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Witherslack Group

Conference 18th November 2026

The Long-Term Impact of Trauma on learning and behaviour

Without love – safety, protection & belonging there is no learning



Our brains and nervous system write chemical codes of learning as memories throughout our entire body, – especially the brain.

Children develop the capacity – the **'functionality'** and **adaptability** to interact with our environment in an *optimum* way for *natures blueprint to* flourish.

This is a 'Bio-psycho-social' process.

Genetics are only a blueprint.

Epigenetics are Genes + Love + Environment = 'ME'

Resilience means 'adaptability'

Emotion is the motivator that fuels and ‘builds’ intelligence



Young underdeveloped brains are designed to behave when driven by emotion – Why?

Because they must attach to other humans to feel safe enough to learn about & explore their world.

Intelligence is relationship driven.

The genetic imperative is relationship driven.

Teaching and learning is a social process.

Inculcate Self Care into curriculum and lesson plans

Harness peer influence and peer esteem to build confident and resilient learners.

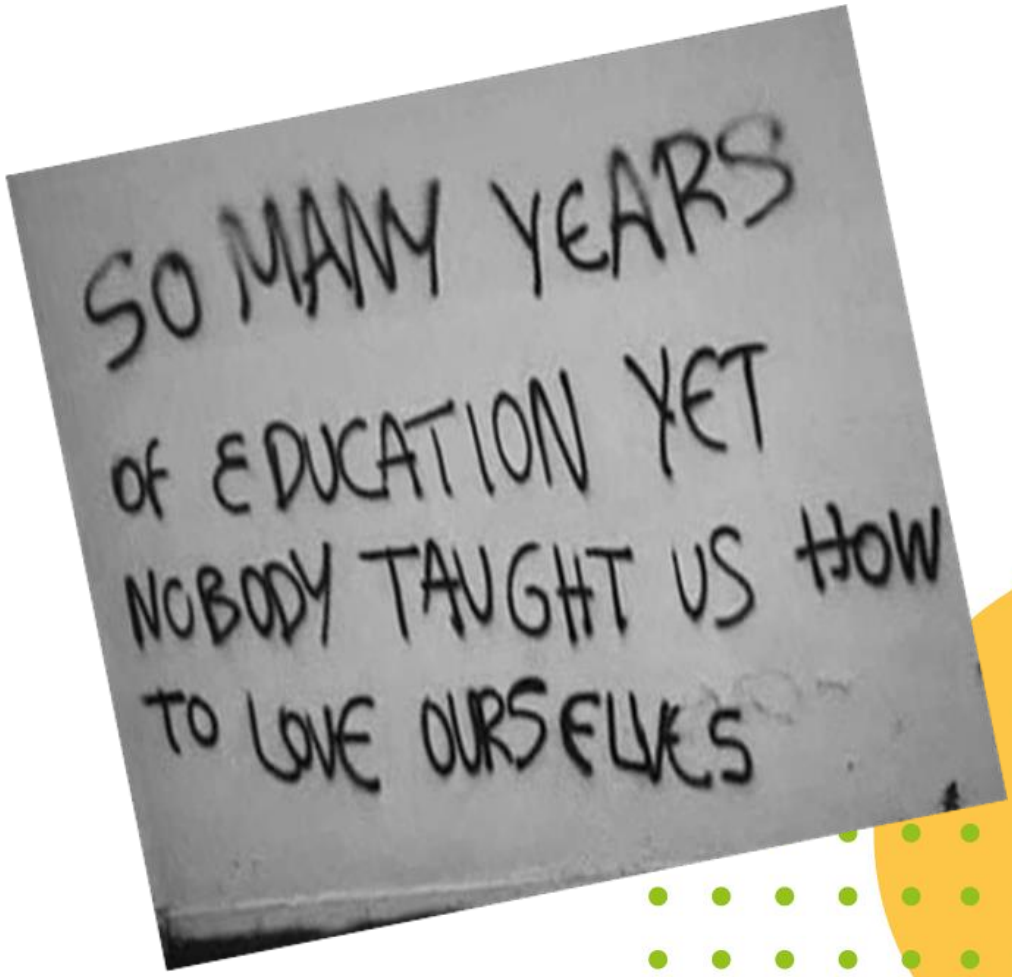
Examples of childhood trauma – ACE's. *'Living with uncertainty'*

You are not trained to diagnose – but you are the experts in identifying barriers to learning and delayed progress (that may be caused by….)

1. Parental divorce
2. Physical ill health
3. Accidents – (Esp children with Dyspraxia, ADHD, children with physical disabilities / hypermobility)
4. Bullying
5. Bereavement
6. Social isolation – the medical consequences of loneliness and its impact on learning and behaviour
7. Cumulative trauma
8. Neurodivergence – masking, camouflaging, social trauma, medical trauma
9. Abuse – verbal, physical, emotional, sexual.
10. Care experienced – unstable home life & family breakdown
11. Witnessing domestic violence
12. Parental mental health problems
13. Social media – access to violent, sexual and self harming content.
14. School exclusions? (1 Million)
15. Overwhelmed by **status anxiety** – Education systems designed to **'rank'** in a hierarchy

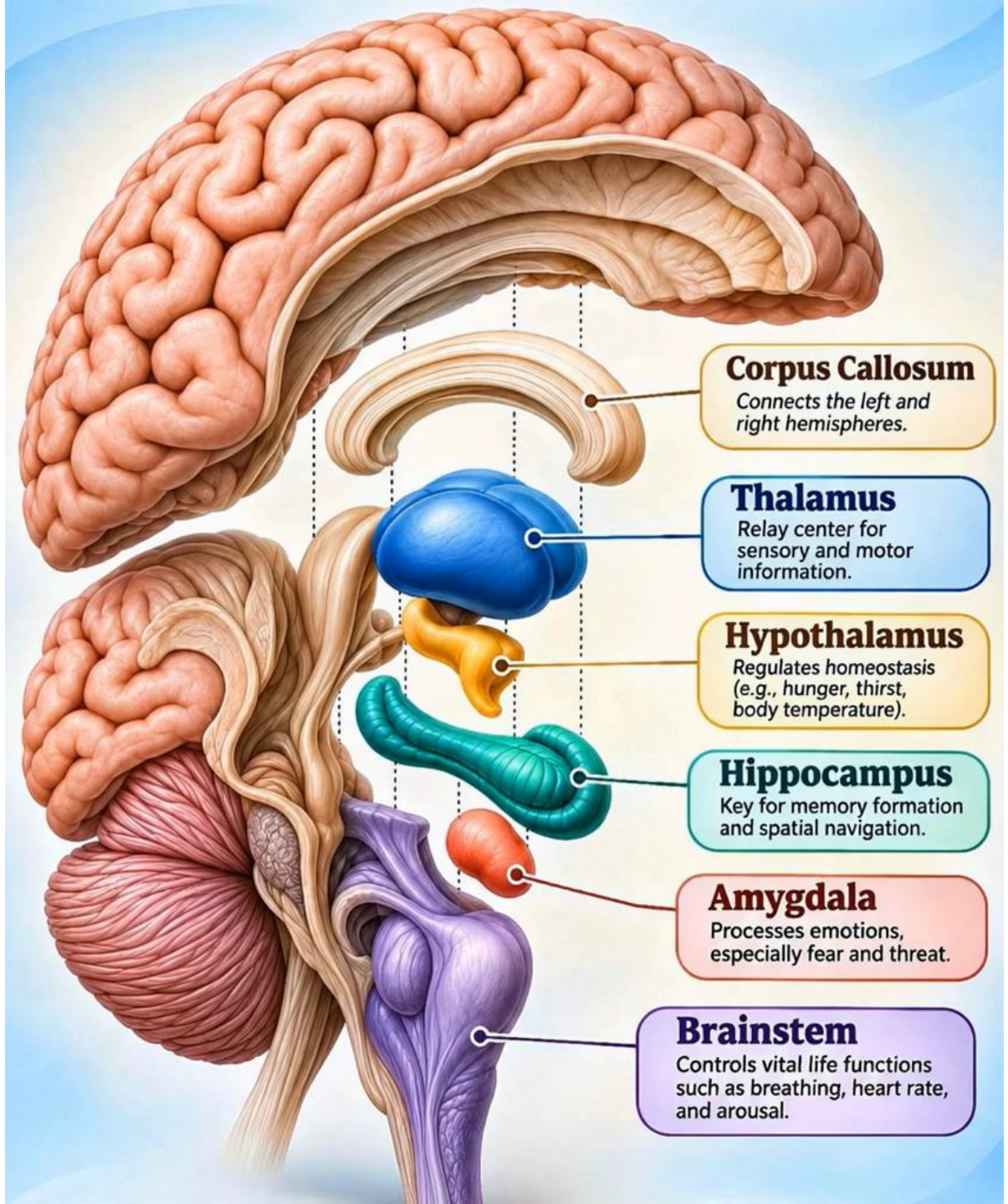
Trauma informed education – Why do we need it?

- 47% of adults report traumatic experiences from school days. (Esp SEND)
- Parental concerns about their child's safety, mental health and changing expectations of what schools should provide
- Access to CAMHS 1 Million children waiting for support
- Access to Assessments for neurodivergence – over 500,000 children waiting for ADHD & Autism assessments
- Concerns about impact of technology – screens and social media.
- Children are different – the world is different & rapidly changing – and **unpredictable.**
- **We want our children to be happy, healthy, successful lifelong learners who make a successful transition to adulthood, employment, parenting, with a sense of civic responsibility.**



What must schools do and be as trauma informed education providers?

