Making Space for Learning

Travancore School
September 7th 2022

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1

The Australian Childhood Foundation acknowledges Aboriginal and Torres Strait Islander people as the traditional custodians of this land and we pay our respect to their Elders past, present and future.

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2

Learning Outcomes Making Space For Learning:

Develop understanding of trauma, the underlying neurobiology and neurophysiology and how it impacts children and young people

Learn strategies to apply in the classroom which will benefit all children and young people

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Consider a teacher who taught you, and had a positive influence on you... What do you remember about them? How did they make you feel?

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4

5

Understanding Neuro sequential Brain Development

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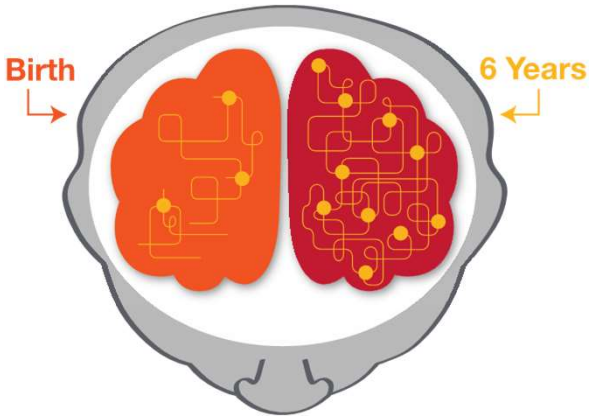
6

Culture is part of development

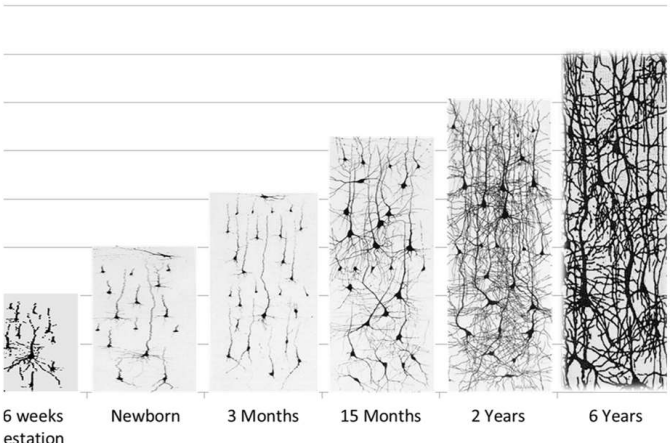
- Our culture influences our brain development
- Our relationships influence our culture and our culture influences our relationships
- Sensory data is interpreted according to our culture long before our ability to think about and understand our culture

Neuronal connections

- The neural system has the ability for one neuron to communicate with up to 10,000 other neurons
- The newborn brain has approximately 100 billion neurons



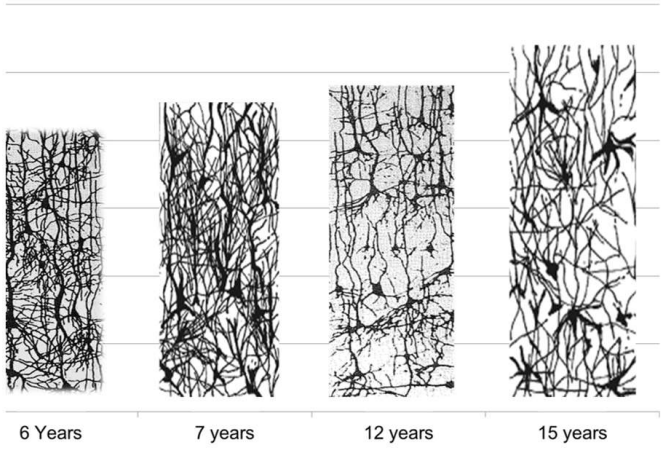
Neuronal development



- Rapid growth occurs from birth to 6 years
- **Critical period** of development
- Healthy neuronal development occurs through **relationships, regulation, repetition**

9

Neuronal development



- Early years – period of **rapid growth**
- Followed by onset of puberty in which **synaptic pruning** and **formation of new neurons** occurs.

10

Brainstem - basic life functions

- Basic life functions
- First part of our brain to develop
- This is the most developed brain part at birth
- Responsible for our heart beat, breathing, sucking, temperature control, blood pressure

11

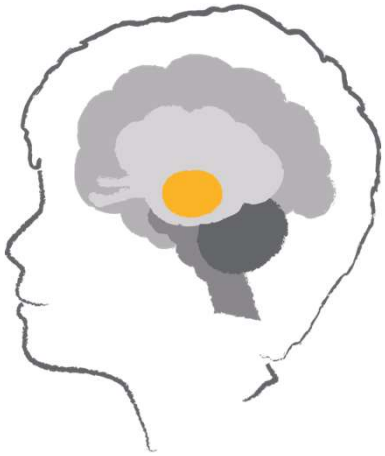
Cerebellum- movement and balance

- Helps us to know where our body is in space
- Helps us with our posture and balance
- Helps us not to fall over and to control our movements
- Has its own connective pathways between the
  2 halves- cerebellar vermis

12

Diencephalon - sorting & sending centre

- This area of the brain develops mainly after birth
- It sorts out messages coming into the brain and sends them
- It uses hormones to send signals to body
- Hormonal signals tell your body what it needs, eg. food, water, love



