

Testing a new digital approach to measuring emotion systems: The Three Circles App for adolescents

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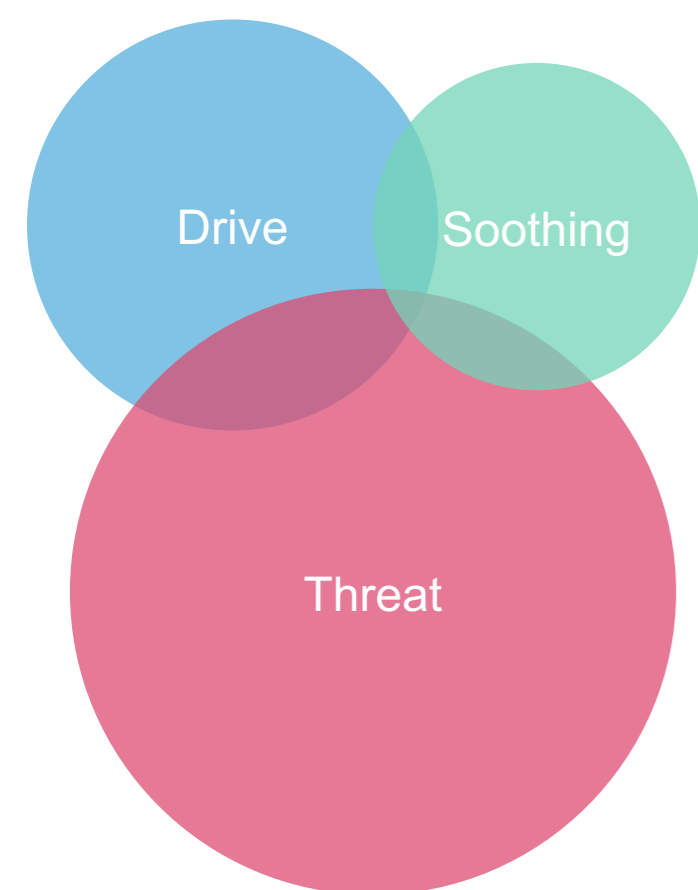
