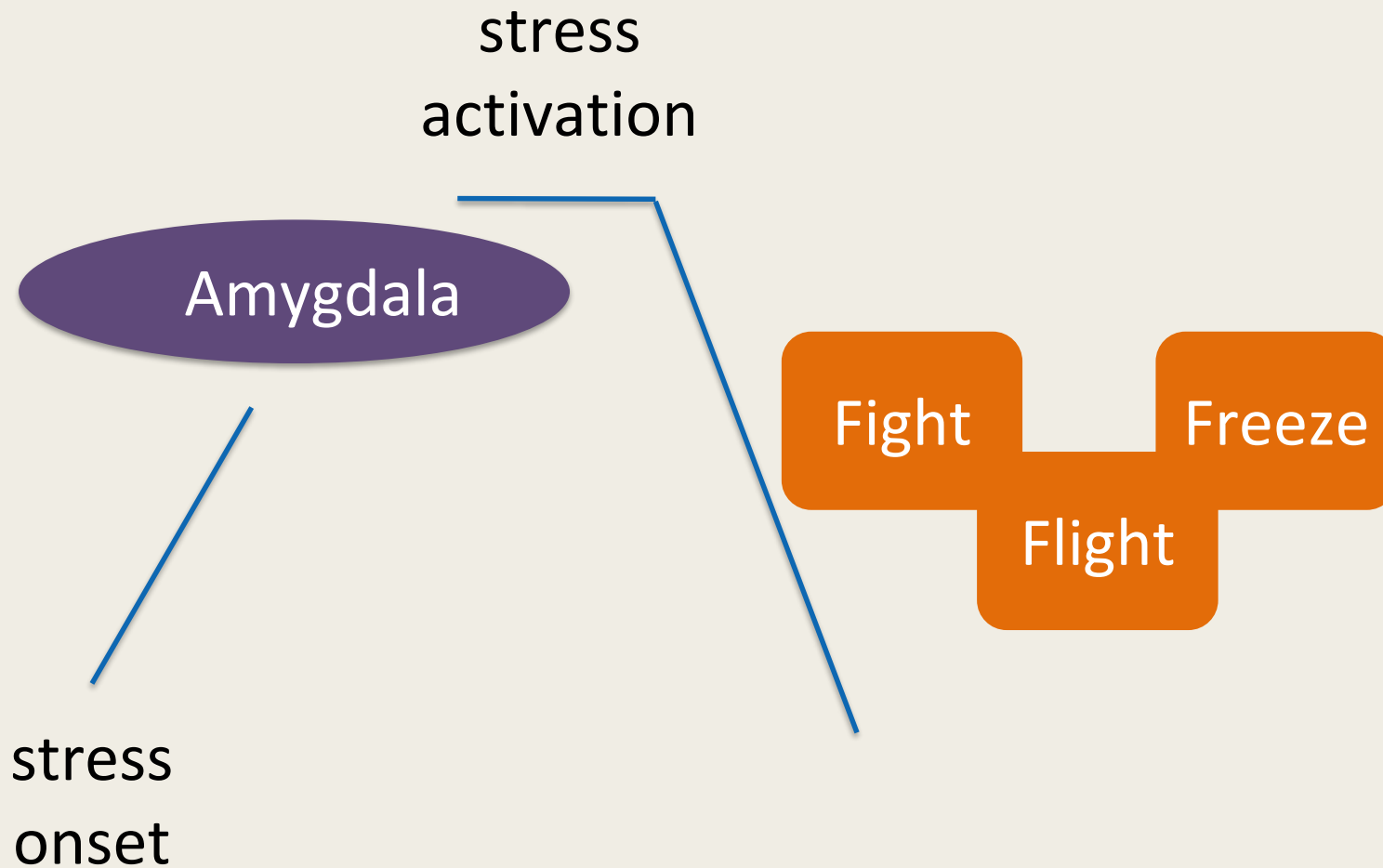
FAST Pathways to Recovery

Fight

Flight

Freeze

Watson, 2017; LeDoux 2011, 2013, 2016



More experiences
of stress



FAST pathways become
more sensitized

SLOWER Pathways to Recovery

Making sense

Making meaning

Reflection

Problem analysis

... are all less able
to develop

Watson, 2017; LeDoux 2011, 2013, 2016

stress
activation

Amygdala

stress
onset

Making sense

Making meaning

Reflection

Problem analysis

More experiences
of stress

=

Slower pathways are less able
to develop

Self-Regulation

- Self-regulation is the ability to recover from intense thoughts, feelings and behaviours.
