Act Your Age: Developmental Trauma and Lifespan Integration Therapy

by

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Abstract

Childhood (or 'developmental') trauma can have a significant impact on a person's mental and even physical health (Kessler et al., 2010; van der Kolk, 2014). In particular, because of the way developmental trauma affects brain development and is 'remembered' those who've survived trauma in childhood can struggle with affect dysregulation. Lifespan Integration (LI) therapy is a newer modality suited to resolving symptoms of developmental trauma without a high risk of retraumatization. This literature review will consider both the characteristics and particular impacts of developmental trauma and also the efficacy of LI therapy in addressing childhood trauma at its neurological roots. In addition, the history, mechanics, and limitations of LI will be considered. Finally, a workshop for counsellors will be proposed, offering them an overview of LI's efficacy and potential utility for their work with clients.

Keywords: Attunement, Co-regulation, D=Developmental trauma, Dissociation, Implicit memory, Lifespan Integration therapy, trauma, neural integration, self-regulation, self-state

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Chapter One: Introduction

When triggered by present-day events, many people who have experienced developmental trauma can react with an emotional outburst or emotional shutdown commiserate to the age at which they were traumatized. Thus, when triggered by rejection, the fifty-year-old businessman suddenly descends into a temper tantrum befitting a six-year-old, or, the forty-year-old successful entrepreneur is suddenly seized by crippling anxiety similar to what she experienced at age five. It's not surprising, therefore, that many clients, particularly those with trauma histories, come to counseling to deal with overwhelming negative emotions and the deleterious effect these emotions have on themselves and those around them. This experience of overwhelm can also be described as an inability to emotionally regulate, which has been linked to various forms of psychopathology like Post Traumatic Stress Disorder (PTSD), depression, and anxiety (Lawson-McConnell, 2020), in social problems (Lopes et al., 2005) and physical ailments (Sapolsky, 2007). Thus, addressing and working with strong emotions in therapy can be critical for mental, social, and physical health. As Paré (2012) has noted, "Counselling devoid of emotion is mere information exchange with little transformative power" (p. 348). That said, uncovering emotions and the trauma from which they arise should not be considered inherently therapeutic; if done carelessly, such a pursuit might destabilize a vulnerable client and harm the therapeutic alliance with the therapist (Paré, 2012, p. 355). Therefore, it behooves therapists to understand the roots of emotional dysregulation and offer counseling that does not further exaggerate it.

Background to the Topic

The inability to regulate emotionally often has roots in trauma. In fact, research is showing how many mental health challenges characterized by emotional dysregulation, from

anxiety to depression and suicidality to PTSD and addiction, are trauma-related (Dye, 2018; Kessler et al., 2017; Sperry, 2016). Given the preponderance of these mental health challenges, it's not surprising that the experience of trauma is widespread. Indeed, one study showed that when surveyed about their experiences of various kinds of trauma (e.g., domestic violence, war, abuse), over 70% of respondents from the general population reported experiencing at least one type of trauma in their lifetime (Kessler et al., 2017). Contemporary conceptualizations of trauma propose that it is not simply an event that causes trauma but how that event is experienced and processed (Dye, 2018; Levine, 1997, 2010; van der Kolk, 2014). When the event is unexpected, and the individual has no control over the event and is not supported adequately afterward, then it may be considered traumatic (Dye, 2018).

Childhood (or 'developmental') trauma seems to be especially impactful on an individual's mental health in adulthood (van der Kolk, 2014). In a groundbreaking study about childhood abuse, Felitti and colleagues (1998) showed that the experience of childhood trauma was far more prevalent than previously understood and that there was a strong correlation between Adverse Childhood Experiences (ACE) and adult mental and physical illness. Indeed, it is theorized that early experiences of trauma affect a child's neurological development, which in turn affects later cognitive and emotional abilities (Taylor, 2010). In the wake of a traumatic event, a child's brain may not be able adequately process the event, which in turn can result in an altered stress response system, making the child more prone to emotional dysregulation (Nemeroff & Binder, 2014). Heller and Lapierre (2012) have proposed that the brain's memory processing is implicated in this altered stress response system, especially with sufferers of PTSD, since these memories exist without a 'time stamp.' Sar (2011) wrote: “in clinical practice, it is

well known that the clinical consequences of developmental trauma show themselves as the most difficult and resistant problems patients present with" (p. 7).

Purpose Statements

The overall aim of this capstone project is to gain a clear understanding of the nature and effects of developmental trauma, particularly in relation to emotional dysregulation and memory. In addition, this capstone will examine the use of LI therapy as a modality suited to resolving symptoms of developmental trauma. These aims will be addressed in the following ways:

1. A literature review of the relevant research, including clinical studies, articles, and monographs that highlight the relationship between developmental trauma, emotional dysregulation, brain development, and memory.
2. A review of the origins, mechanisms, and effectiveness of LI as an effective treatment for developmental trauma.
3. A proposed workshop for therapists providing an overview of the history, mechanics, and potential utility of LI therapy for clients who have experienced trauma.

The following research questions will act as scaffolding for this paper: What can be considered developmental trauma? What are the neurological impacts of developmental trauma? How do these impacts affect the survivor in everyday life, especially emotionally and relationally? How and why is LI therapy effective in addressing the neurological roots of trauma? What are the implications for therapists?

Theoretical/Conceptual Framework

The three primary frameworks for approaching the topic of developmental trauma and the appropriateness of LI as a treatment are the following: polyvagal theory, attachment theory, and neurobiology.

Polyvagal Theory

Polyvagal theory, developed by Steven Porges (2011), explains how the autonomic nervous system (ANS) aids a person in assessing and responding to threats. The ANS is constantly on the lookout for cues of safety and danger and uses the vagus nerve as an information highway carrying information to and from various parts of the body, from the head to the stomach (Porges, 2011). According to Dana (2018), the ANS "serves as the foundation upon which our lived experience is built" (p. 4). Porges (2011) coined the term “neuroception” to explain the ability of the ANS to scout for danger and safety cues both within and external to oneself. The process of neuroception occurs below the level of consciousness, and, depending on the cues perceived, the ANS can switch to a parasympathetic ventral vagal state (associated with feelings of safety and social connection), a sympathetic action state (characterized by a hyperarousal state of fight or flight), or a parasympathetic dorsal vagal state (characterized by a hypoarousal state of freeze or immobility). The ability of the ANS to automatically send a person into hyperarousal and hypoarousal is a stroke of evolutionary genius that can save humans (and all mammals) from harm and even death. Dana (2018) claimed that people experience well-being when the three parts of the ANS work together in an integrated way so that a person can move into action (sympathetic) when faced with a threat but then return to rest (ventral vagal) soon after the threat has passed. Sometimes, however, the ANS gets habituated to states of either hyperarousal or hypoarousal. The former might be characterized by emotional dysregulation and physical symptoms of anxiety; the latter might be characterized by emotional shutdown and physical symptoms of depression (Dana, 2018). For the purposes of this paper, it is important to note that the conditioned response of the ANS is developed in childhood and influenced by the

ability of a child's caregiver to regulate their own nervous system responses and that of their children (Schore, 2003). Thus, if a child encounters a traumatic event and her parent can help soothe her fear and help her return to a ventral vagal state of safety and connection, the child's nervous system will develop with the capacity to move out of fight/flight/freeze with ease as the nervous system has evolved to do. But if the child's parent is dysregulated or if the parent caused the trauma through abuse, neglect, or an attachment injury, then the child's nervous system is tuned toward states of more prolonged hyper or hypoarousal.

Attachment Theory

Attachment theory, first developed by Bowlby (1973, 1988), has had a significant impact on the understanding of human development. The theory postulates that when experiencing distress, children turn toward a primary caregiver as a way of regulating emotional overwhelm and returning to homeostasis (Bowlby, 1988). If the caregiver attunes to the child's emotional distress the majority of the time through their own availability, helpfulness, and responsiveness, the child develops a secure attachment style (Bowlby, 1988). Interactions with the caregiver and the sense of safety and trust that is built within a secure attachment become a template for relational capacity with oneself and others into adulthood (Bowlby, 1988). Looking at this development through a polyvagal lens, the repeated learning of nervous system regulation through co-regulation acts as a template for the child to eventually gain capacity in returning to homeostasis on their own (Sharif, 2015). However, if the caregiver is overly anxious, abusive, or absent, the child might develop an insecure-avoidant, insecure-anxious, or disorganized attachment style. Lewis (2017) contends, "children with insecure or disorganized patterns of attachment can lack the abilities to regulate emotions, manage stress, interact well with others, expect positive responses from others, and maintain a positive view of themselves" (p. 2).

These attachment styles, developed in childhood, are like blueprints and influence the ways one functions in adult relationships, both intra-personally and interpersonally. Rahim (2014) contends that attachment difficulties are involved in developmental trauma, both as a possible source of trauma and as a factor that contributes to the severity of the trauma. Indeed, attachment challenges during the sensitive developmental period of childhood can adversely impact the child's behavioural, emotional, and cognitive development, which leads to long-lasting impacts (Rahim, 2014). One of these impacts includes the ability to effectively regulate emotions and body sensations as an adult (van der Kolk, 2005). For example, if caregivers gave signals that lacked safety, such as "angry faces, frozen expression, and aggressive body postures," but their children also got positive cues elsewhere, these children might grow up to have challenges with social engagement (Kain & Terrell, 2018, p. 158). Again, drawing upon polyvagal theory, because a child's insecure attachment pattern interrupts their ability to return to homeostasis, their ANS can become stuck in hyper or hypoarousal, causing them to live in states of fight/flight/freeze (van der Kolk, 2005). Southwell (2016) claimed that existing in such a state can inhibit essential developmental tasks, such as:

> identity formation, regulation of emotional states, cognitive processing (for example, the integration of sensory, emotional, and cognitive information into a cohesive whole), moral and spiritual development, ability to control behavior, experience of bodily integrity, trust of self and others, and capacity to form interpersonal relationships characterized by mutuality, empathy and emotional connectedness. (p. 115)

Again, given these poor outcomes, some researchers are classifying attachment wounding as a developmental trauma (Shafir, 2015; van der Kolk, 2005).

It makes sense, then, that healthy and secure attachment bonds between parent and child provide a buffer to developmental trauma, both because the child can seek out the parent to co-regulate after an upsetting event and also because the parent is not a source of developmental trauma. Shafir (2015) put it this way, a person's attachment style is either a "resource or impediment to the restitution of trauma and long-term post-traumatic stress" (p. 244).

Contemporary Conceptions of Neurobiology

There have been a number of developments over the past thirty years that have expanded our understanding of the brain and how it works. The foundational shift in neurobiology is away from the archaic view that neural development ends in childhood to an understanding of neuroplasticity, whereby the brain is capable of growth and change throughout a person's life. Indeed, the brain can change, and its ability to change opens possibilities for those whose nervous systems developed within settings of trauma (Levine, 2015).

Another new development is the idea that the brain is more than what is contained within a skull. The brain functions through 'embodiment.' Siegel (2014) contends embodiment means whatever the mind is; it's bigger than what merely occurs in the head -- it includes the whole body. He writes that neurologically, the mind, brain, and body are inseparable (Siegel, 2014). The mind is not just a product of the brain, and the body is itself an extension of the brain (Siegel, 2012a). Siegel (2012a) is also a proponent of interpersonal neurobiology, which posits that the mind of one person is shaped and influenced developmentally and moment-by-moment by the neural activities of those around them in a way that produces neural alignment.