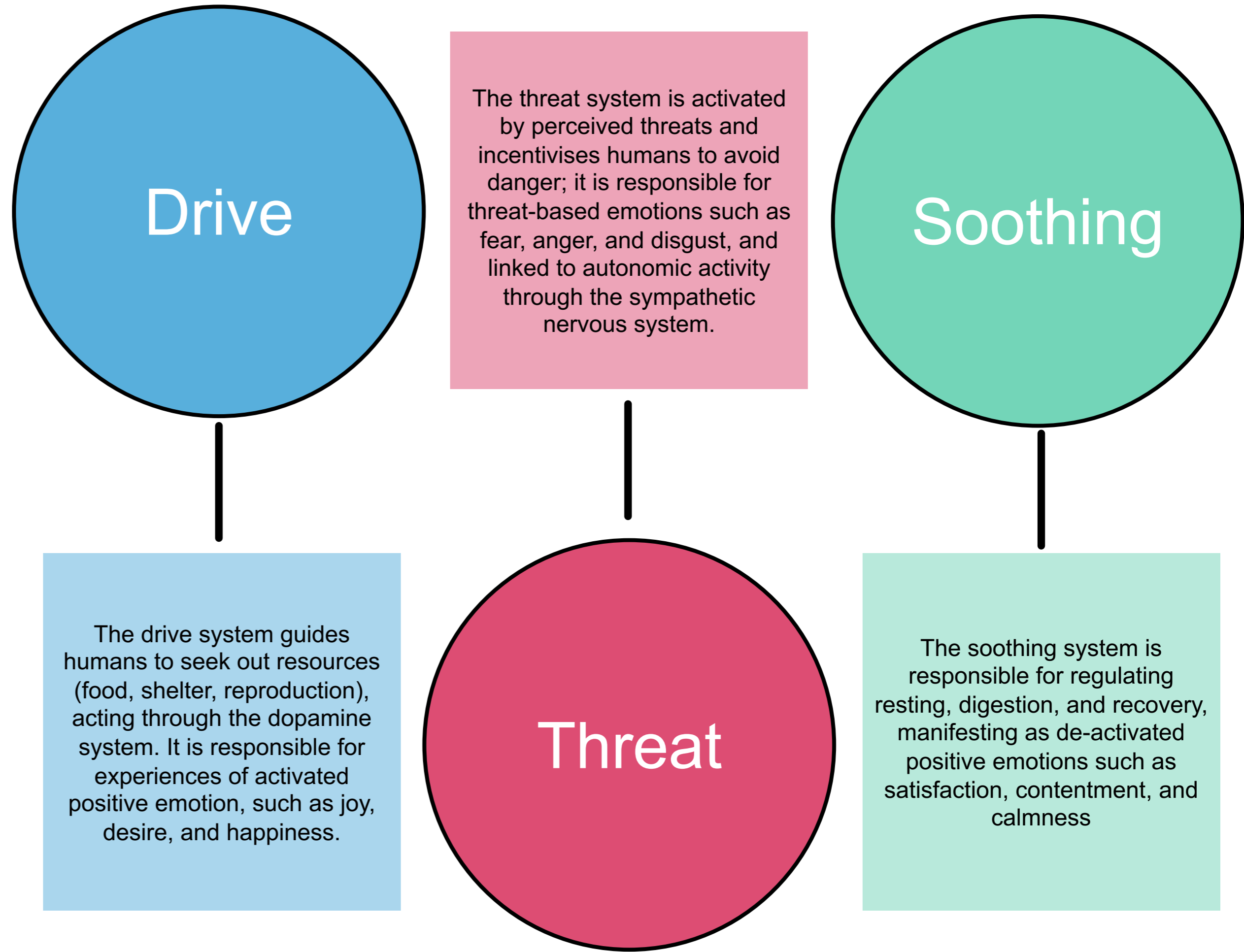
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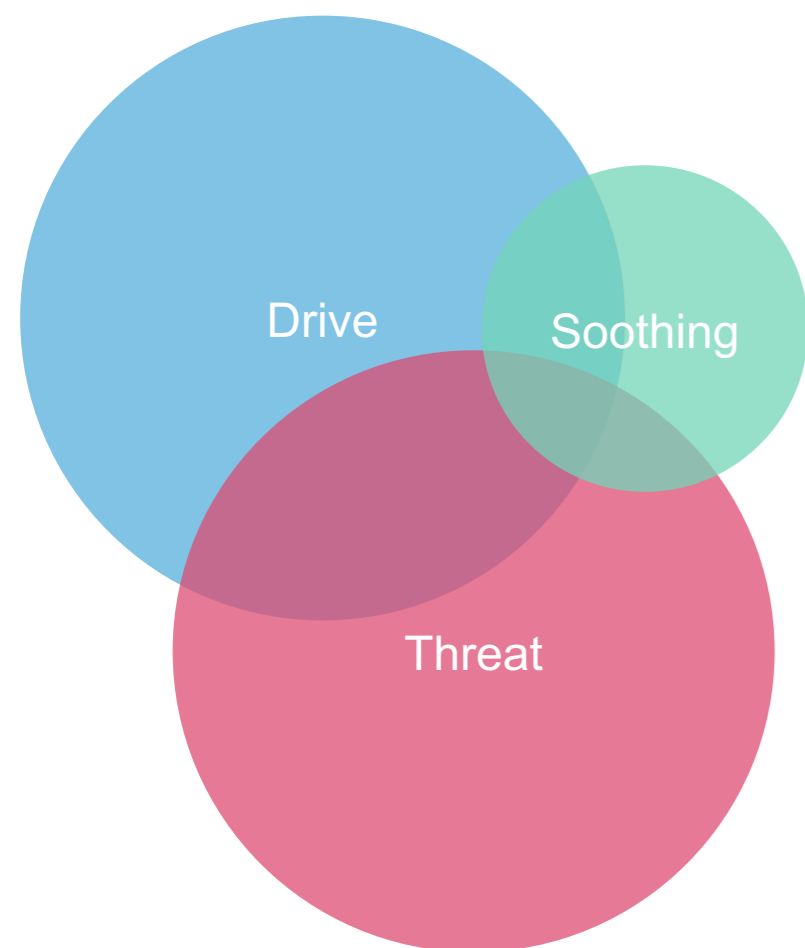
The Tripartite Model of Emotion Regulation