- Self-regulation is essential to one's ability to complete tasks, organize behaviour, control impulses and solve problems.
- The development of self-regulation is influenced by the environment and interactions with others.
- Adults have a critical role in facilitating the development of self-regulation in relationship with an infant and young child.
- Self-regulation begins with co-regulation.

Co-Regulation

- Co-regulation results from warm and responsive interactions with caring adults.
- These interactions give infants and young children the support, coaching and modeling they need in order to learn to self-regulate (e.g., understand, express, and modulate their thoughts, feelings and behaviours).
- Caregivers and educators must pay close attention to infants and young children's cues and respond consistently and sensitively, helping them return to calm each time.
- Co-regulation is a process that happens over time.

Co-Regulation

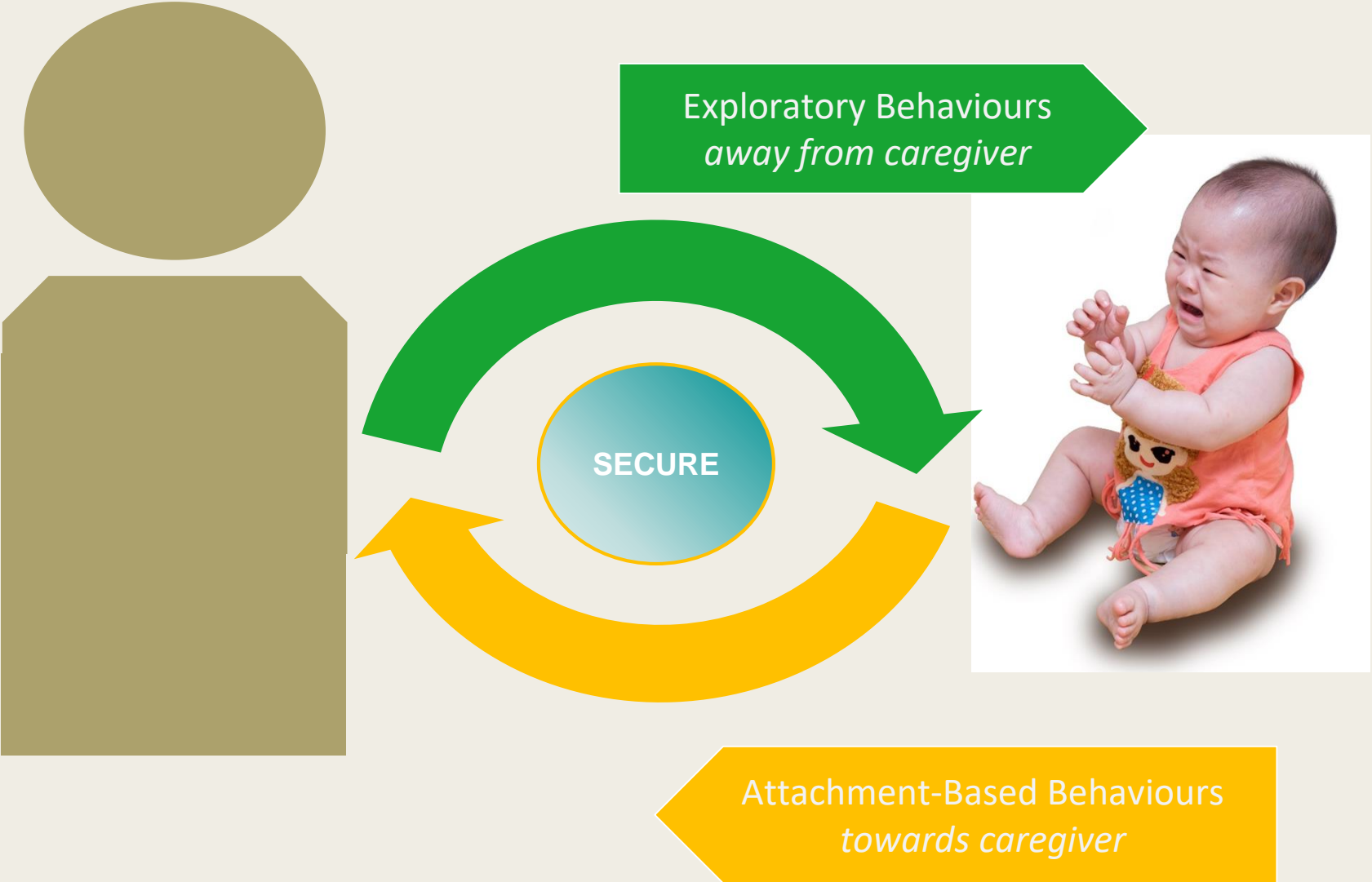
- Infants and young children depend on adults to help them move from a state of distress to a state of calm. This is co-regulation.
- Responsive interactions help children not only to self-regulate, but to trust that adults will care for them in states of distress or heightened emotion.
- When their needs are met, children will eventually learn to self-soothe, and over time, to apply this ability to more complicated tasks (e.g., problem-solving).

