

Adverse childhood experiences - stressful and potentially traumatic experiences of a child less than 18 years of age; physical, emotional sexual abuse; physical and emotional neglect; household dysfunction, bullying, multiple medical procedures, foster care/adoption, death or serious illness of a significant other

Allostatic load - wear and tear on the body related to chronic exposure to stress; the work required to try and maintain homeostasis/balance in the body

Attunement - how a person reads and responds to another's emotional needs and moods; a person who is well attuned will respond with appropriate language and behaviors based on another person's emotional state.

Amygdala - part of the limbic brain; located directly in the center of the brain; responsible for detecting any real or perceived threat and altering the brain and body of the threat; plays a role in emotional memories and reactions; may become highly sensitive and over responsive to even minimal perceived threat if a person has been exposed to toxic stress; the amygdalas of adolescents become highly sensitive during puberty and may cause strong emotional reactions

Autonomic Nervous System - controls internal body processes such as blood pressure, heart and breathing rates, body temperature, digestion; many organs are controlled primarily by either the sympathetic or the parasympathetic division; the two divisions have opposite effects on the same organ i.e, the sympathetic division increases pulse rate, and the parasympathetic division decreases it; the two divisions are supposed to work together to ensure that the body responds appropriately to different situations - arousing then calming, arousing then calming, etc.; following exposure to toxic stress, the sympathetic nervous system becomes dominant causing increased heart and breathing rates, sweating, agitation even in calm nonthreatening environments and the body has difficulty returning to calm state

Bias to threat - brain organization to continuously scan the environment for threat to the exclusion of anything else; wired into our brains to ensure our survival

Bottom up regulation - engaging in rhythmic, repetitive activities to regulate the brain stem which in turn allows the regulation of the limbic center followed by connection to the cortex; examples include deep breathing exercises, jumping, swinging, dancing, drumming, running, walking, etc; far more effective in building long lasting co-regulation and self regulation skills in children than top down approaches; working with the body to regulate the brain

Brain Stem - controls the flow of messages between the brain and the rest of the body, also controls body functions such as breathing, swallowing, heart rate, blood pressure; primary role is to keep the body alive using primitive, automatic reflexes; responsible for the reflexive fight or flight responses to threat; following exposure to toxic stress the brain stem becomes highly reactive, and survival reflexes become disorganized; brain stem is organized by rhythmic and repetitive activities such as jumping, running, swimming, dancing, drumming, swinging, etc.

Co-regulation - refers to the way one person can adjust him or herself when interacting with another in order to maintain or attain a mutual regulated, calm state; the limbic system of one

person affecting the limbic system of another person (See neuroception and mirror neurons); is the prerequisite to self regulation; a biological imperative.

Cortex - the outer most part of the brain responsible for logical thinking, decision making, organizational skills, and prioritizing tasks and information; also responsible for managing the lower parts of the brain including the brain stem and the limbic center; built and organized by creative activities, reading, writing, planning, organizing, etc. and is very “plastic” and able to be modified and organized relatively easily as compared to the limbic center and brain stem.

Countenance - a person’s facial expression as a measure of their mood or emotion.

Empathy - the feeling that one has of sharing and understanding the feelings, emotions, thoughts, attitudes, and behaviors of another person; the foundation for supportive relationships

Formative consequences - consequences that build awareness and skills to promote a child’s responsibility, and positive leadership; provide support for children and youth to learn the skills and acquire the insights that they are lacking i.e, learning the language of emotions and how to accurately identify their own feelings and the feelings of others, creating a poster or collage about how it feels to be bullied, assisting teachers to resolve conflict between other students, teaching a class lesson about respect and how to show it, creating a presentation about the positive impact of diversity in the school community, etc.

Growth mindset - an underlying belief that all people are able to achieve and reach goals and obstacles and challenges are part of the process; the brain is capable of growth and change and must be pushed to achieve it; success requires hard work and effort; criticism is a source of learning and a way to improve; we can be inspired by the success of others rather than threatened

Hippocampus - part of the limbic system; located just below the ventricles in the center of the brain behind the amygdala; responsible for bringing short term memory into long term memory; plays a role in down regulating cortisol levels and management of the stress response; contributes to the processing of emotional reactions; weakened by exposure to toxic stress.