A third contribution to contemporary neurobiology concerns a more nuanced understanding of memory and, in particular, how traumatic memories are stored, retrieved, and enacted. Researchers (Heller & Lapierre, 2012) and clinicians (Levine, 2012) have proposed that

the brain stores different types of memories differently depending on the level of stress response one experiences during the episode. Therefore, the symptomology of PTSD can be understood as the enactment of traumatic memory, which remains somatically alive in a person in ways that memories processed in times of calm are not (Heller & Lapierre, 2012).

Finally, a significant contribution to neuroscience has been made by Allan Schore (2003, 2007, 2011, 2014, 2015) and his regulation theory, which outlines the role of the right orbitofrontal cortex in making 'resonate' connection with others (Heller & Lapierre, 2012). Schore's work gives a neurological explanation for attachment theory. Through a right-brain-to-right-brain experience of attunement characterized by emotional empathy, a child experiences their parent's regulated emotional state, which then co-regulates their own (Schore, 2003). He posits that a person's 'self' forms when they first start to regulate their own emotions or 'affect' (Schore, 2003). Schore goes on to claim that when a child can sense their own emotions and temper them without the help of another, that's when they understand they are not just part of their primary caregiver -- they have an independent self. Self-concept, according to Schore (2003, 2015), is based on a positive sense of emotionality in the self. In his psychobiological model, this self-system is located in the right brain, the biological home of the unconscious.

Contributions to the Field

Given the widespread nature of childhood trauma and the physical, psychological and interpersonal effects that often result, it behooves counsellors to offer therapies that help clients address their trauma histories (and thereby their affect dysregulation). Some of the therapeutic modalities that have been studied and are now used widely include trauma-focused cognitive behavioural therapy (TF-CBT), cognitive processing therapy (CPT), and eye movement desensitization and reprocessing (EMDR) (Longden et al., 2012; Shapiro, 2001). LI therapy also

aims to address childhood trauma and the resulting symptoms of emotional dysregulation. LI is a newer therapy, and while anecdotally it is enjoying good client outcomes, it is still relatively unknown. More research, including that offered within these pages, might aid counsellors in considering a modality suited to particular clients. For example, LI might be useful for counsellors working in agencies where only brief therapies can be offered. Alternatively, LI might be appropriate in settings where clients are unable to pay for months or years of therapy. Lifespan Integration might be suited to people who are reluctant to talk through their trauma, perhaps because of their age, stage, or neurodiversity (e.g., teenage boys or clients with autism spectrum disorder). Furthermore, LI might work well for people who are not able to accomplish the homework demanded by CBT or the discipline required to implement a mindfulness practice. This paper will look at the ways LI can address populations who might not be served by long-term traditional talk therapy.

Most of the previous LI research has studied its efficacy with particular populations. This paper will take a uniquely comprehensive view, bringing together both the findings on trauma's impact on affect regulation, brain development, and memory, and also the ways that LI has been used across many populations to reduce trauma symptoms. Therefore, the research undertaken herein might be useful for therapists working with a variety of trauma-affected clients, offering them an overview of the scope of LI's utility and effectiveness.

Reflectivity and Positionality Statement

I would like to identify my social location, identity, and experience with this topic as a way of naming both my privilege and potential bias. I am of European ancestry, and am a middle-aged and middle-class cis-gender woman. I am also an immigrant from the U.S., where I experienced incredible privilege, including the privilege of higher education. I acknowledge that

I occupy a place of privilege as a researcher and am in a position to perpetuate a system that privileges the experiences of the dominant, white, middle, and upper-class individuals.

With regard to my lived experience, I've witnessed firsthand both the impact of developmental trauma and also the near miraculous effects of LI therapy in the life of someone close to me. Thanks to this experience and because of my desire to help others who suffer from childhood trauma, I wish to better understand and offer LI therapy to others who find themselves stuck in patterns of emotional dysregulation and/or suffering from mental health diagnoses that likely have roots in earlier childhood trauma.

Given my own experience of the effects of this therapy on a close other's life, I recognize I might approach my research with a bias toward the efficacy of LI. I also realize that this person came from their own context of privilege. They were highly motivated to change, educated, and belong to a dominant cultural group (white and middle-class). I am curious if this therapy would be effective for clients with less motivation or from differing socio-economic and social contexts.

Definition of Terms

Attunement

Attunement describes the ability to be deeply responsive to another person's affective experience through things like body posture, prosody of voice, and gaze. It is characterized by "a kinesthetic and emotional sensing of others … a two-person experience of unbroken feeling connectedness by providing a reciprocal affect and/or resonating response" (Erksine 1998). When a person is attuned to, they 'feel felt' (Siegel, 2010) and experience cues of safety.

Co-Regulation

Co-regulation refers to the process whereby one person 'lends' their regulated ANS to another person who finds themself in a state of ANS dysregulation. Ideally, this process happens consistently during infancy and childhood. When a child experiences something that feels like threat and naturally reacts with overwhelming emotions of fear and/or somatic sensations, like a racing heart or shallow breath, they can turn to a caregiver who is calm and in a regulated state of ANS. The caregiver then soothes the child (e.g., by holding them and talking in a gentle way), helping them return to a place of calm.

Developmental Trauma

Developmental trauma is trauma that occurs before the age of 18, but particularly in the years of sensitive brain development in infancy and before the age of ten (van der Kolk, et al., 2005). It includes abuse (physical, emotional, and sexual), loss, neglect, as well as sub-optimal attachment experiences (van der Kolk et al., 2005). Studies on Adverse Childhood Experiences (ACE) indicate that the experience of developmental trauma correlates to an increase in the likelihood of psychological and physical illness in adulthood (Kain & Terrell, 2018). The first ACE study included ten categories: parental mental illness, parental substance use, parental loss through divorce, abandonment or divorce, parental imprisonment, violence against a step-parent, physical abuse, psychological abuse, sexual abuse, physical neglect, and emotional neglect (Felitti et al., 1998). In recent years other categories have been proposed, including bullying, isolation and peer rejection, poverty, exposure to community violence, and war (Finkelhor et al., 2015).

Dissociation

Dissociation is a common neurological defense developed because of trauma. Through dissociation, a person 'leaves' the present moment. In milder cases, someone might feel spacey or

tired or like they're not 'all there.' In extreme cases, an individual might feel totally disconnected from their body and might experience a sensation of looking down on their body.

Implicit Memory

Implicit memory is sub-conscious and includes non-verbal memories rich in sensory information both emotional and somatic in nature. It also includes procedural memories, as well as pre-reflective knowledge and schemas. While implicit memory can't be consciously accessed, it is thought to greatly influence a person's present day behaviour and sense of self (Heller & LaPierre, 2012; Levine, 2015; Schore, 2003).

Neural Integration

Neural integration occurs when neural networks that have been isolated from each other become linked. It is thought that this linkage impacts a person's ability to emotionally regulate. Siegel (2012a) wrote, "regulation results from integration...When the brain links its differentiated circuits to each other, the nervous system achieves homeostasis and develops new levels of intricacy in its functions" (p. 36).

Self-Regulation

Self-regulation relates to a person's ability to calm themselves and return to baseline after a period of emotional arousal (Kain & Terrell, 2018). From a polyvagal point of view, a person self-regulates when their ANS returns from either hyperarousal or hypoarousal to a ventral vagal state of social connection (Dana, 2018). Self-regulation develops through childhood interaction with caregivers (Schore, 2003).

Self-State

The term self-state (sometimes referred to as ego-state) is found in various theoretical modalities. Siegel (2012a) proposed that while a person's mental life extends across time, it is

comprised of "distinct but interdependent states" (p. 210). According to LI theory, these states are like snapshots of someone at a particular moment in time and contain physiological, mental, and emotional information (Thorpe, 2012). Self-states might be accessible through explicit memory, but more often, the bodily sensations, emotions, sights, sounds, and thoughts that make up that state are held below the level of conscious recall in implicit memory. All self-states are part of the whole of a person, but some might be less integrated than others (Pace, 2012; Thorpe, 2012). According to LI theory, if traumatic experiences are not adequately processed in the presence and with the support of loving parents or adults, they can create enduring self-states, which, when triggered through activation of implicit memory, cause one to feel like they are undergoing the same trauma in the present moment (Pace, 2003/2012).

Trauma

Briere and Scott (2012) defined an event as traumatic, “if it is extremely upsetting, at least temporarily overwhelms the individual’s internal resources, and produces lasting psychological symptoms" (p. 14). Trauma is any event that overwhelms the ability of the individual to cope (Benyakar et al., 1989). Trauma is also more than the event; it is how the body, brain, and nervous system, reflexively respond in ongoing symptoms of dysregulation (Levine, 2012). According to the Diagnostic and Statistical Manual of Mental Disorders (DSM-V), these reflexive symptoms include intrusive thoughts and emotions, impaired cognitions, mood disorders, uncontrollable swings of arousal levels, dissociation, and persistent avoidance of trauma-related cues (American Psychiatric Association, 2013).

Chapter Summary

Through the research undertaken for this capstone project, I hope to better understand the nature of developmental trauma and how it impacts affect regulation, brain development, and memory. I also hope to understand the mechanisms of LI therapy and how this modality uniquely works to resolve trauma and integrate traumatic memories. In addition, I will offer a concise overview of the research on LI and its efficacy and application for a variety of clients. Finally, I hope to offer an outline of a psycho-education workshop for clinicians who are interested in alternatives to traditional talk therapy.

Chapter Two: Literature Review

Developmental trauma

Dye (2018) described trauma "as a perceived experience that threatens injury, death, or physical integrity and causes feelings of fear, terror, and helplessness" (p. 381). Developmental trauma is surprisingly prevalent. In the U.S. alone, there are over three million reports of child abuse annually (van der Kolk, 2005). Across the world, it's estimated that over a billion children experience violence annually, and in the U.S., two out of three children are victims of violence at some point in their childhood (van der Kolk et al., 2019, p. 2). These stats do not include other forms of trauma that might be more psychological, biological, or societal in nature. psychological category includes incidents like bullying, verbal abuse, and attachment injuries. The biological category includes things like acute illnesses experienced in childhood. Societal factors include things like poverty, war, and racism are included. These experiences create acute and even chronic stress in children's lives that can be considered traumatic (van der Kolk, 2015).

Developmental trauma can impact a person's overall health. Indeed, the higher one's 'ACE score,' the higher the likelihood of experiencing various forms of mental and physical illness in adulthood (Felitti et al., 1998). These impacts include everything from psychological categories or diagnoses like depression, anxiety, and panic attacks (Kessler et al., 2010) to physical categories like being at increased risk for stroke, cancer, liver disease, diabetes, asthma, and all-cause mortality (Kessler et al., 2010). Developmental trauma has also been linked to a higher likelihood of participating in risky behaviours like substance use, self-harm, suicide, physical inactivity, and promiscuity (Anda et al., 2006; Felitti et al., 1998). Developmental trauma also affects people's relationships since sufferers have a greater chance of early sexual

intercourse, poor anger control, emotional dysregulation, and a propensity toward intimate partner violence (Anda et al., 2006). Schore (2003) wrote, “there is extensive evidence that trauma in early life impairs the development of the capacities of maintaining interpersonal relationships, coping with stressful stimuli, and regulating emotion” (p. 185). Dye (2018) echoed the aforementioned researchers, contending that experiences of trauma early in life impact emotional regulation and behaviour control. Indeed, Kessler and colleagues’ (2010) global study on this topic showed that the association between ACEs and all classes of disorders extends to all groups in all life stages across all cultural categories.