Co-Regulation

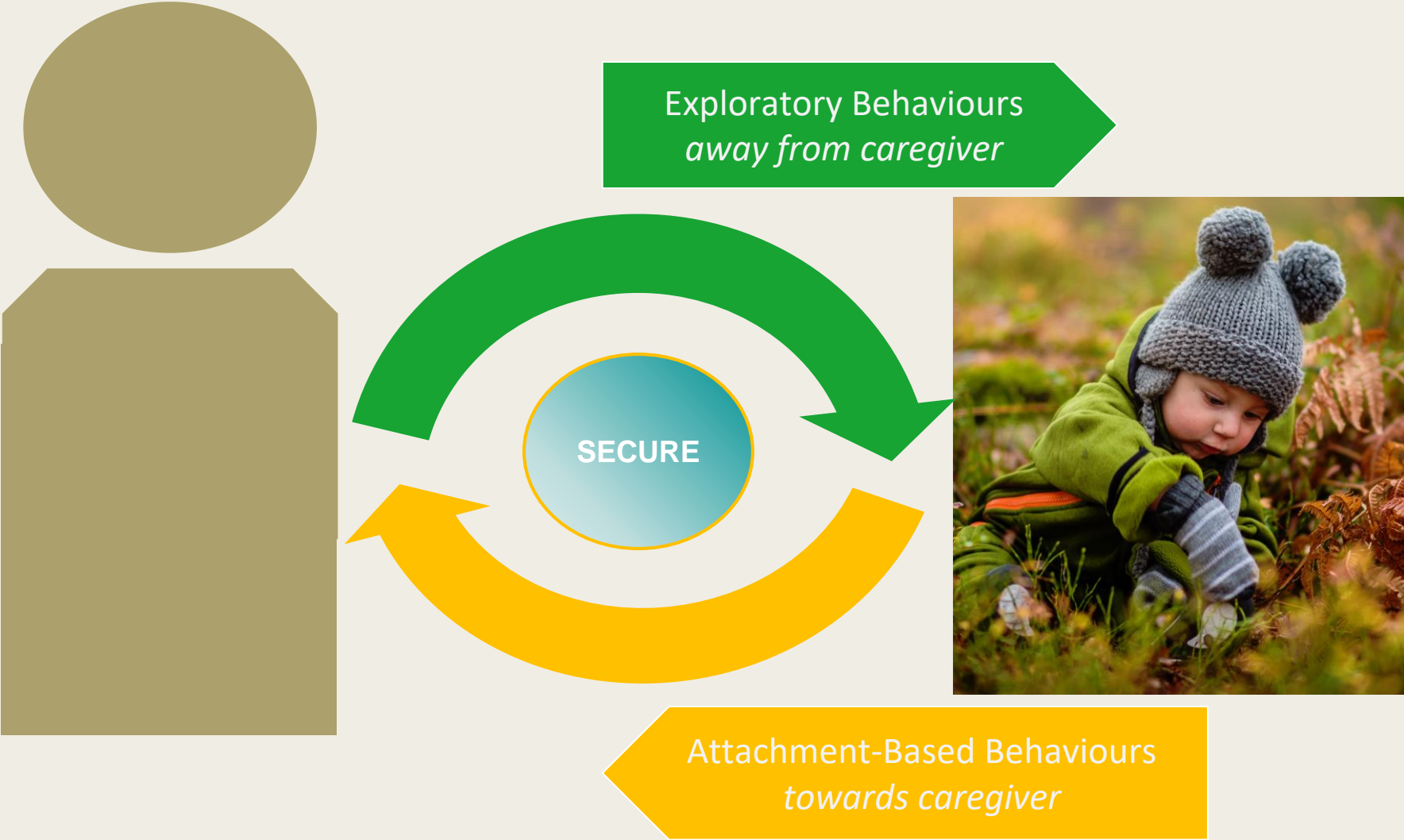
A key challenge for educators is to:

