

Embodiment as a Necessity for Healing Trauma

by

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Abstract

Trauma and its ubiquitous impacts invite an embodied approach to healing that integrates self, mind, and body. The prevalence of traumatic experiences and its impacts on individuals, communities, institutions, and societies underscores the urgent need for effective and long-lasting therapeutic interventions. Trauma disrupts physiological and psychological states and identity, leading to a fragmented sense of self and pervasive symptoms such as anxiety, depression, dissociation, and disembodiment. Traditional cognitive, “talk therapies” may fall short in addressing these complexities, highlighting the importance of somatic approaches that reconnect all aspects of the self, including the body, mind, and relational connection. Embodied practices may offer promising avenues for healing when verbal approaches falter. These modalities emphasize the importance of body awareness, self-regulation, and interoception, enabling individuals to process trauma through physical sensations and movements. The holistic integration of mind and body is crucial for long-term recovery and well-being. Embodiment not only aids in the processing of traumatic memories but also empowers individuals to reclaim agency over their bodies and their lives. By addressing the physiological, emotional, psychological, and relational dimensions of trauma, embodied practices provide a comprehensive framework for healing. Adjunctive body-based approaches foster resilience, support the development of healthy relationships, and enhances overall life satisfaction, underscoring the necessity of embodiment in trauma therapy and the pursuit of a fulfilling life.

Keywords: complex trauma, embodiment, dissociation, disembodiment, somatic practices, trauma

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Chapter 1: Introduction

Overview of the Topic

Trauma, both acute and chronic, is a pervasive issue affecting all populations across every biopsychosocial domain, the effects of which are detrimental for individuals, communities, institutions, and societies as a whole. According to a 2017 analysis of WHO World Mental Health surveys, involving 24 countries, over seventy percent of survey respondents had experienced at least one traumatic event in their lifetime (Kessler et al., 2017). These traumatic experiences often result in profound feelings of fear, powerlessness, and loss of control, leading to long-lasting effects on well-being and functioning (Rosenthal, 2021). Trauma disrupts the physiological and psychological states of individuals, causing a fragmented sense of self and numerous debilitating symptoms such as anxiety and hypervigilance, depression, interpersonal challenges, dissociation, and disembodiment (Giotakos, 2020; Post et al., 1995; Sollmann, 2023; Tolman et al., 2014).

Traumatic experiences profoundly disrupt an individual's sense of self and worldview (Sollmann, 2023). Consequences of trauma may include disengagement and disavowal of one's emotions and physical sensations and feelings of unsafety within the individual's own body, resulting in disembodiment (Kearney, 2020; Malkemus & Smith, 2021; Sollmann, 2023). While a disembodied state spares a traumatized individual the pain of the traumatic experience(s), it also inhibits one's ability to experience vitality, joy, and fulfillment.

The human body is equipped with built-in stress responses, commonly known as fight-or-flight and freeze-or-collapse mechanisms, which are essential for survival in the face of threat (Emmons et al., 2021). These responses are regulated by the autonomic nervous system (ANS) and are crucial in life-threatening situations. However, in non-life-threatening scenarios, these

responses can become dysfunctional (Sollmann, 2023). When the body's stress responses are not properly discharged, the energy for survival action may become “stuck” (Sunseri, 2022) in the body, resulting in what van der Kolk (2015) refers to as *physioneurosis* - trauma stored in the body as fragmented sensory memories. Repeated exposure to stressors sensitizes the internal response to those stressors, leading to structural changes in the brain, such as increased synaptic connections in the amygdala and reduced activity in areas crucial for cognitive and emotional functions (Post et al., 1995). These changes are linked to traumatic stress disorders and highlight the profound impact of trauma on brain structure and function, posing risks to physical and psychological health and the human spirit (Sollmann, 2023).

Traditional trauma treatment approaches, which often prioritize cognitive interventions, may be insufficient until individuals achieve a sufficient level of body awareness and self-regulatory skill (Emerson & Hopper, 2011; Scaer, 2005). Embodiment - the experience of existing in the world through one's body - is crucial for addressing the complex interplay of self, mind, body, and relational dynamics disrupted by trauma (Payne, 2019). Embodiment involves a bidirectional relationship between subjective experiences and the body's sensations and reactions, emphasizing the importance of reconnecting the body and mind to facilitate healing (Tolman et al., 2014).

Contemporary understandings in various disciplines recognize that the embodied experience is essential for learning, emotional healing, and relational connectivity (Payne & Brooks, 2018). Neuroscience supports the perspective that self-awareness is anchored in the ability to feel and interpret bodily sensations, reinforcing the idea that one's primary understanding of self stems from their embodied experience (Kearney, 2020). Somatic approaches, such as emotional freedom technique, dance movement therapy (DMT), tension

release exercises (TRE), trauma-sensitive yoga, and the bodymind approach (TBMA), offer promising avenues for facilitating this reconnection, promoting long-term healing and well-being.

In conclusion, addressing trauma through embodied practices is essential for fostering deep and long-lasting healing. Somatic approaches emphasize embodiment, the importance of body awareness, self-regulation, and interoception, enabling individuals to process trauma through physical sensations and movements. By integrating body-oriented methods with traditional psychotherapeutic practices, individuals can reclaim agency over their bodies, develop healthier relationships, and achieve a more fulfilling life. The holistic integration of mind and body is not merely adjunctive but foundational to effective trauma therapy, underscoring the necessity of embodiment in the pursuit of recovery and well-being.

Purpose Statement

The purpose of this thesis is to explore the possibilities of embodiment in the healing process of trauma survivors, highlighting how integrating body-oriented therapeutic practices can enhance psychological and physical well-being. This research aims to demonstrate that traditional cognitive-based verbal therapies may, in some cases, leave elements of recovery unaddressed, and to advocate for the inclusion of somatic approaches in treatment. By examining the physiological, emotional, and psychological impacts of trauma, this thesis seeks to provide a comprehensive understanding of how reconnecting the mind and body through embodied practices can lead to more effective and sustainable healing outcomes for trauma survivors. This work is intended for counsellors, clients, and those with a curious mind seeking to increase understanding of trauma, its consequences, and connection to the self.

The research question guiding explorations throughout this Capstone project is: How do embodied therapeutic practices, as primary or adjunctive modalities, contribute to the healing and recovery process of trauma survivors, and in what ways do these practices enhance psychological and physical well-being?

Contribution to the Field

This research on embodied therapeutic practices as trauma interventions provides utility and applicability within the fields of counselling and psychotherapy. By investigating how somatically-oriented and embodiment-advocating modalities contribute to trauma recovery, this study addresses a gap in therapeutic practices that emphasize cognitive approaches over bodily wisdom in addressing trauma and its symptomatology. The integration of somatic methods is increasingly being recognized for its effectiveness in treating trauma (Ong Gaffney et al., 2023), highlighting the need for continued comprehensive research to validate and expand its use in counselling practice.

Undertaking this research holds substantial value as it provides empirical evidence and theoretical insights into the benefits of embodied practices for trauma survivors. By focusing on the intersection of somatic and cognitive therapies, the study addresses gaps in existing literature where embodied practices have not been thoroughly explored or validated as primary or adjunctive therapeutic modalities. This work aims to demonstrate the potential of these modalities to enhance multiple domains of well-being, thereby offering a holistic approach to trauma therapy that aligns with contemporary understandings of mind-body interconnection. This research might inform clinical practices, guiding therapists in adopting more integrative and effective treatment strategies. Findings may inform counsellors and psychotherapists about the practical application of embodied practices, providing a framework for integrating these methods

into their therapeutic repertoire to better serve trauma survivors. This study underscores the importance of addressing both psychological and physiological aspects of trauma, advocating for a more holistic approach to mental health that can be adopted by practitioners in diverse therapeutic settings. The insights gained from this research can be incorporated into training programs for counsellors and psychotherapists, enriching the educational curriculum with evidence-based approaches that emphasize the role of embodiment in healing.

In awareness of where the power lies and how it is generated within the academic and scientific communities and, therefore; within the literature, it should be addressed that the literature itself is (in general) biased as a product of a Western-informed, empirically obsessed apparatus. Although highly functional, the traditional partiality for empirically measurable, mathematically evidence-based “proof” has left much wisdom, such as the learned and instinctive knowledge of the body itself, disregarded. As such, the literature may be biased toward labeling personal testimony, anecdotal evidence, and land-based, spirit-based, and body-based wisdom as unscientific, pseudoscience, or “woo” denying valuable resources in the process. The Cartesian philosophy of mind-body dualism and the superiority of mind over body, I believe, has been detrimental to the medical and social sciences, hobbling potentials for individuals and society to flourish fully.

Of course, this is not universal or totalitarian, and the zeitgeist, in my perspective, appears to be shifting. However, treatments in fields such as medicine and psychotherapeutic practices are reactive and change on the ground takes time and continued advocacy. Therefore, this work is submitted in honor of and allegiance with this change process. In summary, this research project not only addresses a critical need within the field of trauma therapy but also

contributes to the advancement of counselling and psychotherapy by adding to the current literature promoting an integrated, holistic approach to healing.

Reflectivity and Positionality Statement

As a student researcher in the field of counselling psychology, I acknowledge that my personal background, experiences, and values invariably shape my approach to this capstone project on trauma and the need for embodiment to facilitate healing. I am a middle-aged, white, cisgender, queer-identifying woman who has received training and supervision in narrative therapy, solution-focused brief therapy, motivational interviewing, and traditional cognitive-behavioral therapy (CBT). I strive to approach counselling practices, and my interactions with all things, through a collaborative, person-centered, strengths-based, affirmative, and anti-oppressive lens. My interest in exploring embodied therapeutic practices stems from both my professional encounters with trauma survivors and my personal journey of healing through various therapeutic frameworks including clinical and alternative somatic treatments and practices.

My professional experience includes working with diverse populations in a community clinic setting where I have witnessed the limitations of solely cognitive-based verbal therapies in addressing the complex and multifaceted nature of trauma. This has led me to see the need for integrated body-oriented practices and to seek increased knowledge related to mind-body unity, including pursuit of clinically supported somatic training to enhance my therapeutic offerings for future clients. I believe that embodied approaches offer a holistic path to deep healing by addressing both the physiological and psychological dimensions of trauma.

I recognize that my advocacy for embodied practices may be influenced by my own positive experiences and the success I have observed in those around me, both in practice and

within my personal life. To help mitigate potential biases, I am committed to rigorous examination of both empirical evidence and anecdotal accounts and continuous self-reflection with the aim of ensuring that my conclusions are well-supported by diverse sources of data. I also strive to remain open to findings that may challenge my preconceptions, acknowledging the importance of maintaining scientific rigor and objectivity.

In conducting this research, I am aware of the power dynamics inherent in academic, scientific, medical, and institutional apparatus, and I am cognizant of the potential for my positionality to impact my interactions with data acquired throughout my research process. I am committed to approaching this work with humility and open-mindedness to change in my beliefs. My goal is to contribute to the field of counselling psychology by highlighting the value of embodied practices in trauma therapy, ultimately advocating for more inclusive and effective treatment modalities.

This positionality statement serves to reflect my awareness of how my background and beliefs may influence my research and practice. It is my intention to approach this capstone project with a balance of personal insight and scholarly integrity, contributing to the broader discourse on trauma and healing within the field of counselling psychology.

Definition of Terms

Bodymind: A philosophical concept in which the mind and body are understood as an interconnected and unified entity, rather than separate components, with cognitive and physiological processes continuously shaping one another (Barratt, 2013).

Complex trauma: The experience of prolonged traumatic exposure.

Dance movement therapy: A dynamic therapeutic approach informed by embodied, often non-verbal, communication via improvisation, facilitating integration across emotional, social,

cognitive, and physical domains through the co-creation of therapeutic alliances utilizing movement between therapist and client, or in group settings (Payne, 2019; Yuhua, 2020).

Devitalization: A marked decrease in vitality.

Destructive plasticity: The capacity for drastic and irreversible transformation of an individual's identity and neural structures resulting from traumatic events leading to disruption of self-continuity and development of an alternate post-trauma identity (Malabou, 2012).

Disembodiment: A long-term dissociative state resulting in detachment from sensory and cognitive awareness and disengagement from bodily sensations (Tolman et al., 2014).

Dissociation: A fragmentation and a splitting-off of consciousness from the self and bodymind (Malkemus & Smith, 2021; Barratt, 2013), involving a separation or disconnection in aspects of one's experience, such as one's thoughts, emotions, or sensations (Scaer, 2001) or in disconnection from one's entire self (Malabou, 2012).

Embodied: (to be) A conscious and unconscious experience of existence within a corporeal form with awareness of physiological sensations, emotions, and relatedness to external environments and relationships.

Embodiment: A multifaceted concept characterized by existence in the world through bodily experience; a bidirectional relationship of mutual connection between subjective experiences and the body's sensations and reactions (Payne, 2019).

Emotional freedom technique: A psychophysiological intervention combining elements of cognitive-behavioral exposure therapy with touch-based stimulation of specific acupressure points by rhythmic "tapping" applied by a therapist or self-administered.

Fight-or-flight: Biological and physiological stress reactions which facilitate physical defense or evasive survival action in response to threat (Sollmann, 2023).

Freeze-or-collapse: Biological and physiological stress reactions resulting in dissociative states in response to threat when fight or flight are not possible (Emmons et al., 2021).

Inner attunement: A process of connection to internal self, emotional, and physical states (Ong Gaffney et al., 2023) involving self-awareness, bodily awareness, mindfulness, emotional regulation, recognition of needs, and self-compassion.

Internalization: The process of incorporating external narratives, beliefs, attitudes, values, and norms of into self-concept and perceptions of the world and reality.

Interoception: The sensory and interpretive processes of internal bodily sensation distinct from the sensory information processing concerning external stimuli (McGreevy & Boland, 2022. p. 2).

Intersubjectivity: The interconnected nature of relationships with others as both subject and object (Merleau-Ponty, 1962).

Introjection: Identification with the aggressor(s) resulting in diminished ability to distinguish between self and the other in efforts to maintain connection and a semblance of safety, individuals may unconsciously adopt aspects of the aggressor (Mucci, 2019).

Kindling: A sensitization process through which repeated subthreshold stimulation in neurological systems leads to heightened states of reactivity due to strengthened neurological information processing pathways (Giotakos, 2020).

Neuroception: The process by which neural circuitry interprets physiological data from tissues, organs, and bones to determine safety, unease, or life-threat (Sollmann, 2023).

Physioneurological: Physiological and neurological aspects of the human body.

Physioneurosis: A condition or a set of symptoms that emerges due to the storage of traumatic contents in body memory (van der Kolk, 2015).

Plasticity: Processes of cognitive reorganization resulting in structural brain connectivity

adaptations (pruning or development of new neural connections) which allows the brain to adapt to experiences.

Retraumatization: Traumatic stress reactions developed through multiple exposures to

experiences perceived as traumatic, or through triggering stimuli (sights, sounds, smells, internal or external sensations, experiences or relationship dynamics) perceived as similar to those surrounding past traumatic events (Carello, 2018).

Somatic approaches: Modalities that incorporate non-verbal, physiological methods into

therapeutic processes and emphasize body-based intelligence and embodiment over purely cognitive channels for healing (Darnell, 2021) to bridge the gap between mind and body, fostering a deeper understanding of and connection to self-as-bodymind.

Stress response: See fight-or-flight and freeze-or-collapse.

Survival response: See fight-or-flight and freeze-or-collapse.

Talk therapies: Counselling and psychotherapy modalities prioritizing language-based

interventions over body-based, somatic approaches.

Tension release exercises (TRE): A somatic approach for accessing and releasing trauma stored

in body-memory through engaging the musculus psoas major (Sollmann, 2023).

The Bodymind Approach (TBMA): A treatment methodology that highlights the importance of

targeting bodily experiences of medically unexplained symptoms (MUS) to affect emotions, behavior, and symptoms management underpinned by phenomenology and neuroscientific research.

Trauma: Prolonged or brief experiences of distress perceived as harmful or life-threatening,

accompanied by feelings of fear or helplessness and a lack of choice or control, which

overwhelm an individual's ability to understand and process, leading to lasting negative effects on functioning and well-being (Ong, 2020; Emmons et al., 2021; Malkemus & Smith, 2021; Rosenthal, 2021).

Yoga therapy: A body-oriented postural practice offering potentials for mind-body integration empirically supported in its ability to positively impact physical well-being for individuals with a trauma history (Ong Gaffney et al., 2023).

Trauma loops: A cyclical phenomenon where unresolved peritraumatic dissociation and kindling lead to deep-rooted, easily reactivated stress responses, causing individuals to repeatedly experience states of hyperarousal or hypoarousal, which are intrinsically linked to trauma-related memory functions and result in ongoing autonomic nervous system dysregulation and persistent trauma symptoms (Scaer, 2001; Sollmann, 2023).

Trigger: Stimuli that recall earlier traumatic events causing a reactivation of traumatic stress reactions such as emotional dysregulation, anxiety, or other symptomology (Carello, 2018).

vitality: A positive state of aliveness and vigor which can be harnessed for meaningful and intentional actions (Malkemus & Smith, 2021).

Yoga: An approximately 3000-year-old holistic mind–body–spirit practice originating in India which focuses on physical postures in union with breath and spiritual energy (English et al., 2022, p. 1).

Outline of the Capstone Project Chapters

Chapter one has provided a research question and objectives and has presented to readers the purpose and significance of this study within the context of counselling psychology in preparation for the following chapters.

Chapter Two encompasses the literature review, providing a brief description of trauma followed by an overview of its prevalence, drawing on statistical data and research findings to highlight the urgency of effective therapeutic interventions. An explanation of neurobiological behaviours and impacts on physiological and biopsychosocial aspects of trauma follows, including distinguishing between features of post-traumatic stress disorder; complex post-traumatic stress disorder; and various forms of trauma, with explanations of potential etiologies. Throughout the literature review, existing research on trauma and trauma's effects on the body and mind are explored, and some of the limitations of traditional cognitive, verbal-centric therapies are addressed. Chapter Two introduces the concept of embodiment and its significance in trauma therapy, setting the stage for the exploration of various somatic practices. It delves into the theoretical foundations of embodiment, exploring how mind-body connections are understood in psychological and physiological terms. The somatic practices emotional freedom technique, dance movement therapy (DMT), trauma yoga, the BodyMind Approach (TBMA), and Tension Release Exercises (TRE) are reviewed, focusing on their efficacy in trauma recovery.

Chapter Three explores the value and potential benefits of incorporating embodied practices into counseling to promote healing and well-being. The chapter delves into touch-based and somatic sexology therapies and the role these may play in addressing trauma, highlighting how they may help restore balance to a dysregulated autonomic nervous system and enhance interoceptive awareness. Empirical studies supporting the use of touch and somatic sexology in therapy are discussed, emphasizing effectiveness in fostering a sense of safety and connection. These practices are presented as powerful tools for helping clients reconnect with their bodies

and embrace their full range of sensory and emotional experiences. The benefits of somatic sexology practices in overcoming sexual dysfunction and disconnection are also highlighted. Overall, Chapter Three provides an overview of some innovative embodied approaches in counseling, supported by empirical evidence and theoretical insights, demonstrating their significant potential to enhance therapeutic outcomes for clients dealing with trauma and seeking greater well-being.