13

Limbic lobe- emotional gateway

- The part of the brain that helps us attach an emotion to an experience or memory
- This part of the brain is particularly involved with the emotions of fear and anger
- Also heavily involved in attachment processes
- This area develops mainly after birth

14

Amygdala & Hippocampus

Amygdala

- the 'smoke detector' of the brain
- is mature at birth
- processes & stores implicit memories

Hippocampus

- matures between 2-3yrs of age
- provides context to memories & embeds into long-term memory

15

Cerebral cortex- complex thinking

- The largest part of the brain
- Associated with higher brain function such as thought and action
- Examples of functions:
  - Reasoning
  - Logic
  - Judgement
  - Voluntary movement

16

The prefrontal cortex- executive function

- Responsible for executive functions, such as judgement, reasoning, and self awareness. Final part of the brain to reach maturity in late twenties to early 30s

17

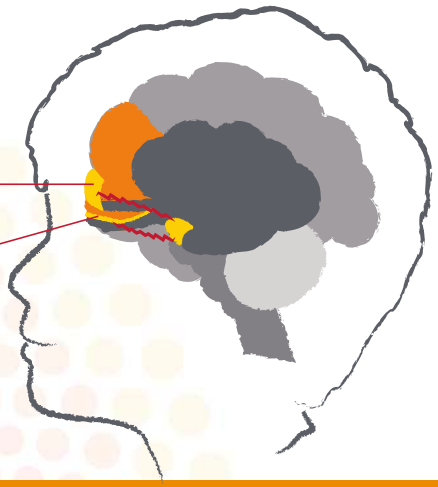
18

19

Mindfulness and co-regulation

Pre-Frontal Cortex (the centre of Mindfulness/ Self awareness)

Right Orbitofrontal Cortex (Regulation of Arousal)



- Mindful awareness/ meditation de-activates the amygdala
- Quality co-regulation de-activates the amygdala

20

Safety & the Brain

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21

An introduction to the Polyvagal theory and neuroception

Cues of risk and safety are continually monitored by our nervous system.

"Before we can engage in social behaviour and learning we must first feel safe."

(Porges, 2015, p.115).

http://lewisinstitute.com.au/wp-content/uploads/2017/08/img-stragegies2.jpg

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23

Polyvagal theory and Protective Responses

by Stephen Porges

Behavioural Functions	Body Functions
Social Engagement Soothing and calming Indicates safety	• Lowers or raises vocalisation pitch • Regulates middle ear muscles to perceive human voice • Changes facial expressivity • Head turning • Tears and eyelids • Slows or speeds heart rate
Mobilisation Fight or Flight Active Freeze Moderate or extreme danger	**Hyper arousal** • Increases heart rate • Sweat increases • Inhibits gastrointestinal function • Narrowing blood vessels - to slowblood flow to extremities • Release of adrenaline
Immobilisation Collapse or submission Death feigning Increased pain threshold Conserves metabolic resources Life threatening situations	**Hypo - arousal** • Slows heart rate • Constricts bronchi • Stimulates gastrointestinal function

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24

What trauma or stress response can look like

Cognitions & Behaviours:

- Asking lots of questions
- Bravado (speech or actions)
- Attention, concentration and memory difficulties
- Black & White thinking, negative thoughts
- Generalised worries
- Rigid thinking & behaviours
- Compulsions/ repetitive behaviours
- Ruminating – what if's, should, cyclic thoughts

Mobilised Responses:

- Hypervigilant
- Edgy/jumpy
- Irritable – easily annoyed
- Poor recovery from distraction
- 'silly', loud, over-excitement
- Unsettled, sleep difficulties
- Outbursts, aggression
- Defensive, taking things personally
- Increased expectations of self and others
- Inflexible, 'controlling'
- Sensitive to sensory input

Immobilised Responses:

- Flat, numb affect
- Disengaged, disinterested
- Withdrawn
- "boredom"
- Lethargic, unmotivated
- Disconnected from peers
- Developmental regression – e.g. with abilities to self-soothe, self-care/hygiene, toileting
- Changes to appetite

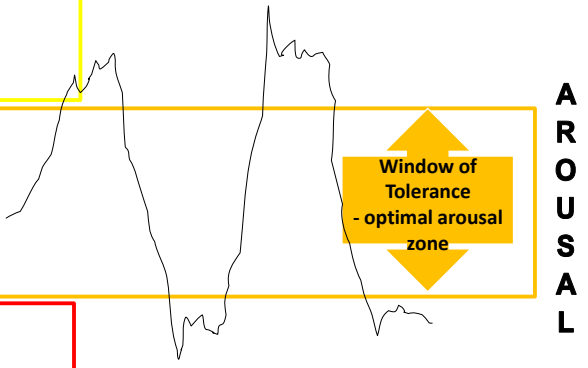
25

Changes in Arousal States

Affect:	Shame, anger
Thought:	"I'm a screw up, this is unfair"
Behaviour:	Hitting, running away
Sense of self:	"I am bad, I am broken"
Consciousness:	Hyper-focused, narrow, rigid

frozen, emotionally reactive, racing thoughts, hyper-arousal, impulsive, aggressive

Affect:	**Joy, pleasure**
Thought:	**"This is fun, "I'm good at this"**
Behaviour:	**Increased, sustained effort**
Sense of self:	**"I'm competent, I can do this"**
Consciousness:	**Focused and flexible**