- attune to each child's unique way of expressing feelings, responding to stimuli and coping with change, and
- create a learning environment where each child can practice self-regulating.

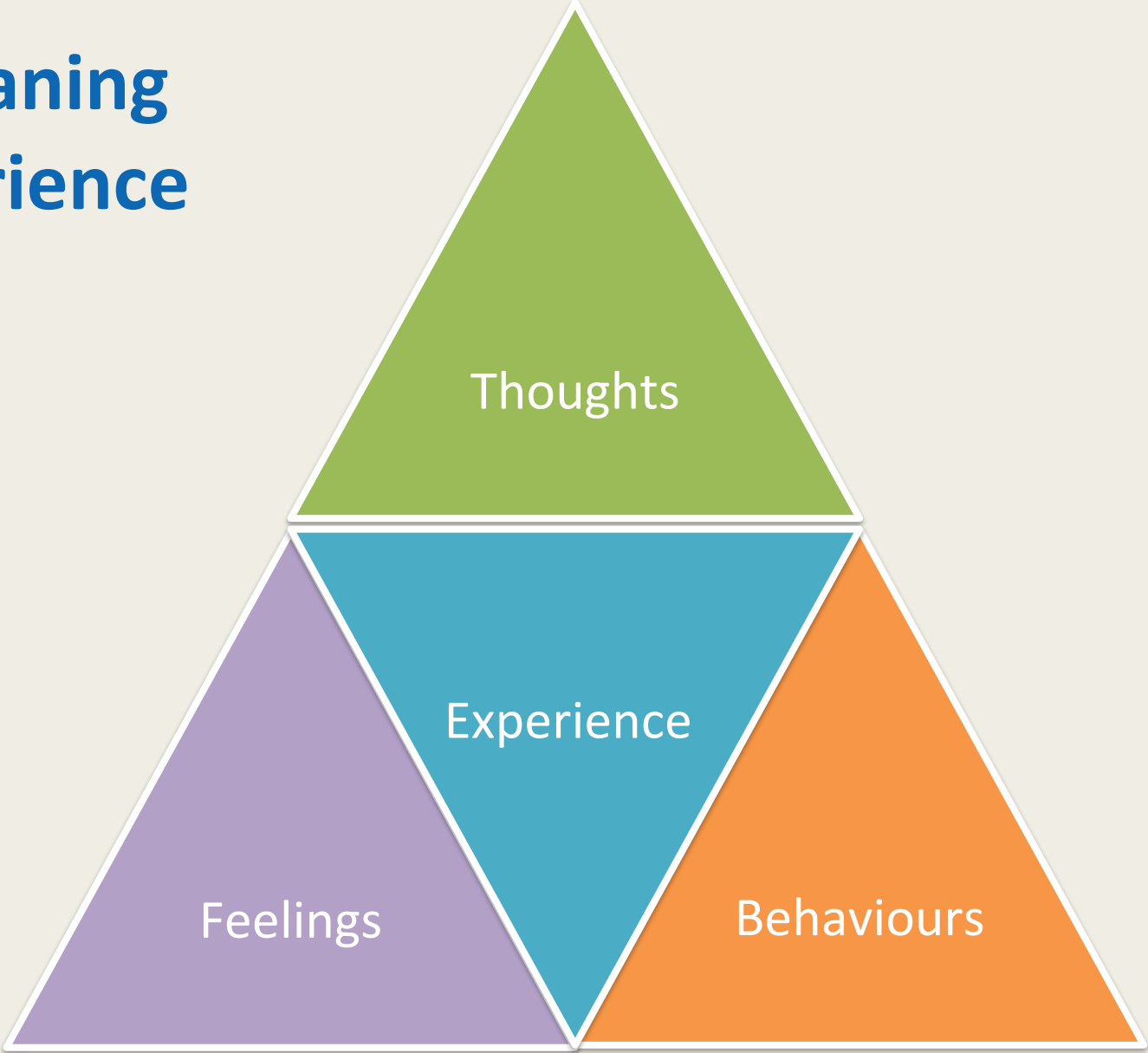
Attachment = Two Inverse Systems



Attachment = Two Inverse Systems



Making Meaning of the Experience



Video: What is Self-Reg?



7 min 15 sec

The MEHRIT Centre

Watch the video and ask yourself:

1. How would you explain how the body reacts to stress?
2. How do the children you teach exhibit physical, emotional, cognitive, social and pro-social stress?
3. What strategies are used in your classroom to help children understand and recover from their stress?