Hope - the feeling that something good will happen, to expect something positive

Hypervigilance - being highly and abnormally alert to potential threats creating anxiety and eventually, exhaustion; heightened sensory awareness; children that are hypervigilant are often off task and lack focus leading to a diagnosis of ADHD

Interoception - bringing awareness to the sensations in the body to determine if conscious intentional intervention is required to decrease arousal level; basic foundational skill of self regulation

intimacy barrier - the measure of how much inter-relational interaction a person’s nervous system is able to tolerate; a spectrum from casual, routine, personal to intimate; children that have grown up in stressful situations may perceive any type of inter-relational interaction as threatening; even casual or routine interactions become too much for the child’s disorganized nervous system to tolerate and a reflexive survival response will be activated

Intrusions - historical memories or thoughts that come to consciousness without a person's control and are unwanted, painful, and distressing.

Level of regulation or state of the nervous system - the internal state of the body's physiology and emotions

Limbic system - located in the center of the brain and includes the amygdala, hippocampus, and hypothalamus; responsible for housing our memories and emotions; amygdala is the "smoke detector" of the body and alerts the brain and body to any real or perceived threat; where our sense of identity and self worth resides

Logotherapy - a philosophy based on the idea that we are strongly motivated to live purposefully and meaningfully, and that we find meaning in life as a result of responding authentically to life's challenges; the work of Viktor Frankl

Mentalization - understanding the mental state that underlies our own behaviors or the behaviors of others

Mindfulness - focusing one's awareness on what is going on in the present moment, both inside our bodies and minds as well as in the environment; bringing attention to one's thoughts, feelings, sensations without judgment; knowing what is on your mind so that you can act with intention and purpose

Mirror neurons - a nerve cell that fires, or is activated, by a person just watching someone else do some thing; fires to mirror the emotional state of another; a component of imitation which is important in learning; believed to be the way the brain unconsciously interprets the actions, intentions, and emotions of others.

Neurobiology - the study of the structure and function of the nervous system including the brain, autonomic nervous system, neurotransmitters, and hormones.

Neuroception - how the brain stem and limbic system distinguish if people and or situations are safe or threatening; unconscious process that occurs completely out of a person's control; detection without awareness; wordless interpretation of experiences.

Neurosequential development - the brain develops and functions in a sequential manner from bottom to top; brain stem is the foundation of the entire brain and supports the development of the limbic system and cortex; all information from the environment and internal bodily states enter the brain through the brain stem, then limbic system, and finally the cortex; brain stem and limbic center evaluate all information and process it related to sense of threat and relation to previous emotions and memories; if the brain stem is disorganized the result is a weak foundation on which the rest of the brain develops and functions; a weak and disorganized brain stem is reactive and causes a person to have reflexive survival responses that are out of his or her cortical control, making self regulation, social interaction, and logical thinking challenging

Parasympathetic branch of the autonomic nervous system - part of the autonomic nervous system; neural system that originates in the brain stem and plays a role in the body's response to stress and threat; involved in restoring the body after response to stress; slows heart and breathing rates, returns blood to digestive organs and stimulates the return of intestinal peristalsis and digestive secretions; in a parasympathetically driven state a person will desire social interactions

Physiology - the functioning of living organisms including physical and chemical processes

Presence - fully focused in body, mind, and heart on another person to the exclusion of all else; focusing fully and completely on another person for the only purpose of relieving the other's distress; provides a child with safety, soothing, security, and a sense of being "seen".

Psychophysiology - study of how the physical and chemical processes of the human being affect behavior and emotions

Relationship - a positive emotional bond that includes understanding and support; includes connections around successes and failures; ebbs and flows with connection and rupture and it is always the adult's responsibility to repair the relational rupture when the relationship is between a child and an adult; relational rupture might include a strong disagreement, disciplinary action, or a violation of trust.