- Trained
- Multi-disciplinary teams including school counsellors, educational psychologists, ‘experts at hand’
- Flexible, innovative and responsive in maintaining a safe place & culture in the school
- Collaborative support for parents – support groups (PTA), Training, Peer support.
- Clear policies, guidelines, strategies and insight to anticipate unmet need.
- Effective MDT with other public services



Learning first - for survival

- **Brain development throughout childhood**
- **Designed to grasp care from primary caregiver**
- **Designed to communicate distress to caregiver to meet needs**
- **Designed to predict danger**
- **Learns through trial and error as cognitive functions develop throughout childhood.**
- **Brain signalling is restructured and reorganised after one year, three years,**
- **seven years, puberty and adolescence.**
- **Reaches maturity in early 30’s**

How Trauma can impact on learning

Limbic System comprises of..

Thalamus – The 999 Call Centre

A relay station for sensory information from the body to the brain

Amygdala – The Brain's Security Guard

Processes emotions (binary safe or threatened fight or flight)

Hippocampus – The Brains Library

Stores memories – esp. episodic memory & traumatic memory and encoding them into long term memory & spatial memory.
Time – Place – Facts – Events (impaired when overwhelmed)

Hypothalamus – The First Responder

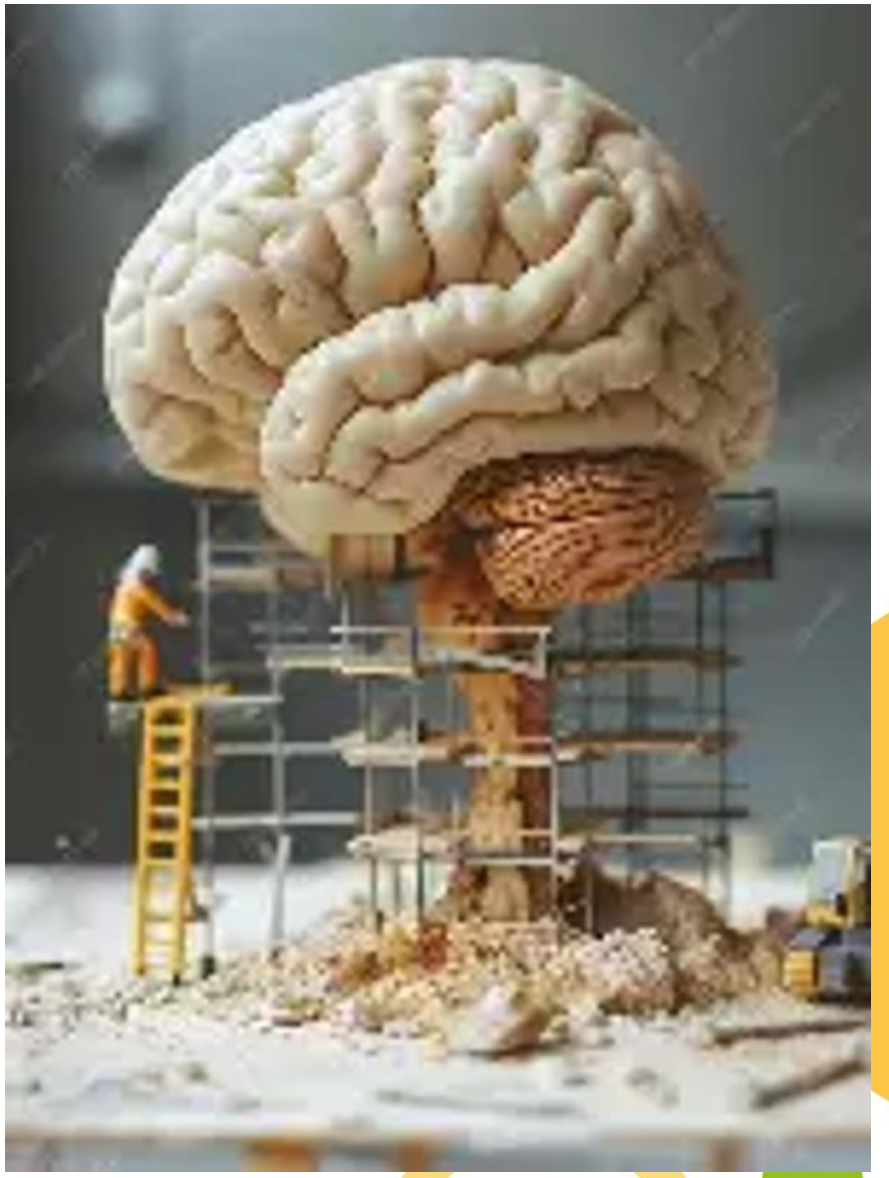
Homeostatic needs – hunger, thirst, etc connecting
with endocrine system (hormonal).

Cingulate Gyrus – Operations Director

plays a role in emotional regulation and linking behavioural outcomes to motivation & goals

Salience system includes all of the above, and **the Anterior Insula and Anterior Cingulate Cortex – The 'Risk Manager' of the brain**

Frontal Lobe – The Brain's CEO - A neuro-constructionist approach – repeating specific behaviours to change the thinking and the feeling to goal- based behaviours & inhibitory control (BIDIRECTIONAL)



The Brain's Salience Network –

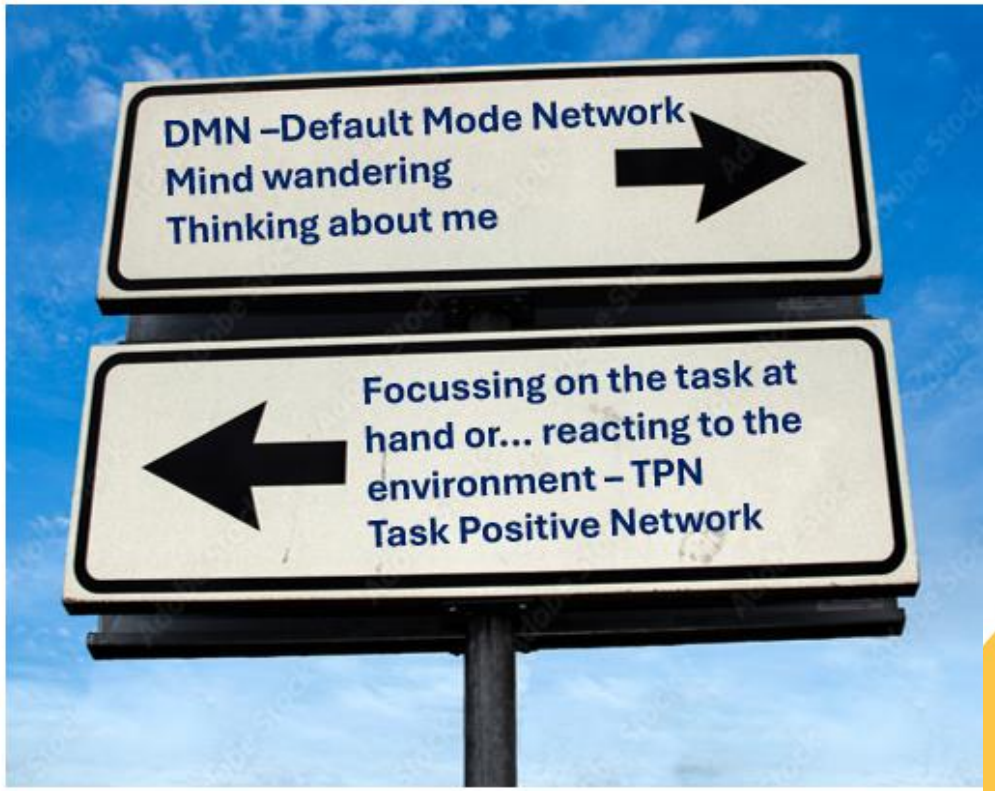
A neural process for perceiving and responding to interoceptive Homeostatic demands. e.g. hunger & temperature etc. (life balancing systems).

Sensory modulation and proprioceptive systems also integrate into the salience system.

This evaluation is not solely based on pre-programmed instincts; it also incorporates learned experiences from the hippocampus (the Brain's library) & current bodily internal states.

We receive 11 Millions bits of sensory data per second. (unconscious)

The frontal cortex (Brains CEO) can only process 10 to 60 Bits per second so your brain predicts what is 'salient' to make conscious.

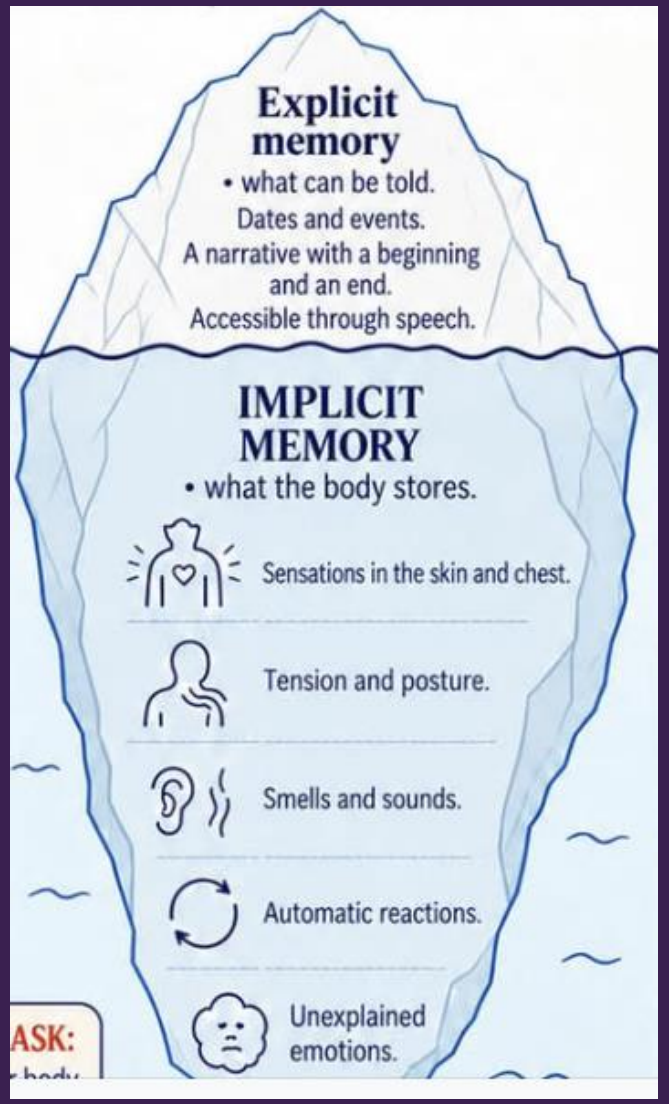


What is salient to 'you' can change moment by moment, depending on your goals, environment, your internal state.