Self-Regulation

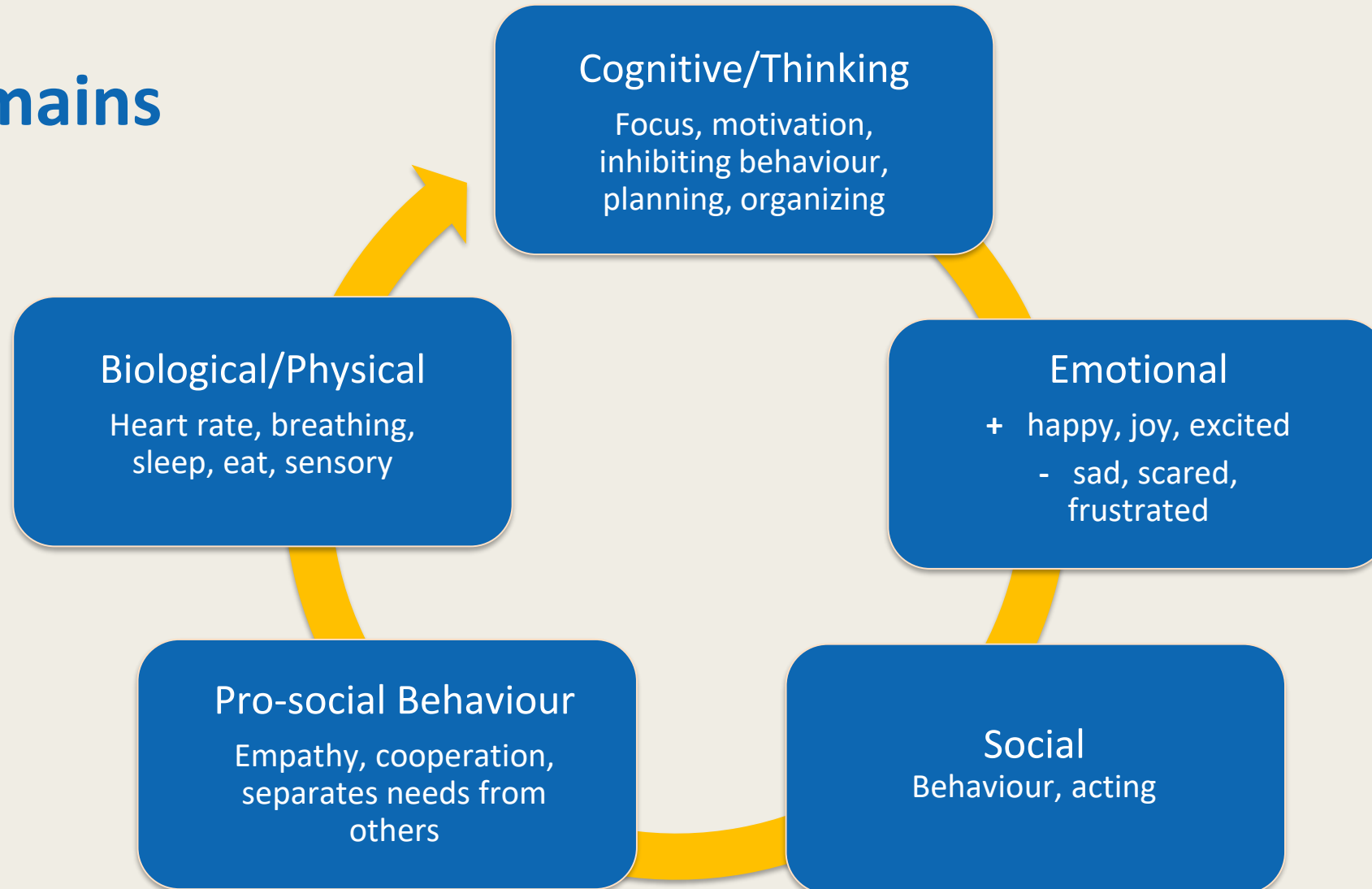
- Self-regulation is the ability to monitor and direct our activities, to achieve certain goals, and recover from stressors (e.g., demands imposed by circumstances, or by others).
- When something causes us stress, different systems in our bodies (i.e., nervous system, cardiovascular system, and endocrine system) react to the stressor in an effort to restore our internal balance.
- Stress in children can often be observed in multiple domains (e.g., physical, cognitive).
- Self-regulation involves understanding what causes stress, alleviating the causes of problematic behaviour and helping a child find ways to deal with and recover from a stressor.

Self-Regulation

- Stress can be experienced in the **biological, emotional, cognitive, social** and **pro-social domains**.
- Caregivers and educators can reduce a child's stress level, help them to be more aware of how they feel when calm or when stressed, and help them develop strategies for feeling more calm.
- Children will then be better able to modulate their emotions, pay attention, inhibit their impulses, be more aware of how their behaviours affect other people, and empathize with the thoughts and feelings of others.