Southwell (2016) has argued that the impact of childhood trauma is greater than trauma experienced later in life “because it fundamentally interferes with normal child development” (p.115). Indeed, experiencing trauma in childhood “interrupts the developmental process of aging, leaves the individual with life-long medical and psychological deficiencies, and can lead to learned helplessness and exaggerated emotional distress” (Dye, 2018, p. 383). Let us consider three interrelated impacts on a child's development: affect regulation, brain development, and memory formation.

Affect Regulation

Affect regulation can be understood colloquially as a person having her emotions instead of her emotions having them. In other words, a person can experience her emotions freely without those emotions being blocked or without the feeler of the emotions being overwhelmed. Schore (2003) has contended that the fundamental task of early childhood development is the training of affect regulation, whereby the child moves from externalized regulation from others to internal regulation within one's self. The latter can also be considered self-regulation. This ability is compromised during trauma, particularly if the trauma is rooted in attachment disorder

(Schore, 2003, 2008, 2009). Bowlby (1969) and other researchers (Kain & Terrel, 2018; Schore, 2003) have proposed that the co-regulation of emotions is one of the primary qualities of the attachment process.

Through co-regulation, a parent 'lends' their settled nervous system to the dysregulated child's nervous system, helping them become settled as well. The parent does this through prosody of voice, calm mannerisms, warm and gentle facial expressions, and so forth (Schore, 2003). If this is done well enough, the child will seek out the parent or primary caregiver in times of distress, and through the caregiver's attuned attention, the child will return to nervous system homeostasis (i.e., they will become calm). These children are likely to develop a secure attachment style. If this is not done well enough, and the child experiences either abuse and/or chronic misattunement from caregivers, then the child's ability to emotionally regulate will be compromised (Schore, 2003). This misattunement could look like missing opportunities to soothe and comfort a child when they are in distress. It could also look like responding inappropriately by shaming a child's fear or sadness (e.g., 'big boys don't cry'). A child who has experienced abuse or any other Adverse Childhood Event and does not have a secure attachment will find emotional regulation significantly more challenging (Teague, 2013).

Children stuck in this cycle of distress and misattunement may be relatively unable to regulate their internal states nor name and understand what they are experiencing (van der Kolk, 2005). If the distress becomes chronic, "the relevant sensations, affects, and cognitions cannot be associated—they are dissociated into sensory fragments – and, as a result, these children cannot comprehend what is happening or devise and execute appropriate plans of action" (van der Kolk, 2005, p. 403).

van der Kolk (2005) outlines characteristics of children who experience developmental trauma (either from Adverse Childhood Events and/or attachment wounding), noting that they have poor impulse control and experience many complicated emotions like "rage, betrayal, fear, resignation, defeat, and shame" (p. 406). In order to buffer against these 'harder' emotions, many children learn to dissociate and present with “lability, anhedonia, flat or numbed affect" (D'Andrea et al., 2012, p.189).

Heller and Lapierre (2012) see dissociation as one of the ANS’s survival strategies. When experiencing trauma, if a child's ANS survival strategies of fight or flight do not gain them the response from caregivers that they need to feel safe, the child will resort to a freeze response (Heller & Lapierre, 2012). This response can become an on-going maladaptive strategy that attempts "to protect the attachment relationship by foreclosing core expression, anger, aggression, and ultimately authenticity” (Heller & Lapierre, 2012, p. 11). In this way, the child splits off from their core emotions and even their 'knowing' of a situation and presents in a way where they are 'not all there' (Heller & Lapierre, 2012). According to Schore (2011), this splitting occurs unconsciously through right brain hemisphere activity. The right brain is not only the seat of emotional and physical pain processing but is also the home of the ‘self’ (Schore, 2011). Thus, splitting off from a felt sense of one's emotions, one's body, and even others' relational presence constitutes a final defense against the emotional overwhelm brought on by trauma.

When children are not in a full dissociative state, they might present with "explosive or sudden anger, and incongruous or inappropriate affect" (D'Andrea et al., 2012, p. 189). Similar to van der Kolk's (2005) observations, D'Andrea (2012) noted that a child's inability to regulate their emotions could be implicated in tendencies toward "withdrawal, self-injury, aggression,

oppositional behavior, substance use, or other compulsive behavior" (p. 189). As children, and later as adults, times of stress become occasions where a sufferer of developmental trauma feels “confused, dissociated, and disoriented" as they become stuck in states of fight, flight or freeze (van der Kolk, 2005, p. 407).

Given these challenges in affect regulation and emotional intelligence, it is not hard to imagine that adults who have experienced early trauma often face relational challenges. Rahim (2014) wrote that children in this population become adults who have poor boundaries, are challenged in naming and expressing their own emotions and are equally challenged in understanding the emotions of others. These individuals can fall into patterns of blaming and helplessness (Rahim, 2014).

Sometimes this blaming and helplessness result from challenges in trusting others. This slowness to trust has its roots both in fear of abandonment and also in a propensity toward insecure relationships (Dye, 2018). The child who struggles with affect regulation becomes the adult who struggles similarly in their current relationships, causing them to potentially become "overly clinging, compliant or distrustful" (van der Kolk, 2005, p. 407). In short, adults with developmental trauma don’t act their age, they act like children.

Neurological Changes

Affect regulation is a more obvious impact of developmental trauma. When a person experiences stress and flies into a rage or shuts down in a dissociative state, it is easy to recognize trauma's impact because it is so externalized. However, this externalized behaviour has its roots in an internal neurological reality. In other words, developmental trauma alters the brain. According to Heller and Lapierre (2012), the “cumulative effects of chronic early neglect and abuse adversely influence brain development and negatively impact the nervous system,

endocrine system, and memory" (p. 6). Likewise, according to Dye (2018), “exposure to trauma has been shown to alter ... the interrelated brain circuits and hormonal systems that regulate stress.... [And] alter the hypothalamic-pituitary-adrenal (HPA) axis which affects trauma survivors ability to modulate behavioral and cognitive responses to subsequent stress” (p. 383).

When a child experiences trauma, including chronic stress and attachment trauma, the limbic area of the brain -- an area that is implicated in emotional regulation, mood, and arousal -- is compromised. Schore (2017) wrote that these neurobiological changes to the limbic system translate into “affective instability, inefficient stress tolerance, memory impairment, and dissociative disturbances” (p. 753). Marusak and colleagues (2015) have posited that the brain-derived neurotrophic factor (BDNF) gene (which changes the limbic area's gray matter) is impacted by childhood trauma. This impact is significant since variations in BDNF neurobiology are linked to the capacity (or lack thereof) for resiliency in the face of traumatic stress (Marusak et al., 2015). Thus, less limbic area gray matter can equal less resiliency. D'Andrea and colleagues (2012) also have shown that developmental trauma impacts brain development: "maltreated children have been found to have volumetric reductions in the corpus callosum, hippocampus, and amygdala" (p.192). These are all areas of the brain implicated in navigating both the stresses of everyday life, as well as major life challenges (D'Andrea, 2012). Again, less gray matter can equal less resiliency. In summary, Dye (2018) cites Perry's (2006) research, which is comprehensive in its assessment of trauma's impact on brain development:

> Trauma disrupts normal brain development in several key areas: the brainstem where stress-regulation, survival, and metabolism are regulated; the midbrain and diencephalon, which plays a role in sensory-motor activity, sleep, and appetite; the limbic system, which regulates emotions, attachment, affiliation,

> mood, and pleasure; and the cortex, which is associated with cognition, language, and reasoning. Due to early childhood trauma, normal development and disruption in the brain creates incongruence between biological age and developmental age. (Dye, 2018, p. 383)

Another way of looking at the brain and trauma's impact is in terms of cerebral hemispheres. In the context of his attachment-related research regarding the right hemisphere, Schore (2017) showed how the right brain is home to the "implicit self-system" (p. 761). The creation of a robust 'self-system' is particularly compromised by developmental trauma. For example, when faced with abuse or chronic misattunment from caregivers, a child's ANS can move them into dissociation, a state in which they can no longer make sense of incoming stimuli from the world around them by integrating it with their own internal and implicit 'self-system' (Shore, 2017). The person is there but not 'all there,' unable to be fully aware of their own body sensations, emotions, and cognition, nor able to be fully aware of the people around them. Schore (2017) claimed that this lack of integration between the higher right hemisphere and the lower right brain hemisphere impairs both subjectivity and intersubjectivity in the present moment and an eventual stalling of emotional development going forward (Schore, 2017). Therefore, the trauma response of dissociation is a “severe dysfunction of the right brain’s vertically organized systems that performs an attachment, affect regulation, and stress modulating function, which in turn impairs [one's] capacity to maintain a coherent, continuous and unified sense of self” (Schore, 2002, p. 32).

Trauma and Memory

According to Levine (2015), memory can be understood as falling into two categories (which also have two parts): Explicit memory, which includes declarative and episodic memory;

and Implicit Memory, which includes emotional and procedural memory. Explicit memory can also be considered conscious memory, which is available for retrieval. It can be declarative and include things like information about a subject of interest (e.g., the mechanics of LI therapy). It can also be episodic and include things like remembering what one ate at a birthday dinner last year. Episodic memory has a ‘time stamp’ and comes with a sense of when it occurred in the past. Levine (2015) has called these sorts of memories 'normal' memories. A person might judge them as bad (e.g., a person's first time having Covid) or good (e.g., getting a puppy for Christmas), but what they have in common is their accessibility and dynamic nature. That is, they can be recalled at will, and they can (and will) change over time. As Heller and Lapierre (2012) wrote, "remembering is a reconstructive process, and every time we recall a memory, it is received in the brain as new information" (p. 111).

Implicit memory can be considered unconscious memory (Levine, 2012). It includes sensory information, both emotional and somatic in nature. It also includes procedural memories (e.g., how to ride a bike or how to duck and weave when being attacked). Traumatic memories fall within the category of implicit memory because of how they are neurologically stored. Because of the aforementioned impact of childhood trauma on the sufferer's limbic and subcortical areas, traumatic memories get stored in a fixed way that can result in such things as flashbacks, hyper or hypoarousal, and intrusive thoughts (Levine, 2012). Heller and Lapierre (2012) explained how normal memory encoding is impaired when experiencing high levels of emotional arousal. They wrote,

> In the case of trauma, high levels of circulating cortisol can cause cell damage or even complete shutdown in the hippocampal system, precipitating impairments in explicit memory. In such cases, traumatized individuals cannot express what

> happened to them in words, and their memories manifest implicitly as dissociative behaviors, startle responses, nightmares, and visual and somatic flashbacks. (p. 111)

Levine (2012) called these sorts of memories 'engrams' - imprints of overwhelming experiences that are "carved into the sufferer's brain, body, and psyche. These harsh and frozen imprints do not yield to change, nor do they readily update with current information" (p. 7). They are 'hot' memories that are "powerfully compelling" (Levine, 2012, p. 7). They present "as a collage of sensations, emotions, and behaviors" (Levine, 2012, p. 7). Heller and Lapierre (2012) described implicit traumatic memory this way:

> Even though it constantly influences our current functioning, it does not feel like memory to us. It feels more like who we are. Stored in implicit memory are the memory of shapes and forms; the bodily memory of motor skills, habits, and routines, and the memory of our emotional and relational responses. (p. 112)

Heller and Lapierre (2012) also contended that these sensations, emotions, and relational responses can be trauma symptoms (as seen in PTSD, for example) and are related to the original wounding but also to more current stress that triggers responses commiserate with responses to the original event. In Levine's (2012) words, traumatic implicit memories "prompt organizing themes for action" (p. 7). Or, in van der Kolk's (2014) words, when it comes to trauma, 'the body keeps the score.' Siegel (2012a) contended that a child's repeated experience becomes "encoded in implicit memory as expectations and then as mental models or schemata of attachment" (p. 91). These schemas become the template for future ways of relating to others and one's self. Thus, to draw upon the opening example from this paper, if a 50-year-old man experienced chronic misattunement from his primary caregiver, resulting in an insecure-anxious attachment

style, his implicit memory of this experience primes him to be anxiously on the lookout for abandonment. Given this organizing theme/schema of fearfulness of abandonment, when his partner forgets his birthday, the implicit trauma memory is triggered, and he descends into a temper tantrum, befitting his childhood experience. He does not consciously think, *Oh, this reminds me of how my mom was never there for me*, he just reacts with hot tears and rage. Perhaps, in the past, his hyperarousal might have gotten him the attention from a caregiver that he so badly needed for survival, but in his present context, such a reaction may only serve to produce dysfunction within himself and in his relationships. As Levine (2012) wrote, "such maladaptive, habitual reactions leave the individual entangled in unresolved emotional angst, disembodiment, and confusion" (p. 23). Dye (2018) explained such reactions this way, "re-experiencing stressors elevate emotional reaction and suppress emotional control and behaviors" (p. 383).