Chapter 2: Literature Review

Trauma has profound and often debilitating impacts, affecting psychological, emotional, and physiological well-being. Traditional therapeutic approaches, predominantly verbal in nature, may fall short in addressing the complexities of trauma as a bodily experience. This chapter explores the necessity of integrating embodied therapeutic practices into trauma recovery frameworks. Drawing on research and theoretical perspectives, it highlights how somatic modalities may effectively bridge the gap between mind and body, fostering a deeper understanding of and connection to self-as-bodymind and a holistic healing process. By delving into the physio-neurological underpinnings of trauma, this chapter underscores the significance of reconnecting with bodily sensations and movements to mitigate trauma symptoms, enhance self-regulation, appreciate the self as an embodied entity, and promote vitality and overall well-being. The goal is to provide a comprehensive understanding of the transformative potential of embodied practices in facilitating long-term recovery and improving the quality of life for trauma survivors.

Trauma and Highly Distressing Adverse Experiences

It appears that in popular North American culture today any experience resulting in even minor stress may be referred to as “traumatic”. However, stressful and adverse experiences do not automatically result in a diagnosis of psychological trauma or post-traumatic stress disorder (PTSD) (Kessler et al., 2017). Contemporary trauma theory defines psychological trauma as a brief or extended experience of distress which overwhelms a person’s capacity to understand and process the event(s), results in lasting negative effects on functioning and well-being (Malkemus & Smith, 2021). In addition, such trauma has been described as events perceived as harmful and life-threatening (Ong, 2020) in conjunction with experiences of fear and powerlessness

(Rosenthal, 2021). Emmons et al. (2021) describe traumatic experiences as those involving ultimate lack of control and choice.

According to data collected by Substance Abuse and Mental Health Services Administration, as of 2019 over sixty percent of men and over fifty percent of women had experienced one or more traumatic events in their life (Substance Abuse and Mental Health Services Administration, 2019 as cited in Ong, 2020). A 2017 analysis of WHO World Mental Health surveys, involving 24 countries, determined that over seventy percent of survey respondents had experienced at least one traumatic event (Kessler et al., 2017). Although 3.2 specific lifetime traumatic events per respondent was the average (Kessler et al., 2017). For purposes of their analysis Kessler et al. (2017) created seven categories of trauma “types”:

- war-related traumas;
- physical violence;
- intimate partner violence;
- accidents such as man-made and natural disasters or life-threatening illnesses;
- unexpected or traumatic death of a loved one;
- traumas that happened to close others or were directly witnessed;
- and “other” (Kessler et al., 2017, p. 3)

Kessler et al. (2017) claim that the most common types of traumas reported were unexpected death of close others (31.4%) and witnessing or discovering death or serious injury (23.7%), followed by accidents at roughly 14% with some variability in accident type. In consideration of sociodemographic factors, they also found women were significantly more likely to experience intimate partner or sexual violence yet were significantly less likely than men to experience other types of trauma. Additionally, traumas involving violence and accidents

were positively correlated to adolescence and early adulthood and negatively correlated with socioeconomic status. Interestingly, being married was a protective sociodemographic factor, with reduced risk of exposure to many trauma types compared to respondents that had never been married. As one might expect and as supported within the literature, Kessler et al. found that exposure to various traumas was correlated over time with first exposure, increasing risk of subsequent traumas (Kessler et al., 2017).

Traumatic experiences of fear, powerlessness, and loss of control and choice result in hopelessness and a disturbed sense of agency in the world itself (Ong, 2020). This may have long-lasting effects on well-being and functioning (Rosenthal, 2021). Bearing this in mind, it seems to me that traumatic events are much more serious than popular North American semantics might have us believe. Having said this, trauma is a highly personalized phenomenon involving complex emotional responses to events perceived as extremely distressing (English, 2022). The unique manifestation of trauma depends on individual factors. In other words, if two people were to experience the exact same adverse and overwhelming experience, trauma and potentially post-traumatic stress disorder (PTSD) may result for one party while the other might remain untraumatized due to a variety of risk and protective factors (Kessler et al., 2017). Additionally, some forms of trauma, popularly dubbed “Little t” traumas (Newport Institute, 2022), that of themselves do not result in traumatization, may accumulate over time, and result in manifestations of trauma as severe as those previously discussed.

“Little t” Trauma

In the landscape of trauma, a distinction may be made between "Big T" traumas which involve life-threatening or severe events such as those previously discussed, and "Little t" traumas, which include less severe but still distressing events (Newport Institute, 2022).

Breakups, job loss, social rejections (Newport Institute, 2022), and financial stress (Kinman, personal communication, May 2, 2024) fall under the umbrella of Little t traumas, as well as chronic stress that is ignored or is unable to be processed (Maté, 2003), and denial of needs and denial of negative emotions (Priya, 2007).

Big T traumas include acute and chronic events that generate significant psychological distress. However, although Little t traumas may not pose an immediate threat to one's physical safety, cumulatively, they can mirror the trauma responses typically associated with Big T traumas (Newport Institute, 2022), resulting in considerable psychological and emotional harm and physical manifestations such as illness (Priya, 2007, Maté, 2003). Through the phenomenon of kindling, discussed in detail later, the cumulative effect of repeated Little t traumas can be profound. As the nervous system does not differentiate between life threat and emotional threat, these smaller, less critical events may even cause more emotional distress than a single Big T trauma event (Newport Institute, 2022). As a result of chronic Little t traumas, the brain and body might remain in a state of hyperarousal, unable to process and release traumatic impacts (Newport Institute, 2022). This emphasizes the importance of addressing both acute and chronic forms of trauma.

Survival Responses

All animals, including humans, are equipped with built-in stress responses to facilitate survival in the face of threat. These survival responses are commonly referred to as fight-or-flight and freeze-or-collapse (Emmons et al., 2021) and are normal biological and physiological processes (Sollmann, 2023). Events leading to ultimate loss of control and powerlessness beget freeze or collapse states, however, these are normally preceded by survival responses of fight or

flight. When fight or flight are impossible, freeze or collapse are initiated, resulting in the reality, or the perception, of absolute helplessness.

The process of survival responses are as follows. Data from the eyes, ears, nose, and skin is transmitted primarily to the limbic brain for interpretation by the amygdala regarding relevance to well-being and survival (Kearney, 2020). However, the amygdala is part of the emotional brain, and it merely interprets sensory data, not actual threat (Kearney, 2020). This process is automatic, and conscious awareness is not involved. Van der Kolk (2015) likens the amygdala to a smoke detector, continuously scanning the environment at the subconscious level for safety. If data transmitted by the sensory organs is interpreted as painful, threatening, or otherwise unsafe, stress hormones are released, and the sympathetic nervous system is engaged. A full-body fight or flight survival response follows (Kearney, 2020). Ideally, once the sympathetic branch of the autonomic nervous system (ANS) is turned on, the medial cortex and frontal lobes, which van der Kolk (2015) dubs the watchtower, are recruited for objective data analysis and rational decision making (Kearney, 2020). Appropriate responses to perceived or actual threat require collaboration between the watchtower and the smoke detector (van der Kolk, 2015).

One's physiological state depends on the amount of physical security the individual experiences and is registered through the unconscious process of neuroception – that is, the neural circuitry interpreting physiological data from tissues, organs, and bones to determine safety, unease, or life-threat (Sollmann, 2023). However, traumatic experiences profoundly disrupt one's sense of self and worldview (Sollmann, 2023). Traumatic experiences challenge and invalidate the fundamental beliefs and assumptions that previously guided an individual's actions, and result in unstable social identity and decreased self-confidence, leaving individuals

feeling disoriented and unsure of their place in the world (Sollmann, 2023). In other words, neuroceptive data and its interpretation may become skewed after traumatic experiences, resulting in amplified responses to stimuli.

Issues arise when the watchtower or the smoke detector are overwhelmed by each other in the case of non-life-threatening scenarios, leading to overstimulation, overexcitement, and nervous system overwhelm. In such cases, reacting appropriately (if actual threat is absent) becomes unlikely (Sollmann, 2023). If the watchtower, that is the rational decision-making brain, is overwhelmed by the emotional, automatic, “smoke” detecting amygdala (van der Kolk, 2015) the individual will “flip their lid (Siegel, 2021),” resulting in exaggerated emotional reactions. If, on the other hand, the watchtower fully suppresses the amygdala and goes into hyperdrive then the denial of feelings and sensations results (Kearney, 2020). As Rosenthal (2021) points out, these reactions involve disconnecting from self, others, and the environment, with dissociation potentially involving distorted or numbed perceptions or depersonalization (Rosenthal, 2021).

In real life-threatening situations these responses are immensely helpful and promote survival. The organism under threat utilizes the energy created by the stress response to fight or fly from the threat. If fight/flight is not possible, the energy created for action is not utilized and overwhelms the organism, essentially leading to freeze or collapse states. If the organism survives the encounter by freeze/collapse, once the threat has passed that energy prepared for fight/flight will normally be discharged through a series of tremors through which the energy is shaken off. At some evolutionary point, humans lost the instinctual capacity to “shake off” the stuck energy of fight or flight, which may contribute to dysfunction and lowered well-being in our species (Sunseri, 2022).

In summary, all animals, including humans, possess innate stress responses aimed at ensuring survival in threatening situations. These responses encompass natural biological processes of fight-or-flight and freeze-or-collapse. Ideally, rational decision-making centers in the brain collaborate with the amygdala to generate appropriate responses to threats (van der Kolk, 2015). However, traumatic experiences can disrupt an individual's sense of self and worldview, leading to amplified responses to stimuli due to skewed interpretations of neuroceptive data (Sollmann, 2023). In non-life-threatening scenarios, overwhelmed decision-making centers, or amygdala dominance, can result in exaggerated emotional reactions or denial of feelings and sensations (Scaer, 2001), potentially leading to dissociation. While these responses are advantageous in life-threatening situations, humans may experience challenges in discharging the energy generated by fight or flight responses, leading to cognitive kindling, trauma cycling (Sollmann, 2023) or “loops”, and stored trauma referred to as physioneurosis (van der Kolk, 2015).

Kindling and Sensitization

Repeated exposure to stressors sensitizes the internal response to those stressors. The concept of kindling, first discovered by neuroscientist Graham Goddard (1967), elucidates how repeated subthreshold stimulation in neurological systems can lead to a heightened state of reactivity. His findings provide a framework for understanding the progression and recurrence of neurological and psychological conditions, including the development and exacerbation of PTSD (Goddard, 1967). Goddard's work reveals how repeated subthreshold stimulation in neurological systems can lead to a heightened state of reactivity, analogous to the way small twigs can kindle a large log. In short, just as the log will not burn without many smaller pieces of wood as a prerequisite to feed the flames and build heat, stressful, adverse experiences that do not result in

traumatization or PTSD on their own are thought to affect biochemical and microstructural cognitive changes (Post et al., 1995), accumulating like so many twigs. Acting as cognitive tinder, the individual becomes increasingly sensitized to distress, exacerbating vulnerability and the risk of igniting a larger psychological response to trauma (The Carlat Psychiatry Report, 2013).

Further expanding on this notion, Post et al. (1995) observed that subsequent episodes of depression after traumatic experiences are less associated with initial trauma and more with the sensitization process. Essentially, while emotional trauma may result in manifestation of depression, other factors may have a stronger role in causing recurrent depressive episodes after the initial episode has been triggered through trauma. This suggests that past emotional traumas may leave latent traces that make individuals susceptible to future episodes under moderate or even no stress, underscoring the enduring impact of sensitization on mental health (Giotakos, 2020). Sensitization's implications for delayed onset PTSD are significant, with a body of research including McFarlane (2010) highlighting that the majority of PTSD cases do not present immediately post-trauma. It is possible that over time, and often with the introduction of additional stressors, the full clinical picture of PTSD emerges, with symptoms intensifying in the months following trauma exposure (McFarlane, 2010).

The physiological impact of kindling and sensitization manifests in the neurobiology of affected individuals. Even without development of a traumatic stress disorder, experiencing intense emotional stress can lead to significant changes in the brain. Specifically, highly distressing situations can cause an increase in the number of synapses within the basolateral amygdala (potentially due to kindling), a brain region tied to anxiety and avoidance behaviors (Giotakos, 2020). Repeated exposure to emotional stress has been noted to further strengthen

these neural connections and promote growth in dendrites within the amygdala while causing dendritic retraction in the hippocampus (Giotakos, 2020). Giotakos (2020) suggests that these structural changes may contribute to the development of anxiety symptoms, avoidance behaviors, hypervigilance, and fixation on traumatic memories.

When looking at individuals diagnosed with PTSD, brain imaging studies have identified reduced activity in areas such as the frontal lobe, anterior cingulate, and thalamus (Giotakos, 2020), areas crucial for a range of cognitive and emotional functions such as planning, attention, and integrating sensory information. By contrast, increased activity has been found in the temporal and limbic regions, which Giotakos (2020) postulates may correlate with increased alertness and re-experiencing of traumatic events. Decreased activity in the thalamus, which plays a key role in connecting different brain regions, may lead to functional disruptions such as difficulties integrating sensory experiences, problems with memory, challenges in cognitive processes, and difficulties in the interaction between brain hemispheres potentially leading to emotional overstimulation of the nervous system (Giotakos, 2020).

Further, Giotakos (2020) notes that reduced activation of the dorsolateral prefrontal cortex (dlPFC), a region associated with cognitive control and emotional regulation, is frequently noted in research with PTSD patients. Negative correlations between the dlPFC and amygdala activation have also been noted in PTSD studies. Reduced activity in the dlPFC may relate directly to increased amygdala activity post-trauma, as compared to an individual's pre-trauma baseline. This relationship illustrates potential neurobiological underpinnings of PTSD as the amygdala, which is associated with processing emotions such as fear and stress, may become hyper-sensitive due to kindling with repeated stressors whilst the dlPFC becomes less activated and less able to regulate the emotions the amygdala processes (Giotakos, 2020).

Giotakos notes structural brain changes linked to PTSD and emotional trauma indicate that reductions in overall brain volume may help differentiate PTSD from major depression, underscoring the profound impact of trauma on both brain structure and function, thereby placing an individual's physical and psychological health at risk. However, exciting neuroimaging studies of eye movement desensitization and reprocessing (EMDR) therapy have demonstrated increased activation in the frontal lobe of patients following treatment (Giotakos, 2020), indicating that some of the cognitive effects of trauma may be not necessarily reversible, but are capable of rehabilitation. In addition to therapies such as EMDR in working with trauma and PTSD, researchers are increasingly promoting mind-body practices to address physiological distress, dysregulation, and somatic symptoms in treatment (Ong Gaffney et al., 2023).

In sum, repeated exposure to stressors can sensitize internal responses, heighten reactivity in neurological systems, and may contribute to the development and exacerbation of conditions such as PTSD. Physiologically, kindling and sensitization can result in structural changes in the brain, such as increased synaptic connections in the amygdala and reduced activity in areas crucial for cognitive and emotional functions. These structural changes are linked to PTSD and underscore the profound impact of trauma on brain structure and function, posing risks to both physical and psychological health. However, promising research on therapies like EMDR therapy suggests potential for cognitive rehabilitation. Additionally, mind-body practices are increasingly recognized as beneficial in addressing physiological distress and somatic symptoms associated with trauma.

Trauma “Loops”

When neuroceptive data sets off the “smoke detector” (van der Kolk, 2015) and an experience is interpreted as threatening, it has a profound psycho-physiological impact on the

entire body. This evaluation occurs without conscious awareness and can lead to various states of arousal as previously described. Because of kindling, this response may become deep-rooted and extremely sensitive to stress, easily reactivated by new triggers, putting an individual into an ongoing state of alarm (Sollmann, 2023). Expanding on this concept, Scaer (2001) provides a comprehensive description of a cyclical phenomenon I refer to as “trauma looping”. Scaer explains how unresolved peritraumatic dissociation can impact the central neural circuits responsible for memory and arousal regulation and can lead to kindling. Those who have undergone trauma might experience hyperarousal, with symptoms like sleep problems and anxiety, or hypoarousal leading to numbness and depression (Sollmann, 2023). These states of arousal are intrinsically linked to how memory functions in trauma. Scaer (2001) outlines how trauma-related dissociative memory involves declarative memory which is crucial for conscious recall of trauma-related information, and procedural memory which is central for acquiring motor skills and habits, developing emotional memories and associations, and storing conditioned sensorimotor responses. While declarative memory is unstable and subject to decay, procedural memory is stable and resistant, forging extremely durable connections particularly when associated with emotionally charged or threat-based experiences (van der Kolk, 1994).

Through traumatic operant conditioning, experiences and sensations may become deeply imprinted on procedural memory. As Scaer (2001) points out, in threatening events or those that elicit an extreme arousal response, a single trial may be all that is needed to establish an extremely strong conditioned response. From an evolutionary standpoint, single-event conditioning is practical, as learning the first time is evolutionarily advantageous, however, in some modern-day situations, traumatic operant conditioning results in dysfunction. These strong cognitive-structural connections reinforce dysfunctional physiological arousal patterns and

dissociation with the aid of the brain's endogenous opiate reward systems. As a result, cyclical dysfunction can occur in the ANS with neuroception and procedural memory keeping the individual stuck in patterns of feeling and reacting as if the trauma is still happening. This is partly because the brain and body release chemicals in response to traumatic reminders, and those reminders are often triggered without conscious awareness (Scaer, 2001).

Scaer, (2001) suggests that kindled sympathetic arousal pathways easily trigger a response resulting in muscle tension, racing heart, sweating, trembling, and heightened sensitivity to stimuli. Additionally, Sollmann (2023) points specifically to the vagus nerve, a cranial nerve in the brainstem that connects to the heart, lungs, and digestive system and is an important part of the parasympathetic response (Cleveland Clinic, 2022), with regard to kindling and trauma looping. As the body will always attempt to regain homeostasis, a parasympathetic response will follow, potentially with palpitations, nausea, dizziness, and digestive issues (Scaer, 2001). In the case of trauma looping, the parasympathetic response has also been kindled (Sollmann, 2023), making both the sympathetic and parasympathetic systems extremely sensitive. Sympathetic and parasympathetic symptoms can perpetuate themselves and contribute to ongoing abnormal oscillations of ANS dysregulation, or trauma looping, with the symptoms of trauma taking control in an endless cycle of arousal (Scaer, 2001).

While nervous system stress responses are functional in that they protect the body and mind from threat, they do take a toll on mental and physical well-being (Porges, 2017). Post-threat, individuals may respond to unconscious drives to heal which can take the form of internalization and reenactments of traumas in relationships and experiences in an attempt to achieve results different from the original trauma (Levine & Frederick, 1997). If left unaddressed and unhealed, traumatic injuries may result in behavioural cycles of trauma, with individuals

attempting to heal by unwittingly reliving traumatizing experiences, which end up continuing patterns of violence, oppression, and further traumas (Rosenthal, 2021).