The Salience network filters information– reducing cognitive load & prioritising behavioural response

Knowing what to do and living it are not the same for a child whose body &

‘unconscious mind’ is overriding their ‘thinking’



Mentally, the prolonged distress of being locked in survival mode causes the amygdala to become hyperactive while weakening the prefrontal cortex, which **impairs executive function** and traps the brain into automatic negative thinking loops.

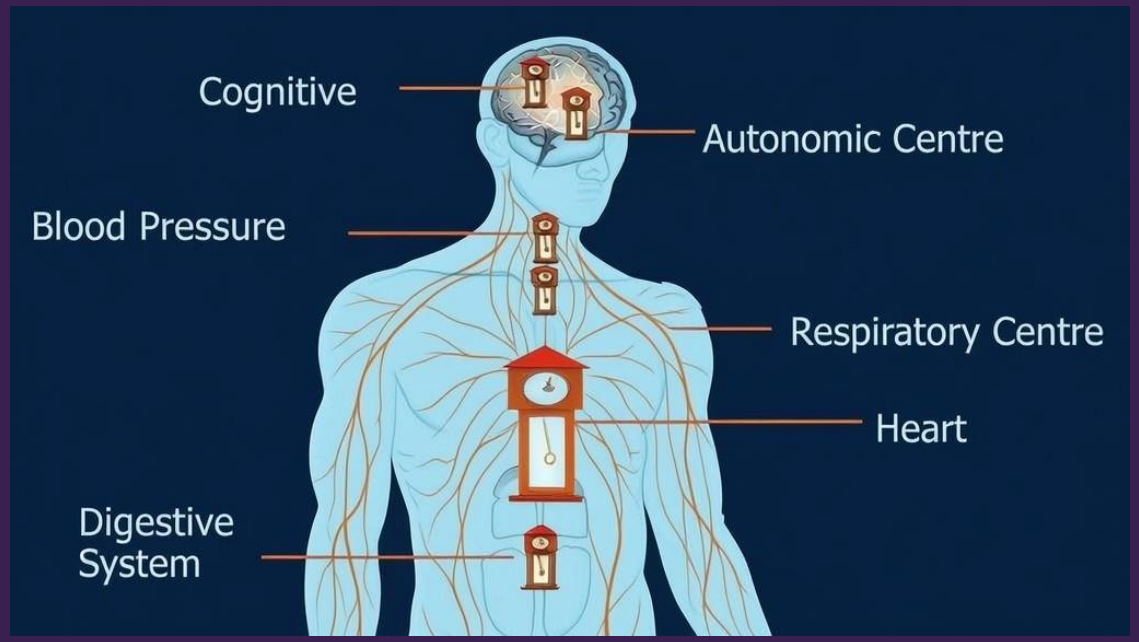
Physiologically, pervasive elevation of stress hormones destroys brain cells, and neural pathways weakens the immune system.

70% of behaviours are habitual – habits do not require motivation (Dopamine)

The Body remembers fear and threat at an unconscious level.

The Body keeps the score...

We can think ourselves unsafe…. ‘worry’ *State Dependent Learning*

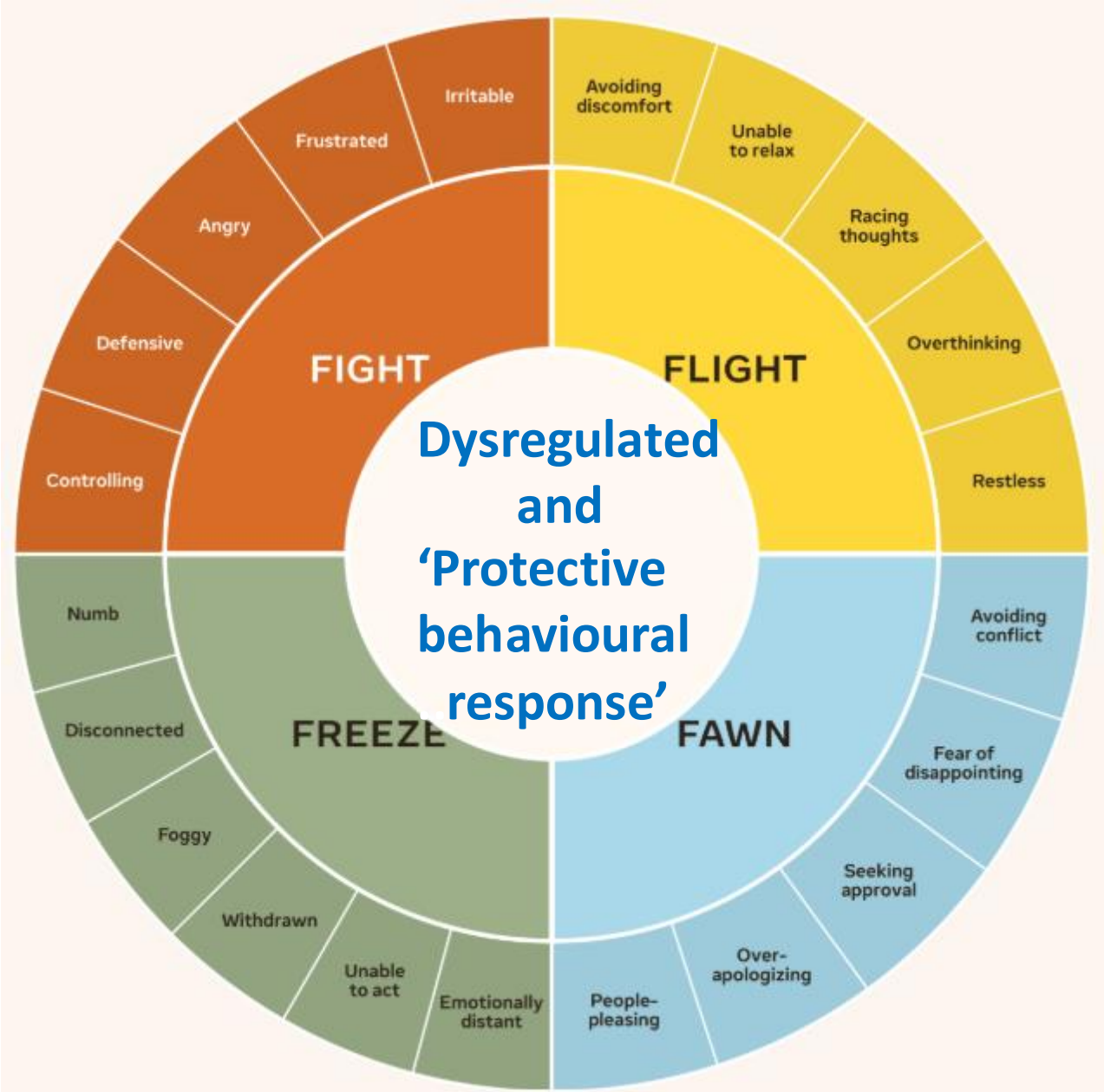




A young rapidly growing brain may be capable of focus and intense learning – only when safety, sensory conditions are right, metabolic state with timely instinctive interest & curiosity *all align* = ‘**A State of Mind to Learn**’ needs a safe environment.

A neuro-constructionist approach – repeating specific behaviours to change the thinking and the feeling by attaching a positive emotional charge each time the behaviour is repeated (praise, encouragement – esp from peers)

‘Sympathetic’ Nervous system



Behavioural Responses to Trauma can become ‘habitual’ (70%)

The Salience system defaults to

protective behavioural responses

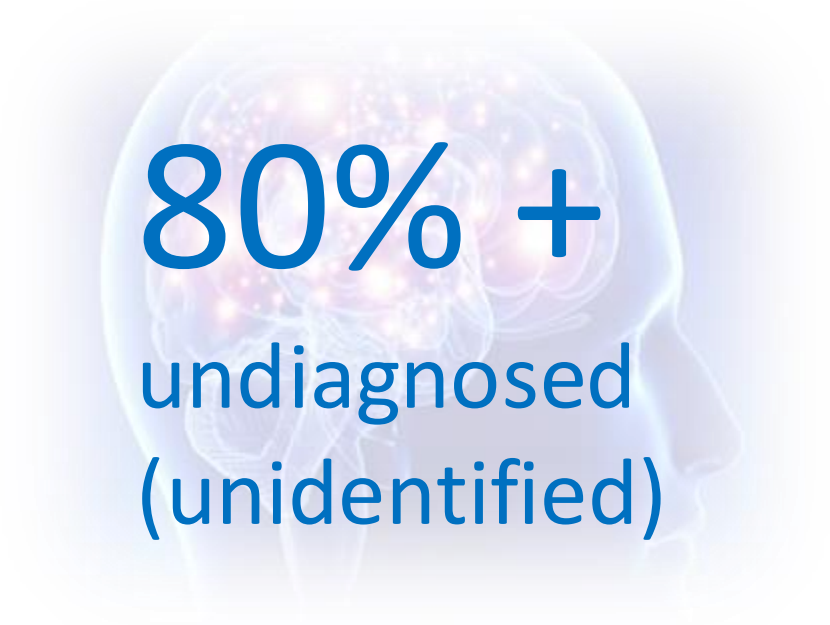
without access to complex conscious analysis of the risk benefit ratio.