Because of the way traumatic experiences are stored in implicit memory, some researchers (Heller & Lapierre, 2012; Schore, 2001, 2011; Siegel, 2009, 2012) speak of individuals having 'self-states.' These self-states are like snapshots of the emotional, somatic and sensory information of past experiences. When children experience adverse events or compromised early attachment styles, Siegel (2009) contended that this creates "engrained and inflexible states of mind that remain unintegrated across time within specialized and potentially dysfunctional self-states" (p. 306). Likewise, Fisher (2017) posited that traumatized children learn to "adapt using a system of selves rather than becoming a fully integrated self" (p. 25). Schore (2007) described what happens when a person moves into a state of dissociation, which causes a "sudden implosion of the implicit self and the rupture of self-continuity" (p. 753). This rupture of self-continuity can be imagined as a self-state or as Levine's (2012) 'engram,' which

contains all the somatic, sensory, and emotional information of a previous time. Heller and Lapierre (2012) promoted the idea that one of the regulation strategies for dealing with trauma is fragmentation (i.e., the creation of self-states), whereby the child “sacrifices unity to save [themselves]” (p. 9).

Heller and Lapierre (2012) also contended, therefore, that implicit memory (where these self-states are held) is 'state-dependent'. Thus, if the state a person finds themself in resembles the one which caused the creation of a self-state, the more likely they will react with the same cognitions, somatic responses, and emotions of their past experience (Heller & Lapierre, 2012). The past memory is present, but unconsciously so, since it is experienced via a self-state and is therefore "relived rather than recalled" (Heller & Lapierre, 2012, p. 114). Going back to our 50-year-old businessman, it could be said that one of his self-states is a younger boy traumatized by abandonment. When triggered by his partner's forgetfulness regarding his birthday, he acts out of his past self-state with all its irrationality and emotionality.

Lifespan Integration Therapy

Lifespan Integration (LI) was developed by Peggy Pace (2012) approximately twenty years ago. It was born out of twenty years of therapeutic practice, working with clients with complex developmental trauma. To understand the basics of LI, it's helpful to understand how it started. Pace (2012) tells of finding some success with EMDR in treating trauma clients and also some success using Jungian Active Imagination (Fleisher, 2020) in accessing a client's 'inner child' to help treat childhood trauma. Neither approach, however, ultimately yielded the results Pace hoped for. With Active Imagination, clients would have breakthroughs in the counseling office, connecting compassionately with a 'younger self', but when they got back into the ‘real world’ and were emotionally triggered, they would continue to react in childish ways they found

distressing and discouraging (Pace, 2012). Likewise, with EMDR, Pace found that it worked well for clients with single incident traumas, especially if the traumatic event occurred in the previous five years, but in her experience, clients with complex developmental trauma, like attachment trauma, often did not receive long-lasting benefit from EMDR (Pace, 2012).

Pace (2012) told of 'discovering' LI during one particular session when doing Active Imagination with a client. The client was a 40-year-old highly educated woman who, while revisiting a traumatic memory, became stuck in a state of nervous system overwhelm. From a Polyvagal perspective (Porges & Dana, 2018), she was well outside her window of tolerance. When Pace asked the client how old she was, the client responded in a high-pitched, fearful voice, "I'm six years old." From a polyvagal lens, the woman was clearly feeling emotionally overwhelmed and in a state of sympathetic ANS hyperarousal, as if the trauma she had experienced all those years ago was actually happening in the present moment. The emotional regulation abilities and cognitions of her normal 40-year-old self were totally unavailable to her. In order to bring her client out of this state, Pace had the insight to ask the woman to remember being seven years old, then eight, nine, ten, and so forth, up to her present age. By the time she got to forty, the woman was restored to her window of tolerance and felt she was her appropriate age. She left the session feeling calm and capable.

Since that illuminating session, Pace (2012) and her colleagues have developed LI therapy to include a number of different protocols for everything from PTSD to attachment trauma. In the past twenty years, over one thousand therapists have been trained around the world. Though research studies on LI are only recently being conducted and therefore are limited in number, the anecdotal reports from LI practitioners seem to indicate that it is an effective therapy for working with trauma clients with less risk of re-traumatization than other cognitive-

based therapies (Pace, 2012; Thorpe, 2012). Specifically, Pace found that using LI allowed her clients to engage in therapy without reverting to dissociative states brought on by trauma (Pace, 2012). According to Pace (2012) and Thorpe (2012), Lifespan Integration is based upon the following theories: "1) Earlier memories influence how the brain processes current events, and 2) A client who is stuck in troubling thoughts, feelings, and behaviors can solve current situations by resolving earlier memories" (Thorpe, 2012, p. 27).

How and Why It works

The mechanics of LI therapy are simple enough. Pace (2012) and Thorpe (2012) outlined the method clearly in their books and training manuals. In the following pages, I will consider both the mechanics of different LI protocols and also, where applicable, how and why these mechanisms are effective when understood through polyvagal theory, attachment theory, and contemporary understandings of neurobiology.

The various LI protocols align with specific desired outcomes. For example, the PTSD and Standard Protocols attempt to resolve specific traumatic events, while those like the Baseline, Cell Being, and Relationship Pattern Protocols are designed to help the client build a more integrated and solid sense of self while also addressing trauma more generally (Pace, 2012). I will consider a few of the most utilized protocols.

Baseline Protocol

The Baseline protocol is always the first protocol used (Pace, 2012; Thorpe, 2012). Before the first LI session, clients create a list or 'timeline' of memories (one for each year of life) from their earliest memory to the present day. This timeline is the foundational tool of LI therapy. It is "the unique, therapeutic change agent of Lifespan Integration and is the main component of LI therapy" (Thorpe, 2012, p. 18). The cues might be as simple and banal as 'Mrs.

Acre, fourth-grade teacher' or as charged as 'attended father's funeral at age 10.' During the baseline protocol, the therapist says the memories aloud, picking one memory for every three to six years, depending on the client's age, while the client listens and employs a four-limb activation technique. This process is repeated between 15 to 25 times during a session, with breaks in the reading of the timeline for check-ins between therapist and client. As the client hears the timeline, they are instructed to briefly notice whatever sensations arise, cognitively and/or somatically. The therapist reads through the timeline at a pace slow enough for the client to be present to each cue but not so slowly that the client becomes overly emotionally activated by imagining past traumatic events. Pace (2012) theorized that the repetitive witnessing of one's lifespan allows for neural integration, whereby various self-states and somatically held 'hot memories' (Levine, 2012) become neurologically connected. In this vein, she is echoing Siegel (2012b) who contended, "as we accumulate lived moments across time, we are capable of recalling not as oneself, but as the many types of selves that have existed in the past. Narrative recollection, then, is the opportunity for those varied states to be created anew in the present" (p. 89). For those who have experienced developmental trauma and have resulting self-states laden with difficult emotions, body sensations, and cognitive schemas, Siegel (2012a) advocated for "the development of a specific process that integrates the selves across time" (p. 211). Pace (2012) and Thorpe (2012) have claimed that LI is such a process.

For victims of childhood trauma, this process of integration allows for traumatic memories that were logged into implicit memory without a time stamp to be included in the coherent whole of a person's life and sense of self. The timeline repetition gives a time stamp to these events, so they no longer become confused (e.g., through symptoms of affect dysregulation) with present moment reality. In a similar way, Binet and Torquino (2016) claimed

that neurobiologically, the repetition of a person's timeline allows them to remain aware of the continuous movement of their existence, but without being activated by past events. Therefore the activity of the Anterior Cingulate Cortex (ACC) is diminished since there is no longer a need for the brain to 'excite' since “the emotional tones diminish as the timelines are repeated, and one perceives the transitory and imperfect nature, sometimes happy or unhappy, of their experiences during life" (Binet & Torquino, 2016, p. 636).

The 'four-limb activation' technique, utilized in the baseline and all other protocols, is also quite simple. The client intentionally presses their feet into the floor, while also gripping a pillow or tea towel. There are variations on this technique where a client can place their hands on their chest or another area of the body where sensations are present. The purpose of this technique is to 'ground' the client in the present moment through somatic awareness. This grounding gives cues of safety to a person's nervous system, so the mind-body system knows they are not lost in a past traumatic event.

Another aspect of the Baseline Protocol that is used in all other protocols is a 'check-in' between the readings of the timeline. After two or three passes through a client's timeline, the therapist asks the client what they are noticing. The therapist welcomes all kinds of awareness from the client, including cognitions, emotions, and somatic awareness. For example, a client might note that they noticed tears or feelings of anger coming in the early part of the timeline. Or, they might note that they were holding their breath throughout the reading. Or perhaps they might note that they were spacing out for much of the timeline. This information is important in several ways. First, it helps the therapist gauge if the client is staying within their ANS window of tolerance. If the client is spacing out, it might indicate that they are going into hypoarousal, and the therapist will suggest various strategies to support the client. For example, they might

join the client in standing up during the next timeline, suggest the client takes a sip of water, or take a few deep, grounding breaths while looking around the room. These grounding techniques allow the client to stay within their window of tolerance.

Bringing cognitive awareness to somatic sensations aids in the integration process as clients are supported through the co-regulation of their emotions. Thus, the client's nervous system 'learns' how to deal with affect dysregulation, laying the possibility of self-regulation and the return to ventral vagal system states (Geller, 2018).

Information shared during the check-in also helps the therapist know where the client is in the journey of the session (Thorpe, 2012). Typically, the strength of the client's reactions/sensations follows a bell curve during a session. At the beginning of the session, a client might not notice much, but mid-way through (at about timeline numbers 6 - 10), they might experience more emotions or body sensations, which calm toward the end of the session. Usually, toward the end of the session, the client will note that their body feels relaxed and that their memories seem like they are in order, or that they are looking at their memories from a greater distance (Thorpe, 2012).

Another important aspect of the check-ins is the building of a strong therapeutic alliance through attunement (Thorpe, 2012). Of course, the therapeutic alliance is being built throughout the session through eye contact, the therapist's prosody of voice, gentle facial expressions and other non-verbal signals of safety. Like with all therapeutic modalities, during an LI session, the therapist and client engage in what Schore (2014) calls right-brain interactions "beneath the words" (p. 392). From a neurophysiological point of view, when these interactions include the therapist's full presence, as is encouraged in the LI trainings, the client's ANS receives cues of safety that keep them in a socially connected and curious state (Geller, 2018; Geller & Porges,

2014). This is important because the therapist's attuned attention allows a client's traumatized self-states the opportunity to come to the fore and be repaired because of the experience of a new connection with a safe other (the therapist).