Ong Gaffney et al. (2023) describe how traumatized individuals may become disconnected from a sense of self and struggle with inner attunement and emotional regulation. Various distress signals such as racing heart, anxiety, or held breath may create a sense of danger within the body, and as these signals can be overwhelming, individuals may attempt to cope through numbing themselves or developing symptoms related to panic. By learning to ignore internal distress signals, one's relationship to sense of safety versus true distress becomes lost and can lead to a feeling that the body itself is a place of hostility and insecurity. To manage these feelings, traumatized individuals may seek to regulate and soothe through external means such as self-medicating with substances or other behaviours (e.g. dysfunctional levels of shopping or eating) and seeking excessive reassurance from others in order to feel safe (Ong Gaffney et al., 2023).

In conclusion, when reminded of something traumatic, even (and often) at the subconscious level, procedural memory works unconsciously to recall actions, feelings, and automatic reactions related to the traumatic event(s). The body's reaction to trauma, whether through heightened arousal or a numbed state, forms part of a cycle perpetuated by conditioned memory processes, kindling, and ANS responses. This cycle can result in an individual remaining trapped in a state of continuous physiological trauma response and dysfunctional patterns of behaviour. Repetitive cycles of hypo- and hyperarousal, trauma reenactments, and disavowal of one's own body characterize the persistent impact of trauma, demonstrating the complexity of trauma's long-lasting effects on the nervous system, behaviour, and well-being.

Physioneurosis

As previously detailed, during acute stress reactions endorphin release assists in processes of disregarding injury and staving off further attack or, if unable to fend off an attacker, endorphins will render the animal (including the human animal) analgesic during a freeze/collapse response (Scaer, 2001). Upon survival of freeze/collapse states in nature, animals can discharge the stored energy of fight/flight by completing the evasive action or, if released as opposed to having fled or fought, through a distinct form of shaking (Levine & Frederick, 1997). However, it appears that humans have lost this inherent bodily wisdom, thus undischarged energy and trauma may and often do become stuck in the body and body-memory (Levine & Frederick, 1997), a process van der Kolk (2015) refers to as *physioneurosis*.

According to van der Kolk's extensive research on traumatic memories and the polyvagal theory, trauma may become stored in the body as fragmented sensory memories that do not change over time (Leibig, 2019). In response to trauma, the mind may resort to denial, behaving as if the event never occurred while the brain and body becomes stuck in fight, flight, freeze, or collapse mode, and stress hormones continue to activate the body's muscles and tissues long after the event has passed (Kearney, 2020). This may result in various somatic disorders (Kearney, 2020), difficulty handling stress, and challenges regulating emotions as the brain's warning system has essentially been rewired (Leibig, 2019). Scaer (2001) warns that persistent, recurrent dissociation in the face of helplessness without completion of the survival response and dissipation of the sympathetic charge kindles the architecture of stress responses and sensitizes the human animal resulting in continued or subsequent dissociations (Nijenhuis et al., 1998) and trauma reenactment (van der Kolk, 1989; Levine & Frederick, 1997). Individuals might resort to self-medicating and dysfunctional behaviours to temporarily suppress overwhelming emotions and other somatic experiences resulting from trauma(s) while beneath, the body continues to be

affected, remembering the pain that the rational mind cannot rationalize away (Kearney, 2020). For genuine healing to occur, those who have suffered trauma must re-engage with their experiences on emotional and physiological levels, moving from the place of trauma (in the past) to existing in full awareness in the current moment (in the present) (Kearney, 2020). Essentially, in order to fully heal from past traumas, present moment embodiment is a necessity.

Psychotherapeutic modalities that value mind-body connectivity and employ somatic practices, such as somatic experiencing spearheaded by Peter Levine, do so under the assumption that psychoneurosis, trauma and powerful emotions stuck in the body, incite ANS activation loops and various physical complaints that require special means to be accessed, unstuck, and healed (Thouin-Savard, 2019). Modern trauma theory (Levine & Frederick, 1997; van der Kolk, 2015; Porges, 2011) holds that healing trauma requires moving from disembodied states of ANS hyper- and hypoarousal to a regulated, embodied state. From a trauma theory lens, embodiment - the moment-by-moment interconnected relationship of mind and body - is considered a significant marker of positive mental health and well-being and is a fundamental healing principle of somatic psychotherapies (Malkemus & Smith, 2021). For example, somatic experiencing (Levine et al., 2018), like many other somatic psychotherapies, suggests that traumatic experiences stored in the nervous system as uncompleted biological stress reactions can be alleviated by incorporating non-verbal, physiological methods into the therapy. According to this approach, the body inherently understands how to release trapped traumatic energy and can effectively do so when provided with adequate support, ultimately leading to healing and improved overall health (Lieb, 2022).

In sum, acute stress reactions prompt the release of endorphins to manage injury and defense, often rendering one analgesic during freeze/collapse responses. While animals in nature

discharge stored energy through evasive actions or shaking, humans lack this inherent bodily wisdom, leading to undischarged energy and physioneurosis. This impacts stress handling and emotion regulation and may manifest as somatic disorders. Persistent dissociation without completion of survival responses sensitizes individuals to trauma reenactment and perpetuates dysfunctional behaviors. Genuine healing from trauma necessitates reengagement with experiences on emotional and physiological levels, emphasizing the importance of embodiment. Therapeutic modalities such as somatic experiencing acknowledge the role of embodiment in trauma healing, utilizing non-verbal, physiological methods to release trapped traumatic energy and restore overall health.

Traumatic Stress Disorders

Post-traumatic Stress Disorder. The diagnostic criteria for post-traumatic stress disorder (PTSD) as outlined in the DSM-5 involve exposure to severe trauma such as death, serious injury, or sexual violence. Symptoms must persist for over one month and significantly impair multidimensional aspects of functioning (American Psychiatric Association, 2013).

Symptoms of PTSD may include:

- intrusions such as recurrent, involuntary, and distressing dreams, flashbacks, or reminders of the event;
- dissociative reactions;
- intense or persistent distress in the face of internal or external cues reminiscent of the traumatic event(s), often with distinct psychological reactions;
- detachment from others, prior interests, and positive emotions
- enduring and heightened negative ideas or assumptions regarding oneself, others, and the world

- negative changes in baseline cognition and mood typical of those pre-event, potentially including negative beliefs about the self and the world, self-blame and distorted cognitions about responsibility for the traumatic event(s);
- increased arousal leading to behaviors like hypervigilance or sleep disturbance;
- internal and external stimuli reminding one of the traumatic event are typically avoided and if unavoidable, cause extreme distress (American Psychiatric Association, 2013, pp. 271-274).

Individuals with PTSD experience altered arousal sensitivity and reactivity. They may often find that the traumatic event(s) they survived remain a potent force, capable of summoning feelings of panic, terror, grief, or deep sadness, and intrusions may feel as real as the original event (Friedman, 1994). Explicit or covert reminders of distressing events or trauma can trigger vivid mental pictures, emotional and physiological reactions, and psychological responses that mirror the original traumatic experience. Activation may increase in the limbic brain (i.e. the amygdala and hippocampus, the smoke detector (van der Kolk, 2015)) potentially due to kindling (Scaer, 2001) while the medial prefrontal cortex (the rational brain, the watchtower (van der Kolk, 2015)) experiences decreased activation (Strauss et al., 2019) resulting in decreased rational decision-making abilities and emotion-driven reactions (Friedman, 1994).

After onset, many cases of PTSD remit within a matter of months although this is by no means the majority with under 40% of cases remitting within one year (Kessler et al., 2017). Based on research utilizing World Mental Health data carried out by Kessler et al. in 2017, mean symptom duration is significantly longer than previously recognized, averaging just over six years across trauma types. There appears to be wide variation within trauma types however, with PTSD due to combat experience in war averaging over 13 years with a median duration of 5

years in this population, a median duration of 3 years for trauma due to intimate partner violence although this category is broad in definition and accounted for over 40% of the population burden in their study, and those involving natural disasters lasting approximately one year on average (Kessler et al., 2017). They also found that conditional risk of the development of PTSD, as classified in the DSM-5, to be 4.0% with significant variability by trauma type, with the highest risk due to rape at 19%, followed by physical abuse by a romantic partner, being kidnapped, and being sexually assaulted other than rape at 11.7%, 11%, and 10.5% PTSD risk respectively. Age and gender also appear to be associated with risk of PTSD with the highest risks found during childhood and adolescence, after age sixty-five, and in being female-identified.

Regardless of biopsychosocial and geographical factors, a vast majority of humans are exposed to highly distressing adverse experiences sooner or later in life. Yet not all those who experience traumatic events develop PTSD, indicating that psychological vulnerabilities may be a risk factor in the development of PTSD (Kessler et al., 2017). Kessler et al. (2017) found prior trauma exposure is a predictor of both future traumas and PTSD development, with highest risk in individuals with a history of recurrent traumas and those who experienced traumas involving interpersonal violence. Physical violence was found to be the form of interpersonal violence most strongly associated with PTSD vulnerability, as well as a predictor of future intimate partner violence and various other forms of physical violence (Kessler et al., 2017). As physical violence is not only the highest risk factor for PTSD within the category of interpersonal violence, but also a predictor of future physical and intimate partner violence events, physical violence may be a statistical triple-threat with regards to PTSD development.

Complex PTSD. In 1988, Dr. Judith Herman of Harvard University proposed complex posttraumatic stress disorder (CPTSD) as a new diagnostic category of stress disorders (Herman, 1992; U.S. Department of Veterans Affairs, n.d.). She maintained that symptoms stemming from extended exposure to traumatic events, such as ongoing abuse in childhood, domestic violence, or the experiences of war prisoners, require a diagnostic category separate from, yet related to, the symptoms of PTSD that acknowledges the unique impact these types of stress have on an individual's internal structure of the self (Karatzias et al., 2016).

For Herman's (1992) formulation of CPTSD, as outlined by the U.S. Department of Veteran's Affairs, symptoms are listed as follows:

- Behavioral difficulties (e.g. impulsivity, aggressiveness, sexual acting out, alcohol/drug misuse and self-destructive behavior)
- Emotional difficulties (e.g. affect lability, rage, depression, and panic)
- Cognitive difficulties (e.g. dissociation and pathological changes in personal identity)
- Interpersonal difficulties (e.g. chaotic personal relationships)
- Somatization (resulting in many visits to medical practitioners) (U.S. Department of Veterans Affairs, n.d.)

According to Emmons et al., (2021), the main differences between PTSD and CPTSD include the interpersonal nature of CPTSD development, and repeated subjection to traumas within that relationship. Their evaluation is supported in the evidence. From 1991 to 1992, Roth et al., a group of researchers specializing in trauma-related conditions, worked on the DSM-IV PTSD Field Trial. Foci of their investigation pertained to potential alternative interpretations of the qualifying PTSD stressors, the consistency of symptoms across different stressors (focusing

on sexual abuse, physical abuse, or a combination of physical and sexual abuse), and statistical methods to explore the connections between various factors and the likelihood of receiving a diagnosis of CPTSD over a lifetime. Findings from the trial showed that individuals with prolonged exposure due to trauma were more likely to exhibit a range of symptoms that disrupt emotional regulation, self-concept, and relationships than those participants exposed to acute traumatic events (Roth et al., 1997). This study was limited in that the majority of participants (89%) were female, and only sexual and physical abuse were being considered in the study. Despite these limitations, Roth et al.'s (1997) study presents important information and implications about long-term trauma exposure. Ongoing research has since been highlighting significant disruptions due to trauma, particularly childhood trauma and adults who have experienced sustained interpersonal violence, including wartime civilian experiences (Karatzias et al., 2016).

CPTSD has been considered for inclusion in the DSM but has not been added as a separate diagnosis. During the DSM-IV Field Trials, Roth et al. (1997) found that most cases of CPTSD also qualified for a PTSD diagnosis, with a ninety-two percent overlap. When the DSM was in revision for its fifth edition in 2013, the reconsideration of CPTSD as a standalone diagnosis was dismissed due to a lack of substantial empirical support for Herman's proposition that it was a distinct condition (Karatzias et al., 2016; Kessler et al., 2016). The debate centered around whether the symptoms attributed to CPTSD merely depicted severe forms of PTSD rather than a separate disorder. Nonetheless, the DSM-5 acknowledged some aspects of CPTSD, incorporating symptoms such as impulsivity, anger, emotional difficulties, and particularly the PTSD Dissociative Subtype, into the broader PTSD category (U.S. Department of Veterans

Affairs, n.d.) resulting in a single disorder with diverse symptom profiles that may share little similarity (Karatzias et al., 2016).

Unlike the DSM, the Psychodynamic Diagnostic Manual (PDM-2) and the World Health Organization responded to the issue with a different approach. The Psychodynamic Diagnostic Manual, Second Edition (PDM-2) categorizes CPTSD as distinct from PTSD but seems to limit its definition to a disorder that arises specifically from experiences of trauma and neglect during childhood (Alliance of Psychoanalytic Organizations, 2017). In their eleventh revision of the International Disease Classification (ICD-11), PTSD and CPSTD became two separate disorders (World Health Organization, 2019). The ICD taxonomy rarely employs specifiers or subtypes due to evidence suggesting mental health providers often overlook these in diagnostic processes (Karatzias et al., 2016). Instead, it opts for single overarching diagnoses (such as traumatic stress disorders) that subdivide into separate, more specific diagnoses (e.g. PTSD *or* complex PTSD). The ICD's model is also validated by the existence of unique risk factors, varying degrees of functional impairment, distinct symptom profiles, and potential treatments which reinforce the clinical significance and utility of distinguishing between disorders (Karatzias et al., 2016).

PTSD, which may follow a single traumatic event, primarily manifests with symptoms of reliving the trauma, avoidance, and hyperarousal. CPTSD, however, involves additional symptoms of issues with self-perception, interoception, and emotional regulation making it more challenging to treat (Emmons et al., 2021).

Interpersonal Trauma

Traumas caused through human agency are more difficult to process psychologically than naturally occurring disasters (Sollmann, 2023). Interpersonal trauma refers to traumatic experiences caused by other, usually more powerful or trusted, people within relationships in

contexts such as war, rape, incest, neglect, profound betrayal, and other serious maltreatment (Mucci, 2019; Yuhas, 2020). The essence of interpersonal trauma lies in its occurrence through human interaction and the violation of trust within relationships where care and safety are expected (Mucci, 2019; Yuhas, 2020). Mucci (2019) explains that when trauma arises from human interactions, the emotional and psychological ramifications are often magnified due to the symbolic meanings ascribed to those relationships. Interpersonal trauma impacts the psyche and the complex network of neurobiological pathways through which emotions are processed and meaning is given to experiences (Mucci, 2019). Although the immediate emotional reactions such as terror, helplessness, and a sense of powerlessness may be similar regardless of human-made or natural disasters, psychological processing diverges significantly (Sollmann, 2023). This divergence is due to the added layers of betrayal and the disruption of expected social roles (Mucci, 2019) often by those expected to provide intimacy, care, and protection (Yuhas, 2020).

Trauma within close relationships is sometimes referred to as attachment or betrayal trauma because it fractures the deep connections expected for safety and trustworthiness (Yuhas, 2020). Furthermore, interpersonal traumatization is often prolonged (Ong Gaffney et al., 2023). Yuhas (2020) explains that when trauma is inflicted by someone who is trusted or upon whom the victim relies, a complex dynamic of dependence and repeated violation often ensues. The victim may feel unable to escape due to their needs or a sense of loyalty to the perpetrator(s). It is marked by an imbalance of power where the abuser exerts control, often diminishing the victim's sense of self. This kind of trauma not only breaks trust but may also involve subtler forms of domination with emotional manipulation or neglect of the victim's needs. Over time, abusers may employ various strategies to assert and maintain dominance, progressively eroding the victim's self-worth. This relentless undermining leads to a state where survivors perceive the

abuse as normal or what they deserve. As a result, individuals who endure extreme neglect, or physical, sexual, or emotional abuse often adapt their thinking and behavior to survive within these dysfunctional relationships. The pervasive dehumanization during the abuse can make even acknowledging one's own desires and emotions feel threatening, even after the trauma relationship has ended. Abusers often aim to strip their victims of identity to use them for their own purposes, leaving survivors feeling powerless, without a sense of self or value in relationships. To cope with extreme mistreatment, victims may resort to mechanisms like compartmentalization or dissociation, sometimes numbing their bodies to insulate themselves from the pain of abuse (Yuhus, 2020).

Survivors of interpersonal trauma may experience what Mucci (2019) describes as introjection, or identification with the aggressor(s). Here, the individual's ability to distinguish the lines between the self and the other becomes unclear, and in efforts to maintain connection and a semblance of safety, individuals may unconsciously adopt aspects of the aggressor. This leads to a complex cycle of internalized aggression and violence, further distorting the victim's senses of reality and of self, and can manifest as repeated patterns of violence directed both inwards and outwards towards others. Moreover, this internalization is not limited to aggression but extends to the guilt and shame of the aggressor, leading to low self-esteem and a tendency towards self-blame and revictimization (Mucci, 2019).

Complex Trauma

Prolonged traumatic exposure is often referred to as complex trauma - not to be confused with complex post-traumatic stress disorder (CPTSD). A distinction is made here between complex trauma and CPTSD as there may be confusion between the two terms, as evidenced by my own misunderstanding prior to researching these topics, as well as the terms seemingly being

used synonymously in much of the literature I reviewed. CPTSD is a formal mental health diagnosis whereas complex trauma is the experience of multiple interpersonal traumas over an extended time period (UK Trauma Council, n.d.). Experiencing complex trauma does not automatically denote the acquisition of CPTSD (UK Trauma Council, n.d.). Complex trauma is a series of events and consequences, not a diagnosis (UK Trauma Council, n.d.).

Complex trauma is associated with high psychiatric comorbidity and a range of physical health issues, including chronic illnesses and emotional disturbances (Emmons et al., 2021). This form of trauma often results in profound emotional and neurobiological disruptions (Emmons et al., 2021). Research highlights that complex trauma survivors may experience higher dysfunction than do sufferers of PTSD - especially in family and relationship dynamics (Karatzias et al., 2016) –because interoception abilities tend to be more severely impaired by those who suffer prolonged trauma than those diagnosed with PTSD due to single-event trauma (Emmons et al., 2021).

The prolonged nature of interpersonal trauma may foster persistent negative self-views and fearful interpretations of others (Karatzias et al., 2016). Increased sensitivity to threats and heightened attention to anger are common, suggesting behavioural sensitization or electrophysiological kindling (Giotakos, 2020). Such experiences may structurally and functionally alter the prefrontal cortex and other brain areas like the amygdala and hippocampus, leading to persistent anxiety and stress responses (Giotakos, 2020).

Another profound impact of complex trauma Yuhas (2020) emphasizes is imposed silence which is enforced by the perpetrator(s) and becomes a learned behaviour, incorporated into a survivor's state of being. Victims are often punished for any expression of thought, emotion, or resistance, which conditions them to suppress their own voices and conceal their

feelings. The learned behaviour of silence leads to shame, and survivors' identities are often shrouded in it, perpetuating a belief that they should conceal their emotional pain (Yuhas, 2020).

Commonly, survivors describe symptoms of:

- dissociation;
- extreme secrecy;
- trust issues;
- difficulty establishing healthy boundaries;
- challenges in accessing personal strength;
- negative self and body image;
- overwhelming feelings of anger, fear, guilt, and shame (Ong Gaffney et al., 2023; Yuhas, 2020).