It is designed for safety first – think later.

Children’s brains operate on this system because pre-frontal brain is underdeveloped until adolescence to 30’s.

Trauma and neurodivergence

Genetic potential Vs Epigenetic = how it adapts to an environment designed for the ‘normal’ learner.



80% +

undiagnosed

(unidentified)

Dyslexia 1 in 10 people **(only 2 of 10 children identified)**

Fletcher et al., 2019; Wagner et al., 2021

https://pmc.ncbi.nlm.nih.gov/articles/PMC8183124/#R13

ADHD 1 in 20 of the population –‘symptomatic’.

1 in 10 boys (1 in 5 girls_ World Health Org

Getinet et al., 2023 Only 1 to 2 % ever identified

Dyspraxia 1 in 20 people

7 times more common in boys.

Castellucci & Singla 2024

Autism 1 in 67-100

Zeidan et al., 2022; Li et al., 2022 ’

Dyscalculia 1 in 10 to 1 in 20 people

Santos et al., 2022

Alexithymia 1 in 10 Wang Xi et al 1922
Aphantasia 1 in 25 Dance CJ. 1922,
Sensory Processing ‘D’ between 5 and 16.5% - (1 in 7 to 1 in 20) Miller L.J. 2017
Synaesthesia 1 in 25 Tsakanikos et al (2006)

53% of Young people identify as Neurodivergent.

Aphantasia – Synaesthesia – Alexithymia (Spectrums – Genetic in Origin)

Senses play a key role in learning – but can be overwhelmed

Synaesthesia is a neurological phenomenon in which stimulation of one sense or mental process automatically produces an additional sensory experience. (e.g. colours translated into sounds)

Aphantasia is genetic in origin but can be caused by TBI. It is the inability to voluntarily create mental images – objects, scenes.

Alexithymia is a difficulty in identifying, naming feelings and processing emotions. This can also cause difficulty distinguishing between physical sensations such as anxiety or hunger.

Sensory Processing (disorder) differences in how senses are experienced and the degree of intensity – impacting on personal care and protective behaviours as well as social interaction.





The myth of normal and the trauma arising from living in an environment where we are compelled to be ‘normal’

Who decides what normal is? Do **you** expect ‘normal?

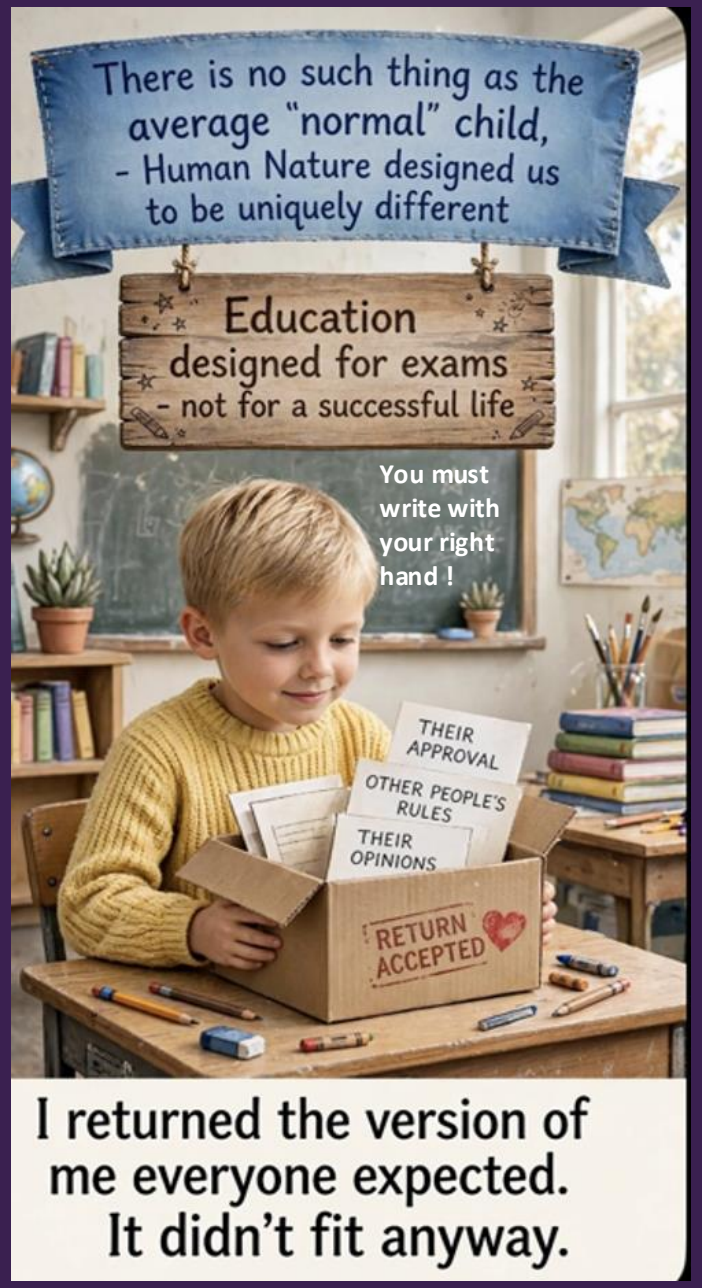
1. Meets normative developmental milestones and pathologised when not met.

2. Able to sustain concentration on tasks deemed to be necessary by educators.

3. Prioritise efficiency, logic and independence of emotion and creativity.

4. Demonstrate a preference for consistent compliance & moderated emotion.

5. Ability to easily assimilate into the social dynamic demanded by the school.



Assimilating to be considerate of others & to belong

does not = 'forcing' us to be who we are not nor –'learn' the same way as everyone else.

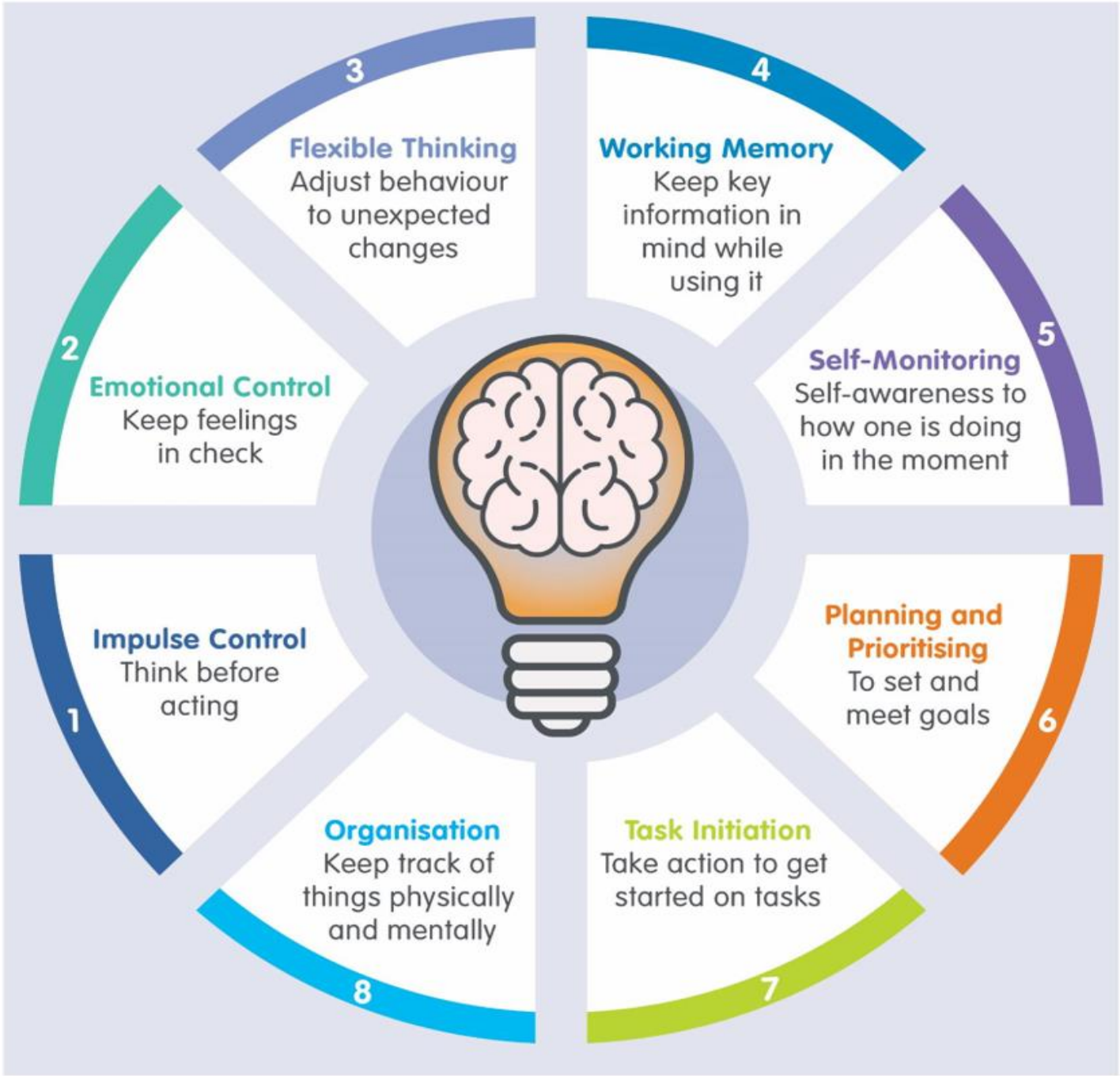
5. Ability to easily assimilate into the social dynamic demanded by the school.