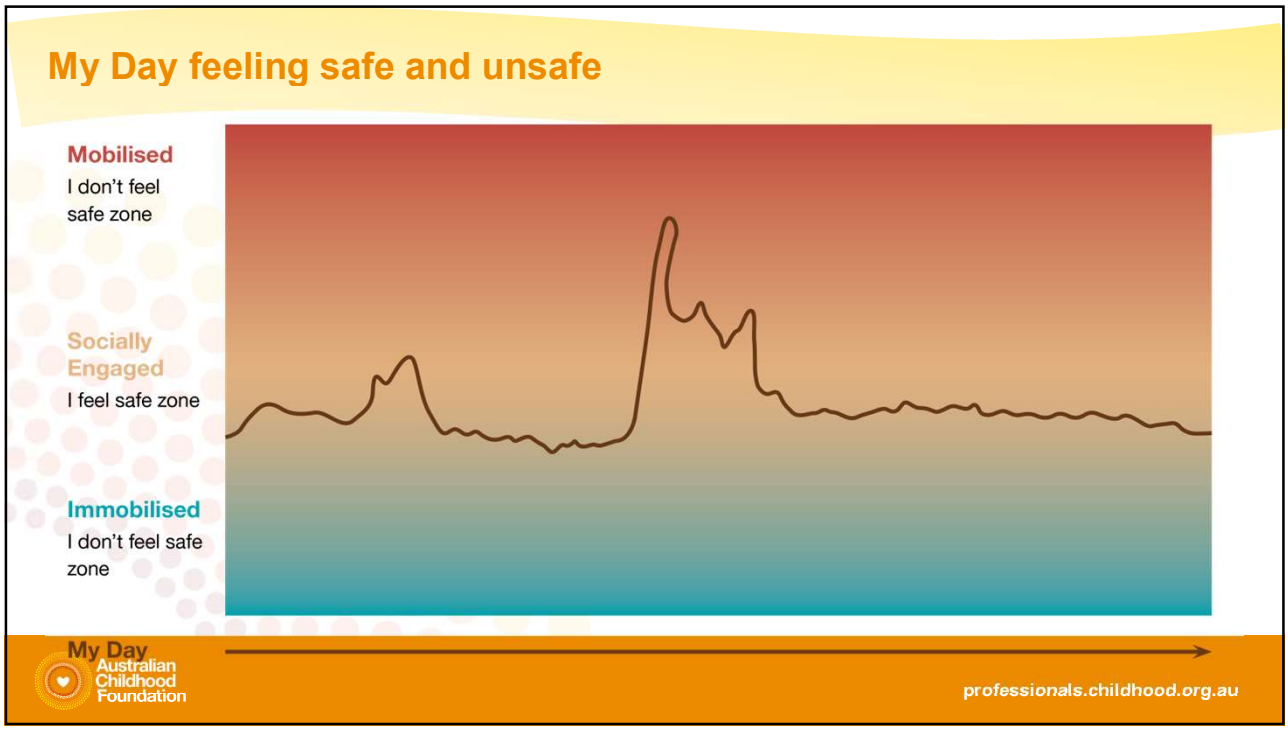
Affect:	Shame
Thought:	"I don't care, I can't do it"
Behaviour:	Collapsing, spacing out
Sense of self:	"I am bad, I am broken"
Consciousness:	Diffuse, spacey

Numb, lethargic, collapsed, cognitively slowed, withdrawn, distant

(Adapted from Ogden & Fisher, 2015)

26

My Day feeling safe and unsafe



27

Impacts of Trauma

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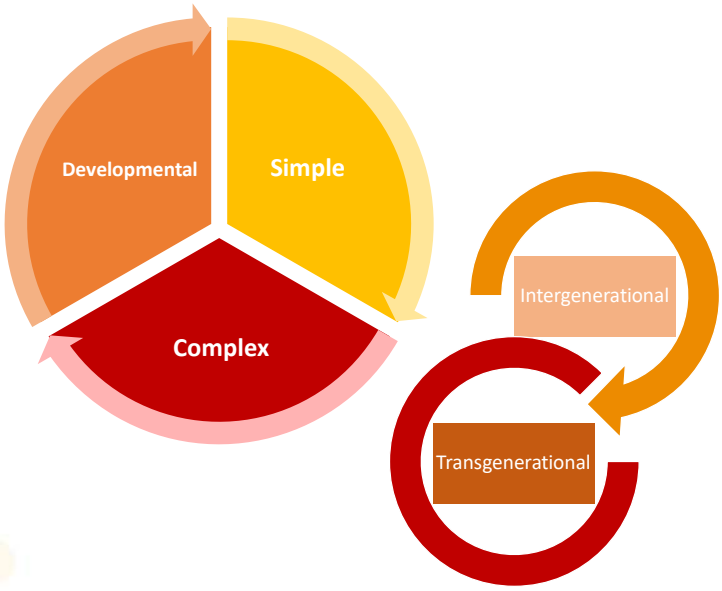
28

Defining trauma

Any single, ongoing or cumulative experience which:

- is a response to a **perceived threat**, usually to survival
- **overwhelms** our capacity to cope
- feels/is **outside our control**
- often evokes a **physiological** and **psychological** set of responses based on fear or avoidance