Interpersonal trauma is associated with a multitude of issues hampering well-being. In discussing consequences of interpersonal trauma Ong Gaffney et al. (2023) list physical, emotional, psychological, and behavioural challenges such as:

- neuroendocrinological disruptions;
- chronic illnesses;
- anxiety;
- depression;
- trauma-related disorders, including PTSD;
- self-medication through substance-use or self-injury (Ong Gaffney et al., 2023).

Internalization of psychological pain also manifests in various somatic symptoms, and physical complaints are frequent among those who have endured trauma in relationships, as the body becomes a repository for deep-seated psychological distress (Yuhas, 2020).

In working with survivors of interpersonal trauma, mindfulness practices and verbal therapies may be complicated as intense shame, intrusive thoughts, emotional upheavals, and bodily responses can make it extremely challenging for survivors to remain present and connected to their experiences, discomfort, and bodily sensations (Ong Gaffney et al., 2023; Yuhas, 2023). Treating survivors of complex trauma may be more difficult and complicated than utilizing conventional PTSD treatments due, in part, to persistent internal feelings of unsafety and lack of trust in oneself and others, which may lead to dissociation and depersonalization (van der Kolk, 2014). Conventional PTSD treatments such as cognitive-behavioral therapies may see high dropout rates among those with complex trauma due to these complicating factors (Emmons et al., 2021). Standard treatments may not fully address the breadth of symptoms or the deep-seated nature of emotional dysregulation (Emmons et al., 2021).

Successful intervention should utilize a nuanced approach that not only addresses trauma but also works to restore a sense of control and power and fosters safe relationships that facilitate reconnection with daily life and a reintegration of the self into society (Ong, 2020). The intricate challenges posed by complex trauma require therapeutic strategies that go beyond the conventional frameworks used for PTSD, emphasizing holistic restoration of personal agency and relational trust for enduring recovery and well-being (Emmons et al., 2021; McGreevy & Boland, 2022; Ong, 2020).

In summary, the profound effects of interpersonal trauma, particularly those betrayals of trust within intimate relationships, usher in complex psychological and neurobiological changes that challenge one's fundamental assumptions about relationships and the world, their sense of safety, and their identity. As a result, such traumas are not merely survived events but are experiences that deeply alter individuals' relations with themselves and the world. While natural

disasters are indiscriminate, interpersonal traumas are personal and intentional, often leading to a pernicious cycle of shame, silence, and self-blame that can persist long after the trauma has ended. These traumas can inflict lasting damage, complicating the path to recovery as they interfere with the ability to remain connected to self and body and grounded in the present due to the visceral legacy of the abuse that reverberates through mind and body. Addressing these multidimensional impacts is crucial in therapeutic settings, where the objective is not only to process the trauma but also to re-establish a sense of personal agency and relational value for those who have been profoundly violated by others upon whom they once trusted or depended.

Sexual Trauma

Sexual traumas are prevalent throughout the world (Forde & Duvvury, 2020), transcending biopsychosocial dimensions. Numerous patterns of response and recovery from sexual trauma have been documented, with post-traumatic stress disorder (PTSD) being the most widely acknowledged (Forde & Duvvury, 2020). According to an analysis of WHO World Mental Health (WMH) surveys carried out by Kessler et al. (2017), traumas involving sexual violence are particularly severe in terms of PTSD risk. The burden of PTSD, calculated by combining the prevalence of multiple forms of trauma with specific PTSD risk and duration, totaled 77.7 person-years per 100 respondents. Notably, the trauma types most responsible for this burden include rape (13.1%) and other forms of sexual assault (15.1%). Intimate partner sexual violence alone accounted for nearly 42.7% of all person-years with PTSD. These forms of trauma carry a high risk of leading to PTSD compared to other types of traumas such as the unexpected death of a loved one, which is more common but associated with a lower PTSD risk (Kessler et al., 2017). Another WHO WMH analysis conducted by Liu et al. (2017) in the same year found that the highest risk of PTSD was seen in survivors of rape (19.0%), followed by

those who have experienced physical abuse by a romantic partner (11.7%), and other forms of sexual assault excluding rape (10.5%) (Liu et al., 2017).

All forms of trauma may affect future experiences, and when sexuality is involved, trauma may lead to heightened or diminished sensitivity to sexual stimuli, causing disruptions in neurobiological functions and alterations in or suppression of sexual energy (Malkemus & Smith, 2021). Having had their sense of self violated, repeatedly in many cases of sexual abuse, survivors of sexual abuse and assault often experience a profound loss of control over their bodies and lives (Mitchell & Morse, 1998). The impacts of sexual abuse extend deeply into the physical and mental health of survivors, manifesting in anxiety, depression, and confusion between sex and love (Forde & Duvvury, 2020). Establishing personal boundaries may be challenging (Mitchell & Morse, 1998), and survivors may struggle with negative body image and difficulties in interoception, impairing safety perceptions (Emmons et al., 2021).

Sexual traumas often result in shame and self-blame, as survivors may feel they somehow contributed to their victimization and view themselves as flawed and undesirable (Mitchell & Morse, 1998). Mitchell & Morse (1998) also identify how survivors commonly experience ongoing helplessness, loss, anger and rage, and the inability to trust themselves and others. Due to internalization (Mucci, 2019), survivors may fear losing control and harming others, frequently associating inner rage with their abusers, afraid they will become like their abusers if feelings are no longer repressed (Mitchell & Morse, 1998). In their study of clients at the Rape Crisis Centre in Ireland, Forde & Duvvury (2020) also found that survivors struggle with shame, as well as fear, grief, and anger, emotional states which resident psychotherapists confirmed as the most common responses. Many survivors struggle to acknowledge that abuse has taken

place, often denying and minimizing, resulting in anguish due to harboring dark secrets that feel impossible to share. Uncovering memories may be a slow process (Forde & Duvvury, 2020).

Yuhas (2020) highlights the dehumanizing nature of sexual assault and abuse, and how survivors may find it daunting to acknowledge their desires and emotions post-trauma. Survivors of complex sexual trauma often develop thought and behavior patterns that enable them to survive within damaging interpersonal relationships as abusers typically aim to erode the individual's identity, reducing them to exploitable objects. This may cause survivors to lose their sense of autonomy, identity, and value in relationships (Yuhas, 2020), and in sexual encounters post-trauma, it may be exceedingly difficult to navigate sexual desire and communicate choice (Jesse, 2017). In surviving sexual assault and abuse, survivors frequently resort to coping strategies like compartmentalizing or dissociating from their needs and desires, and numbing parts of their bodies to shield themselves from the pain of the abuse (Yuhas, 2020). Later sexual arousal and pleasure may trigger distressing emotions, prompting an urge to escape these sensations (Jesse, 2017) leading to dissociation and disembodiment.

Although sexual trauma is largely associated with manipulation and misuse of power, it may not always arise due to interpersonal violence. Malkemus & Smith (2021) define sexual trauma as any trauma that affects the sexual aspect of a person's life, and this does not strictly require assault or abuse. Choosing an intriguing biopsychosocial lens for consideration of the development of sexual trauma, Malkemus and Smith (2021) propose three primary forms for understanding its origin: devitalization, emotional wounding, and sexual conflicts. Devitalization is central to their discussion and is described as a marked decrease in vitality, with vitality defined as “enthusiasm, aliveness, and energy available for constructive and purposive action” (Malkemus & Smith, 2021, p. 10). They associate devitalization not only with sexual

dysfunction, depression, and general poor health but also with a heightened risk for physical and mental illnesses and an increase in negative emotional states. They explain that vitality is crucial for quality of life and identity formation, including sexual identity. As one might expect from the term, devitalization originates from a chronic lack of vitality within the developmental environment. An environment lacking consistent vitality may lead to a stagnation or dissociation from one's vital sexual energy, manifesting as somatic-energetic distress, anxiety, or depression. Such conditions might remain unrecognized in traditional mental health assessments due to their subtle and often unseen origins. Recognizing that sexuality extends beyond mere genital function and desire to include the broader experiences of sensuality and vitality, Malkemus and Smith (2021) advocate for a broader understanding of sexual trauma that accounts for the impacts of environmental devitalization (Malkemus & Smith, 2021).

The second form of sexual trauma Malkemus and Smith (2021) discuss is emotional wounding. Because sex involves physical closeness, early attachment patterns may be triggered. For those lacking sensitive emotional responses from primary caregivers in early life, sexual events may bring about pain, fear, and shame, resulting in perceptions of sexuality as unsafe. Consequently, such adults may struggle with such intimacy, and disconnect from the self or outright avoid sensual and sexual contact to evade intense and difficult emotions, posing a threat to psychological well-being. In such cases, sexual encounters may become merely physical, lacking emotional engagement as a protective mechanism against the vulnerabilities associated with intimacy (Malkemus & Smith, 2021). Both devitalization and emotional wounding do not necessarily result from any form of violent action.

In discussion of the sexual conflicts, the third causeway for development of sexual trauma as identified by Malkemus and Smith (2021), interpersonal violence and oppression like

those discussed earlier or sexuality-related sociocultural oppressions are generally involved. Sexual conflicts may be those most commonly addressed in sex therapy settings as causes can be more overtly identifiable than devitalization or emotional wounding. Painful experiences of sexual conflict often relate directly to one's sexuality and can lead to somatic suppression of sexual energy due to feelings of unsafety, lack of self-acceptance, and misunderstanding. Consequently, it is common for sex to be associated with fear, confusion, and shame (Malkemus & Smith, 2021).

The concepts of devitalization, emotional wounding, and sexual conflicts highlight the environmental, interpersonal, and situational influences that contribute to sexual trauma and the association of distress with sexual experiences. Just as sexual conflicts can result in dissociation during sensual and sexual engagement, so might devitalization and emotional wounding, and all three categories of sexual trauma may ultimately result in sexual disembodiment. Considering the profound impact of sexual trauma, the potential for healing and achieving a fuller sexual embodiment deserves focus (Malkemus & Smith, 2021).

In summary, sexual traumas are pervasive worldwide, transcending biopsychosocial dimensions and often leading to profound disruptions in individuals' lives. Post-traumatic stress disorder and CPTSD are a widely acknowledged consequence, particularly severe in cases of sexual violence, with rape and intimate partner sexual violence carrying high risks. Survivors commonly experience a loss of control over their bodies and their lives, along with anxiety, depression, and confusion regarding sex and love. Shame, self-blame, and ongoing helplessness are common responses, leading to challenges in establishing personal boundaries and negative body image. Survivors may develop coping mechanisms that further distance them from their desires and emotions, exacerbating dissociation and lack of embodiment. Sexual trauma may

arise from manipulation of power dynamics or other forms of emotional wounding and conflict, contributing to a sense of disembodiment and disconnection from one's sexuality. Understanding the various forms and impacts of sexual trauma underscores the importance of addressing its environmental, interpersonal, and situational influences to promote healing and assist survivors in achieving fuller sexual embodiment.

Embodiment

Embodiment is a multifaceted concept that encapsulates how one experiences existence in the world through their body. It constitutes a bidirectional relationship, one of mutual connection between subjective experiences, the body's sensations and reactions in response to those experiences, and the consequences that follow (Payne, 2019). Embodiment suggests that one's physicality, their corporality, is not just a vessel; it is integral to how one engages with and perceives their environment (Tolman et al., 2014). In daily experiences, rarely is consciousness explicitly focused on body ownership, yet there is a general awareness of existence "in" a corporeal form, that what is happening to the body is happening to "me" (Leibig, 2019). As Leibig (2019) terms it, one experiences body-mind coherency (p. 3). To acquire a consciously embodied state, however, in addition to present-moment physiological awareness requires intentionality, positive acknowledgement of one's body and what it conveys, and deliberate engagement with one's communities and one's world.

There is a prevalent belief in Western culture that the mind and body operate as separate entities (Payne & Brooks, 2018). However, contemporary understandings in various disciplines challenge this notion by recognizing that the embodied experience is crucial for learning, emotional healing, and relational connectivity (Payne & Brooks, 2018). Without a body, there can be no movement or interaction with environments, no speech or written word; no chemical

or electrical messages relayed to and through the brain to interpret sensations, lived experience, or consciousness. Without the body, there is no brain, no *mind*. All of this takes place through the specific location of the body (Tolman et al., 2014).

Internalization and dissociation are fundamental components of embodiment that shape experience (Tolman et al., 2014). These involve the construction and perception of the self in connection (or disconnection) with other individuals or within broader social environments (Tolman et al., 2014). In other words, one's sense of self, and sense of mind, and sense of body are influenced by biopsychosocial and cultural factors.

Biological Factors

Van der Kolk (2015) highlights how neuroscientific research acknowledges an emotional brain functioning as the center of neurological operations. This part of the brain, which operates independently of the rational forebrain (e.g. the watchtower (van der Kolk, 2015)), incorporates the instinctual reptilian brain with the limbic system. It manages innate responses to care, pleasure, and danger, deeply rooted in one's earliest relationships (van der Kolk, 2015). This emotionally driven brain region (e.g. the smoke detector (van der Kolk, 2015)), serves as a foundation for understanding the self and the world through the interpretation of experiences at a visceral level (Kearney, 2020). Neuroscience supports the philosophical and therapeutic perspective that self-awareness is anchored in the ability to feel and interpret bodily sensations (Kearney, 2020). This assertion upholds the idea that one's primary understanding of self stems from their embodied experience, which is far more than merely physical - it is an integrative process where the body is the receiver, translator, and actor of every aspect of human existence.

Psychological Factors

The psyche lives in the body in both a personal and communal sense (Kearney, 2020), and embodiment cannot be discussed without consideration of where the body is (C. Kinman, personal communication, Dec. 31, 2023). Not only does the body reveal and interact with its environment, the body – down to cognitive plastic behaviours – is also shaped by the world. Maclaren (2016) points to the hand of an infant, whose function is not inherent but is realized gradually as an instrument for tactile engagement; grasping and caressing, interacting with the world to develop its utility and function. This developmental process suggests that the body and all its functionality, including the brain *and the mind*, are not merely parts or behaviours that belong to the body's owner. The functioning body, the brain, and the mind are aspects of the whole, which may be referred to as “bodymind” (Barratt, 2013), a bodymind which is shaped by the external world one interacts with (Maclaren, 2016).

Philosopher Merleau-Ponty (1962) explored this concept in the sixties, asserting that when a body develops a new ability or part, it is not just about the mind taking control of a “tool” already present and available as such. Instead, the bodymind rearranges itself and creates a new system for how it operates through a self-organization which brings together the different functions of the body and allows it to communicate and differentiate between the body that feels and the object being felt. Importantly, the body does not go through this process on its own. It responds to ever-changing and ambiguous requests of those things in the world being sensed. When a new part of the bodymind is created, or “comes into being”, it is just as much about the outside world becoming a part of the sensing body as it is about the body living in the sensed world. Following this line of reasoning, Merleau-Ponty described the body as an active participant in its encounters with the world, as opposed to a mere receiver of sensory information waiting for the mind to interpret and respond. He asserts that the body inherently understands its

surroundings due to its intrinsic connection with the world resulting in "latent knowledge" (Merleau-Ponty, 1962, p. 238), an innate bodily wisdom which can surpass conscious awareness (Malkemus & Smith, 2021). Similarly, Young (1984, as cited in Tolman et al., 2014) proposed that bodies are not simply collectors of external inputs but are engaged in the direct experience of sensations and consciousness.

Social and Cultural Factors

Embodiment also pertains to how bodies are created and entwined within social and historical contexts, embodying the interactions with and influences from environments (Tolman et al., 2014). In the realms of psychology and social sciences, the concept of embodiment is twofold, involving both the experience of living in bodies and the simultaneous internalization of societal norms (Tolman et al., 2014). This perspective is aligned with social constructionist views and those expressed by Foucault (1978) in exploring how various aspects of self and society, including knowledge, power, and social norms, are shaped by historical and cultural contexts. The bodymind conforms to societal expectations and norms, and these pressures shape behaviors, feelings, and overall demeanor, influencing the very phenomenology of self and embodiment. Through this lens, societal and historical powers are seen as not only shaping individuals, but also being embodied within them, thereby influencing self-perception and one's interaction with the world (Foucault, 1978; Tolman et al., 2014). Merleau-Ponty (1962) articulated the foundational role of bodily coexistence in understanding intersubjectivity - the interconnected nature of relationships with others. Despite the inherent 'otherness' that may exist between individuals, there is a fundamental bodily communication that happens through shared actions, gestures, and language, reflecting a joint orientation toward the world (Maclaren, 2016).

Leibig (2019) emphasizes embodiment as a dynamic process that involves continuous adaptation and adjustment with the world while still retaining the individual's identity (Liebig, 2019), a natural process of plasticity - shaping through experience, creating individuals shaped by their past. Plasticity enables positive transformations that are developmental and adaptable. However, in the face of trauma, Leibig looks to Malabou (2012) in discussing how the bodymind must learn and comprehend its own embodiment anew. Efforts and subsequent changes may be temporary, occurring over time, or transformative. Through trauma the process of reshaping can be severely impacted, leading to a loss of coherence in sense of self and one's relationship with the world (Liebig, 2019). Malabou (2012) attributes this phenomenon to "destructive plasticity", a drastic transformation of self that interrupts the generative process of selfness and one's ability to maintain equilibrium. Destructive plasticity during trauma alludes to the collapse state, where the only option left to the organism is dissociation from self, an othering of self in seeking to avoid the destructive experience taking place (Patrick-Weber, 2016). This results in a "new" self coming into existence through the eradication of the initial self (Patrick-Weber, 2016). Malabou's concept challenges the idea that neuroplasticity is universally advantageous, shedding light on the possibility of adverse consequences when the brain's adaptive abilities are disturbed by trauma, underscoring the complex and relatively unpredictable dynamics of brain function and adaptation (Leibig, 2019).

In and after traumatic experiences, individuals may feel a strong urge to flee from their circumstances or their own bodies, leading to a deep sense of disconnection and disorientation (Liebig, 2019). During and after traumatic events one may feel as though they have lost their sense of self; however, Malabou contends that the core identity is not destroyed. She asserts that a basic sense of self remains. This "core" self is constituted of the individual's desires, actions,

thoughts, and memories, and once the individual begins to process what happened, they may begin the process of piecing their sense of self and their sense of embodiment together again (Malabou, 2012; Leibig, 2019).

In sum, the theoretical concept of a unified bodymind is important and has direct implications for therapeutic practice. However, in the realm of lived experience, the relationship between self, mind, and body is actively constructed rather than inherently predetermined (Malkemus & Smith, 2021). Consequently, embodiment does not denote a fixed state of experience that one achieves and maintains indefinitely (Leibig, 2019). Instead, given the dynamic interplay of relationships shaping each moment, embodiment is better conceptualized as a fluid quality of awareness dependent on a multitude of contextual layers (Malkemus & Smith, 2021). To be embodied implies a subjective acknowledgment of sensations and emotions, mirroring one's corporeal existence, the fact that they inhabit and *are* physical bodies (Tolman et al., 2014). Lived embodiment is an awareness that encompasses the bodily experiences as they are perceived and felt in everyday life, and how these are determined by and determining of movement through the world (Tolman et al., 2014). Overall, embodiment is a complex phenomenon that shapes how individuals perceive themselves and interact with the world, influenced by a host of factors, and can undergo both positive and negative transformations over time (Liebig, 2019).