- Compassion Focused Therapy (CFT) and Mind Training (CMT) are a family of therapeutic techniques aimed at improving and sustaining mental wellbeing
- Based on the tripartite model of emotion regulation (Gilbert, 2014): a model of how emotional control systems interact that integrates findings from evolutionary psychology, physiology, and clinical psychology.
- The tripartite model presupposes that emotions fall under the control of one of three systems (drive, threat, soothing), which serve adaptive functions to incentivise behaviour; threat, while responsible for negative emotions, is evolutionarily adaptive in incentivising survival through avoidance behaviours
- Individual systems become maladaptive where they are unbalanced relative to the other systems relative to context
- The goal of compassion focused therapy and compassionate mind training is to facilitate balance between the systems to enable compassion; this is towards others, as well as to others, and to oneself



Threat dominant

- An easily triggered threat system and under-active drive and soothing system
- Can manifest as heightened anxiety, hypervigilance, uncontrolled displays of threat-based emotions, or blunted affect and motivational disengagement



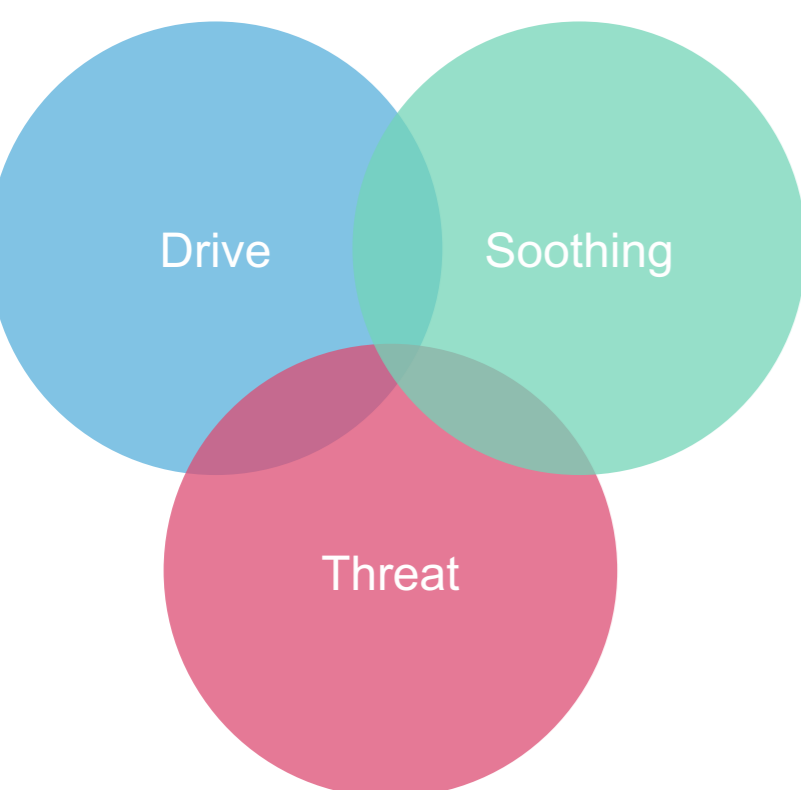
Regulation of threat through drive

- Threat and drive activate the sympathetic nervous system and lead to higher physiological and psychological arousal
- Drive and threat together can motivate action, but overactivity of these systems can present issues such as stress, anxiety, and burnout



Drive dominant

- An overactive drive system is characterized by hyperactivity, poor self-control, and risk-taking
- The soothing system cannot balance the increase in drive, and the threat system cannot warn of potential danger
- Can present as impulsive behaviour, attentional deficiencies, poor decision making, and negative emotions associated with hyperarousal