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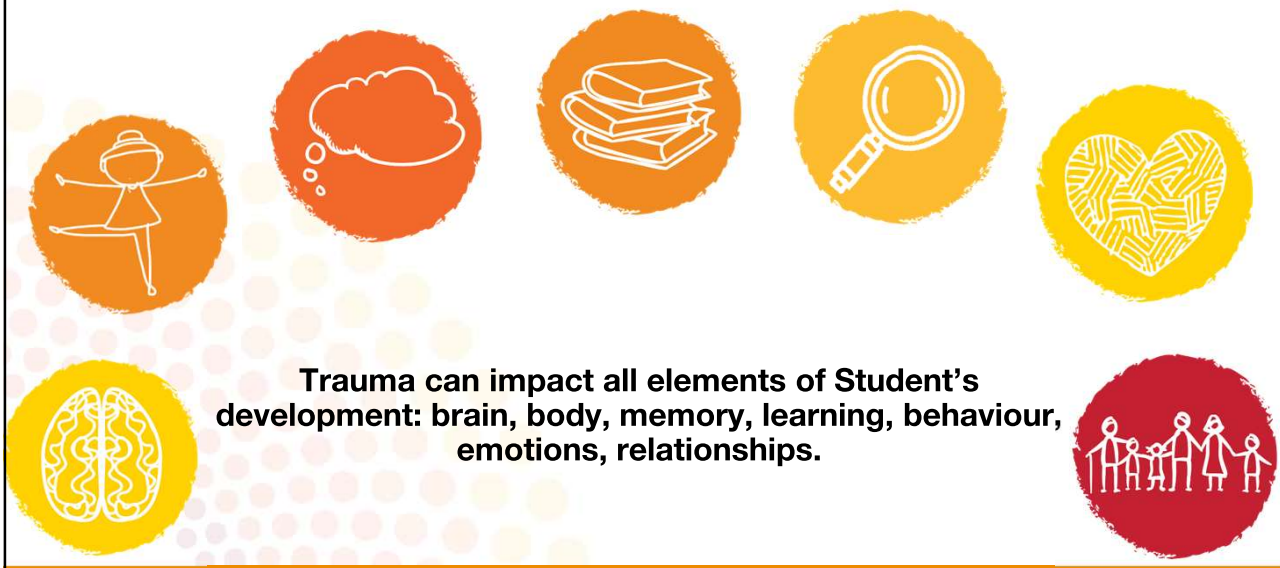
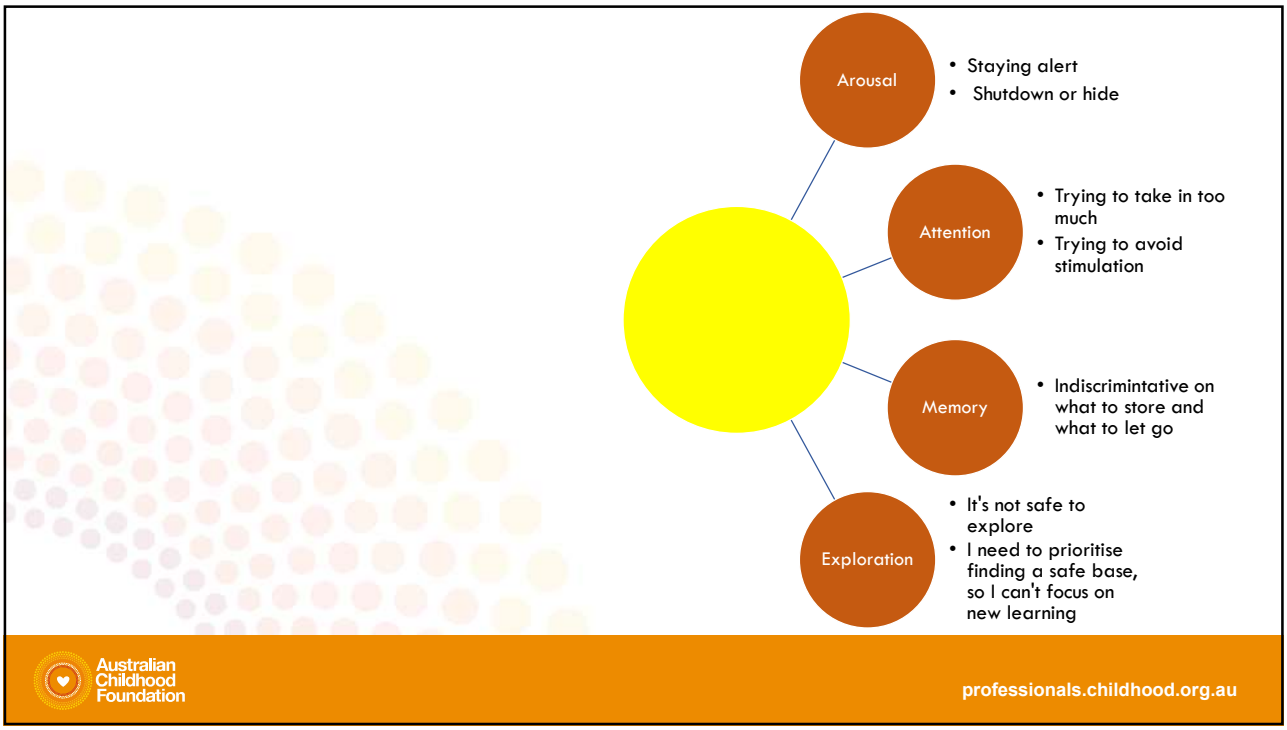


Trauma can impact all elements of Student's development: brain, body, memory, learning, behaviour, emotions, relationships.