Unembodied States

Unembodied states may be helpful or dysfunctional. Take, for example, the functional disruption of bodymind experienced in states of freeze and collapse. In these states, the organism, in this case the human organism, is spared the moment-by-moment terror and physicality of what is happening to them. This is a highly functional process that one might even

choose to view as a kindness-to-self in horrific circumstances. However, dissociation and disembodiment may become problematic and impede enjoyment in the experience of living when these survival strategies become maintained coping mechanisms.

Dissociation and disembodiment are related concepts (Malkemus & Smith, 2021), and depending on the source explored, they may be two words for the same phenomenon viewed through different therapeutic lenses. Here I choose to differentiate the two concepts due to subtle differences, looking at disembodiment as specifically somatic based chronic dissociation.

Dissociation

Dissociation can be generalized as fragmentation and a splitting-off of consciousness from the self and bodymind (Malkemus & Smith, 2021; Barratt, 2013), involving a separation or disconnection in aspects of one's experience, such as one's thoughts, emotions, or sensations (Scaer, 2001) or in disconnection from one's entire self (Malabou, 2012). Scaer (2001) refers to Janet and Freud in discussing the history of dissociation in psychology and medicine, stating that Janet believed it to be intense fear and avoidance of memories of trauma which manifested as inappropriate, exaggerated physical reactions in the face of internal or external reminders (Janet, 1920; Scaer, 2001). Following his exposure to Janet's ideas, Freud incorporated them into his own understanding of dissociation, viewing it as a fragmentation of consciousness accompanied by somatic symptoms and expressions (Scaer, 2001). Initially, Freud associated these symptoms in his "hysterical" patients with a history of childhood sexual abuse (Freud, 1896/1962). However, he revised this theory in 1925 due, in part, to societal pressures and his own reluctance to acknowledge the pervasiveness of incest and other sexual abuse of children in the upper classes (Mucci, 2008). Freud decided that accounts of childhood sexual abuse from female patients were products of imagination, not actual events that had taken place (Scaer, 2001).

Modern understanding of dissociation sees it as a reflexive shock reaction (Sollmann, 2023). A complex psychological process often observed during and in the aftermath of trauma, serving as a critical involuntary coping strategy like a psychophysiological shield (Yuhas, 2020). Trauma models of dissociation suggest that dissociative responses, including detachment from one's body, can act as coping mechanisms during overwhelming and threatening situations when escape (fight/flight) is not possible (Loeffler et al., 2022), suggestive of freeze/collapse states. Manifesting as detachment from the traumatic experience, it allows the individual to endure intense pain and distress by numbing emotional and physical responses, effectively separating consciousness from sense of self and from bodily experiences (Yuhas, 2020). This mechanism, as described by the American Psychiatric Association (2013, p. 291), involves a disruption in the typically integrated functions of consciousness, memory, identity, or perception.

When an individual experiences trauma, psychoneurosis may occur, with trauma stored in the body expressed as somatic symptoms and implicit memory, resulting in grief, shame, anger, and intense fear (Forde & Duvvury, 2020). Clinical manifestations may include changes in behaviours with derealization and depersonalization, and distorted perceptions of time, space, reality, sense of self, and sense of the body ownership (Scaer, 2001).

Symptoms are wide and varied, and potential alterations in function include:

- panic;
- numbness;
- anesthesia;
- acute pain;
- weakness;
- paralysis;

- convulsions
- confusion;
- severe attentional deficits;
- hypermnesia or amnesia;
- abnormal or distorted memories often triggered by exposure to cues evocative of past traumas (Scaer, 2001).

The lasting impacts of dissociation may extend beyond the traumatic event, as survivors often continue dissociative behaviors, no longer identifying with their emotions, or identifying with their bodies, or recognizing their body's value (Yuhas, 2020). When dissociation influences the *ongoing* relationship of the survivor with their self-concept, or their internal or external world, disembodiment ensues (Yuhas, 2020). Despite protective intent, serving as an escape during and after traumatic events, dissociative responses cannot be controlled and may result in long-term dysfunction that can negatively affect well-being (Sollmann, 2023). In protecting one from pain and horror, dissociation also denies the individual the sensation of embodiment (Kearney, 2020). Thus, post-threat, an embodied state may become threatening for traumatized individuals. Conditioning and adaptation may lead the individual to compartmentalize their body and perceive it as separate from one's "true" self (Malkemus & Smith, 2021; Malabou, 2012). While protecting the individual from physical and emotional pain, this leads to long-term feelings of alienation, estrangement, and unsafety within one's body and profound disconnection from physical sensations (Kearney, 2020; Malkemus & Smith, 2021; Sollmann, 2023).

As previously implied, dissociation and disembodiment may be the same phenomenon differentiated by the period of time one remains within a state of fractured bodymind. Within the literature some sources differentiate the two states, while others appear to use the terms

interchangeably. This may be due, in part, to the challenges of classification because symptoms can manifest in diverse and numerous ways (Scaer, 2001), as well as the personalities, opinions, educational backgrounds, and lens(es) through which writers discuss these topic(s). In my understanding of the literature review, a long-term dissociative state appears to equate to disembodiment.

Disembodiment

Disembodiment, as suggested by the term, is the antithesis of embodiment. In various societal domains, the body has been disavowed throughout history. This is not a new phenomenon, and its origins are rooted in a multitude of factors (Young, 2006a), the extent of which are beyond the scope of this paper. According to Wilhelm Reich, whom many body psychotherapists view as the founder of somatic psychotherapies, this fundamental rejection stems from a deep-seated fear of uninhibited sensual expression and movement (Young, 2006a). Payne (2019) highlights how for many cultures cognition and language are given preference and validated over non-verbal forms of wisdom, knowledge, and being. As such, slipping into disconnection from bodily intelligence and limiting the full experience of living is easily done. She asserts that relying solely on verbal expression to communicate life challenges may hinder one's capacity to be truly present and thus to recover as tuning into bodily sensations can enhance present-moment awareness and reach beyond cognitive and conceptual boundaries.

Tolman et al. (2014) assert that within psychology, disembodiment is conceptualized as a consequence of dissociation, via the psyche's reaction to trauma. They define it as a continuous state of detachment from sensory and cognitive awareness resulting in disengagement from bodily sensations (Tolman et al., 2014). Embodiment is a cornerstone of identity and self-awareness and informs the ability to act and exert control over one's body, which is integrated

into the overall sense of self (Leibig, 2019; Tolman et al., 2014). An embodied state is typically regarded as a psychologically “healthy” (Tolman et al., 2014, p. 765) default state of connection with one's body, oneself, in relation to others, community, and the environment. However, due to trauma, this connection can be severed, resulting in dissociation and disembodiment, and disruptions in self and agency (Leibig, 2019).

Utilizing a framework of psychospiritual healing and transformation, Malkemus and Smith (2021) assert that embodiment requires intentionally nurturing a more integrated way of existing in the world. In this perspective, embodiment arises from a cultivated relationship between the mind and body. Disembodiment implies a less coherent and underdeveloped connection, an immature, disjointed relationship between body and mind where somatic existence is disavowed. Disembodiment can thus be characterized by a patchy or broken communication between conscious awareness and the emotional, instinctual, and kinesthetic dimensions of bodily experience (Malkemus & Smith, 2021).

The disconnection experienced by the unembodied self results in a severing or estrangement from one's physical body (Young, 2006a). Trauma, as noted by Mucci (2019), has the capacity to result in the erasure of the internal recipient of communication. In other words, trauma might disrupt one's ability to effectively communicate with oneself or internally process information. Consequently, one may perceive their body more as an external object within their surroundings rather than an integral aspect of self (Young, 2006b). Laing (1960) states that the body comes to be viewed as the locus of a "false self," observed from a detached, disembodied "inner" or "true" self (p. 69), a self which may regard the body with various emotions ranging from affection to disdain and hatred, depending on the circumstances (Young, 2006a). This trauma-induced fracturing and objectification indicates the destruction of a cohesive, positive

internal entity (Mucci, 2019) and a crucial tool for navigating current reality post-trauma(s) (Yuhas, 2020). When a trauma survivor becomes disembodied and detached from their sense of self, an important tool and conduit for comprehending the surrounding environment in the present moment is lost (Leibig, 2019). This implies that in a disembodied state, while one is not subject to the pain of trauma, one is also unable to know and embrace the wondrous and joyful aspects of lived experience that result in a good life.

Retraumatization

Most counselling and psychological therapies are referred to as “talk therapies” for a reason - interventions have traditionally been heavily focused on verbal strategies for healing, and these talk therapies have proven extremely beneficial for many individuals in various states of distress. The forms of psychotherapeutic intervention popularized in the early days of private psychology *à la* Freud and his contemporaries, and those that have been solidified in the public understanding of what psychotherapy *is*, are largely based on verbal communication strategies for overcoming dysfunction. However, modern trauma theory and some somatic modalities assert that there are other, potentially safer, ways to work through adverse experiences in therapeutic settings. Levine (2010) asserts that confronting issues head on through detailed verbal accounts is unnecessary in many cases and, in the case of trauma, may even be harmful due to retraumatization. Having survived traumatic experiences some individuals may be empowered in recounting their stories and gaining validation from empathetic listeners. However, this is not the rule and may actually be the exception.

When attempting to process adverse experiences or traumas Sunseri (2022) suggests that some clients may not be ready or equipped with a sense of safety and self-regulation skills strong enough to communicate highly distressing experiences in a manner to facilitate healing. When

clients are unready to discuss adverse and traumatic experiences outright, the retelling of events may be harmful, thus psychoeducation on potential risks and benefits of recounting traumatic events, followed by clients choosing whether or not to tell their stories, is advisable. If a client is pushed or pushes themselves to share their stories there is a risk of experiential retraumatization (Sunseri, 2022).

According to many trauma specialists, this type of sharing is unnecessary (Levine, 2010), and clients may end up triggered, mentally and physiologically back in the traumatic event itself (Sunseri, 2022). Generally, retraumatization refers to traumatic stress reactions developed through multiple exposures to experiences perceived as traumatic (Carello, 2018).

Retraumatization also applies to triggering. Triggers are stimuli that recall earlier traumatic events causing a reactivation of traumatic stress reactions such as emotional dysregulation, anxiety, or other symptomatology. Triggering stimuli may arise in the form of sights, sounds, smells, internal or external sensations, and experiences or relationship dynamics perceived as similar to those surrounding the initial trauma (Carello, 2018). Consciously recalling memories of traumatic events, as in the case of discussing them with a counsellor, may also retraumatize (Forde & Duvvury, 2020).

If triggered in sharing traumatic events in counselling, the client may now be in a defensive state of fight/flight or freeze (Yuhas, 2020), and may be shutting down (collapse). At this point the client's stress levels have exceeded their window of tolerance, and their "smoke detector" (van der Kolk, 2015) has taken over, overwhelming their rational brain (Sunseri, 2022). Cognitive processing abilities have been taken offline in favour of survival mode and therapeutic interventions are pointless until the client has re-regulated. Unfortunately, this phenomenon will also end up reinforcing the "stuckness" of their cycling autonomic nervous system (Sunseri,

2022). This can further entrench patterns of traumatic stress responses that may have brought them into therapy in the first place (Levine, 2010). For this reason, many trauma care practitioners assert that recounting trauma narratives is not a necessity for healing, instead choosing to co-facilitate client engagement with bodily sensations to unstick freeze-energy remaining in the body post-trauma (Levin, 2010).

Some schools of thought do believe that verbally recounting details of highly distressing and traumatic events is important for recovery, and Forde and Duvvury (2020) address that providing space for survivors to reclaim their silenced voices with a person-centered therapist as witness can be an important part of recovery. While honouring this belief, the cognitive and physiological cost of retelling trauma should not be discounted. In narrating past emotionally traumatic events the limbic system, right amygdala, anterior cingulate cortex, anterior insula, and the anterior and medial temporal cortex become activated (Giotakos, 2020), and all are key brain regions highlighted in the trauma literature. The limbic system is central to the experience and expression of fear and trauma, and is heavily involved in emotion and emotional association with memory (Torrice & Abdijadid, 2023; Wright, 2020a). The amygdala is critical for the formation of emotional memories, especially fear-related memories, and is responsible for triggering survival responses (Wright, 2020a). The anterior cingulate cortex plays a role in cognitive functioning and many autonomic functions such as regulating blood pressure and heart rate (Li et al., 2022). The anterior insula is employed in recording physical impacts of negative emotions and is thought to integrate somatic and emotional information to create the subjective experience of emotion (Giotakos, 2020). The anterior and medial temporal cortex are both implicated in processing emotions and forming new memories (Giotakos, 2020). This pattern of activation may well be a blueprint of retraumatization, and the reason why many modalities and

experienced psychotherapists believe memory work is not required for trauma-integration, instead opting to focus on the present while the story of client's traumas unfolds through emotions and other bodily sensations (Forde & Duvvury, 2020).

Disembodiment, or dissociation as disconnection from the body due to trauma, is treated in psychotherapeutic talk therapies in various ways. However, as there may be a tendency toward separation of bodymind, may it not be more effective and practical to work directly with the body in healing? Trauma work is delicate work (Ben-Avraham, personal communication, multiple dates), and survivors may not be in a place to access their bodies due to intense feelings of unsafety, thus talk therapy and working cognitively to build a trusting and safe therapeutic environment may be called for. However, if or when a client feels capable of accessing stored trauma and "unsticking" physioneurotic elements, working directly with the body may be transformative.

Trauma Therapy

Within the psychotherapeutic field generally, aspects of body are increasingly being incorporated into both theoretical frameworks and treatment approaches (McGreevy & Boland, 2022; Yuhua, 2020). Young (2006a) cites EMDR and Buddhist mindfulness practices within cognitive behavioral therapy; the biopsychosocial model's inclusion into clinical psychology; and somatic countertransference within psychoanalysis as examples. Mindfulness practices, such as grounding, are commonly utilized by counselors to help clients connect with the present moment (Ong, 2020). Yuhua (2020) highlights how trauma therapists are acknowledging that trauma is a physical experience requiring body-based interventions while also lamenting how treatment within the field in general still relies on mind-management strategies. In 2006, Young declared that despite neuroscientific advancement and subsequent findings along with shifts in

some treatment approaches toward more body-inclusive practices, mind-body dualism remained the status quo (Young, 2006a). Based on the research I consumed in preparation for this work, it appears that the ideology of bodymind remains a countercultural one within the field, albeit potentially less so than at the time of Young's (2006a) writing.

Traditional trauma treatment approaches, which often prioritize cognitive interventions, may be insufficient until individuals achieve a sufficient level of body awareness and self-regulatory skill (Emerson & Hopper, 2011; Scaer, 2005). Utilizing solely cognitively oriented methods might have limited effectiveness in addressing the complexities of trauma. In reviewing early post-traumatic interventions, Guay et al. (2019) found that while cognitive approaches like cognitive behavioural therapies (CBT) may show modest effects, results were inconsistent, and fall short in addressing the physiological aspects of trauma. Similarly, EMDR, while effective in reducing immediate fear and anxiety, may overlook long-term emotional complexities such as guilt, shame, and issues with trust (Forde & Duvvury, 2021). However, recent advancements in neuroscience, particularly the work of researchers like neuroscientist and psychologist Stephen Porges, who founded polyvagal theory (2011), have provided profound insights into trauma and underscore the significance of physiological aspects of trauma. Researchers such as Porges and van der Kolk, who gained scientific traction for the idea that trauma memories are not stored solely in the mind but are also deeply embedded in the body's physiology (van der Kolk, 2014) have made significant impact in trauma work. By revealing trauma as a multifaceted condition where physiological, emotional, psychological, and social aspects of an individual are intricately intertwined, the importance of the influence that bodily sensations exert over psychological states is emphasized (Scaer, 2005).

A crucial aspect of the recovery process for overcoming trauma involves developing a heightened awareness of one's physical sensations (Scaer, 2005; van der Kolk, 2014). As such, there is growing recognition among counselors of the necessity for incorporating body-oriented approaches into trauma therapy (Ong, 2020). Understanding the intertwined nature of bodily sensations and psychological states may be a necessity for counselors to provide comprehensive and effective support to individuals navigating complex trauma experiences. Healing from trauma involves both physical and psychological aspects, with the body serving as a less threatening means of expressing traumatic experiences when words fail, according to Yuhas (2020). Traumatic memories can trigger intense feelings and physiological responses, activating fight-or-flight and dysregulating the autonomic nervous system, and non-verbal interventions, such as regulating breath and heart rate, can help manage arousal and initiate the healing process by activating the parasympathetic nervous system (Yuhas, 2020; van der Kolk, 2014). By employing non-verbal evaluations and interventions, the body can "become the voice" (Yuhas, 2020, p. 13) for expressions of trauma, providing therapists an opportunity to connect with the client and begin the work of "unsticking" (Sunseri, 2022) without imposing unattainable demands on the survivor (Yuhas, 2020).

On the other hand, many trauma survivors, particularly those suffering due to interpersonal trauma, may find being in their bodies too painful to attempt, requiring a slow therapeutic pace in acknowledgment of the delicacy of trauma work and its healing (Ben-Avraham, personal communication, multiple dates; Forde & Duvvury, 2020; Yuhas, 2020). Prior to engaging with the body and redeveloping the bodymind, more traditional talk therapy approaches in conjunction with trauma-informed practices; counselling microskills; normalization; radical validation (Ben-Avraham, personal communication, multiple dates); and

psychoeducation on physioneurosis and somatic practices are most likely necessary to build a strong, trust-filled therapeutic alliance prior to engaging in somatic-based trauma work (Ben-Avraham, personal communication, multiple dates).

Healing from trauma involves a multifaceted approach encompassing somatic transformation and the reconnection of mind and body (Kearney, 2020). Trauma therapy focuses on integrating traumatic memories with emotions to create a cohesive narrative, facilitating awareness of bodily sensations and their significance in the present moment (Forde & Duvvury, 2020). Techniques like touch, breath, and movement aim to harmonize the rational and emotional brains, addressing traumatic stress disorders symptoms and promoting a sense of re-anchoring in the present (Kearney, 2020). Successful recovery also entails reintegration within oneself and connection to others, with community support playing a crucial role (Rosenthal, 2021; Ong Gaffney et al., 2023). This process involves self-awareness and meaning-making to address fragmented aspects of the self that result from trauma (Rosenthal, 2021). While traditional cognitive techniques like exposure treatment target symptom reduction, contemporary trauma therapy emphasizes somatic approaches to address the physiological and emotional dimensions of trauma (Forde & Duvvury, 2021). Therapists can play a crucial role in guiding survivors to recognize and articulate their bodily sensations, helping them understand the significance of these sensations in the current moment (Forde & Duvvury, 2020). The goal of this process is to empower individuals to develop body awareness, allowing them to assess, regulate, and mitigate traumatic hyperarousal, while also distinguishing between past and present experiences (Forde & Duvvury, 2020).

Somatosensory functioning is increasingly being recognized as essential in treating traumatic stress disorders and associated symptoms (McGreevy & Boland, 2022). Integrative

frameworks which emphasize a body-mind approach, such as somatic experiencing (Levine, 2010) and somatic trauma therapy (Rothschild, 2000), focus on releasing stuck emotions and traumatic energy, which in turn affects cognition and behavior (Forde & Duvvury, 2021). Despite advancements, challenges persist in addressing the multilayered impact of trauma, emphasizing the ongoing need for somatically-oriented approaches and adjuncts in trauma therapy.