6. Competent with modalities of communication including sustained eye contact.

7. Ability to easily adapt to multiple hierarchical social dynamics, unspoken cultural …conventions, expectations and social norms.

8. Evaluated by narrow measures of ability and potential premised on *fluctuating ….cultural and political priorities.*

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Executive Functioning is the 'how of learning...

Different and 'contextually' impaired in over 50% of those with ND's. (**AND** temporarily by all of us when experiencing psychological distress).

EF is regulation and management of everything your brain does – processing information for you to understand what your environment is demanding of you.

Intelligence is what you know- Executive Functioning is how you use what you know to achieve your goals.

How Trauma can impact on the foundations for learning & the development of Executive Functioning Skills

Pervasive unconscious distress & impaired emotional regulation impairing all executive functioning skills & relationships

Ability to accurately read verbal and non-verbal communication

Ability to process oral and written information

Impaired working memory, sequential memory and organisation

Identifying and differentiation of emotions

Understanding cause and effect / consequences

Sense of self and perspective taking

Impacting on classroom & collaborative learning

Easily emotionally entrained by others

Capacity for empathy

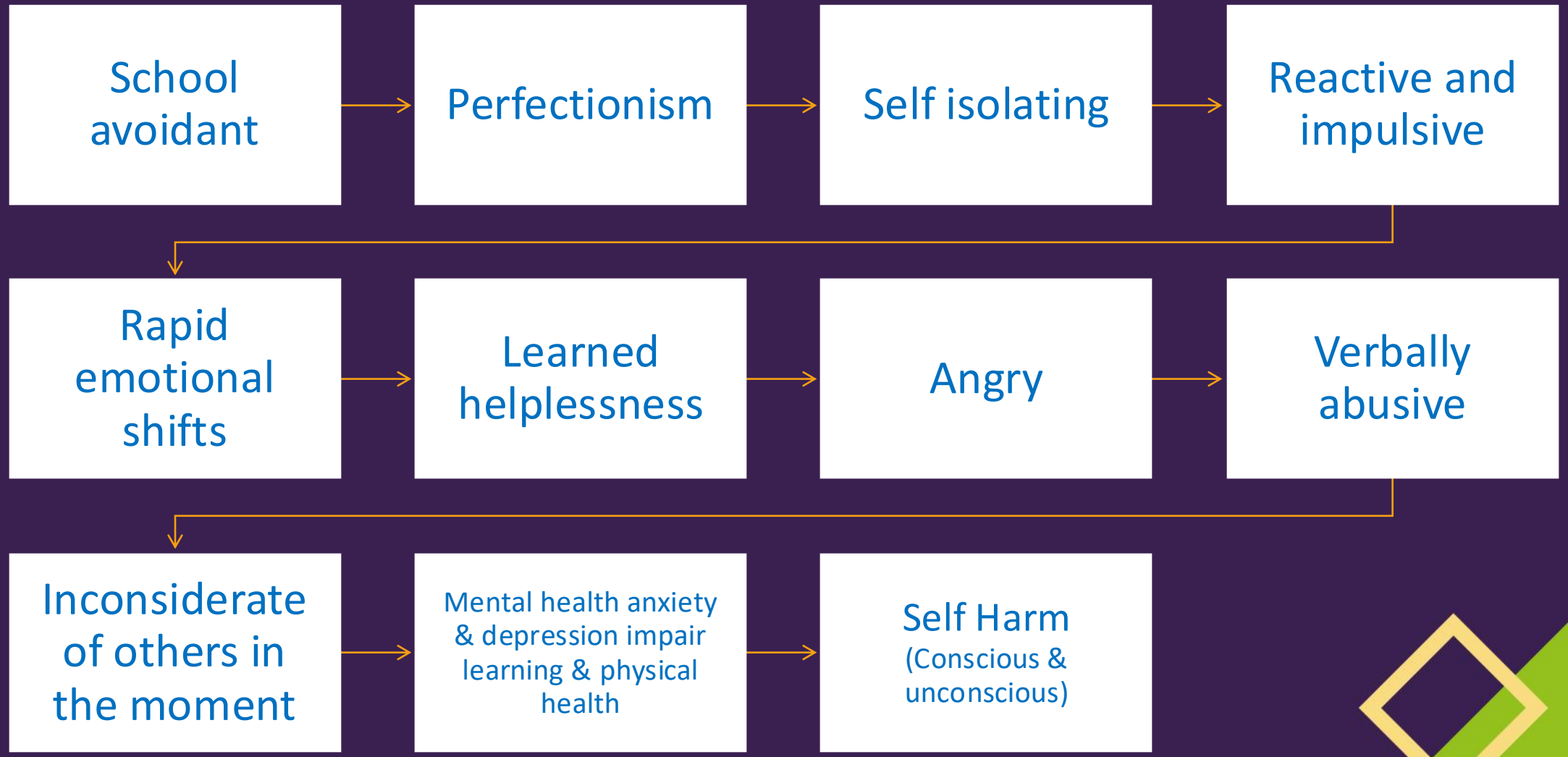
Understanding and facilitating state dependent learning

Planning organsing prioritising

Goal setting

Motivation

Impact of Trauma on behaviour – ‘mistaken goals’



Understanding the Fragmented Self: Brain Dissociation and Trauma Parts

Trauma forces structural separation between left and right hemispheres.

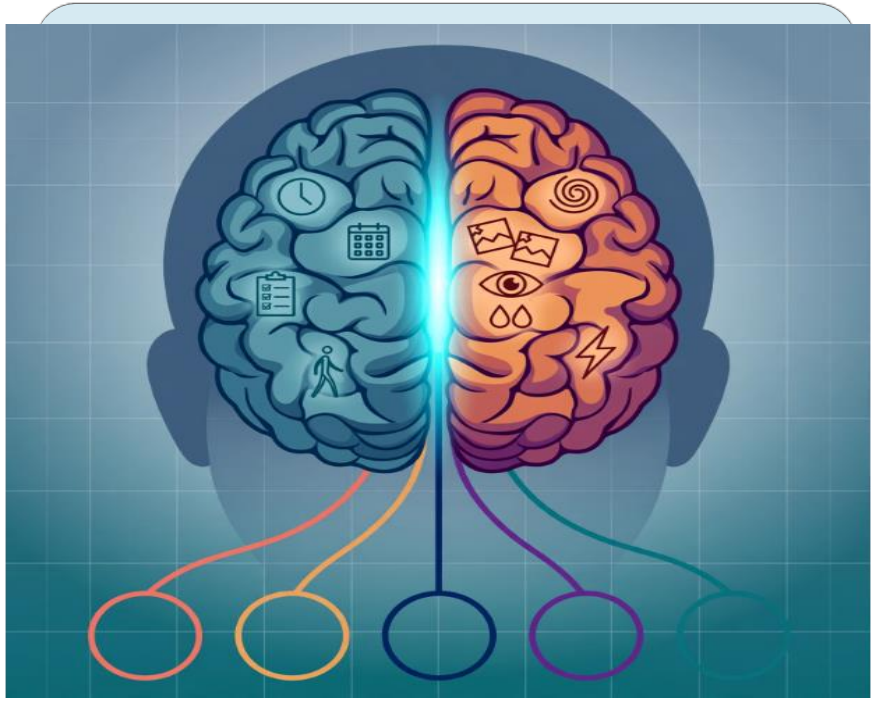
Dual hemisphere brain split

Normal

Life Self

Left-brain part maintains daily functioning while minimizing past trauma.

What it protects: routine, planning and being able to carry on.



Traumatized

Emotional self

Right-brain part stores non-verbal memories and senses ongoing danger.

What it holds: body memories, images and threat signals.

Left — daily life • Central split • Right — emotional memory

The five survival defense parts

Each part once helped survival

Fight part

Boundary defense and self-protection.
Hypervigilance, resistance, anger, self-harm.

Flight part

Escape from overwhelming internal distress.
Self Protective Behaviours. Avoidance, substance use, eating disorders.

Freeze part

Stillness when escape feels impossible.
Freeze parts trigger bodily panic.

Submit part

Passive survival and attachment preservation.
Chronic depression, shame, helplessness, caretaking.