30


Arousal
• Staying alert
• Shutdown or hide
Attention
• Trying to take in too much
• Trying to avoid stimulation
Memory
• Indiscrimintative on what to store and what to let go
Exploration
• It's not safe to explore
• I need to prioritise finding a safe base, so I can't focus on new learning
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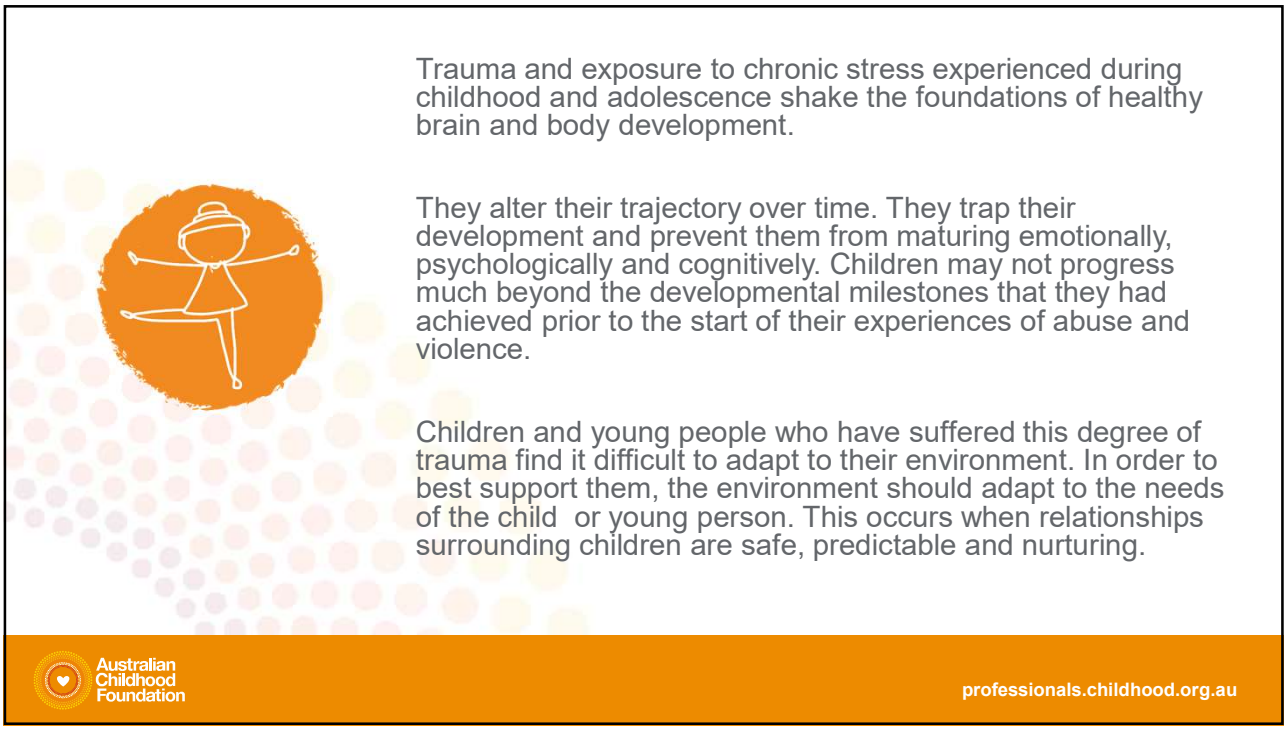
31


Trauma and exposure to chronic stress experienced during childhood and adolescence shake the foundations of healthy brain and body development.
They alter their trajectory over time. They trap their development and prevent them from maturing emotionally, psychologically and cognitively. Children may not progress much beyond the developmental milestones that they had achieved prior to the start of their experiences of abuse and violence.
Children and young people who have suffered this degree of trauma find it difficult to adapt to their environment. In order to best support them, the environment should adapt to the needs of the child or young person. This occurs when relationships surrounding children are safe, predictable and nurturing.
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32

Exposure to chronic toxic stress or complex trauma affects the effectiveness of key brain structures to integrate the different dimensions of memory. The emotional and physiological resonances of traumatic experiences come to be stored as memory fragments in the limbic system, cerebellum and brain stem without reference points. They do not connect to detailed explicit memories (i.e. the facts) of the events in which these reactions occurred.

Traumatised children and young people are lost in time. They are not connected to their own reactions. Their present and their past are mixed up and confused. They find it difficult to make sense of what has happened to them and what continues to drive their thoughts, feelings and behaviour.

33

Traumatised children and young people stop practising integrating their feeling states (a function of their right hemisphere) with words and constructs (a function of their left hemisphere) they can use to know and communicate about their internal sensations. They have limited emotional literacy. They do not easily understand their own feelings. They find it hard to attribute language to them and describe them meaningfully for others to understand.

Consistent, congruent and validating responses give them effective blueprints for organising their internal world.