Shanker, 2011, 2016

Five Domains



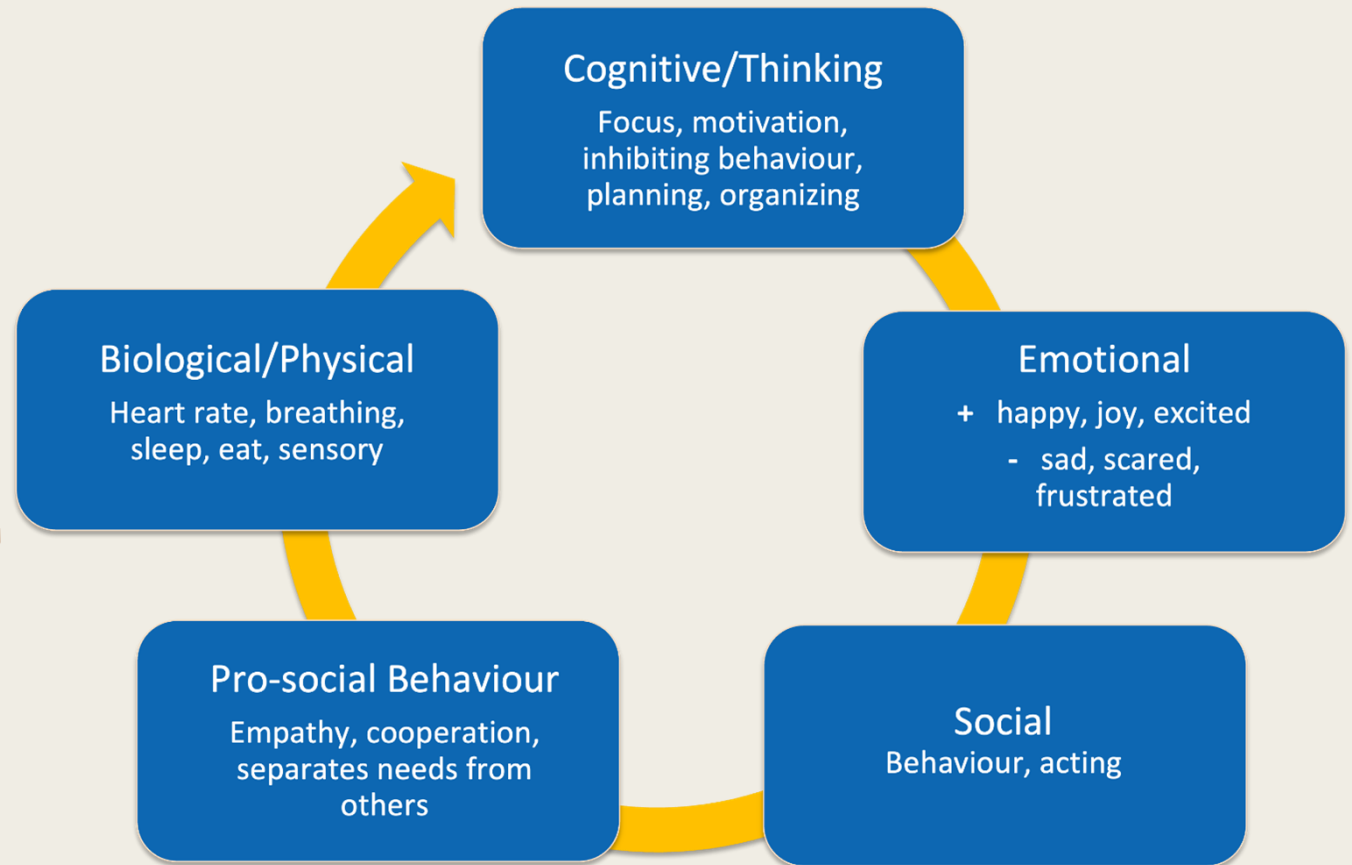
Shanker, 2011

Self-Regulation vs. Self-Control

Regulation \neq Self-Control

Regulation = Recovery of Feelings

Self-Control = Inhibiting Behaviour



Stuart Shanker, 2011

Biological Domain

Involves

- Nervous system
- Body's processes that burn and restore energy

Causes of Stress

- Inadequate nutrition, sleep or exercise
- Motor and sensorimotor challenges
- Noise, sights, touch, smells
- Pollution, allergens
- Extreme heat, cold

Signs of Stress

- Low energy or lethargy
- Hyperactivity
- Difficulty transitioning from one activity to another
- Sensitivity to noise, sound (volume, tone)
- Difficulty sitting on hard surfaces
- Difficulty sitting still for long periods
- Clumsiness, difficulty grasping objects