Cry for help part

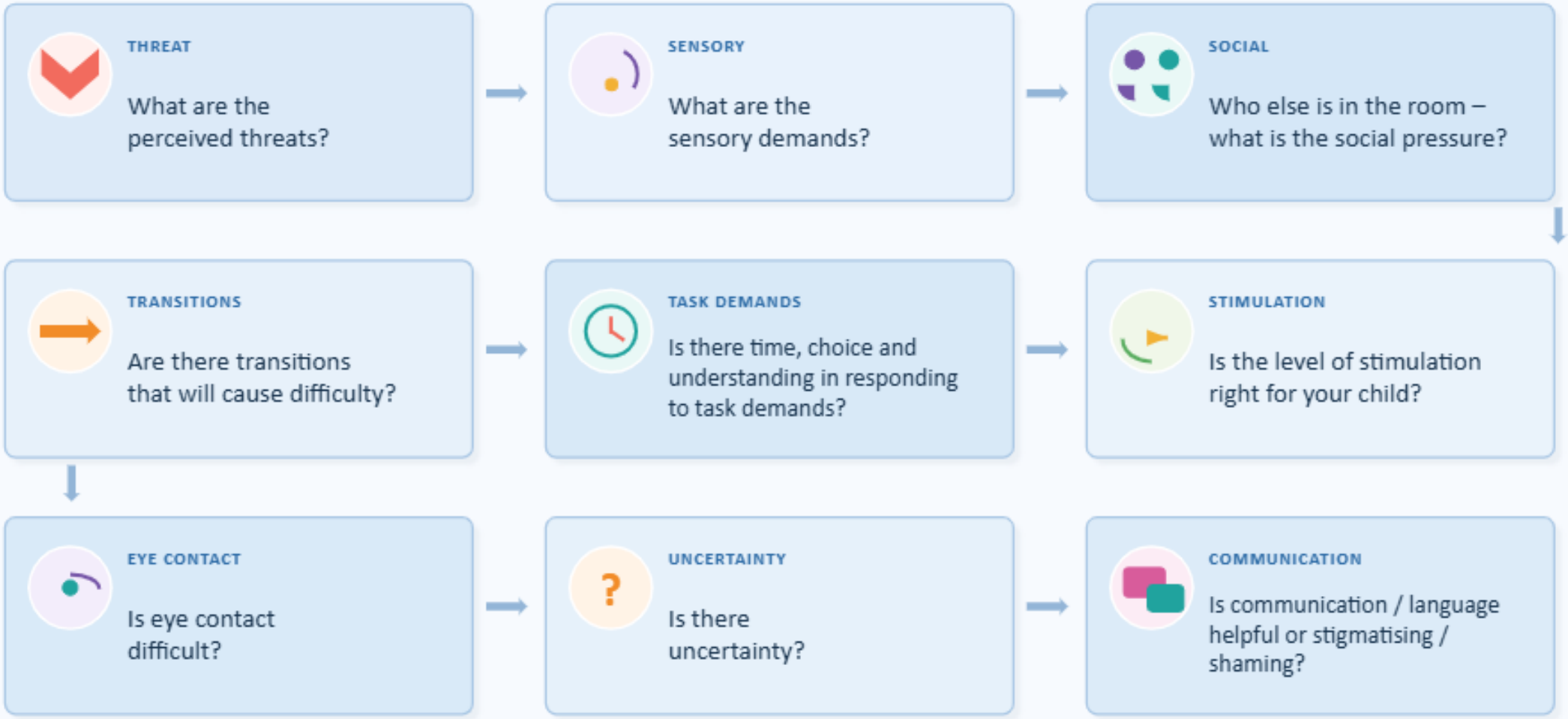
Desperate vulnerability to elicit protection.
Attach parts seek external protection.

Reduce the Emotional Load. Reduce the Cognitive Load

Understanding demands and environmental pressure

Competing needs build throughout the day

Questions to consider when a child is experiencing difficulty



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Reflect – anticipate – protect. Communicate – connect – co-regulate

TEACH CHILDREN SELF CARE – Protective Responses to Distress

Understanding trauma responses — how you feel, how you act, and what can help

	HOW YOU FEEL	HOW YOU ACT	WHAT CAN YOU DO ABOUT IT?	
 FIGHT	Angry Offended Upset Stressed Out Irritated Tense	Bullying Controlling Narcissistic Explosive Behavior Aggressive Defensiveness **Mistaken Goals**	• Deep Breathing Exercises • Positive Self-Talk • Journaling Thoughts • Grounding Techniques	• Physical Activity • Support Network • Mindful Meditation Humming – 90 seconds Singing, Gargling,
 FLIGHT	Anxious Panicked Scared Distracted Zoned Out Trapped	Over Thinker Can't Stay Still Avoiding Conflict Perfectionist Workaholic Hypervigilance	• Controlled Breathing • Mindful Awareness • Self-Soothing Techniques • Cognitive Reframing	• Safe Space Visualization • Calming Affirmations • Slow Physical Movement Run cold tap water on your wrists
 FREEZE	Numb Empty Bored Lacking Focus Scared Shame	Dissociated Depressed Seeking Solitude Avoiding Relations Day Dreaming Indecisiveness	• Grounding Exercises • Focused Breathing • Sensory Awareness • Gentle Movement	• Progressive Muscle Relaxation • Safe Object Holding • Reorienting Thoughts
 FAWN	Overwhelmed Scared Disconnected Responsible for Others Burn Out Inauthentic	People Pleasing Co-Dependency Difficulty Saying No Easily Manipulated No Boundaries Over Apologizing	• Boundary Setting Practice • Assertiveness Training • Self-Validation Affirmations • Detachment Techniques	• Reflective Journaling • Inner Child Healing • Prioritize Self-Care

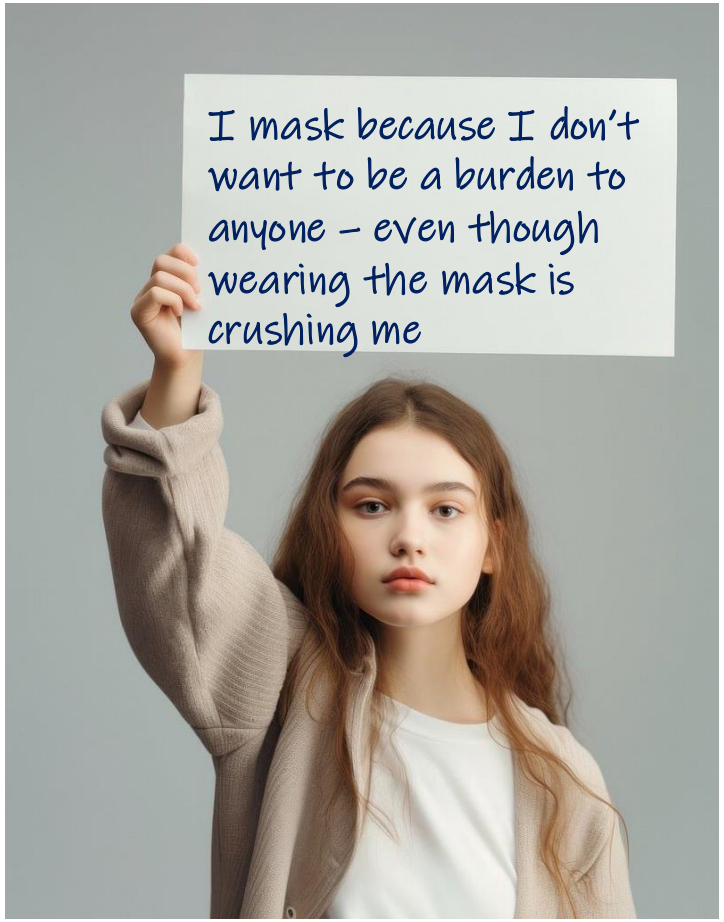


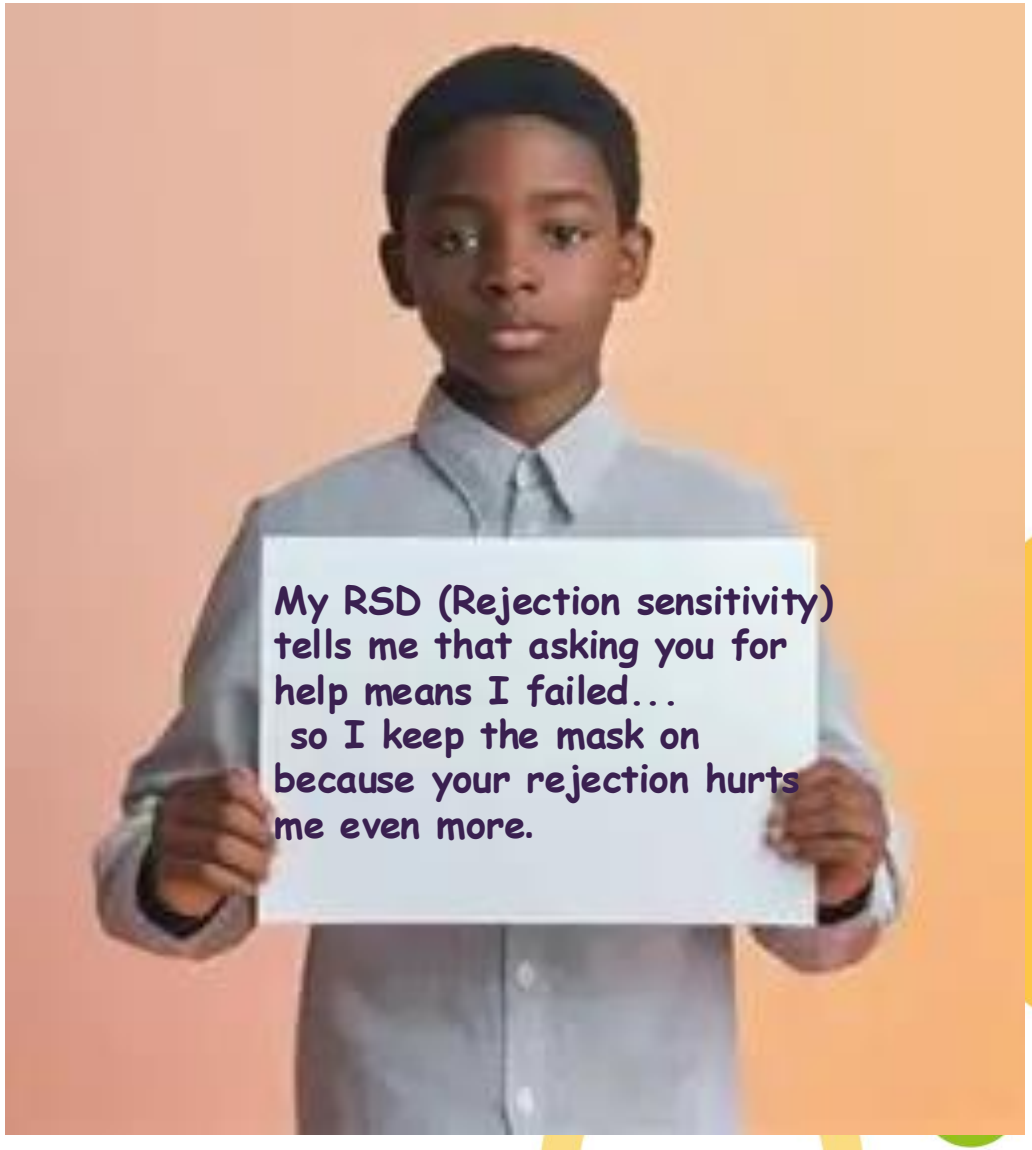
Teach Children ‘Self Care’

Learning about relationships,

Navigating puberty, adolescence, falling in love..