34

Children need positive experiences of connection as the basis for them to learn how to:

- problem solve;
- feel safe to explore new situations;
- manage their feelings;
- remember the positive feelings associated with forming relationships; and,
- have a working model for initiating and maintaining relationships.

Traumatised children have poor connective experiences. Their working models are built on fear and mistrust. Supporting children to re-experience relationships differently is the key to trauma recovery and change.

Trauma-based behaviour, in general, serves important adaptive functions. It often makes sense in the context in which it first emerged. However, it can become counterproductive if it continues after the need for it has changed.

- Comfort Seeking
- Seeking connection
- Self-Protection
- What feelings are under the behaviour?
- What needs are under the behaviour?

SPACE

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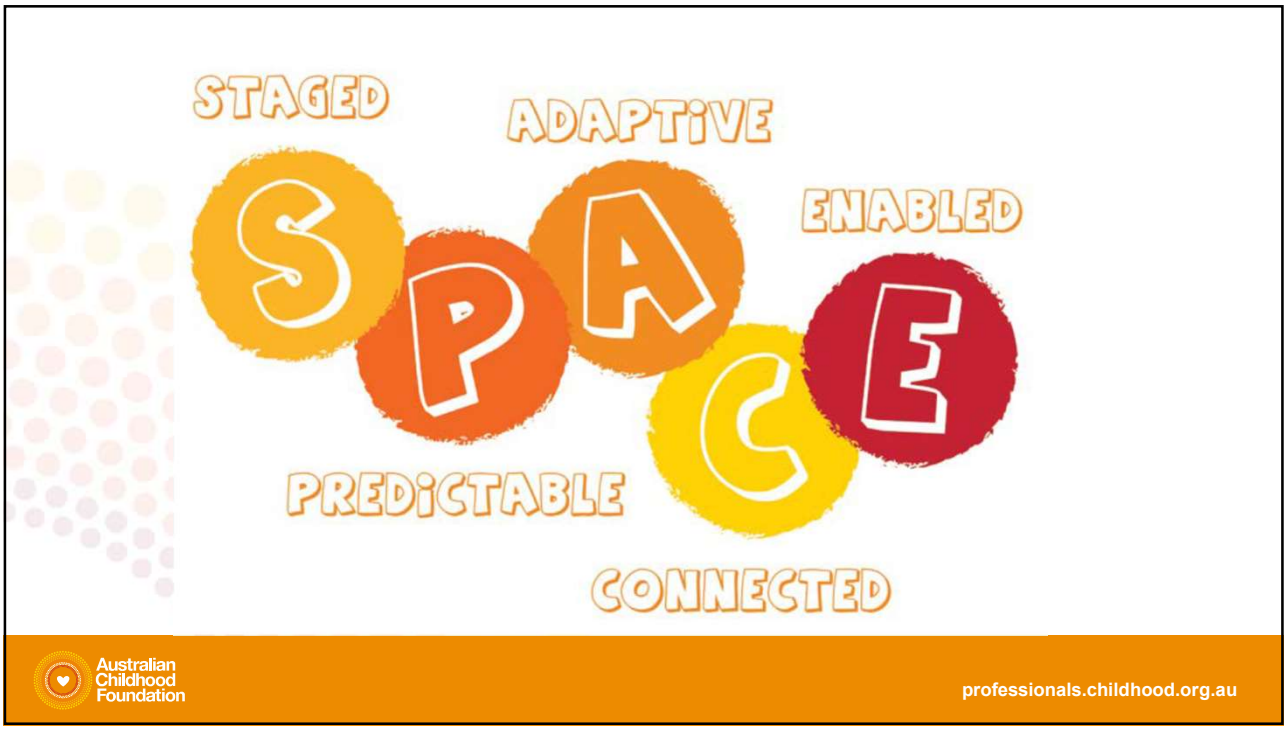
37



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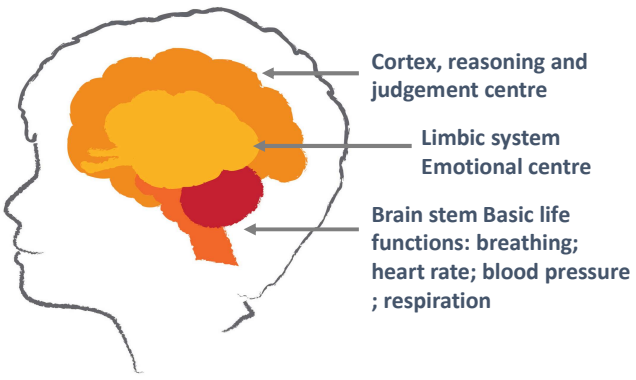
38