Baseline Plus Protocol

This protocol builds upon the Baseline Protocol by adding a simple phrase at the beginning of each timeline. The purpose of this addition is to lessen protective maladaptations (either in beliefs or behaviours or somatic responses). Examples of phrases used for clients who leave their window of tolerance and descend toward a freeze response include: "I persevered" or "I survived" (Pace, 2012; Thorpe, 2012). For clients who tend to track toward nervous system hyperarousal, the therapist adds a client-appropriate "plus" like, "Fighting helped me survive," or "Running kept me safe" (Pace, 2012; Thorpe, 2012). The client always chooses the ‘plus’ after reflection upon what helped them survive stressful or traumatic events. By recognizing the client's coping style at the start of each timeline, the strategy is both honoured and also released if it no longer serves the client (Pace, 2012). This process brings awareness to cognitive schemas developed during childhood trauma and thus held in implicit memory where they operate in the background, significantly affecting a person’s day-to-day life.

Standard Protocol

In the Standard Protocol, clients engage their imagination, accessing both implicit and explicit memory of a specific childhood traumatic event. Standard Protocol unfolds in three stages.

Stage One: The Traumatic Episode**.** The first stage uses something Pace (2012) called an 'affect bridge.' Thorpe (2012) explained the 'affect bridge' as such: "The process in which a client identifies a current problem and its associated body feelings, and then follows the mind-body system to the appropriate neural networks associated with the problem" (p. 21). The LI affect-bridge model rests upon the theory proposed by researchers like Siegel (2012a), who posited that mind extends beyond the brain and into the body. Thorpe (2012) echoed Siegel's ideas when she wrote, "the brain and body are one interrelated system considered the mind" (p. 31-32). The affect bridge brings attention to somatic sensations that are believed to be the mind's implicit memories showing up in the body, especially the trunk of the body. For example, if a woman is currently experiencing extreme anxiety in her relationship with her boss, she will first be directed to notice how this anxiety shows up in her body. Perhaps she identifies the anxiety as a sensation in her chest that feels like a concrete block. The therapist then asks her to remember when this same feeling of a concrete block in her chest was present in her childhood. She might then identify a time when her father ridiculed her in front of friends. It should be noted that before utilizing the affect bridge, the client constructs a 'peaceful place' in their imagination to which they can safely escape from a past childhood event. The peaceful place acts as a way of titrating the client's experience of a traumatic memory -- allowing them to only experience as much as their nervous system can handle without becoming overwhelmed.

Having identified a somatic and emotional sensation from her childhood, the client 'goes back in time' to view the event with coaching from the therapist. The client is instructed to have their adult self enter the memory scene and introduce themselves to their child self. During the

first visit, the child-self is asked if they want to stay in the memory or go immediately to the peaceful place. According to Thorpe (2012), many clients find even the first blush of remembering a traumatic event can be triggering, and they want to escape to the peaceful place immediately.

Whether the client 'stays' in the original memory or goes immediately to the peaceful place, the child-self receives comfort and help from their adult-self. With prompts from the therapist, the adult-self speaks directly to the younger self and asks what they need. The adult-self can't change the actual traumatic event (like preventing something from happening), but they can give comfort and enact what the child would have liked to have happened afterward (like yelling at or even hurting or destroying an abuser).

Stage Two: The Peaceful Place. If the child-self has not visited the peaceful place yet, the therapist prompts the client's adult self to take them there. Once there, the child is asked what they would like to do. Often they want to be held, relax, play, or nap (Pace, 2012; Thorpe, 2012). The therapist encourages the adult-self to follow the child-self's lead and, in their imagination, do whatever the child wants to do together. With guidance from the therapist, the client tells their younger self that time has passed and they are no longer in the traumatizing event, which is then 'proved' as they together listen to the therapist read their timeline aloud. The timeline is repeated two or three times starting at the point of the event being treated.

Stage Three: The Present. In the final stage, the younger self enters the present time via the imagination as the adult-self brings their younger self into the home where they presently live. Engaging Active Imagination again, with prompts from the therapist, the child-self is invited to ask questions and is reassured that they are safe and live now with their adult self. Because the client is accessing a past self-state, Pace (2012) and Thorpe (2012) have claimed

that it is not uncommon for a client's younger self-state to be unaware that they've grown up. Therefore, questions from the younger selves might include ones like, "Are we happy now? Are we safe?" These younger versions of the client's self often react with amazement when they learn that they have children of their own, have a career, or have moved away from their childhood town. Through a conversation between the client's adult self and younger child-self, the younger traumatized part is reassured that they live with the adult self, who will always be there to keep them safe (Thorpe, 2012).

The above three stages are repeated at least four times during a session, with check-ins at the end of each Present Day imaginative exercise. With each repetition, the client's adult self gives the younger self what they most need and answers their questions. The therapist knows it is appropriate to end the session when the client's younger self feels calm and safe, and all their questions have been satisfied. Therapists usually book a 90-minute session for the Standard Protocol to make sure there is enough time for this sort of resolution can occur.

It is theorized that the Standard Protocol works through memory reconstruction. As Heller and Lapierre (2012) wrote, "Remembering is a reconstructive process, and every time we recall a memory, it is received in the brain as new information" (p. 111). Within the safe and attuned presence of the therapist, the client is able to experience a new level of safety, allowing for new neural connections that bring new information to past memories. According to Heller and Lapierre (2012), this new information of safety modifies the past memory and transforms the resultant trauma response. In LI parlance, present-moment attunement occurs not only between therapist and client but, most significantly, between the self-states of the client as their adult-self protects and nurtures their child-self (Thorpe, 2012). It is theorized that the client is enacting a

new kind of secure attachment within themselves -- and *between* and *for* themselves (Thorpe, 2012).

As mentioned, a number of other protocols have been created that all make use of the repetition of timelines, somatic awareness techniques, and active imagination. In all of these, the therapist is present with attuned support and attention, making sure the client is staying within their window of tolerance.

Summary and Synthesis

Having looked at the mechanics of LI, it can be said that Lifespan Integration works through a process of memory reconsolidation whereby neural circuits of implicit memory are 'unlocked' and reconfigured through the hearing of one's lifespan. The repeated hearing of one's timeline is supported by somatic awareness, as well as present-moment grounding and imaginal techniques. Furthermore, the process is built upon the attunement of the therapist to their client, as well as the client's adult-self to younger self-states. This process allows the client to co-regulate and experience a new and secure way of attaching to another and to themself, opening the possibility of new and more adult ways of regulating emotions.

The Efficacy of LI

Thorpe (2012), one of the most experienced lifespan integration therapists working today, outlined a few of the outcomes she has witnessed with her LI clients: the reduction of distress when remembering a traumatic event; the resolution of somatically held procedural memories; the regulating of emotional affect in everyday life; positive effects on relationships; the resolution of presenting problems like anxiety and depression; increased coherence and recall of one's life events; and, positive changes in areas of life that seem unrelated to the presenting problem. Of course, these outcomes are anecdotally reported by Thorpe, which highlights the

nature of much of LI's evidence of efficacy. Up until recently the reports of LI's efficacy have been primarily anecdotal from Pace (2012), Thorpe (2012) and some of the hundreds of clinicians who have been employing this modality with clients. However, within the last twelve years, a number of studies have been undertaken with a variety of populations.

Some of the populations studied include adopted children (Lewis et al., 2021), 'third culture kids' (Macfarlane, 2019), women with anorexia (Wufelstad & Pace, 2018), women with anxiety (Wilson, 2018), victims of sexual abuse (Balkus, 2012), those suffering from PTSD because of sexual abuse (Rajan et al., 2022), adults with attachment/developmental trauma (Hu, 2014), children with trauma histories (Rensch et al., 2021), individuals with Munchhausen by proxy disorder (Binet & Tarquinio, 2015), and clients presenting with anxiety and depression (Rejil et al., 2020). In each of these studies, participants showed a lessening of various trauma symptoms after participation in LI therapy. In the following few pages, I will consider these studies more thoroughly.

Balkus (2012) was the first to conduct a clinical study on LI. She recruited twenty-two women from a Seattle residential rehabilitation centre. Of these 22 women, 17 completed the study. She aimed to study the efficacy of LI in reducing the trauma symptoms of avoidance and intrusion, hypothesizing that these symptoms would lessen with treatment. Three certified LI clinicians conducted two sessions of the Standard Protocol with each woman. To gain data for evaluating the results, the women took the Impact Events Scale (IES) before the first and second sessions, and then one month after the last session. Results from the data analysis showed a significant decrease in the scores for intrusion and avoidance. From an average score of 28 before treatment, scores one month after treatment showed a remarkable decrease to below four

(for avoidance) and below six (for intrusive incidents). Balkus (2012) credited the LI sessions as causal for the improvement in trauma symptoms.

Hu (2014) conducted the second known study on LI as part of her Master's degree research at Trinity Western University. She chose a Hermeneutic Single-Case Efficacy Design (HSCED; Elliott, 2002) for her study. This type of design was developed by Elliott (2002) as a way of documenting and evaluating both quantitative and qualitative data. Because of the paucity of research, Stiles (2007) has contended that HSCED is a design well-suited to investigate a newer therapy, because as a case study, it lends itself to theory evaluation. Rensch (2015) contended that the HSCED model is superior to other single case study models because it requires the involvement of multiple experts, as well as an in-depth investigation of the data from two different 'judges,' who present their interpretations in a 'for' and 'against' court case type of model. This process strengthens results by eliminating possible alternate explanations.

The study was conducted with three adults (aged 20, 40, and 60) with histories of developmental trauma, including insecure and disorganized attachment styles. They all presented with chronic psychological issues, including generalized anxiety, panic attacks, depression, and relational challenges. Each subject received between seven to twelve sessions over the period of three months. Subjects completed the CORE-OM, a Personal Questionnaire, the Adult Attachment Interview, the Helpful Aspects of Therapy form, and the Change Interview. Using the data collected from these sources, the adjudication process showed that all of the subjects demonstrated clinically significant decreases in trauma symptoms as a result of LI interventions. The answers in the Change Interview from the first subject, a woman in her 40s, are telling regarding LI's efficacy. The following is a sample of her answers:

-- *What changes, if any, have you noticed in yourself since therapy started*?

"More mindful without trying. Calmer in my brain. Not as much internal dialogue going on. That was one thing that was really surprising. I feel an internal shift, a sense of being over the hump of a couple of my goals, like on the downward slope of the curve. I feel less reactive about a lot things that I was pretty reactive about before. Put it this way, I expected [the change] based on what other people reported, but to really feel it was a surprise. I intellectually knew what we were going for, but to feel it was a

surprise."

-- *In general, what do you think has caused these various changes*?