Emerging ‘Identity’ Personal values, ideals, aspirations





Emotion is the motivator that fuels and ‘builds’ intelligence
Peer Mentors and Peer Educators – Train them !

Relational thinking motivates them to control their impulses and behave in a pro social way that **enables them to belong, feel and consciously experience safety learning from the social groups they ‘belong’ to.**



**A neuro-constructionist approach – repeating specific behaviours to change the thinking and the feeling –
And attitude to collaborative and independent learning – adding a relationship driven positive emotional charge.**

Body Doubling…

Training your nervous system ‘habitually’ over time to reduce sensitivity to overwhelm.



A neuro-constructionist approach – repeating specific behaviours to change the thinking and the feeling

Physically move (walk, shake, stretch, dance, rhythmic jumping)

Belly breathing 6Hz– slowly inhaling for 5 seconds and exhaling for 5 seconds

Progressive muscle relaxation

Massage points of the body linking to Vegas nerve (ear lobes, wrists, feet, neck)

Exercise – mindful walks

Singing (especially in a choir) or humming

Gargle

Swill face and wrists in cold water

Adults - Modulate your voice -talk to the child slowly and in a lower tone

The Grounded Model

G = Grounding – Stand, Listen to your body, *mindfully* visually scan your body from the feet up, feel it -

R= Regulation - Self-Calm, Self-Soothe, Breathing 6Hz, Acupressure, Body Scanning, Stretching - 'notice mindfully'

O=Orienting – Focus on the present moment, where I am, the physical space I am in, eyes open, notice the temperature of the room, the sounds, notice one object in the room, hold it in your gaze,

U=Understanding Notice what you are now feeling, what you are now thinking. What do I need? What do I want? Do I want or need it right now? How can I get the best out of this situation?

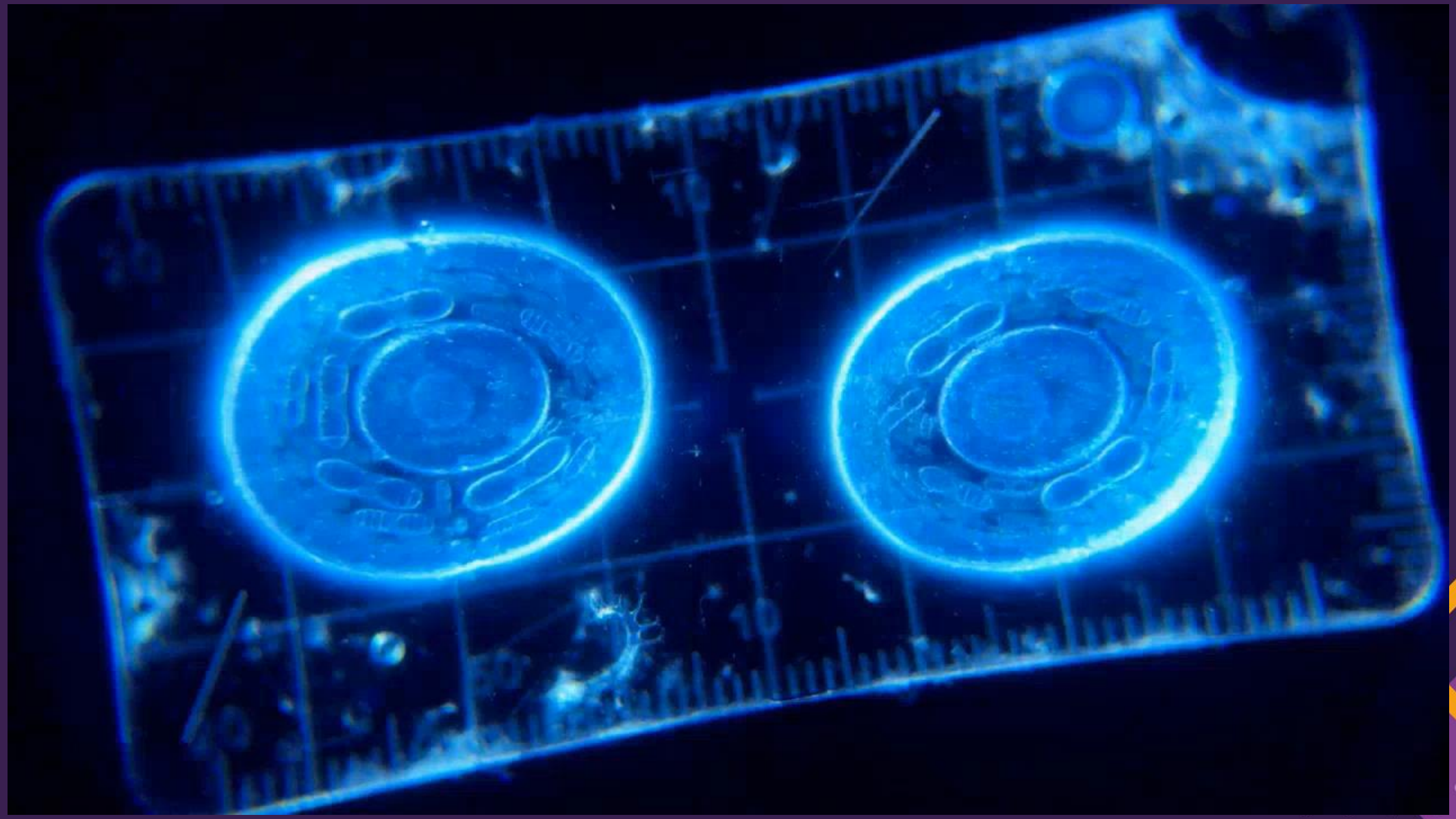
N=Nurturing Teach, show model strategies to self calm, self soothe, communicate empathy & concern

D=Drop the 'Disorder' labels should describe – not constrain, stigmatise, measure by deficit, or construct self limiting beliefs.

E = Ecology Encourage the child to anticipate how happier, more confident, capable they will be as they develop these behaviours, skills, new self concept, confidence.... Devise a plan, SMART Goals (not just related to school)

D= Direction **Metacognition** – teach child to notice when they experience negative self talk, or talk about their difficulties as defining them and counter with two positive things about themselves and recall positive experiences & achievements. Write them down!

Connection + Communication + Coregulation:



Inculcate Self Care Strategies into the curriculum.

Teach children to ‘Change their State’ – State Dependent Learning –
A Learning ‘State of Mind’

Reduce the Emotional Load.

Reduce the Cognitive Load.

Teach them - Show them – ‘model’ good self care

Model regulation by ‘grounding’ yourself and model co-regulation.

Teacher well being is integral to pupil well being.

Thank you



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https://www.neurodiversitytraining.uk

https://drtonylloyd.com

School Counsellors…

Identifying barriers to learning and delayed progress What to consider the 5 P's Framework

1. **Presenting concerns** – about learning impairment, underachievement, general behaviour (not just discipline code) Specific problems, needs or difficulties the child is experiencing.

2. **Predisposing factors** – ACES family history neurodivergence, physical health problems – that you are aware of Historical or contextual factors that may have caused or contribute to the vulnerability or impairments –

3. **Precipitating factors**, Events that may have triggered the current issues – eg transitions, bullying, family distress, other health problem that may impact on learning behaviour but have not been identified –e.g. Hearing impairment / vision impairment / chronic pain or fatigue exp by children with Dyspraxia, hypermobility, ADHD or Autism etc

4. **Perpetuating factors** – ongoing factors that maintain or exacerbate the presenting issues such as unhelpful coping strategies, learned helplessness, environmental stressors

5. **Protective factors** – strengths and resources the child has that offer some support in managing their challenges without being overwhelmed – including supportive friendships, learned strategies to reduce distress, anxiety, facilitating self care.

The child who is 'coping' does not mean the problem is sorted. Masking & Camouflaging in high achievers

Introduction to Schema Modes /Attachment Styles for Adolescents for School Counsellors & Mental Health Lead on SLT

CHILD MODES (Vulnerable & Expressive)

- **Vulnerable Child:** Feels lonely, abandoned, anxious, hurt. Needs comfort & validation.
- **Angry / Impulsive Child:** Expresses unmet needs intensely, often inappropriately. Needs limits & understanding.
- **Contented Child:** Feels safe, loved, connected, playful. The goal state.

DYSFUNCTIONAL PARENT MODES (Internalized Critics)

- **Punitive Parent:** Internal voice that criticizes, punishes, or shames. Feels unforgiving.
- **Demanding Parent:** Pushes for perfection, achievement, or self-sacrifice. Never satisfied.

THE SELF & CORE EMOTIONAL NEEDS

MALADAPTIVE COPING MODES (Survival Strategies)

- **Compliant Surrenderer:** Gives in to others, avoids conflict, seeks approval. Feels passive.
- **Detached Protector:** Emotionally disconnects, numbs feelings, avoids intimacy. Feels empty.
- **Overcompensator:** Fights back, acts superior, controlling, or aggressive. Feels dominant.