Emotional Domain

Involves

- Understanding and managing big emotions (positive and negative)
- Learning what to do when overwhelmed by emotions
- Language needed for expressing feelings effectively
- Temperament can impact how child reacts to stressors (e.g., rain)

Causes of Stress

- Intense emotions
- New or confusing emotions
- Emotional conflicts

Signs of Stress

- Stomach aches
- A lack of concentration and/or struggles at school
- Withdrawing from social interactions
- Mood swings and/or changes in behaviour
- Eating or sleeping too much or too little
- Having low or no energy

Cognitive Domain

Involves

- Thinking
- Learning
- Mental processes like memory, attention, information processing, reasoning, problem-solving, self-awareness

Causes of Stress

- Trouble picking up on sensory information (visual, auditory, tactile)
- Too much info or too many steps
- Info presented too quickly/too slowly
- Required to concentrate longer than able to

Signs of Stress

- Attention problems
- Learning difficulties
- Poor self-awareness
- Problems transitioning between tasks
- Problems dealing with frustration

Pro-social Domain

Involves

- Empathy
- Selflessness
- Internal standards and values
- Collective engagement and behaviour
- Social responsibility
- Putting the needs of others ahead of one's own

Causes of Stress

- Having to deal with others' strong emotions
- Being asked to put the needs of others ahead of one's own
- Tension between personal and peer values
- Moral ambiguity
- Guilt
- Dealing not just with internal stressors but stressors of those around the child, and of group

Signs of Stress

- Lack of empathy
- Child may feel anxious, excluded, isolated
- Overwhelmed by dominant personality in group
- Swept up by ideas that contradict their own moral and behavioural standards

How can ECEs help?

Five Steps to Self-Regulation

1. Read the signs and reframe the behaviour
2. Recognize the stressors
3. Reduce the stress
4. **Reflect** – help child learn to reflect on own; self-regulate
5. **Respond** – help child learn to respond to stressor and return to calm

Stuart Shanker, 2011

Video: Executive Function – Skills for Life and Learning



Watch the video and ask yourself:

1. How are you promoting and supporting co-regulation, self-regulation, and the development of executive function through your classroom environment and practices?

5 min 35 sec

Center on the Developing Child, Harvard University

Self-Regulation and Executive Function

- Self-regulation and executive function skills are essential for learning and development.
- These skills depend upon three types of brain function:
 - **working memory** (which enables us to remember and manipulate information)
 - **mental flexibility** (which allows us to adjust our attention as circumstances change)
 - **self-control** (which allows us to resist our impulses).

Self-Regulation and Executive Function

- Children are born with the potential to develop these skills, and we know that they need support from adults in order for this to happen.
- When we establish routines, model social behaviour and provide supportive relationships, we help a child develop executive functions.
- As children have opportunities to engage in creative play, build social connections, cope with stress, exercise, and practice directing their own action, this strengthens their executive functions.

Adapted from: <https://devhcdc.wpengine.com/science/key-concepts/executive-function/>

Ten Key Insights

1. Brains that have adapted to toxic environments:
 - are hyper-vigilant
 - quickly move into fight, flight, freeze states
 - have neural circuitry that has developed to prioritize danger responses vs. learning capacities
2. Internal working models predict “the world is unsafe,” “I am bad,” “I am not worthy,” and lead to sense of shame
3. Traumatized children do not recognize signs of safety
4. Controlling behaviours reflect underlying fear
5. States of hyper-arousal and hypo-arousal are not pleasurable or deliberately chosen

Ten Key Insights

6. To survive, children suppress curiosity and empathy
7. Self-regulation only develops in the context of felt sense of safety
8. Dysregulated adults can not regulate a dysregulated child
9. Trying to change behaviours through reward and punishment is ineffective at best, and at worst causes further damage
10. ECEs are well positioned to use co-regulation to help infants and young children develop self-regulation.

Your Relationship Matters!

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