Domains	Domain Explanation	Translated into needs statements
Staged	The brain develops sequentially. Sophisticated functions only emerge after basic functions are consolidated. We should resource children in line with what their developing brain's need.	Children's brains need support to grow and learn **My brain grows upwards step by step**
Predictable	Uncertainty and unpredictability can disrupt emotional wellbeing and threaten social competence. Strategies which promote stability and familiarity enhance social and emotional wellbeing.	Children need to know what they can count on **I feel better when I know what is coming next.**
Adaptive	Familiar behavioural routines are more likely to be enacted in response to life challenges than new ones. Familiar routines may not always be constructive. Strategies which promote adaptability in children's behavioural routines are ones that meet children creatively with multiple options for intervention.	Children need support to grow up healthy and strong **There are things I need to grow up healthy and strong.**
Connected	Children's internal maps for forming, maintaining and being in relationships are affected by their experiences of relationships throughout their lives. Negotiating relationships at school can be a source of stress when children have found them hard or unsafe in the past. Relationship with safe and consistent adults and peers form the foundation for change.	Children need to feel like they are connected. **I need to feel like I am connected.**
		Children need to feel safe and know about what makes a safe connection. **I need to feel safe.** **I need safe connections in my life.**
Enabled	All children can benefit from engaging in the process of understanding themselves more deeply. The capacity to identify feelings and learn how they relate to the body, thoughts, and behaviours is a worthwhile life skill. Learning to communicate feelings with each other enriches social cohesion. Making sense of our stories helps us to build coherent identities over time.	Children need to know more about what makes them who they are. **I grow stronger as I learn more about what makes me, me.**

39

5 Domains- Staged

- Brain development is sequential
- One of the ways our brain develops is vertically, from the bottom to the top
- Some neurodevelopmental delays such as those effected by trauma can cause brain changes. However with the right support the brain can be repaired through neuroplasticity.



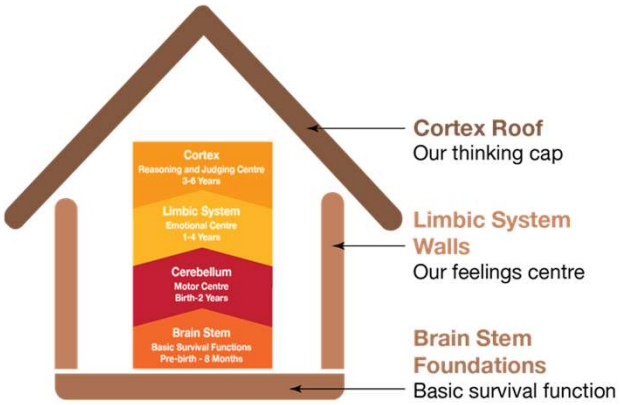
Children's brains need support to grow and learn

My brain grows upwards, step by step.

40

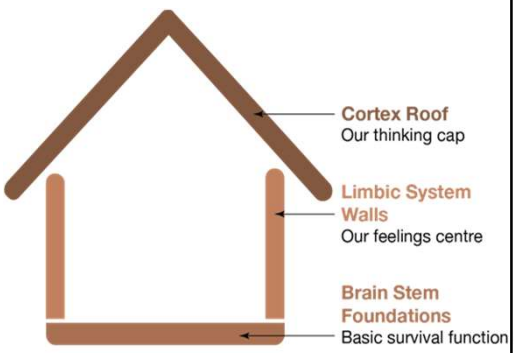
Staged- A brain development metaphor - My Brain House

- We build our brain from the bottom to the top- like building a house
- We reinforce parts of our house as we grow, with our roof continuing to develop into our mid 20s.
- A student who is calm and focused at school will likely be functioning with a strong standing brain house, from foundation to roof.
- In times of great stress bits of our brain house can come down and require repair. This is achievable and our brain house can stand strong again.



Staged/Safe- A brain development metaphor - My Brain House

- Our brain house can experience adversity. This can effect its structural integrity. If we get rattled our thinking cap roof can come off, leaving our feeling walls exposed. This can lead to strong emotions coming out without our thinking cap to help us contain our feelings.
- When this happens we can struggle to find words to communicate as our words flew off with our thinking cap roof.
- If we are deeply shook our roof and walls might come down and leave only our foundation. Our foundation is very strong and reliable. In these times we have our basic life functions to focus on to get us through- eg. our breathing, our heart beat.
- Everyone's rooves blow off from time to time. Given we have all built our own brain houses, we are all equipped to support each other to repair our houses together.



Predictable

- Changes to routines and uncertainty can be a source of stress to student
- Predictability in Student's relationships and online activities deactivates their stress systems
- This then promotes flexibility and adaptability

Student need to know what they can count on

I feel better when I know what is coming next.

43

What might predictability look like in practice?

- Build routines and predictability wherever possible
- Prepare children and young people for what is coming next eg: giving countdowns to transitions
- Visual timetables are useful
- Think about how to do transitions throughout the day
- Play online and fun
- Planned brain breaks
- Give plenty of information and time building up to changes

44

What might predictability look like in practice?

- For students
- For families
- For all staff
- Systemically

relationships	physical activities
routines	instructions
learning tasks	behavioural expectations

45

Predictable You

"I've come to a frightening conclusion that I am the decisive element in the classroom. It's my personal approach that creates the climate. It's my daily mood that makes the weather. As a teacher, I possess a tremendous power to make a child's life miserable or joyous. I can be a tool of torture or an instrument of inspiration. I can humiliate or heal. In all situations, it is my response that decides whether a crisis will be escalated or de-escalated and a child humanized or dehumanized."