"The therapy. I would think it's the grounding in today, bringing parts of myself to today, communicating to parts of myself that that level of distress isn't necessary anymore…" (Hu, 2014, p. 59)

The second subject, a young woman in her first year of university, experienced similar changes, crediting these changes to the eleven sessions of LI she experienced. Some of her reported changes included:

-- Increased (inner) stability

-- Decreased relationship struggles

-- [New ability to] discern which relationships to keep

-- Animosity toward mom decreased, and increased relationship building with her

-- Less anger toward mom's boyfriend and more boundaries with him

-- Couldn't talk about dad w/o crying and now almost at peace w/ that

-- Have boundaries now. (Hu, 2014, p. 67)

The third subject was a 60 year-old woman who had worked as a clinical counsellor for many years. She came to the study wanting to work on family-of-origin issues related to her challenges in pursuing and maintaining romantic partnerships. Given her long experience of therapy both as a clinician and a client, her answers to the Change Interview questions are particularly poignant:

> -- *So how are you doing?*
>
> "I feel much more content, I think, generally. Some of those 'edges' that had surfaced have been rounded, and I am happy about that."
>
> -- *In one HAT you said that 'the LI resolved the issue' – what did you mean by that?*
>
> "It means that I don't react. When I think about it, I don't get activated; I don't get into flight or fight."
>
> -- *So given your experience in this field, what does that say to you?*
>
> "That it's powerful stuff. And, um, it also is something that the process of LI treatment is able to circumvent my intellect, so I didn't get in my own way, so I didn't actually stall myself or sidestep it…" (Hu, 2014, p. 77)

Based on these interviews and the comprehensive results of the study, Hu (2014) posited that after LI therapy, clients with developmental trauma, including that from abuse and sub-optimal attachment styles, experienced a lessening of trauma symptoms. In particular, beneficiaries of LI therapy are likely to demonstrate more secure attachment characteristics, especially in relation to affect regulation and a stronger sense of self.

The study by Rensch and colleagues (2021) also followed an HSCED model. There was one subject in the study: "Kelly," a 12-year-old girl with a history of trauma. She presented with

symptoms of anxiety and hypervigilance and completed nine sessions of LI therapy over a period of three months. Results showed a significant decrease in symptoms. The adjudication process, inherent to the HSCED model, indicated with 80% certainty that these positive results were due to the efficacy of LI (Rensch et al., 2021). Interestingly, while Kelly's family strongly credited the change in Kelly to the LI therapy, Kelly did not. The researchers (2021) surmised that this indicates "Kelly's symptoms got better without Kelly realizing that she underwent trauma therapy. In other words, she experienced relief of her symptoms from trauma without an emotionally intense exposure or discussion of this trauma" (p. 411). This is significant because it indicates that LI is a gentle and well-tolerated therapy that does not re-traumatize and does not require the client to verbalize the content of their trauma.

Another population that might benefit from LI therapy is adopted children. Lewis and colleagues (2021) at the University of British Columbia and Trinity Western University also conducted an HSCED study, this time with an adopted 12-year-old male who underwent 10 sessions of weekly LI therapy. The study, later published in the *Journal of Child and Adolescent Trauma*, demonstrated that after completing the regime of therapy, changes occurred in both the attachment processes and also the attachment bond between the child and his parents. Some of the results included complete cessation of nightmares, complete cessation of bed-wetting, and more ability to emotionally regulate, including less volatility and less blaming of others (Lewis et al., 2021). The subject's family strongly credited their son's change to LI therapy. The adjudicators of the study also strongly correlated the positive changes in the subject with the efficacy of LI therapy. They concluded that LI could help repair attachment disruptions in children, which might prevent psychological, socio-emotional, and interpersonal issues later in life (Lewis et al., 2021).

McFarlane's (2019) HSCED study on the effectiveness of LI in helping develop a more coherent sense of self in 'third culture kids' is unique in the research considered herein because of its autobiographical nature. McFarlane (2019) was both researcher and subject of her study. She considered how LI could aid in the construction of 'self-structure' and the integration of autobiographical narrative fragmentation. McFarlane (2019) argued that LI produces significant positive ego-identity changes. As mentioned, McFalane's research is unique and perhaps not as valuable as other studies because of the autobiographical and perhaps biased nature of the research. Though, it should be noted, McFarlane (2019) contended that as both subject and researcher, her reflexivity was an asset in understanding the efficacy of LI.

Chan (2017) found similar outcomes in her study on the efficacy of LI for developmental trauma. Chan (2017) used a feminist lens, understanding the change in a person's sense of agency and sense of wholeness after the resolution of trauma. She interviewed eight subjects after their completion of a series of LI sessions and found that subjects reported positive effects from LI. While Chan's study did not have the robustness of the HSCED model, with its extensive data gathering and checks and balances of the adjudication system, it is hard to ignore the bold and persuasive reflections from every subject as they reflected on the changes in their lives and the credit they gave to LI therapy for enabling those changes. One subject reported,

> I feel lighter and healthier and happier and just . . I feel really . . . just like, really surprised and delighted that I was able to clear some of that [trauma] up and move towards a more courageous and wholehearted version of myself. It's just so wonderful! (Chan, 2017, p. 156)

Another subject reflected on the role LI played in the substantial changes in her life:

> "I 100% believe, like, 100% . . .there's just no, there's no way I could have

> done this without LI, and I was just so shocked that it worked. I mean, I had hoped that things would shift, but it's just such a drastic difference, and I am so thankful. It's amazing. I recommend everyone do it because, like . . . we all need healing and this was just so . . . like, wow . . . It's just . . . wow . . . it just totally changed everything. (Chan, 2017, p. 156)

A very interesting study on Munchhausen Syndrome by Proxy (MSBP) and LI was conducted by Binet and Torquino (2016) in France. The case study included adult subjects who suffered from MSBP as children. The researchers considered whether participation in LI therapy might alleviate some of the dissociation symptoms associated with a disorganized attachment style typical of adults who had been victims of this particular kind of abuse. The study showed that the initial stage of co-constructing a participant's timeline was an integral part of bringing emotional stabilization. The establishment of safety through the therapist's attuned presence (which allowed the therapist to act as a surrogate safe attachment figure) laid the foundation for the "integration of previously insurmountable mental suffering and the lifting of the paradox whereby, as a child, being cared for was dangerous" (Binet & Torquino, 2016, p. 630). Through the LI process, the two study participants each experienced remarkable symptom relief. The first subject experienced a total cessation of panic attacks and the compulsive need for doctor visits. The second subject, who claimed to suffer from total amnesia of her childhood, as well as constant exhaustion and panic attacks, also experienced a cessation of panic attacks and came to hold a more whole and compassionate view of herself. They each were able to create a compassionate and secure attachment between their adult self and their child self through the LI process. The researchers concluded that because of this new experience of safety, "it becomes possible for these adults to be freed from the unchanging conviction that they are sick, incurably

so, and to reorient the repetitive process initially organized by their parents" (Binet & Torquino, 2016, p. 630).

Rajan and her Swedish colleagues (2022) conducted the first randomized controlled trial of Lifespan Integration, the only one to date. They looked at the efficacy of a single session of Modified LI (MLI), lasting between 90 - 140 minutes, for reducing PTSD symptoms after a single sexual assault. The study was waitlist-controlled, with the subjects individually randomized from a sexual assault treatment centre in Stockholm. Out of over a hundred women interested, 33 completed the study. The results were impressive. The data from the Impact Event Scale Revised (IES-R) showed that 72% of those in the initial intervention group no longer qualified for a PTSD designation, in contrast to only 6 % in the waitlist group (Rajan et al., 2022). When the waitlist group received the MLI treatment, their reduction in PTSD symptoms was similarly impressive. The good results from both groups persisted at six months. The researchers (Rajan et al., 2022) noted that these good results might be related to the narrowness of the criteria for inclusion in the study (a single sexual assault within the last five years). Nevertheless, they also noted that the results are very similar (and sometimes better) to those achieved in studies on various exposure-based therapies including TF-CBT, EMDR, and narrative exposure therapy for rape victims with PTSD (Foa et al., 1991; Foa et al., 1999; Foa et al., 2013; Rajan et al., 2022). This is significant because the studies cited by Rajan and colleagues (2022) all included between 9 to 12 sessions and experienced a dropout rate of around 18%. The fact that a single session of LI's modified PTSD protocol produced results as good and sometimes better with no dropouts warrants attention.

For the purposes of this paper and the consideration of LI's effectiveness for developmental trauma, Rajan and colleagues' focus on an adult experience of sexual assault

might not seem salient. However, it could be argued that the mechanism of the repeated timeline, whether it is focused on a recent traumatic event or whether the timeline starts with one's childhood and continues to the present day, is efficacious in both cases.

A qualitative study by Rejil and colleagues (2020) looked at how therapists describe the experience of 'integration' that is purported to be the outcome of LI therapy. They found that the anecdotal hallmark of LI therapy is the resulting improvements in affect regulation, as well as the newfound coherence in clients' conception of their life stories and themselves (Rejil et al., 2020). As therapy progressed, LI therapists reported that clients often realized they'd listed memories in the wrong order. Clients also began to remember events and sensory memories during stretches of their past where previously they had few memories (Rejil et al., 2020). With regard to self-perception, therapists reported clients exhibited more self-esteem, self-determination, and self-compassion as a result of LI therapy, which were correlated with a decrease in anxiety symptoms and the ability to self-soothe. The therapists interviewed noted that their clients described an increased sense of unity and 'wholeness' within themselves (Rejil, 2020, p. 8). The study reported a sustained effect of clients' sense of integration.

Limitations

There are some clients for whom LI might not be a good choice. Because the first few hours after a session can leave a client feeling mentally tired and potentially emotionally destabilized, LI therapy is not recommended for those who are feeling actively suicidal (Pace, 2012). Nor is it recommended for someone in an acute phase of substance addiction therapy because of the danger of relapse. Finally, according to seasoned LI therapists (Thorpe, 2012), LI is not a good fit for clients who seem 'stuck in their heads' and are prone to an overly analytical approach to life, especially if this 'stuckness' means they are not able to access body sensations.

Chapter Summary and Synthesis

Developmental trauma, either in the form of attachment trauma, Adverse Childhood Events, or socio-environmental conditions like poverty, war or racism, has a systemic impact on a person's life. Because early experiences of trauma affect brain development, sufferers are at a greater risk of experiencing a wide variety of both physical and mental illnesses later in life. One possible, but significant, result of developmental trauma is chronic affect dysregulation. Given the degree of developmental trauma's impact, it is important to find treatment methods that do not retraumatize the sufferer.

The developers of LI claim it is just such a method. LI makes use of techniques common to other modalities, such as therapeutic attunement, visulation and active imagination, and somatic grounding in the present moment. LI is also unique, since the LI therapist guides their client through various "protocols" that are built upon a lifespan of memories. These memories are not so much cognitively processed, as "experienced" on a mind-body level. Through LI therapy, the client, and more specifically, the client's mind-body, recognizes that the traumatic event is over and finished. As the client's mind-body experiences the traumatic event as being over, the client is increasingly able to look back at it as something they have survived. Thus, when triggered in the present day by an event that feels similar to the traumatic event they experienced earlier in their lifetime, the client is able to respond in an age appropriate way (e.g. like the forty-year-old they are, instead of like the five-year-old they were when the trauma occurred).

The above description of LI's utility might seem too good to be true, but based on recent research, particularly single-case hermeneutical design studies, LI therapy indeed appears to be an effective therapeutic modality for both children and adults who have experienced

developmental trauma. Preliminary studies on LI therapy have shown that it can produce good outcomes in less than twelve sessions without the risk of retraumatization (Balkus, 2012; Binet & Torquino, 2016; Hu, 2014, Rajan et al., 2022; Rensch et al., 2015). Thus, populations with developmental trauma who lack adequate time or finances for months or years of talk therapy might be well-served by LI.