Somatic Approaches and Adjuncts

Detailed descriptions of the multitude of somatic approaches to trauma work are beyond the scope of this paper, however, brief descriptions of a few more common approaches, or those interesting to this writer, are outlined below.

Emotional Freedom Technique

In their review of touch-based interventions for PTSD, McGreevy & Boland (2022) specifically highlighted the efficacy of the emotional freedom technique, a psychophysiological intervention developed in the early 1990s. Combining elements of cognitive-behavioral exposure therapy with touch-based stimulation of specific acupressure points, tactile stimulation administered by rhythmically “tapping” these points is applied by a therapist or self-administered. McGreevy & Boland's review included seventeen emotional freedom technique studies showing effectiveness in reducing PTSD symptoms without adverse effects.

The theoretical basis of emotional freedom technique's efficacy, as proposed by Feinstein (2010), suggests that tapping on these acupoints sends deactivating signals to the amygdala, potentially diminishing fear responses and explaining its therapeutic impact. While exploratory data support the connection between acupoints and energy channels, most research focuses on clinical outcomes rather than underlying mechanisms (McGreevy & Boland, 2022), and many

researchers attribute any positive outcomes of the emotional freedom technique to placebo and pseudoscience (R. Schmaltz, personal communication, 2021).

Drawing on the evolutionary and developmental role of C-tactile fibers, associated with social touch systems in mammals, McGreevy and Boland (2022) suggest that therapeutic use of touch may mimic early mammalian caregiving strategies, where touch in the form of grooming functions as a reconciliatory behaviour after conflict and promotes feelings of safety, security, and group cohesion (McIntyre et al., 2022). McIntyre et al. (2022) posit that adult humans may still be influenced by this evolutionary and developmental history, and neural infrastructure might govern how touch is used and interpreted.

Additionally, through the c-tactile system in unhaired skin, touch, especially affective touch, signals are passed to brain regions implicated in social reward and interoception (Müller-Oerlinghausen & Eggert, 2021). In addition to reward value, touch has been shown to aid in emotional regulation, triggering the release of natural opioids such as oxytocin, enabling the body to mitigate the adverse effects of the sympathetic response (Moller-Roth, 2021). Touch is capable of supporting individuals in:

- managing fear responses and emotional regulation;
- lowering cortisol;
- positively influencing digestion and immunity function;
- lowering heart rate and pressure;
- balancing respiration;
- hormonal balance;
- balancing parasympathetic response, especially in times of distress, perceived threat, or illness (Kearney, 2020; McGreevy & Boland, 2022; Moller-Roth, 2021).

McGreevy & Boland (2022) suggest that touch-based interventions such as the emotional freedom technique offer promising avenues for individuals living with traumatic stress disorders to re-establish a sense of safety and manage fear. They emphasize the importance of touch proximity within the therapeutic relationship, as the presence of a skilled practitioner delivering touch-based treatment significantly influences outcomes.

The Body Mind Approach

Payne and Brooks (2018) describe the bodymind approach (TBMA) as a treatment methodology that highlights the importance of targeting bodily experiences of medically unexplained symptoms (MUS) to affect emotions, behavior, and symptom management. Underpinned by phenomenology and neuroscientific research, TBMA is rooted in the understanding of the inseparable connection between mind, body, action, and perception. It recognizes that psychological experiences are shaped and expressed through bodily sensations and movements. TBMA explores the experience of MUS by addressing both conscious and unconscious processes, integrating sensation, perception, emotion, and cognition. It emphasizes the role of non-verbal communication and movement in meaning-making, acknowledges the reality of participants' symptoms, and honors their lived bodily experiences to promote meaning-making processes and recovery. This practice acknowledges the embodied nature of identity formation and understanding, and employs a bottom-up approach prioritizing bodily sensations and movements over cognitive processes to foster well-being, hope, and empowerment (Payne & Brooks, 2018).

Various embodied practices are carried out within facilitated groups, which, according to Payne and Brooks (2018), facilitates important relational dynamics and mutual learning. Through activities like mindful expressive movement and dialoguing with symptoms through

drawing and speaking, participants gain insight into the nature and purpose of their symptoms, fostering emotional self-regulation and facilitating conscious decision-making about symptom management. TBMA reframes symptoms as allies and early warning signs rather than adversaries, helping participants control distress and rebalance when symptoms arise.

Understanding symptoms consciously allows individuals to recognize when they are out of balance and take proactive steps towards self-care. Instead of seeking a cure, TBMA focuses on living well with symptoms, utilizing participants' unconscious and conscious body concerns to prompt curiosity and explore the roots of their experiences (Payne & Brooks, 2018).

Yoga Therapy

Yoga is an approximately 3000-year-old holistic mind–body–spirit practice originating in India which focuses on physical postures in union with breath and spiritual energy (English et al., 2022, p. 1). Yoga as a trauma intervention is referred to in the literature by multiple names including trauma-sensitive yoga (English et al., 2022; Ong, 2020), trauma-informed yoga (Ong Gaffney et al., 2023) and yoga therapy (Emmons et al., 2022). Hereafter, all yogic practices for the purpose of trauma therapy will be referred to as “yoga therapy” for simplicity.

Yoga therapy, a body-oriented practice, offers a mind-body intervention empirically supported in its ability to positively impact physical well-being for individuals with a trauma history (Ong Gaffney et al., 2023). Yoga therapy aims to aid trauma survivors in recovery through fostering self-awareness, self-regulation, a compassionate relationship with the body and the self, and reconnecting body and mind, ultimately reducing trauma symptoms and enhancing internal body awareness (Emmons et al., 2021; Ong, 2020). Unlike traditional yoga, yoga therapy does not focus on spirituality or physical attributes like strength and flexibility, but rather emphasizes client autonomy and choice in bodily actions and uses invitational language without

prescribing specific movements or breath patterns (Emmons et al., 2021). This comprehensive approach to healing addresses the holistic needs of trauma survivors, offering benefits that traditional psychotherapy may not fully provide, as supported by established evidence in the literature (English et al., 2022).

Yoga therapy emerges as a promising intervention for survivors of trauma, offering a multifaceted approach to symptom relief and psychological well-being. The practice facilitates a reconnection between mind and body, activating brain regions associated with trust, control, pleasure, and engagement, which are often challenging for individuals with trauma, especially survivors of complex trauma (Emmons et al., 2021). Studies indicate that yoga therapy positively impacts:

- sleep quality;
- relaxation;
- attentiveness;
- emotional regulation;
- and fosters a shift from self-inflicted harm to self-care and bodily respect (Woodyard, 2011; Emmons et al., 2021).

In empirical studies, participants have reported increased self-compassion, improved coping skills, and enhanced mind-body relationships, attributing these benefits to the safe environment and sense of community fostered in trauma-informed yoga classes (English et al., 2022; LaChiusa, 2016). Moreover, yoga therapy demonstrates significant clinical efficacy, with studies showing substantial reductions in PTSD symptoms and dissociative experiences, in some cases outperforming conventional treatments (van der Kolk et al., 2014; Emmons et al., 2021). For example, a 2014 study conducted by van der Kolk et al. reported their yoga therapy

intervention group had significantly fewer symptoms, and positive gains were also longer lasting, than controls in a conventional trauma support group.

Central to the effectiveness of yoga therapy is its emphasis on interoception, mindfulness, and invitational language, providing trauma survivors with tools to regulate bodily responses and increase present-moment awareness (Emmons et al., 2021). By focusing on bodily sensations rather than trauma-related thoughts, yoga therapy helps individuals reclaim agency over their bodies and emotions, facilitating healing from interpersonal trauma (Emmons et al., 2021). However, the practice can also trigger dissociation or hyperarousal in some clients, highlighting the importance of careful guidance and techniques such as focusing attention on one's hands to reorient individuals to the present moment and manage nervous system arousal levels effectively (Emmons et al., 2021).

The therapeutic benefits of yoga extend beyond individual symptom relief, as it has also been shown to foster a sense of community and belonging among trauma survivors (Ong Gaffney et al., 2023). Group-based yoga therapy offers a supportive environment where individuals may feel understood, accepted, and connected, promoting emotional healing, and reducing feelings of isolation (Ong Gaffney et al., 2023). Meta-categories such as stabilization, inner attunement, equanimity, and community highlight the diverse pathways through which yoga therapy facilitates trauma recovery, underscoring its potential as a therapeutic adjunct and holistic intervention for individuals affected by trauma (Ong Gaffney et al., 2023; Emmons et al., 2021).

Dance Movement Therapy

Dance movement therapy (DMT) is a dynamic therapeutic approach informed by embodied (often non-verbal) communication through contact improvisation, facilitating the co-

creation of therapeutic alliances through movement between therapist and client, or in group settings (Payne, 2019; Yuhas, 2020). It utilizes movement and dance to foster integration across emotional, social, cognitive, and physical domains, recognizing the interconnectedness of the body and mind as a powerful mechanism for healing (Yuhas, 2020). As a pathway for the gradual establishment of safety, trust, and connection in relationships through guided movement exercises emphasizing consent, negotiation, and attunement, DMT is particularly beneficial for individuals grappling with interpersonal trauma (Yuhas, 2020).

Dance movement therapy incorporates contact improvisation techniques, offering a multifaceted approach to addressing interpersonal trauma by facilitating a reconnection with the body and fostering authentic interpersonal connections (Yuhas, 2020). Through practices such as weight-sharing, nonverbal communication, and improvisation, DMT offers a structured yet flexible framework for exploring relational dynamics, rebuilding trust, and promoting empowerment in a safe therapeutic environment (Yuhas, 2020). By guiding clients through sensory experiences and somatic awareness exercises, therapists help survivors to gradually:

- re-engage with their bodies;
- reclaim a sense of body agency;
- express themselves authentically;
- and navigate boundaries (Yuhas, 2020).

Ultimately, this process is designed to foster resilience, self-awareness, and capacities for healthy relationships (Yuhas, 2020; Payne, 2019).

For survivors of trauma, the journey of reconnecting with their bodies is often fraught with challenges, as numbing and dissociation serve as protective mechanisms against past abuse (Yuhas, 2020). Dance movement therapy provides a structured framework for progressively

reintroducing sensory experiences and increasing attunement to internal feelings and impulses, facilitating the reintegration of body awareness into one's identity post-trauma (Yuhas, 2020). Through guided movement exercises and heightened awareness of breath, posture, and tension in the body, survivors can release stored emotions and engage in self-expression, leading to a sense of freedom from the traumatic experience (Yuhas, 2020).

By incorporating somatic approaches like DMT into trauma-informed therapy practices, counselors can address the complex interplay of mind, body, and relational dynamics inherent in the aftermath of interpersonal trauma (Yuhas, 2020). Furthermore, counselors can play a crucial role in supporting clients through this process by helping them tune into their somatic experiences, encouraging clients to interpret meaning, and transform internal narratives (Payne, 2019).

Through guided exploration of body sensations, breath, and movement, survivors can tap into their innate resilience and gain deeper understanding of mind-body connection while also uncovering insights, new perspectives, and creative solutions that may have been previously inaccessible through traditional talk therapy alone (Payne, 2019; Yuhas, 2020). This holistic approach addresses the immediate symptoms of trauma while also fostering long-term healing and empowerment (Yuhas, 2020). It offers a creative and embodied pathway for survivors to reclaim agency, rebuild trust, and cultivate a deeper connection with themselves and others in their healing journey, empowering survivors to reclaim ownership of their bodies and narratives in the aftermath of interpersonal trauma (Payne, 2019; Yuhas, 2020).

Tension Release Exercises (TRE)

Sollmann (2023) begins his fascinating discussion of tension release exercise (TRE) by affirming that a therapeutic approach grounded in the body may be a necessity in the treatment of

trauma and traumatic stress disorders. As the body retains traumatic memory independent of conscious awareness, holistic integration of bodily and cognitive processes might be needed to access stored trauma and heal profound transformations in bodymind beyond the reach of language-based treatments (Sollmann, 2023).

TRE is, Sollmann (2023) asserts, a powerful method for accessing and releasing trauma stored in body-memory, thus facilitating healing when verbal therapies are not enough. The means of accessing psychoneurotic stuck energy, or stored trauma, in TRE occurs through engaging the musculus psoas major, a muscle situated at the inner core of the body with far-reaching implications for overall health. This muscle, the psoas for short, is responsible for skeletal balance, joint mobility, circulation, organ function, and diaphragmatic breathing, and it responds to spinal movements and is of central import in effective bodily functioning (Sollmann, 2023, p. 4). Both acute and chronic trauma directly impact the suppleness and mobility of the psoas (Sollmann, 2023).

Sollmann (2023) explains how stress responses of fight-or-flight and freeze-or-collapse are instinctual reflexes shared by all animals that briefly override conscious action. In humans, when threat is signaled the psoas responds by preparing for and enabling fight or flight. If this is not possible, it responds by pulling the body inward protectively, resulting in a full or partial fetal position, and large sums of energetic potential (for fight-or-flight) remain in the muscle undischarged. Prolonged and cumulative stresses in tandem with the release of endogenous substances result in chemical changes in the body and chronic tension in the psoas, the condition of which indicates an individual's ongoing, personal sense of safety and security (Sollman, 2023).

TRE is a sequence of six to ten light physical manipulations designed to engage the psoas and initiate tremors to release the chronic, undischarged fight-or-flight responses that have been stuck in the body potentially for many years, or even a lifetime (Sollmann, 2023). Sollmann refers to Levine and Frederick's (1997) work around neurogenic tremors as an adaptive mechanism to restore homeostasis within the ANS post-threat. Beginning in the sympathetic nervous system, these tremors are hypothesized to restore parasympathetic function and soothe the organism (human or otherwise) once the stressing event has passed (Levine & Frederick, 1997). Sollmann (2023) describes how through the TRE approach, trembling tends to begin in the thighs and pelvic region, gradually radiating outward to the shoulders, arms, calves, and feet while simultaneously realigning the body. This trembling, while uncontrolled, is not uncontrollable, and in applying will to do so one can cease the tremors at any time. According to Sollmann (2023) the true challenge in the TRE approach is to allow the body to do what it must to release stored trauma. Without willed intervention, he maintains that trembling and movements should abate within approximately fifteen minutes or less (Sollmann, 2023).

The TRE approach, in conjunction with breathwork, has demonstrated enhanced emotional and mental well-being and reduced bodily tension as evidenced by psychophysiological assessment (Davis et al., 2018). This approach proves effective in alleviating symptoms associated with traumatic stress disorders, including sleeping and digestive issues, headaches, chronic fatigue, and tachycardia (Sollmann, 2023). In carrying out the TRE exercises, the vibrations effect the thalamus and hypothalamus through nerve pathways, facilitating resolution of physioneurosis without necessitating conscious recall of traumatic events, thereby moderating the risk of retraumatization (Sollmann, 2023). Drawing from Bercei's work (2015), Sollmann underscores the significance of allowing and experiencing

neurological tremors post-trauma, noting that individuals who relinquish control of bodily action and allow tremors tend to regain sense of agency and achieve physical and mental recovery more swiftly than those who suppress tremors or self-medicate to avoid the consequences of stressors (Sollmann, 2023).

Sollmann (2023) champions the TRE approach as a therapeutic adjunct capable of facilitating access to psychophysiological content and experiences difficult or impossible to access via talk therapies by engaging directly with the body and its (mostly) autonomous processes. Bodily responses may then be used as a foundation for therapeutic conversations or psychoeducational support, allowing individuals to explore and address psychological issues and experiences through somatic experiences and expressions (Sollmann, 2023).

The somatic approaches discussed in this context offer unique and intriguing perspectives on trauma and restoration. These approaches hold promise as means to facilitate potentially (or even preferably) non-verbal and possibly unconscious processes, enabling the opportunity for a kind of traumatic catharsis, and long-term healing. They all, except perhaps emotional freedom technique, emphasize the importance of reconnecting the body and mind, alluding to a return to bodymind unity, and are suggestive of embodiment's importance for well-being, connection, and fulfillment.

Summary

This chapter has explored the multifaceted nature of trauma, emphasizing its profound impact on physical, emotional, and psychological well-being. Through an examination of trauma theory, neurobiological responses, and therapeutic approaches, it has become evident that trauma disrupts the integration of mind and body, leading to dissociation, disembodiment, a loss of coherence in one's sense of self, and disconnection from environments and communities.

Theoretical frameworks and empirical evidence support the notion that trauma is not merely a cognitive or emotional phenomenon but is deeply ingrained in the body, affecting psychophysiological responses and experiences. Dissociation and disembodiment emerge as coping mechanisms in response to overwhelming trauma, exacerbating disconnection between self, mind, and bodily living. These phenomena ultimately hinder the process of healing, preventing individuals from reconciling traumatic experiences, reclaiming a sense of agency over their bodies and narratives, and enjoying multiple domains of existence in the present.

In response to the challenges posed by trauma, various somatic approaches have emerged, emphasizing the importance of integrating body-oriented practices into trauma therapy. These approaches offer holistic pathways for survivors to reconnect with their bodies, regulate physiological responses, and heal trauma stored in body memory. By engaging directly with the body and its autonomous processes, somatic approaches may provide opportunities for non-verbal expression; physical, emotional, cognitive, energetic, and (dare I say) spiritfull catharsis; and long-term healing.

In conclusion, embodiment emerges as a fundamental aspect of trauma recovery, highlighting the interconnectedness of mind, body, and spirit. Through embodiment practices, individuals may cultivate a deeper awareness of their bodily sensations, emotions, and experiences, fostering resilience, empowerment, and a sense of wholeness. By acknowledging the inseparable relationship between trauma and the body, therapists and practitioners can offer more comprehensive and effective support to trauma survivors, ultimately promoting healing, connection, and fulfillment in the lives of survivors.

Chapter 3: Discussion and Application

Chapter Two discusses the processes and effects of trauma and highlights the benefits of reconnecting fractured elements of the self, mind, and body to foster a more deeply embodied experience and a fuller appreciation of the interactive processes of living. Chapter Three explores the value of some intriguing tools and approaches that might be utilized in counseling practice to promote embodiment and refers to empirical studies to support their potential use.

Physical Contact in Counselling

Touch-based therapies offer a promising approach to addressing trauma and its symptoms by promoting embodiment and deeper connection of bodymind. In utero, the skin and the nervous system develop from the same embryonic tissue, positioning the skin as a vital agent in processing information and orienting to the environment (Yuhas, 2020), which are essential elements of embodiment. Therapies involving touch components may help restore balance to a dysregulated autonomic nervous system (ANS), which is often problematic for trauma survivors (McGreevy & Boland, 2022). In their meta-analysis on touch-based therapeutic interventions for traumatic stress disorders, McGreevy and Boland (2022) discovered that skilled therapeutic touch, often described by participants in various studies as nurturing and compassionate, supports individuals in feeling safe and calmly connected with their bodies. Skilled therapeutic touch was found to enhance interoceptive awareness and assist participants in remaining present with uncomfortable feelings. They noted that this ability to remain in a state of interoceptive attentiveness (i.e. undissociated) was a significant avenue for increasing body-awareness (i.e. embodiment), which they identify as essential in treating traumatic stress disorders and associated symptoms (McGreevy & Boland, 2022).