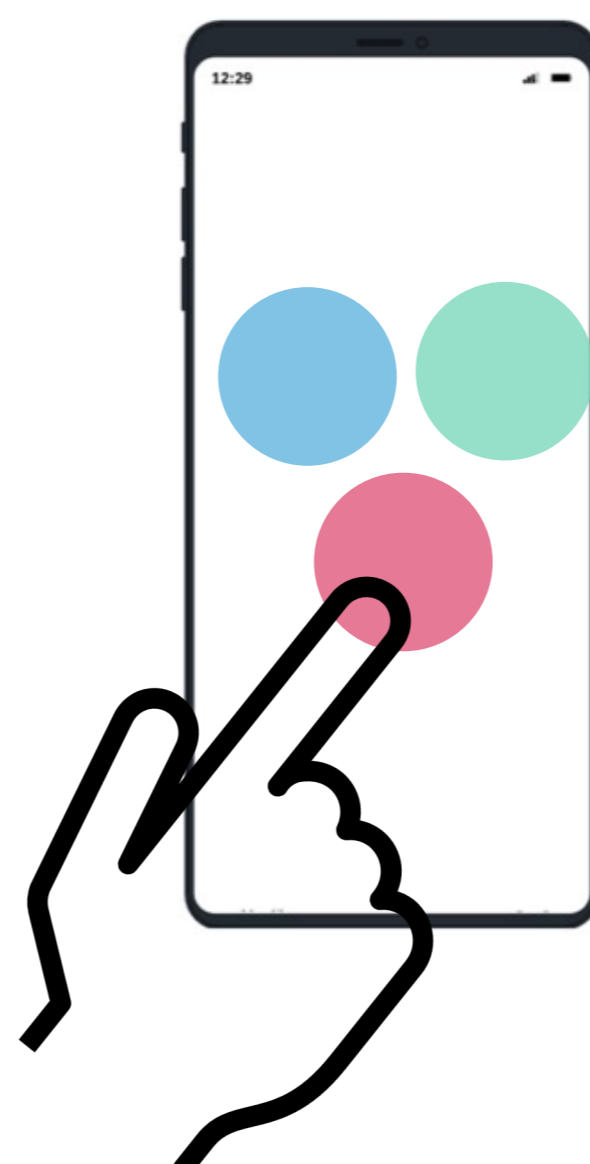
Coregulation

- Balance between the systems is the optimal state for most everyday contexts and represents self-regulation
- Threat is not *inactive* but is balanced by other systems so threats are dealt with appropriately
- Drive is present but balanced by soothing and threat systems so that we are not impulsive

Methods

- Aim is to validate the Three Circles with established measures of emotion in young adults aged 18-25, and teens aged 12-17, respectively
- Validation will help researchers and clinicians better measure emotional activation in adolescents
- Implications for use in classroom settings to examine coregulation between teacher and class
- Hypothesised to correlate with established measures of emotion regulation in ways that reflect the underlying emotion motivation systems
 - Higher scores of negative emotion = greater red circle
 - Higher scores of positive activated emotion = greater blue circle
 - Higher scores of deactivated positive emotion = greater green circle
- Coregulation between the circles is theorised to be reflected in measures of wellbeing and distress,
 - Overactive threat system = high scores on clinical measures such as the DASS - Y (Szabo & Lovibond, 2022)
 - Relative balance between the circles hypothesised to correlate with measures of wellbeing and compassion such as the CMAS (Gillbert et al., 2017).

The Three Circles measure is a simple, phone-based tool where participants can change the size of each circle to represent their current or recent states



Three Circles – Young Adult

- Data collection with 18-25 year old first year psychology students is currently running
- Over 200 participants have completed the study; this will continue to run until the end of the year

Three Circles - Teen

- Applications for ethical clearance to commence work on the teen measure of the Three Circles submitted
- Survey link ready to be disseminated
- Upon clearance from UQ's HREA committee, efforts will be made to contact bodies such as Queensland Department of Education and Brisbane Catholic Education (BCE) to organise gatekeeper ethics
- Volunteer schools from Independent Schools Australia are welcomed
- Goal is to validate the Three Circles with appropriate established scales of emotion regulation, which will be completed via an online study that should take roughly 20 minutes

The Future

- Validation will result in a new measure of emotion regulation exempt from caveats associated with previously established measures of emotion regulation, including time constraints, literacy, and emotional awareness.
- The digital nature and vibrant colours may be appealing to younger users
- Associated psychoeducation on the tripartite model may help young people better establish what it is they are feeling and the adaptive function of these emotions
- May also be completed by teachers, as well as students, so that staff may gauge which strategies aid in coregulation of a classroom.
- Possible settings for the use of this measure include classrooms, clinical practice, out-of-home and foster care settings, and in Youth Justice and Child Safety engagements.