LI has been effective not only for people who have suffered Adverse Childhood Events, but also for those with complex trauma from childhood neglect (Pace, 2012; Thorpe, 2012; Rensch, 2015). Additionally, people suffering from the personal and interpersonal effects of insecure attachment styles might find this a very helpful modality (Hu, 2014). Finally, those who experience a poor sense of self (Rejil, 2020) also seem to benefit from LI.

The positive outcomes that seem to result from LI are in keeping with Siegel's (2012) understanding of what it means to be a healthy 'self.' He wrote, "Integration is not a function of the self. It is what the self is" (p. 355). Siegel (2001) also wrote, "If we can find a way to facilitate neural integration within the minds of individuals across the lifespan, we may be able to promote a more compassionate world of human connections" (p. 90). The first research on LI seems to indicate that it is a modality that aids in this type of integration through the timeline's initiation of neural connectivity, the accessing of implicit memories held in the body and emotions, and attachment repair through attunement and co-regulation. The resultant changes in clients and research subjects seem to indicate that, in the words of one subject/therapist, LI therapy is "powerful stuff" (Hu, 2014, p. 77).

Chapter Three: Workshop for Clinicians

Even though LI has been shown to be an effective and efficient treatment for developmental trauma, it is still a little known therapy. It does not have the profile of other recently developed trauma therapies like EMDR even though it has been shown to be as or more effective in a shorter amount of time (Rajan et. al., 2022). Participation in an introductory workshop about LI could give clinicians the opportunity to become familiar with this modality and consider whether it might be an approach they'd like to be trained in. The following is a script for a one-hour workshop for clinical counsellors, introducing them to LI. In conceiving this workshop, I considered what someone unfamiliar with this modality might want to know. I imagine that being therapists, the workshop participants would have at least a basic understanding of developmental trauma, therapeutic alliance, the autonomic nervous system and the window of tolerance.

I imagined this workshop as a combination of psychoeducation and And an introduction to Lifespan Integration therapy. The arch of the workshop can be conceived in this way:

Developmental trauma as the problem (as demonstrated by an imaginary client)

A possible solution to the problem -- Lifespan Integration therapy

The history, theory, and mechanics of LI.

Evidence of LI's utility (clinical studies)

A sample treatment plan for our imaginary client

Information on specialized training in LI

Questions and comments

The “I” in the following pages is the presenter and the “you” are the participants. Parentheses are used for rationale and guidance for the presenter. The script would not need to be

followed word for word. The aim of the workshop is to pique the interest of clinicians who work with clients presenting with symptoms of developmental trauma. My hope is that they would come away more knowledgeable about the basic tenets and mechanics of LI, the research showing the efficacy of LI, and how they could access LI trainings. If clinicians choose not to get trained, my hope is they would feel confident to refer clients who might benefit from LI therapy to trained LI therapists.

Introduction and Welcome (20 min)

(The presenter would begin by introducing themself and then ask the participants to introduce themselves, stating their names and their area of interest or expertise in the counselling profession.)

A Case Study

Imagine a client has come to see you. She's 45 years old, has a successful career as an accountant. She laughs almost manically when the conversation veers toward emotions. She has come to counselling because she is unable to maintain healthy romantic relationships. She becomes clingy and feels easily abandoned. She says even though she tried a year of talk therapy and she knows that this problem has some roots in her childhood (her father was an alcoholic and would fly into rages and hit her, and her mother was chronically anxious), she still can't shake her insecurity, especially when in a relationship. She says she feels like a little girl when she's in a relationship – like her whole world revolves around her partner. Even though it's what she wants, she reports that romantic relationships are tormenting because she constantly feels insecure and like her partner is going to leave her.

Though this is an imaginary case study, it is very similar to the subject in a fairly recent study on LI ((Hu, 2014). The person in question was a therapist herself. She had done years of

talk therapy but had never been able to resolve her feelings of insecurity in romantic relationships, nor had she been able to maintain romantic relationships and had resigned herself to singleness even though she really desired a partner.

The subject participated in seven sessions of LI therapy. A month after the last session, she participated in an interview reviewing the changes she had experienced. The following is an excerpt of that interview:

"I'm less anxious about meeting potential partners; when I think about my family of origin it is much less, almost not, reactive anymore. I feel much more content generally" (Hu, 2014, p. 76).

When asked what she credited these changes to she replied: "I think it is 95% the therapy and 5% that I wanted it to happen."

When asked what she meant by 'LI resolved the issue' she responded, "It means that I don't react. When I think about [dating], I don't get activated; I don't get into flight or fight" (Hu, 2014, p. 76)

In reflecting on LI therapy and on her own changes from the vantage point of being a therapist, she said, "It's powerful stuff…it's something that the process of LI treatment is able to circumvent my intellect, so I didn't get in my own way, so I didn't actually stall myself or sidestep it…" Finally, she said, "I didn't know how good a person could feel" (Hu, 2014). Having piqued your interest, let's back up and take stock of where we'll be going over the next roughly two and a half hours.

Outline

1. Overview of the nature and impact of developmental trauma (30 min)
2. History of Lifespan Integration Therapy (20 min)

3. Break (10 min)
4. Mechanics of LI (30 min)
5. Populations that would benefit from LI (20 min)
6. Break (10 min)
7. Trainings (10 min)
8. Question time (20 min)

Developmental Trauma

(Assuming participants have come because they are familiar with developmental trauma and its impacts, the brief psychoeducation concerning this phenomenon will be collaboratively provided by the participants, with the presenter synthesizing the responses. This approach will encourage engagement in the workshop material and validation of the participants' expertise and lived-experience as therapists.)

How would you define developmental?

(Write answers on a white board, expecting answers will include experiences like neglect, abuse of all kinds, sub-optimum attachment experiences, war, and poverty, all experienced in childhood.)

What are the effects of developmental trauma that you've witnessed with your clients?

(Write answers on a white board.)

For our purposes today, and based on your offerings, I'd like to propose that developmental trauma is any event or persistent condition during childhood, such as those you named, that creates conditions of overwhelm (van der Kolk, 2005). As you noted, developmental trauma can impact a person's overall health. You will all be familiar with Felitti and colleagues' (1998) study on Adverse Childhood Events (ACEs) and their finding that the higher one's ACE

score, the higher the likelihood of experiencing various forms of mental and physical illness in adulthood. You will also likely be familiar with the research of Kessler and colleagues (2010) that showed these impacts include everything from psychological categories like depression, anxiety, PTSD, and panic attacks to physical categories like being at increased risk for stroke, cancer, liver disease, diabetes, asthma, and all-cause mortality.

With so much at stake and given the way traumatic memories are remembered and present in the body, it's obviously important to treat a client's developmental trauma for their future flourishing. But treating trauma runs the risk of re-traumatizing (Heller & LaPierre, 2012). Somatic clinicians like Heller and LaPierre (2012) and Levine (1997) have noted that revisiting past traumatic events can cause clients to move out of their windows of tolerance and find themselves overwhelmed in flight or flight states of hyperarousal or hypoarousal states of freeze and dissociation. The developers of LI (Pace, 2012; Thorpe, 2012) have claimed that this modality addresses and resolves developmental trauma without the risk of retraumatization.

Lifespan Integration Therapy

History

In 2002, therapist Peggy Pace (2012) stumbled upon the method accidentally. She had been working with clients who had experienced early childhood trauma and had been experiencing some success with EMDR and Jungian Active Imagination (Fleisher, 2020) in accessing a client's 'inner child.' Neither approach, however, ultimately yielded the results Pace hoped for. With Active Imagination, clients would have breakthroughs in the counseling office, connecting compassionately with a 'younger self', but when they got back into the 'real world' and were emotionally triggered, they would continue to react in childish ways they found distressing and discouraging (Pace, 2012). Likewise, with EMDR, Pace found that it worked

well for clients with single incident traumas, especially if the traumatic event occurred in the previous five years, but in her experience, clients with complex developmental trauma, like attachment trauma, often did not receive long-lasting benefit from EMDR (Pace, 2012).

Pace (2012) told of 'discovering' LI during one particular session when doing Active Imagination with a client. The client was a 40-year-old highly educated woman who, while revisiting a traumatic memory, became stuck in a state of nervous system overwhelm. From a Polyvagal perspective (Porges & Dana, 2018), she was well outside her window of tolerance. When Pace asked the client how old she was, the client responded in a high-pitched, fearful voice, "I'm six years old." It was as if the trauma she had experienced all those years ago was actually happening in the present moment. The emotional regulation abilities and cognitions of her normal 40-year-old self were totally unavailable to her. In order to bring her client out of this state, Pace had the insight to ask the woman to remember being seven years old, then eight, nine, ten, and so forth, up to her present age. By the time she got to forty, the woman was restored to her window of tolerance and felt she was her appropriate age. She left the session feeling calm and capable.

Pace began using this technique with other clients, gathering a timeline of their lives, one memory for each year. When working with a younger self-state, Pace would add the timeline, bringing the client quickly through all the years up to date. She theorized that this process was integrating neural memory networks by showing the mind-body system that time has passed.

Thousands of therapists have been trained since Pace's early days of practicing LI. There are concentrations of LI therapists in the Pacific Northwest (where Pace is from), France, and England, with a smattering of LI therapists spread out across North America.

How and Why LI works

The Matroshka Doll Metaphor. **(This metaphor will be demonstrated with a physical matroshka doll.)**

Imagine this nesting doll is a person. (Take apart the doll one inner-doll at a time.) Imagine that a person experiences a number of traumatic events or conditions over their lifetime. Let's use the case study from our intro: She is 45 years old. During her 43rd year she weathered the isolation of Covid and rarely saw another person for months at a time. (The presenter holds up the first doll nested into the biggest outer doll). When she was 30 she was briefly in an abusive relationship. (The presenter holds up the next doll). When she was seven years old she was bullied by the neighbourhood kids and found it hard to go to school. Finally, (the presenter unveils the smallest doll), when she was a toddler, her mother was physically and emotionally absent and her father physically abused her, causing her to develop an insecure-anxious attachment style. These various 'inner-dolls' could be conceived of as the self-states spoken of earlier. Each self-state holds implicit memories held somatically in the body and exist like little neural islands of information, which, when triggered by familiar sights, sounds, behaviours (like an indifferent look from a partner), causes her to become clingy and anxious in the same way she was as a three-year-old.

Another way to look at it is this quote by Brett (2010):

> Somewhere inside us we are all the ages we have ever been. We're the 3-year-old who got bit by the dog. We're the 6-year-old our mother lost track of at the mall. We're the 10-year-old who got tickled til we wet our pants. We're the 13-year-old shy kid with acnes. We're the 16-year-old no one asked to the prom, and so on. We

walk around in the bodies of adults until someone presses the right button and summons up one of those kids. (p. 87)

The Tree Rings Metaphor. The rings of a tree tell the story of the tree's past. A trained arborist can look at a 'round' of a tree and be able to tell when the tree experienced drought conditions because the ring that represents that year in the tree's life will be very thin. When conditions were favorable, the arborist will notice thick rings. Humans are like that. The 'rings' of our lives bear evidence of past traumas. Cathy Thorpe (2012) extended the metaphor like this:

Like a tree, all the 'rings' of our lives comprise who we are today. The very energy that gives us life comes through these rings. Although we may not know it, the way we thought when our 'rings' developed still influences our thinking today. Our sense of self is informed by the way we interpreted our life experiences during the former years of life. Difficult years of life skew our values, beliefs, and behaviors in the present (p. 12).