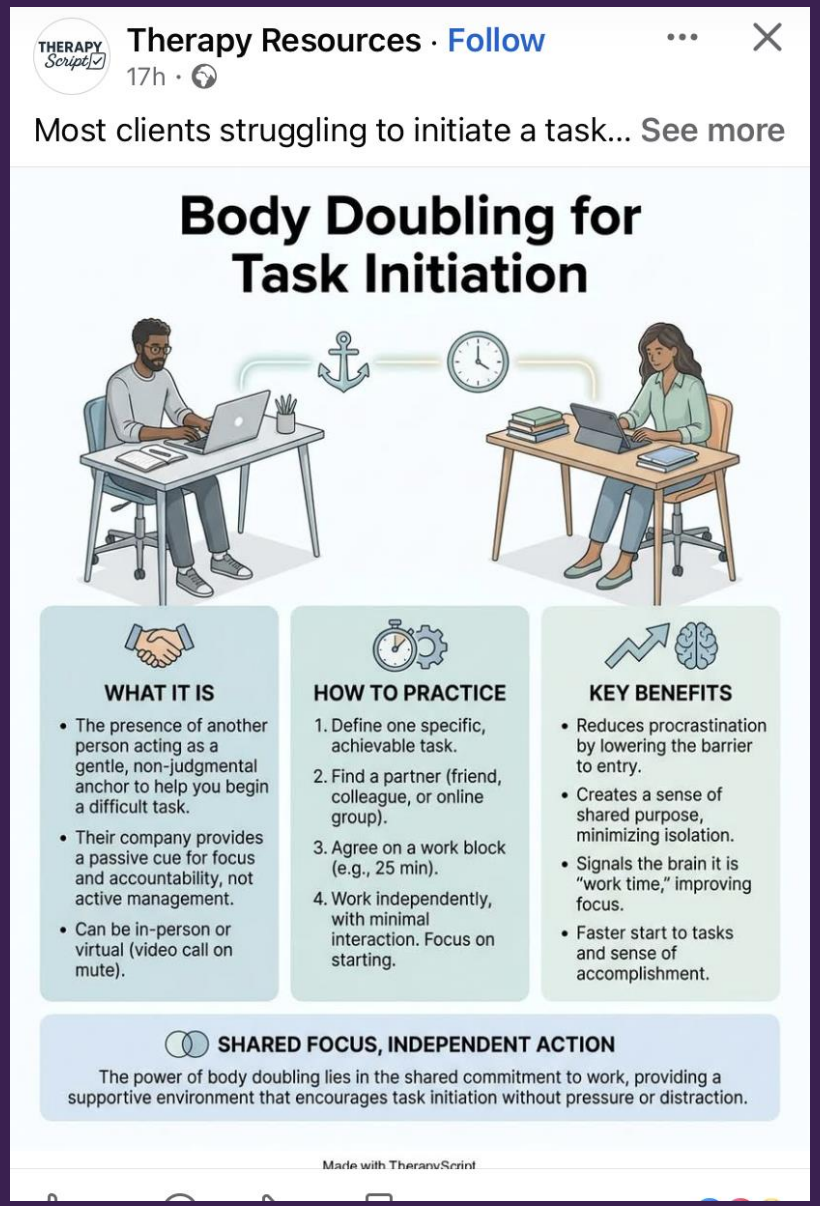
HEALTHY ADULT MODE (Nurturing & Executive)

- Nurtures Vulnerable Inner Child, sets limits on Angry / Child and Dysfunctional Parent modes.
- Uses healthy coping, solves problems, builds connections.
- Integrates feelings and reason, guides behavior based on values.

GOAL OF SCHEMA THERAPY → STRENGTHEN HEALTHY INTEGRATED YOUNG ADULT MODE

Identify Triggers & Modes → **Validate Needs & Set Limits** → **Heal Vulnerable Child & Foster Growth**

Strategies


Therapy Resources · Follow
17h ·
Most clients struggling to initiate a task... See more
Body Doubling for Task Initiation
WHAT IT IS
• The presence of another person acting as a gentle, non-judgmental anchor to help you begin a difficult task.
• Their company provides a passive cue for focus and accountability, not active management.
• Can be in-person or virtual (video call on mute).
HOW TO PRACTICE
1. Define one specific, achievable task.
2. Find a partner (friend, colleague, or online group).
3. Agree on a work block (e.g., 25 min).
4. Work independently, with minimal interaction. Focus on starting.
KEY BENEFITS
• Reduces procrastination by lowering the barrier to entry.
• Creates a sense of shared purpose, minimizing isolation.
• Signals the brain it is "work time," improving focus.
• Faster start to tasks and sense of accomplishment.
SHARED FOCUS, INDEPENDENT ACTION
The power of body doubling lies in the shared commitment to work, providing a supportive environment that encourages task initiation without pressure or distraction.
Made with TherapyScript


Categories of Stimming Behaviours
• Tactile Stimming (Touch)
Touching or rubbing the skin
Playing with or touching hair
Rubbing or exploring different textures
Picking at the skin
Seeking physical touch or firm pressure
• Visual Stimming (Sight)
Watching spinning or moving objects
Looking at lights, reflections or shadows
Visually tracking repetitive movements
Moving fingers or hands in front of the eyes
• Vestibular Stimming (Balance and Movement)
Rocking the body back and forth
Spinning or twirling
Swinging repetitively
Bouncing or jumping repeatedly
Repetitive body movements
• Olfactory Stimming (Smell)
Smelling objects repeatedly
Smelling clothing, toys or other familiar items
Seeking out scented items or preferred fragrances
• Proprioceptive Stimming (Body Awareness and Deep Pressure)
Pushing against walls or furniture
Carrying or lifting heavy objects
Pushing or pulling heavy objects
Stomping the feet
Squeezing the hands or muscles
Seeking tight hugs or firm pressure
• Auditory Stimming (Sound)
Tapping or snapping the fingers
Tapping objects to produce repetitive sounds
Repeatedly listening to preferred sounds
Making repetitive sounds with objects
• Oral Stimming (Mouth and Oral Sensory Input)
Licking objects
Chewing or sucking on non edible objects
Biting the lips or other objects
Seeking specific food textures
• Vocal Stimming (Voice and Speech)
Humming repetitively
Singing repetitively
Repeating words or phrases
Making repetitive vocal sounds
Repeating words or phrases heard from others (echolalia)
• Repetitive Motor Stimming (Body Movements)
Hand-flapping
Repetitive hand or finger movements
Finger flicking or wiggling
Repetitive pacing
Repetitive hand gestures or movements
Empowering Neurodivergent Children

Neuroconstructionist appraoch.

Instead of adjusting outputs, it targets the predictive architecture: the meanings that shape what gets constructed in the first place.

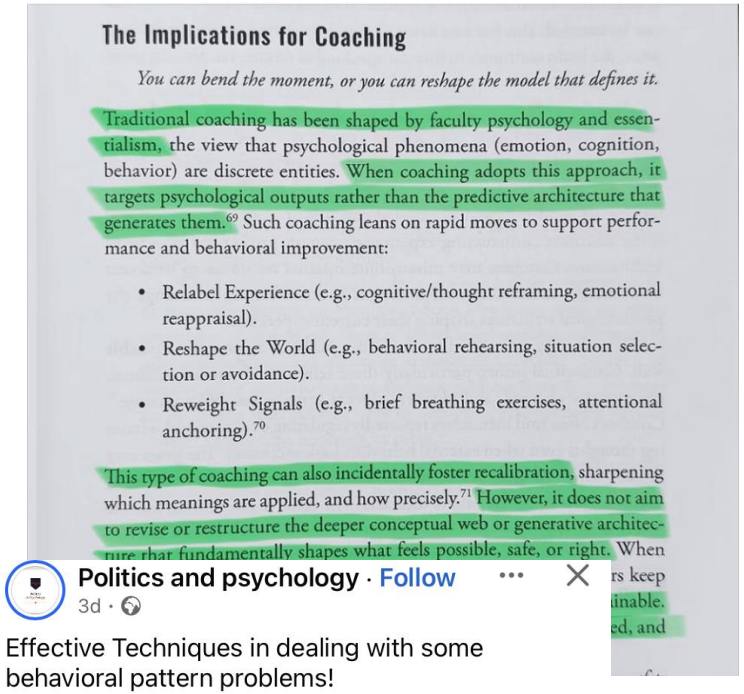
When the prediction changes, the experience changes. Not because the child tried harder, but because the brain is now constructing the moment from different meanings.

The result is change that doesn't require constant regulation. Change that holds under pressure. Change that feels natural rather than forced. That's what coaching the architecture makes possible.

Most coaching targets what people think, feel, or do.
Neuroconstructionist Coaching targets the architecture constructing them

Biological Co-Regulation Builds Resilience: Promptly holding and soothing a distressed infant lowers heart rate and stress hormones within seconds, teaching the developing nervous system that the world is predictable and safe.
Far from "spoiling" a baby, responsive comfort in the first year is literally one of the primary biological signals that builds a resilient human brain.

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The Implications for Coaching

You can bend the moment, or you can reshape the model that defines it.

Traditional coaching has been shaped by faculty psychology and essentialism, the view that psychological phenomena (emotion, cognition, behavior) are discrete entities. When coaching adopts this approach, it targets psychological outputs rather than the predictive architecture that generates them.[69] Such coaching leans on rapid moves to support performance and behavioral improvement:

- Relabel Experience (e.g., cognitive/thought reframing, emotional reappraisal).
- Reshape the World (e.g., behavioral rehearsing, situation selection or avoidance).
- Reweight Signals (e.g., brief breathing exercises, attentional anchoring).[70]

This type of coaching can also incidentally foster recalibration, sharpening which meanings are applied, and how precisely.[71] However, it does not aim to revise or restructure the deeper conceptual web or generative architecture that fundamentally shapes what feels possible, safe, or right. When