Resilience - the capacity to spring back, rebound, and overcome adversity; facing challenges instead of avoiding them.

Resonance - a vibrational connection; one person's limbic system connecting with another person's limbic system; the process of attunement between two people

Safety - freedom from harm or the threat of harm; required by the nervous system for learning to occur; the freedom from threat or the perception of threat to the physical body and/or sense of identity and worth; physical safety is freedom from harm or threat of harm to the physical body; emotional or psychological safety is the freedom from harm or threat of harm to the sense of identity and worth; academic safety is the freedom to make mistakes and fail without being made to feel like a failure; toxic stress creates a disruption in safety

Self efficacy - the belief we have in ourselves, our abilities, and our power to have an effect on the world around us; our belief that we can meet challenges and complete tasks successfully

Self esteem - based on actual accomplishments including overcoming adversity; identifying, understanding, and utilizing personal strengths; living life expressing personal talents and gifts

Self regulation - the ability of a person to use his or her cortex to notice level of regulation and manage the instinctual reactivity of the brain stem and limbic system; an executive functioning skill that requires previous experiences of co-regulation, mindfulness, and cortical organization that is strong enough to over ride the lower brain

Shame - a sense of feeling like a bad, flawed, unworthy person because of wrong or foolish behavior; painful feeling of humiliation and distress associated with wrong doing; as opposed to guilt which is a sense of having done something wrong but sense of self-worth is maintained

Sympathetic branch of the autonomic nervous system - part of the autonomic nervous system; neural system that originates in the brain stem and plays a role in the body's response to stress and threat; mobilizes the body's resources to engage in protection and defense; raises heart rate and force of contractions, raises blood pressure, increases breathing rate and opens large airways, dilates pupils, inhibits intestinal peristalsis and secretion of digestive enzymes; if body becomes sympathetically dominant due to toxic stress the person will feel nervous, tense, agitated, hyper, impulsive, may experience sleeplessness; in a sympathetically driven state a person will avoid social engagement

Theory of mind - trying to understand what is motivating another person to act in certain ways; ability to take another person's beliefs, thoughts, and feelings into account and appreciate how they might be different than one's own; understanding how someone else feels and why; allows a person to adjust his or her own behavior as appropriate

Top down regulation - utilizing the cortex to manage the level of regulation of the lower parts of the brain; requires strong and organized cortex that is able to over ride the lower brain parts that may be reacting reflexively; examples include criss, cross applesauce, quiet hands and quiet voices, positive behavioral expectations; see self regulation; as opposed to bottom up regulation; may show some positive behavior changes in the short term but without the organization of the foundational brain stem and limbic center behavior changes will not be sustained

Tolerable dose of stress - a stress to the brain and body that causes a rise in level of regulation that is manageable for the person; repeated, predictable, tolerable doses of stress increase the window of tolerance

Toxic stress - stress that is frequent, intense, unpredictable, chronic and causes sustained changes in physiology; stress in the absence of a support system

Trauma -a result of an event, series of events, or set of circumstances that is experienced by an individual as physically or emotionally harmful or life threatening and that has lasting adverse effects on the individual's functioning and mental, physical, social, emotional, or spiritual well-being; creates challenges in perceptions and nervous system regulation; a disruption in safety and connectedness.

Trust - firm belief in the reliability, honesty, strength, goodness, and effectiveness of another; a deep knowing of reliability

Ventral branch of the autonomic nervous system - part of the autonomic nervous system that plays a role in the body's response to stress and threat; involved in social engagement; activation of this branch of the ANS is required for regulation, social behavior, and learning; allows a person to acknowledge distress and manage it



Glossary

Window of tolerance - the state of neurological functioning in which a person is able to think, problem solve, process information, and be creative; the state of neurological functioning in which a person is able to manage the autonomic nervous system responses of increased arousal (fight/flight) or decreased arousal (freeze) and remain in a calm/alert state