Both these metaphor are built upon the theory that developmental trauma causes the creation of 'self states' or 'ego-states.' This phenomenon has been described by a number of writers/researchers including Heller and LaPierre (2012), Siegel (2012), and Schore (2003). According to LI developer Pace (2012), all self-states are parts of the whole of a person, but some might be less integrated than others. Pace (2012) believed that if traumatic experiences were not adequately processed in the presence and with the support of loving parents or adults, they can create enduring self-states, which, when triggered through activation of implicit memory, cause one to feel like they are undergoing the same trauma in the present moment.

Therefore, when conditions feel similar to those that caused the original splinter or thin tree ring, the person sees the world through the eyes of the original trauma. For those who

experienced trauma as children, they often have a ring in their tree that contains the script, "I'm bad" or "It's my fault." Because LI allows the client's past self-states to experience the trauma as being over unhelpful scripts can fall away.

As indicated by the overview of Pace's 'discovery' of LI, you might conceive of LI as a composite of EMDR, 'inner child' work, and somatic awareness practices. LI rests upon the assumption that the mind-body is capable of healing itself no matter what the original injury. Over the years, a number of different 'protocols' have been developed for various traumas and presenting symptoms. Some protocols work with attachment wounds, some with PTSD, some with birth trauma, some with specific traumatic events from the client's childhood, to name a few. The 'secret sauce' of LI and the element that all the protocols have in common is the LI timeline. The timeline is a list of memory cues the client creates and the therapist reads aloud (up to 20 times) during a session. This witnessing of one's life is thought to integrate past experiences by creating new neural pathways between memories, proving to the client's mind-body system that time has passed, thereby giving traumatic memories a 'time stamp.' This understanding that time has passed is thought to occur at a neurologically and somatically 'deeper' level than what occurs with talk therapies that rely on cognitive behavioural approaches (Pace, 2012).

Core Tenets

Six core tenets foundational to Lifespan Integration therapy as developed by Pace (2012) and Thorpe (2012):

1. Elements of trauma are stored in implicit memory. Implicit memory is subconscious and held in the body, particularly the nervous system.
2. Secure attachment is key to resilience. Secure attachment can be learned through LI.

3. The brain is plastic. In other words, new neural networks can be formed at any age.
4. The brain does not distinguish between real and imaginary actions when it comes to memory reconsolidation.
5. Integration is mental health. The optimal functioning of any system requires all parts of that system to work together.
6. Therapeutic attunement is foundational to attachment repair.

The Two Tools

The two most essential 'tools' of LI are the use of the timeline and the attunement of the therapist.

The Timeline. The timeline is a list of memories, both 'positive' and 'negative.' The memories are listed as cues and are chosen for their sensory detail or traumatic import. Starting with the client's earliest memory a timeline might look something like this:

Age 3: Falling and skinning knees

Age 5: Hiding under the desk first day of Kindergarten

Age 8: Getting puppy for birthday

Age 11: Abused by uncle

Age 14: Standing ovation for play.

And so on.

Pace (2012) theorized that the client's brain is actually rewiring through the creation of new neural networks as the timeline is read. Thus, 'self-states' related to traumatic memories become activated and are experienced as thoughts, emotions, and body sensations, which surface and then fade as the memories become linked (integrated) into the whole of a person's timeline. Typically emotions and body sensations (whether it's feeling nauseated or suddenly getting a

headache or breathing more rapidly) follow a bell curve pattern, with more activation during the middle of the session (timelines 5 - 10) with calming toward the end. Metaphorically, one could imagine this process like kneading dough so that all the air and ingredients are well mixed together. Or one could imagine from the tree rings metaphor that an early ring that holds implicit trauma memories shrinks back to its proper place with more recent rings on the outside, so that the traumatized self-state is no longer exposed and so vulnerable to being triggered. Interestingly, at the end of a LI session, clients often speak of viewing their childhood and distressing events at a greater distance (Thorpe, 2012).

Attunement. The therapist's attunement to their client is also foundational to LI's success (Pace, 2012; Thorpe, 2012). Just recording a client's timeline and having the client listen to it over and over will not produce the same results as participating in LI therapy with a trained and skilled LI therapist. As with any client-therapist relationship, regardless of the modality being used, the therapist's attuned presence enables attachment repair. As Schore (2001) has explained, the therapist's right-brain-to-right-brain attention gives the client a new experience of attachment. As Dana (2018) and Porges (2018) have noted, the attuned therapist acts as a co-regulator for the client's nervous system, giving the client a new experience of relational safety. Thus, when the client experiences an increase in emotional or somatic experiences related to a past self-state, the therapist who is grounded within their own ANS window of tolerance can provide a safe container for the client to return to their own window of tolerance.

LI therapists are trained to track a client's ANS responses, tracking where they are within their window of tolerance and tweaking the process to keep them within that window. Ironically, the protocol if a client is going into hyperarousal is not to stop and 'talk them down.' Rather, the protocol is to read faster and in a matter of fact way. Conversely, if a client isn't demonstrating

much nervous system activation and seems indifferent to their timeline, LI therapists are instructed to slow the reading down and speak with more prosody of voice and insert phrases like "you got through it" after each cue. Conducting LI therapy is more than employing a technique. Successful LI therapy depends upon the counsellor's ability to remain attuned and grounded and track the client's nervous system so that reparative interventions can be used as appropriate (Thorpe, 2012).

Populations

Studies on LI only began in 2012 and only one randomized controlled trial has been conducted, but there is enough evidence from the ten studies that have been conducted to say with some assurance that LI produces statistically significant positive outcomes for study participants. Studies have been conducted with the following populations:

– Unhoused women with PTSD (Balkus, 2012). This was the first study ever conducted and included 22 women recruited from a homeless shelter in Seattle. The study had some limitations, particularly that only one session was conducted, but the results did show a lessening of PTSD symptoms.

– Adult survivors of developmental trauma (Chan, 2017; Hu, 2014)

After a series of LI sessions, one subject in Chan's study reported, "I feel lighter and healthier and happier and just . . I feel really . . . just like, really surprised and delighted that I was able to clear some of that [trauma] up and move towards a more courageous and wholehearted version of myself. It's just so wonderful! (Chan, 2017, p. 156).

– Survivors of Munchausen Syndrome By Proxy (MSBP) (Binet & Torquino, 2016)

– Women with anorexia nervosa (Wufelstad & Pace, 2018)

– Women with anxiety (Wilson, 2018)

– ‘Third culture kids’ (McFarlane, 2019).

– Subjects with anxiety and depression (Rejil et al., 2020)

– Adopted children (Lewis et al., 2021) Some of the outcomes in the subject’s lives included stronger attachment between the children and parents, complete cessation of nightmares and bed-wetting, and more ability to emotionally regulate, including less volatility and less blaming of others (Lewis et al., 2021).

– Children with developmental trauma (Rench et al., 2021)

– Women with PTSD due to sexual assault (Rajan et al., 2022). This study, conducted in Sweden, is the only randomized controlled trial. The results from a single 90-minute session of a modified PTSD protocol were similar (and sometimes better) to those achieved in studies on various exposure-based therapies that employed eight to twelve sessions of TF-CBT, EMDR, or narrative exposure therapy as studied by Foa and colleagues (1991, 1999, 2013).

The common results between every study included a statistically significant lessening of the target symptoms whether related to PTSD, anxiety, depression, disorganized attachment, or affect dysregulation. This is impressive, but what is equally impressive is that these outcomes were achieved quickly (sometimes in only one session) and with no retraumatization. For example, in the study on adopted children by Rench and colleagues (2021), the children reported very significant changes including total cessation of bed-wetting and nightmares, but they did not credit this change to the LI therapy. However, the parents credited all the changes in their children to the therapy. This discrepancy showed that children successfully underwent trauma therapy without realizing they had undergone trauma therapy because it had been so gentle.

These studies demonstrate that after LI therapy, people find themselves spontaneously reacting to current stressors in more age-appropriate ways. If we go back to the matroshka doll

metaphor, they ‘act their age’ -- behaving like the outer mature adult that they are, rather than the small-child terrorized part of themselves. According to Rejil”s (2020) study, after several sessions of LI, subjects suffering with depression or anxiety reported feeling better about life and more self-accepting.

Sample Therapy Plan

If we had ten sessions with our imaginary client from the introduction it might unfold something like this:

Two Baseline Protocols. The therapist reads through the client’s timeline, jumping every 4 years to be able to go through their timeline 15 times. Every two times through, the therapist asks the client what she is noticing. The implicit memory artifacts of the trauma begin to get neurologically integrated.

Baseline Plus: In this protocol the client identifies a maladaptive survival strategy, which is then read at the start of each timeline. The strategies align with the client’s typical nervous system response to danger (fight, flight, freeze or fawn). The objective is not to get rid of the strategy, but to bring awareness to how it has served the client and how, sometimes, it has hindered their ability to live the kind of life they’d prefer. Our imaginary client might choose the phrase “vigilance has kept me safe.” As this is read at the start of each timeline, the client might notice how as a child staying vigilant (or anxious) kept them close to their mother when she was available, but how it has made her clingy in her adult relationships. Thus, the strategy is both honoured and allowed to relax.

Baseline Protocol: Coming back to the baseline protocol continues the neural integration.

Relationship Protocol: In this protocol a timeline is made exclusively of clues related to a person or event. Our imaginary client might benefit from processing her most recent romantic relationship in this way.

Baseline Protocol: Again, the neural integration will continue with a revisit to the client's timeline from birth to present. More cues can be added to increase integration.

Standard Protocol: This protocol employs 'active imagination' as a way of revisiting a particular traumatic event. The client's present-day-self intervenes on behalf of their younger self within the source memory, providing a kind of resolution that was not available at the time of the trauma. The client, therefore, builds a new sense of inner attachment and trust between their younger self and older self as the therapist coaches interventions and conversations within the client either in the original memory setting, in an imaginary peaceful place or in the client's current day home. The younger self is allowed to ask questions and is shown (through the timeline) how they grew up. The Standard Protocol allows the client to have a new experience of what happened in the past. Unhelpful schemas are revealed and replaced with the therapist's guidance. For example, the client might tell their younger self, "this wasn't your fault." And, "you're safe now, I'm always here to protect you." Our imaginary client might choose to do a Standard Protocol session around a childhood incident of being bullied by a neighborhood boy.

Baseline Protocol: By this point, the client might be remembering more of her past, particularly her childhood. Some of these new memories can be included in the timeline.

Standard Protocol: Another Standard Protocol session for Amanda might deal with a memory of being hit by her father. Because such a memory can hold a lot of emotional charge it would be important to make sure Amanda is prepared and that there is ample time (at least 90 minutes) to resolve the trauma so she doesn't leave the session in a state of hyperarousal.

Baseline: A final baseline session could act as a way to further integrate the traumatic memories addressed through the Standard Protocol sessions.

Trainings

There are four levels of training open to registered clinical counsellors, psychologists, social workers and psychiatrists. Masters students in their last year of studies can also participate in trainings. Each training occurs in-person for two full days and includes both teaching and experiential practices. Perhaps most helpfully, participants experience LI during these training courses both as a client and as a therapist. All four levels of training are offered in Seattle, Washington a few times each year. Levels I and II are currently being offered in Vancouver, BC annually. A clinician can begin practicing LI after completing Level I, but is limited to using only the Baseline and the PTSD protocols. With each training, more protocols are introduced with the most advanced training offering protocols for birth trauma. More information about trainings is available on the LI website. https://lifespanintegration.com/.

If you would like to refer clients to an LI therapist, you can find a directory of LI clinicians on the LI website.

Questions or Comments

(The last 20 minutes will be set aside for questions from the participants).

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