Hiam Ginott

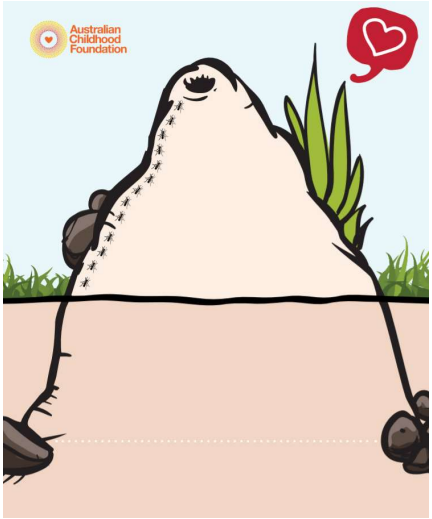
46

Adaptive

- Traumatised students and young people rely on a limited set of behavioural routines to respond to the challenges of their context.
- These routines are sourced in the history of their physiological reaction to trauma and the experiences of relationships through which these reactions were interpreted and responded to.
- Strategies which promote adaptability in students and young people are those which are able to maintain multiple meanings for behaviour and remain open to multiple options for interventions.

Building understanding of behaviour

- When we feel understood, we become open to trying to understand others
- Develop openness and curiosity about behaviour
- If we can understand what drives a behaviour, we can work out how to respond to it
- If we can meet the need that is driving a behaviour, the behaviour can start to reduce
- **Some clues**: is the behaviour a fight/flight/freeze/withdraw response? Is it related to hunger/tiredness? Is it a bid for connection or space?



What might adaptive look like in practice?

- See the needs beneath the behaviour
- Utilise strengths
- Relationship, repetition, rhythm
- Use PACE
  - Playfulness
  - Acceptance
  - Curiosity
  - Empathy

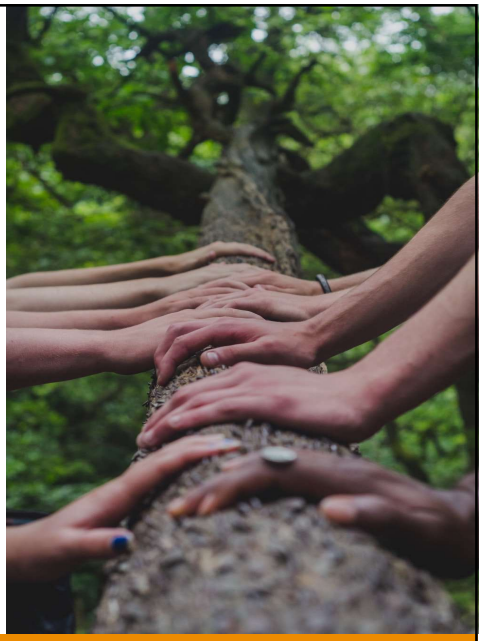
49

Connected

- Student's relational templates for forming and being in relationships take shape as they grow. They learn what to expect and how to navigate relationships through their experiences of connection with those around them.
- We tend to expect things from relationships based on what we have known from past connections.
- Strategies to support students as their relational templates continue to develop emphasise relationships with safe and consistent adults and peers as the foundation for healthy, strong social and emotional functioning.

Students need to feel like they are connected.
Students need to feel safe and know about what makes a safe connection.

I need to feel like I am connected.
I need to feel safe.
I need safe connections in my life.



50

What might Connected look like in practice?

- The student feels safe and connected
- Co-regulation occurs
- A feeling of connectedness is what you get when you feel like you belong in a group, when you are with others of your
- Attuned listening.

“

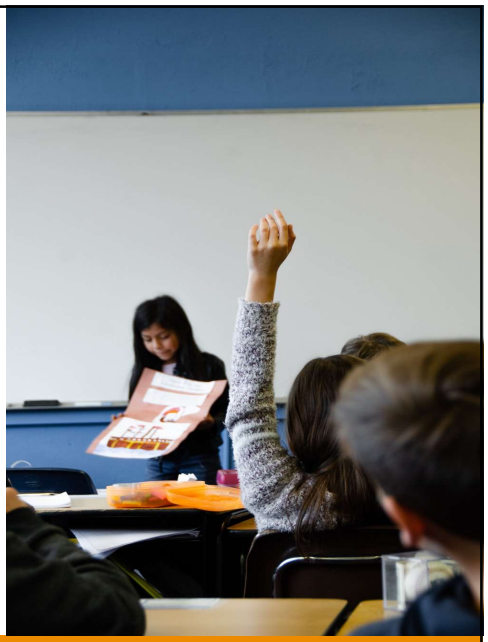
Enabled

- Engaging students in the process of understanding themselves can build social and emotional well being.
- Learning about and identifying feelings, understanding them and practice communicating them with others in socially cohesive ways bolsters emotional regulation.
- When students know about their qualities, their attributes and their talents they can feel good about themselves.
- Knowing about their own special story helps students to build a coherent self narrative

Students need to know more about what makes them who they are.
I grow stronger as I learn more about what makes me, me.

What might Enabled look like in practice?

- Creating safety
- Understand triggers
- Classroom approaches for individuals
- Flight, Fight, Active Freeze or Submit responses are assisted to enable learning.



53

Making SPACE for Learning – Site Audit Tool

This audit tool can be used to evaluate the policies and initiatives of a school that resource and equip different levels of the school structure to undertake trauma informed practice. In the following table, list strategies, policies or other processes currently undertaken that support traumatised students at your school.

	Whole Site	Staff	Classroom / Group	Small Group	Individual Student / Child
S Staged					
P Predictable					
A Adaptive					
C Connected					
E Enabled					

54

Further Resources:

https://professionals.childhood.org.au/making-space-learning-resources/

Any questions?
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