Interpersonal touch has been shown to significantly improve emotional, mental, and physical well-being by strengthening the relationship of the body with the somatosensory cortex and the emotional self (Moller-Roth, 2021). It plays a central role in mammalian development and helps manage anxiety, stress, depression, pain, and physical illness while regulating intense emotions (McGreevy & Boland, 2022). Touch releases natural opioids such as oxytocin, which aids in countering the effects of the sympathetic response and promoting parasympathetic activation (Moller-Roth, 2021). A sensitive approach to touch in therapy may help establish trust and containment for trauma sufferers (Kearney, 2020), not only reducing symptoms associated with traumatic stress disorders but potentially also improving interpersonal relationships and engagement in everyday living (McGreevy & Boland, 2022). Additionally, Yuhas (2020) suggests that for survivors of interpersonal trauma, the idea of physical contact may be both frightening and confusing. It is likely that these clients may have experienced abusive touch in the past, thus ignoring touch in therapy might leave a significant gap in their healing process (Yuhas, 2020).

There is much diversity in touch-based interventions with a long history of beneficial therapeutic effects in treatment (McGreevy & Roland, 2022; Tanzer et al., 2022). However, in counselling, physical contact as an intervention is generally avoided (Tanzer et al., 2022). According to Mcgrane (2019) use of touch in counselling is a polarizing topic with much scrutiny and misunderstanding, often met with ambivalence and criticism (Young, 2006b). Many counsellors base their views on physical contact according to the theoretical models in which they were trained, thus indecisiveness or anxiousness about incorporating touch into therapy are common due to discomfort with physical contact and lack training in its use (Young, 2006b).

There is a paucity of value regarding the healing potentials of touch within the realm of counselling, particularly within North America (Cox & Aella, 2020; Young, 2006b). This has led to a lack of education on touch in the therapeutic professions within North America, as well as ethical considerations often emphasizing its inappropriateness (Guest et al., 2019; Cox & Aella, 2020). Despite reservations, existing studies on touch-based interventions have been shown to enhance the therapeutic alliance between client and therapist (Tanzer et al., 2022). Somatic practitioners from various disciplines provide rich case studies demonstrating how different massage and bodywork techniques can result in the release of stored emotions and somatic history (Darnell, 2021). These findings suggest that, while touch-based therapies are not widely practiced within mainstream counselling, they hold significant potential for facilitating embodiment, and emotional and somatic healing.

The subject of touch in mainstream counselling settings is often viewed with trepidation and considered taboo (Pezzarossi et al., 2020), and counselling students may even complete clinical training under the impression that physical contact between therapist and client is illegal (Guest et al., 2019). This proscription, I believe, is deeply rooted in the traditions and cultural norms of White European ancestry. Nineteenth and twentieth century White males historically dominated the discipline of psychology as creators, instructors, experts, and officials. In the cultural contexts that birthed psychology as a “scientific” discipline, touch, particularly affective touch, was culturally avoided. This systemic attitude and discomfort with physical contact in general, and affective interpersonal touch specifically, has been carried forward in systemic ways, the scope of which is beyond this work. In contemporary contexts, models of individual counseling predominantly avoid the use of touch (Wright, 2020b), with caution stemming from concerns related to the “slippery slope” argument, wherein non-sexual touch is feared to lead to

gratification of the counselor's needs (McGrane, 2019) or unethical sexual conduct (Wright, 2020b).

Physical contact can be interpreted in various ways, being heavily influenced by an individual's past experiences and cultural contexts (Yuhua, 2020; Pezzarossi et al., 2020). While it may be beneficial to integrate physical contact thoughtfully and ethically into therapeutic practice, this non-verbal communication, whether as a therapeutic technique or otherwise, requires a deep awareness of the impact touch can have on clients and their healing processes (McGrane, 2019). Ethical guidelines, such as those from the American Dance Therapy Association (ADTA), specify that touch is appropriate if it is therapeutically beneficial, with clear therapist motivations, client consent, and respect for client diagnosis (American Dance Therapy Association & Dance/Movement Therapy Certification Board, 2015).

The use of touch in counselling is complex and embroiled in ethical considerations, and practitioners must consider the inherent power dynamics in the counsellor-client relationship to ensure that any use of touch is carefully evaluated and contextually appropriate (Wright, 2020b). Despite the potential benefits, in North American settings, touch in counselling is often avoided due to misinformation and legality concerns (Guest et al., 2019), as well as concerns about sexualization and cultural norms that do not support touch in counselling (Pezzarossi et al., 2020). Major mental health professional organizations, such as the APA, explicitly prohibit sexual contact but do not address nonsexual touch, reflecting a cautious approach influenced by risk management and cultural context (Pezzarossi et al., 2020).

Physical contact in counselling is a complex and often controversial topic, with many therapists reporting that they do not incorporate touch into their sessions (Young, 2006b). However, given examples of touch such as handshakes, pats on the back, or even hugs, therapists

often admit to engaging in these behaviors, typically viewing them as separate from formal therapeutic processes (Young, 2006b). However, clients may not view such contact as separate, or be able to differentiate or compartmentalize therapeutic versus non-therapeutic interactions with their counsellors (Young, 2006b). It is my contention that clients should not be responsible for differentiating meaning or context in counsellors touch behaviours. The discrepancy between counsellor formal and informal behaviours with regard to physical contact highlights a lack of clarity in defining, and potentially supervising, touch episodes in therapy. Further, according to Guest et al. (2019) counselling students frequently complete their training with the misconception that touch in therapy sessions might be illegal, leading to a lack of education on the non-invasive, ethical use of touch. This educational gap can result in unintentional harm to clients, as even a simple touch can have significant positive or negative effects (Guest et al., 2019; Gineste et al., 2008).

In Europe, where body psychotherapy (also called somatic psychotherapy) utilizing physical contact is a more normalized form of psychotherapeutic practice, there is no unified standard for appropriate or ethical touch in this work, resulting in considerable variation among training programs (Young, 2006b). Some schools offer extensive training and ethical guidance related to touch, while others provide minimal direction, potentially leading to practitioners who are ill-prepared to use touch effectively and safely (Young, 2006b). In both Europe and North America, there is a lack of specific training for touch in counselling, with formal education and ethics courses often leaving this topic undiscussed in graduate programs (Pezzarossi et al., 2020). From this, one may infer that trainings in embodiment work with physical contact as a vehicle for bodymind reintegration is also lacking in mainstream counselling education. These gaps in education and training mean that most clinicians are neither trained nor comfortable discussing

and using touch in counselling practice. Addressing these educational deficits through targeted training, supervision, and self-exploration may be needed for improving competence in these areas for use with trauma survivors and other clients (Wright, 2020b).

Somatic Sexology

In counselling, "somatics" refers to therapeutic modalities that emphasize body-based intelligence and embodiment over purely cognitive channels for healing (Darnell, 2021). The aim is to help clients achieve a more accessible and enduring state of embodiment, leading to richer experiences of being alive with increased awareness that moves beyond simply conceptual and intellectual understandings (Darnell, 2021). Somatic sexology practitioners use embodied mindfulness to guide clients away from exclusively language-based understandings of their experiences toward engaging with their sexuality and eroticism through embodied attentional states, which Thouin-Savard (2019) describes as erotic mindfulness. Practices in somatic sexology, such as sexological bodywork, sexual surrogacy, and masturbation coaching and orgasmic meditation, have shown significant potential for overcoming sexual disconnection and disembodiment, thereby cultivating increased erotic fulfillment (Thouin-Savard, 2019).

Professional associations have established training programs, certification standards, and ethical codes for somatic sexology practitioners. Thouin-Savard (2019) refers to the Institute for the Study of Somatic Sexology, the Sea School of Embodiment, and the Institute of Somatic Sexology as institutions offering education, training, and certification. As well, she specifies the Somatic Sex Educators Association, the International Professional Surrogates Association, and the Association of Somatic & Integrative Sexologists as governing bodies providing training, certification, community support, and ethical standards of practice within their specific fields (Thouin-Savard, 2019).

Sexological Bodywork

According to the Association of Certified Sexological Bodyworkers (ACSB) (n.d.), sexological bodywork is a body-based educational modality. It aims at fostering erotic embodiment through guiding erotic development and enhancing erotic well-being. They claim that any issue related to the capacity to fully experience erotic embodiment falls within their scope of practice. They cite challenges such as limited access to pleasure, diminished desire and joy, and desire for more nourishing touch from a partner as common presenting concerns for treatment. Using a client-centered approach, sexological bodyworkers seek to empower individuals, couples, and groups. They do so by directing awareness and intention toward clients' felt experiences of movement, breath, touch, and sound to re-sensitize the body. Processes are designed to assist clients in the release of unsupportive and limiting habits, and also to nurture expansive erotic states that integrate body and mind (Association of Certified Sexological Bodyworkers, n.d.).

Surrogate Partner Therapy

Formerly referred to as sexual surrogacy, surrogate partner therapy (SPT) was first developed by Masters and Johnson (1970) in the 1960s and 70s to assist single male patients with sexual dysfunctions in overcoming performance pressures (Thoulin-Savard, 2019). It was also practiced by Martin Cole (1977) in England during this same time (Freckelton, 2013). Surrogates were licensed medical professionals trained for the role of somatic guides. They acted as empathetic role-play partners to assist patients as they rehearsed new skills, providing feedback and facilitating sensate focused, present-moment awareness while being observed in session by the acting therapist (Thoulin-Savard, 2019). A surrogate's aim was to direct the patient's attention to their immediate senses through sensate focus, a technique Brotto and

Basson (2014) argue parallels modern embodied mindfulness practice. Sensate focus practice was intended to increase awareness and enjoyment while simultaneously decreasing dissociation and spectating during sexual activity (Thouin-Savard, 2019).

The approach developed by Masters and Johnson (1970) has transformed significantly in contemporary contexts while bringing the embodied erotic forward as a central aim alongside the treatment of sexual dysfunction (Freckelton, 2013). Surrogate partners are no longer medically trained or professional therapists, although they do receive specialized training in intimacy and human sexuality, clinical sexology, and profession-related issues (Emelianchik-Key & Stickney, 2019). This training is provided through the International Professional Surrogates Association (IPSA), which also provides certification, ethical codes of conduct, and support in the United States, or through associations that refer to IPSA standards. One such clinic is the Dr. Ronit Aloni Clinic in Israel, where SPT is legal, government sanctioned, and paid for through government support in the case of war veterans struggling with sexual issues (Rosenbaum et al., 2014). Surrogacy resources, although extremely limited in number of practitioners and due to legislative concerns, are now available to individuals of all gender expressions. Surrogacy requests by women purportedly have increased (Freckelton, 2013). There has been a notable expansion in initiatives promoting specialized services for people with disabilities, especially within Europe, where services are increasingly referred to as sexual assistance (Geymonat, 2019).

According to IPSA, clients seek SPT for issues such as medical conditions, abuse histories which cause discomfort in intimacy and sexuality, fear of intimacy, lack of arousal, shame, anxiety, and difficulty forming relationships (Emelianchik-Key & Stickney, 2019). Additionally, clients seek out SPT to address concerns around sexual orientation, sexual

performance, self-confidence, and self-esteem (Emelianchik-Key & Stickney, 2019). Client concerns must be addressed in ongoing therapy before pursuing SPT, which happens as part of a triadic relationship between client, therapist, and certified surrogate. Continuous communication between all parties is maintained to maximize therapeutic benefits, co-facilitate treatment goals and plans (Emelianchik-Key & Stickney, 2019), and discuss concepts such as consent, safety, and boundaries (Rosenbaum, 2019).

Following consultation with the client's counsellor or other trained mental health therapist, the surrogate and client meet privately. Here psychoeducation, touch, intimacy, or sexual activities are incorporated as per treatment plans (Emelianchik-Key & Stickney, 2019). Rosenbaum (2019) explains how, as the treatment progresses over the course of multiple sessions, clothing is gradually removed to address comfort and body image issues in a supportive environment. Expectations are avoided to mitigate performance anxieties. The surrogate exercises caution in progressing toward increased intimacy and models boundaries for the client (Rosenbaum et al., 2014). After each session, both the surrogate and client discuss the meeting with the clinician either together or separately, where client experiences and learning are integrated into counselling sessions, and next phases of treatment are co-facilitated (Emelianchik-Key & Stickney, 2019; Rosenbaum et al., 2014). After a predetermined number of sessions, the surrogate-client relationship is terminated, and all contact between the two parties is expected to cease (Emelianchik-Key & Stickney, 2019).

Masturbation Coaching

Masturbation coaching is a recognized somatic sexology modality endorsed by mainstream clinical science for addressing specific sexual dysfunctions, such as female anorgasmia, without necessitating therapist touch (Thouin-Savard, 2019). Central to this practice

is erotic mindfulness, which emphasizes body awareness, acceptance, and visual and tactile bodily explorations. Women are guided to identify pleasurable areas of their bodies and use masturbation techniques incorporating fantasy to enhance sexual excitement (Thouin-Savard, 2019). This approach aligns closely with the sexual mindfulness treatments of Brotto and Basson (2014), utilizing sensate focus to shift attention towards bodily sensations and away from negative cognitive scripts. Thus promoting a state of presence and immersion in erotic sensations (Thouin-Savard, 2019). For men, masturbation coaching prioritizes experiencing more pleasure and accessing altered states of consciousness above reaching climax (Orgasmic Yoga, n.d.) and “weaving the heart to the genitals” (Thouin-Savard, 2019, p. 211). Dr. Joseph Kramer’s Orgasmic Yoga Institute integrates these principles into a mindful masturbation program for all genders, emphasizing erotic mindfulness and embodiment to foster deeper connection and enjoyment of sexual experiences (Thouin-Savard, 2019).

Conclusion

Incorporating embodied practices such as touch-based or somatic sexology practices into counselling spaces presents profound potential benefits for resolving trauma, increasing well-being, and allowing for a fuller appreciation of the joys of living. The empirical studies and theoretical explorations discussed in this chapter highlight the transformative impact these approaches may have for some trauma clients.

Firstly, touch-based therapies offer a unique pathway to address the disconnection between the mind and body often experienced by trauma survivors. By utilizing therapeutic touch, counselors may further assist clients in restoring balance to a dysregulated autonomic nervous system. As well, touch-based approaches and adjuncts may assist with enhancing interoceptive awareness and fostering a greater sense of safety, presence, and connection to self

and others. Such approaches may not only alleviate symptoms associated with traumatic stress disorders but also promote emotional and physical well-being, as demonstrated by works of researchers discussed throughout chapters two and three.

Moreover, the integration of somatic practices, such as those found in touch-based and somatic sexology methodologies, may empower clients to reconnect with their bodies and embrace their full range of sensory and emotional experiences. Somatic sexology practices like those discussed may help guide clients toward deeper understandings and acceptance of their sexuality and promote more fully embodied states. As such, erotic embodiment and mindfulness practices may not only aid in overcoming sexual dysfunction and disconnection, but also have the potential to enrich clients' overall sense of self and pleasure.

By embracing embodiment practices, counselors can become increasingly empowered to provide holistic approaches to healing that address psychological and physiological dimensions of trauma that affect well-being and the vitality of the human spirit. Integrative methods incorporating somatic dimensions of trauma and healing have the capacity to support clients in achieving a more profound state of embodiment, leading to richer, more fulfilling lives. By reconnecting mind and body, embodiment practices may enable clients to heal more completely, experience greater joy, and live more fully. As the field of counseling continues to evolve, embracing innovative and empirically supported approaches may be the next steps in enhancing the efficacy and depth of therapeutic interventions for trauma recovery.

References

- Alliance of Psychoanalytic Organizations. (2017). *The psychodynamic diagnostic manual (2nd ed.)*. Guilford Press.
- American Dance Therapy Association (ADTA) & Dance/Movement Therapy Certification Board. (2015, October). *The code of ethics and standards of the American Dance Therapy Association (ADTA) and the Dance/Movement Therapy Certification Board. Ethics Compliance*. Retrieved from <https://adta.org/ethics-compliance/>
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders (5th ed.)*. American Psychiatric Publishing.
- Association of Certified Sexological Bodyworkers. (n.d.). *What is sexological bodywork?* Retrieved May 23, 2024, from <https://sexologicalbodyworkers.org/whatis>
- Barratt, B. B. (2013). *The emergence of somatic psychology and bodymind therapy*. Palgrave. ISBN 9781137310965.
- Berceli, D. (2015). *Physical exercises for trauma healing*. NIBA-Publications.
- Brotto, L. A., & Basson, R. (2014). Group mindfulness-based therapy significantly improves sexual desire in women. *Behaviour Research and Therapy*, 57, 43-54. <https://doi.org/10.1016/j.brat.2014.04.001>
- Carello, J. (2018). *Retraumatization during MSW training: A trauma-informed narrative approach* [Doctoral dissertation, State University of New York]. ProQuest Dissertations Publishing. (Accession No. 10823893). Retrieved from <https://www.proquest.com/openview/aeb72830b3823cf161e3ec5a583891a4/1?pq-origsite=gscholar&cbl=18750>

Cleveland Clinic. (2022). *Vagus nerve*. Retrieved from

<https://my.clevelandclinic.org/health/body/22279-vagus-nerve>

Cole, M. (1977). The aetiology and treatment of sex disorders: The socio-sexual parameters of a male patient sample and the results of a programme using surrogate partner therapy.

BABP Bulletin, 5(1), 2-3. <https://doi.org/10.1017/S2041348300013860>

Cox, P., & Aella. (2020). Whore phobia: The experiences of a dual-training sex worker–psychotherapist. *Psychotherapy and Politics International*.

<https://doi.org/10.1002/ppi.1539>

Davis, M., Hustead, M., Dietrich, B., Berceci, D., & Kent, M. (2018). Neuromuscular tremors as tension and trauma releasing (TRE): From cultural practices to controlled clinical trial

(RCT) of TRE (2-186; Abstract #1213). In *Poster Abstract Book, International Society for Traumatic Stress Studies, 34th Annual Meeting: Promoting Societal Change:*

Integrating Traumatic Stress Research, Practice and Policy for Vulnerable Populations

(pp. 2-186). November 8-10, 2018. Washington Marriott Wardman Park, Washington,

DC, USA. www.istss.org

Darnell, C. (2023). Sexuality, sex therapy & somatics: In bed with the most likely bedfellows. So why aren't they? *Sexual and Relationship Therapy*, 38(3), 384-397.

<https://doi.org/10.1080/14681994.2021.1882672>

Emelianchik-Key, K., & Stickney, K. (2019). Using surrogate partner therapy in counseling:

Treatment considerations. *Journal of Counseling Sexology & Sexual Wellness: Research,*

Practice, and Education, 1(2), 105–113. <https://doi.org/10.34296/01021020>

Emerson, D., & Hopper, E. (2011). *Overcoming trauma through yoga: Reclaiming your body*.

North Atlantic Books.

Emmons, A. E. R., Chan, D. V., & Burker, E. J. (2021). Yoga therapy as an innovative treatment for complex trauma. *Journal of Applied Rehabilitation Counseling*, 52(4).

<https://doi.org/10.1891/JARC-D-20-00019>

English, A., McKibben, E., Sivaramakrishnan, D., Hart, N., Richards, J., & Kelly, P. (2022). A rapid review exploring the role of yoga in healing psychological trauma. *International Journal of Environmental Research and Public Health*, 19(23).

<https://doi.org/10.3390/ijerph192316180>

Feinstein, D. (2010). Rapid treatment of PTSD: Why psychological exposure with acupoint tapping may be effective. *Psychotherapy: Theory, Research, Practice, Training*, 47(3), 385–402. <https://doi.org/10.1037/a0021171>

Forde, C., & Duvvury, N. (2021). Survivor-led relational psychotherapy and embodied trauma: A qualitative inquiry. *Counselling and Psychotherapy Research*, 21(3), 633-643.

<https://doi.org/10.1002/capr.12355>

Foucault, M. (1978). *The history of sexuality (Vol. 1)*. Random House.

Freckelton, I., SC. (2013). Sexual surrogate partner therapy: Legal and ethical issues. *Psychiatry, Psychology, and Law: An Interdisciplinary Journal of the Australian and New Zealand Association of Psychiatry, Psychology and Law*, 20(5), 643–659.

<https://doi.org/10.1080/13218719.2013.831725>

Freud, S. (1962). The etiology of hysteria. In J. Strachey (Ed.), *The standard edition of the complete psychological works of Sigmund Freud* (Vol. 3, pp. 189–221). London: Hogarth Press. (Original work published 1896)

- Friedman, M. J. (1994). Neurobiological sensitization models of posttraumatic stress disorder: Their possible relevance to multiple chemical sensitivity syndrome. *Toxicology and Industrial Health*, 10(4-5), 449-462. <https://doi.org/10.1177/07482337940100051>
- Geymonat, G. (2019). Disability rights meet sex workers' rights: The making of sexual assistance in Europe. *Sexuality Research & Social Policy: Journal of NSRC: SR & SP*, 16(2), 214–226. <https://doi.org/10.1007/s13178-019-0377-x>
- Gineste, Y., Marescotti, R., & Pellissier, J. (2008). Humanity in care. *Nursing Research*, 2008/3(No. 94), 42-55. Retrieved February 16, 2024, from <https://www.cairn.info/revue-recherche-en-soins-infirmiers-2008-3-page-42.htm>
- Giotakos, O. (2020). Neurobiology of emotional trauma. *Psychiatriki*, 31, 162–171. Retrieved March 22, 2024, from <https://www.psychiatriki-journal.gr/documents/psychiatry/31.2-EN-2020.pdf>
- Goddard, G. (1967). Development of epileptic seizures through brain stimulation at low intensity. *Nature*, 214, 1020–1021. <https://doi.org/10.1038/2141020a0>
- Guay, S., Beaulieu-Prévost, D., Sader, J., & Marchand, A. (2019). A systematic literature review of early posttraumatic interventions for victims of violent crime. *Aggression and Violent Behavior*, 46, 15–24. <https://doi.org/10.1016/j.avb.2019.01.004>
- Guest, D., Parker, J., & Williams, S. L. (2019). Development of modern bioenergetic analysis. *Body, Movement and Dance in Psychotherapy*, 14(4), 264-276. <https://doi.org/10.1080/17432979.2019.1681514>
- Herman, J. L. (1992). Complex PTSD: A syndrome in survivors of prolonged and repeated trauma. *Journal of Traumatic Stress*, 5(3), 377-391. <https://doi.org/10.1002/jts.2490050305>

- Janet, P. (1920). *The major symptoms of hysteria*. New York: McMillen.
- Jesse, C. (2017). Transformative touch. In C. Moore, C. Jesse, & M. D. Yahya (Eds.), *Healers on the edge: Somatic sex education* (pp. 7–14). San Bernardino, CA: Erospirit.
- Karatzias, T., Shevlin, M., Fyvie, C., Hyland, P., Efthymiadou, E., Wilson, D., Roberts, N., Bisson, J. I., Brewin, C. R., & Cloitre, M. (2017). Evidence of distinct profiles of Posttraumatic Stress Disorder (PTSD) and Complex Posttraumatic Stress Disorder (CPTSD) based on the new ICD-11 Trauma Questionnaire (ICD-TQ). *Journal of Affective Disorders*, 207, 181–187. <https://doi.org/10.1016/j.jad.2016.09.032>
- Kearney, R. (2020, November 12). Healing touch: Hermeneutics of trauma and recovery. *Journal of Applied Hermeneutics*, 2020:2020. <https://doi.org/10.11575/JAH.VI0.71458>.
ISSN: 1927-4416
- Kessler, R. C., Aguilar-Gaxiola, S., Alonso, J., Benjet, C., Bromet, E. J., Cardoso, G., Degenhardt, L., de Girolamo, G., Dinolova, R. V., Ferry, F., Florescu, S., Gureje, O., Haro, J. M., Huang, Y., Karam, E. G., Kawakami, N., Lee, S., Lepine, J.-P., Levinson, D., ... Koenen, K. C. (2017). Trauma and PTSD in the WHO World Mental Health surveys. *European Journal of Psychotraumatology*, 8(sup5), 1353383. <https://doi.org/10.1080/20008198.2017.1353383>
- LaChiusa, I. C. (2016). The transformation of ashtanga yoga: Implicit memory, dreams, and consciousness for survivors of complex trauma. *NeuroQuantology: An Interdisciplinary Journal of Neuroscience and Quantum Physics*, 14(2). <https://doi.org/10.14704/nq.2016.14.2.941>
- Laing, R. D. (1960). *The divided self*. Retrieved April 3, 2024, from [http://www.centrebombe.org/Ronald.D.Laing-The.Divided.Self.\(1960\).pdf](http://www.centrebombe.org/Ronald.D.Laing-The.Divided.Self.(1960).pdf)

- Levine, P. A. (2010). *In an unspoken voice: How the body releases trauma and restores goodness*. North Atlantic Books. ISBN 9781556439438
- Levine, P. A., & Frederick, A. (1997). *Waking the tiger: Healing trauma: The innate capacity to transform overwhelming experiences*. North Atlantic Books.
- Levine, P. A., Blakeslee, A., & Sylvae, J. (2018). Reintegrating fragmentation of the primitive self: Discussion of “Somatic Experiencing”. *The International Journal of Relational Perspectives*, 28(5), 620-628. <https://doi.org/10.1080/10481885.2018.1506216>
- Li, A., Huang, C.-J., Gu, K.-P., Huang, Y., Huang, Y.-Q., Zhang, H., Lin, J.-P., Liu, Y.-F., Yang, Y., & Yao, Y.-X. (2022). Title of the article. *Scientific Reports*, 12, Article 17114. <https://doi.org/10.1038/s41598-022-21488-7>
- Lieb, R. J. (2022). *You don't have to have sex: Counselling fields and mandatory sexuality* [Master's thesis, Athabasca University]. <http://hdl.handle.net/10791/393>
- Liebig, N. N. (2019). Trauma, embodiment, and compromised agency. *Public Philosophy Journal*, 2(2). <https://doi.org/10.25335/PPJ.2.2-05>
- Liu, H., Petukhova, M. V., Sampson, N. A., Aguilar-Gaxiola, S., Alonso, J., Andrade, L. H., Bromet, E. J., de Girolamo, G., Haro, J. M., Hinkov, H., Kawakami, N., Koenen, K. C., Kovess-Mora, V., Navarro-Mateu, F., O'Neill, S., Piazza, M., Posada-Villa, J., Scott, K. M., Shahly, V., Stein, D. J., ... Kessler, R. C. (2017). Association of DSM-IV posttraumatic stress disorder with traumatic experience type and history in the World Health Organization World Mental Health Surveys. *JAMA Psychiatry*, 74(3), 270-281. <https://doi.org/10.1001/jamapsychiatry.2016.3783>
- Maclaren, K. (2014). Touching matters: Embodiments of intimacy. *Emotion, Space and Society*, 13, 95–102. <https://doi.org/10.1016/j.emospa.2013.12.004>

- Malabou, C. (2012). *Ontology of the Accident: An Essay on Destructive Plasticity* (C. Shread, Trans.). Polity Press. (Original work published 2009)
- Malkemus, S. A., & Smith, J. F. (2021). Sexual Disembodiment: Sexual Energy, Trauma, and the Body. *Journal of Humanistic Psychology*, 61(1), 1–26.
<https://doi.org/10.1177/0022167821996144>
- Masters, W. H., & Johnson, V. E. (1970). *Human sexual inadequacy*. Little, Brown & Co.
- Maté, G. (2003). *When the body says no: Exploring the stress-disease connection*. Wiley.
- McFarlane, A. C. (2010). The long-term costs of traumatic stress: Intertwined physical and psychological consequences. *World Psychiatry*, 9(1), 3–10.
<https://doi.org/10.1002/j.2051-5545.2010.tb00254.x>
- McGrane, C. (2019). An exploration on the use of touch in the therapeutic relationship (Higher Diploma in Arts in Counselling and Psychotherapy). Dublin Business School, Dublin.
Retrieved from <https://esource.dbs.ie/handle/10788/3761>. Rights holder:
<http://esource.dbs.ie/copyright>
- McGreevy, S., & Boland, P. (2022). Touch: An integrative review of a somatosensory approach to the treatment of adults with symptoms of post-traumatic stress disorder. *European Journal of Integrative Medicine*, 54(102168), 102168.
<https://doi.org/10.1016/j.eujim.2022.102168>
- McIntyre, S., Hauser, S. C., Kusztor, A., Boehme, R., Mougou, A., Isager, P. M., Homman, L., Novembre, G., Nagi, S. S., Israr, A., Lumpkin, E. A., Abnoui, F., Gerling, G. J., & Olausson, H. (2022). The Language of Social Touch Is Intuitive and Quantifiable. *Psychological Science*, 33(9), 1477–1494. <https://doi.org/10.1177/0956797621105980>

Merleau-Ponty, M. (1962). *The phenomenology of perception* (C. Smith, Trans.). Routledge.

(Original work published 1945).

Mitchell, J., & Morse, J. (1998). Verbal treatment modalities: Giving voice to the trauma. In

From Victim to Survivor. Taylor & Francis. <https://doi.org/9781315800684>

Moller-Roth, A. (2021, July 3). The hidden consequences of touch starvation and how you can

leverage the healing power of positive touch. *The Maps Institute*. Retrieved February 8,

2024, from <https://themapsinstitute.com/the-hidden-consequences-of-touch-starvation-and-how-you-can-leverage-the-healing-power-of-positive-touch/>

Mucci, C. (2008). *Il dolore estremo: Il trauma da Freud alla Shoah* [The extreme pain: Trauma

from Freud to the Holocaust] (Original work published 2008). Retrieved May 10, 2024,

from

<https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=6b34490335b73baf47e253c916b17d78853493ee>

Mucci, C. (2019). Traumatization Through Human Agency: “Embodied Witnessing” is Essential

in the Treatment of Survivors. *The American Journal of Psychoanalysis*, 79, 540–554.

<https://doi.org/10.1057/s11231-019-09225-y>

Müller-Oerlinghausen, B., & Eggart, M. (2021). Touch Research—Quo Vadis? A Plea for High-

Quality Clinical Trials. *Brain Sciences*, 11(1), 25.

<https://doi.org/10.3390/brainsci11010025>

Newport Institute. (2022). Big T vs. little t trauma in young adults: Is there a difference?

<https://www.newportinstitute.com/resources/mental-health/big-t-little-t-trauma/>

- Nijenhuis, E. R., Vanderlinden, J., & Spinhoven, P. (1998). Animal defensive reactions as a model for trauma-induced dissociative reactions. *Journal of Trauma Stress*, 11(2), 243-260. <https://doi.org/10.1023/A:1024447003022>
- Ong, I. (2020). Treating complex trauma survivors: A trauma-sensitive yoga (TSY)-informed psychotherapeutic approach. *Journal of Creativity in Mental Health*, 16(2), 182–195. <https://doi.org/10.1080/15401383.2020.1761498>
- Ong Gaffney, I., Gulden, A. W., Jennings, L., & Page, M. L. (2023). Yoga and the healing of interpersonal trauma: A qualitative meta-analysis. *International Journal of Yoga Therapy*, 33(2023). <https://doi.org/10.17761/2023-D-22-00048>
- Orgasmic Yoga. (n.d.). Retrieved March 3, 2024, from <https://www.orgasmicyoga.com/>
- Patrick-Weber, M. (2016). Destructive plasticity, “Surplus of consciousness,” and the “Monster” in True Detective. *Dialogue*, 3(2). Retrieved from <http://journaldialogue.org/issues/destructive-plasticity-surplus-of-consciousness-and-the-monster-in-true-detective/>
- Payne, H. (2019, June 24). Embodied perspectives in psychotherapy. *PESI UK*.
- Payne, H., & Brooks, S. (2018). Different strokes for different folks: The BodyMind Approach as a learning tool for patients with medically unexplained symptoms to self-manage. *Frontiers in Psychology*, 9, 2222. <https://doi.org/10.3389/fpsyg.2018.02222>
- Pezzarossi, C. K., Leigh, I. W., & Koo, D. S. (2020). Psychologists' use of touch in individual psychotherapy with deaf and hard-of-hearing clients. *JADARA*, 54(1). <https://nsuworks.nova.edu/jadara/vol54/iss1/1/>

- Psychotherapy Theory Research Practice Training. (2004). Psychologists' use of touch in individual psychotherapy. *Psychotherapy: Theory, Research, Practice, Training*, 41(3), 332-345. <https://doi.org/10.1037/0033-3204.41.3.332>
- Porges, S. W., & Carter, C. S. (2017). Polyvagal theory and the social engagement system. In P. L. Gerbarg, P. R. Muskin, & R. P. Brown (Eds.), *Complementary and integrative treatments in psychiatric practice* (pp. 221–241). American Psychiatric Association Publishing.
- Porges, S. W. (2011). *The polyvagal theory: Neurophysiological foundations of emotions, attachment, communication, and self-regulation*. W. W. Norton & Co.
- Post, R. M., Weiss, S. R. B., & Smith, M. A. (1995). Sensitization and kindling: Implications for the evolving neural substrates of post-traumatic stress disorder. In M. J. Friedman, D. S. Charney, & A. Y. Deutch (Eds.), *Neurobiological and clinical consequences of stress: From normal adaptation to post-traumatic stress disorder* (pp. 203–224). Lippincott Williams & Wilkins Publishers.
- Priya, R. U. (2007). Transactional analysis and the mind/body connection. *Transactional Analysis Journal*, 37(4), 286–293. <https://doi.org/10.1177/036215370703700406>
- Rosenbaum, T., Aloni, R., & Heruti, R. (2014). Surrogate partner therapy: ethical considerations in sexual medicine. *The Journal of Sexual Medicine*, 11(2), 321–329. <https://doi.org/10.1111/jsm.12402>
- Rosenthal, M. (2021). Intergenerational trauma: An embodied experience. *International Body Psychotherapy Journal*, 20(2), 80. <https://openurl.ebsco.com/EPDB%3Agcd%3A10%3A1515210/detailv2?sid=ebsco%3Aplink%3Ascholar&id=ebsco%3Agcd%3A155293654&crl=c>. ISSN 2168-1279 (Online)

- Roth, S., Newman, E., Pelcovitz, D., van der Kolk, B., & Mandel, F. S. (1997). Complex PTSD in victims exposed to sexual and physical abuse: Results from the DSM-IV Field Trial for Posttraumatic Stress Disorder. *Journal of Traumatic Stress*, 10(6), 539-555.
<https://doi.org/10.1023/A:1024837617768>
- Rothschild, B. (2000). *The body remembers: The psychophysiology of trauma and trauma treatment*. W.W. Norton and Company.
- Scaer, R. C. (2001). The Neurophysiology of Dissociation and Chronic Disease. *Applied Psychophysiology and Biofeedback*, 26(1). <https://doi.org/10.1023/a:1009571806136>
- Siegel, D. (2021). *Dr. Dan Siegel's hand model of the brain*. Dan Siegel. Retrieved April 12, 2021, from <https://drdansiegel.com/hand-model-of-the-brain/>
- Sollmann, U. (2023). The body can heal itself in trauma: Concept and practical exercises. *Psychosomatic Medicine Research*, 5(3), 12. <https://doi.org/10.53388/PSMR2023012>
- Strauss, T., Rottstädt, F., Sailer, U., Schellong, J., Hamilton, J. P., Raue, C., Weidner, K., & Croy, I. (2019). Touch aversion in patients with interpersonal traumatization. *Depression and Anxiety*, 36(7), 635–646. <https://doi.org/10.1002/da.22914>
- Sunseri, J. (2022, March 4). Therapy retraumatization [Blog post; updated 2023, January 12]. Justinlmft. <https://www.justinlmft.com/post/therapy-retraumatization>
- Tanzer, M., Koukoutsakis, A., Galouzidi, I., Jenkinson, P., Hammond, C., Banissy, M. J., & Fotopoulou, A. (2022). Touch in psychotherapy: Experiences, desires and attitudes in a large population survey. PsyArXiv Preprints. <https://doi.org/10.31234/osf.io/j3kbe>
- The Carlat Psychiatry Report. (2013, September 1). The kindling hypothesis: Is it relevant in psychiatry. *Psych Central: Blog*. Retrieved March 22, 2024, from <https://psychcentral.com/pro/the-kindling-hypothesis-is-it-relevant-in-psychiatry#1>

- Thouin-Savard, M. I. (2019). Erotic mindfulness: A core educational and therapeutic strategy in somatic sexology practices. *International Journal of Transpersonal Studies*, 38(1).
<https://doi.org/10.24972/ijts.2019.38.1.203>
- Tolman, D. L., Bowman, C. P., & Fahs, B. (2014). Sexuality and embodiment. In D. L. Tolman, L. M. Diamond, J. A. Bauermeister, W. H. George, J. G. Pfaus, & L. M. Ward (Eds.), *APA handbook of sexuality and psychology*, Vol. 1: Person-based approaches (Chapter 25, pp. 759–804). American Psychological Association. <https://doi.org/10.1037/14193-025>
- Torrico, T. J., & Abdijadid, S. (2023). Neuroanatomy, limbic system. In *National Center for Biotechnology Information*. Retrieved July 17, 2023, from
<https://www.ncbi.nlm.nih.gov/books/NBK538491/>
- UK Trauma Council. (n.d.). Complex trauma. Retrieved March 24, 2024, from
<https://uktraumacouncil.org/trauma/complex-trauma#:~:text=Complex%20Post%20Traumatic%20Stress%20Disorder,individual%20will%20develop%20Complex%20PTSD>
- U.S. Department of Veterans Affairs. (n.d.). Complex PTSD. Retrieved March 24, 2024, from
https://www.ptsd.va.gov/professional/treat/essentials/complex_ptsd.asp
- van der Kolk, B. (2015). *The body keeps the score: Brain, mind, and body in the healing of trauma*. Viking. ISBN 9780670785933
- van der Kolk, B. A. (1989). The compulsion to repeat the trauma: Re-enactment, revictimization, and masochism. *Psychiatric Clinics of North America*, 12(2), 389-411.
[https://doi.org/10.1016/S0193-953X\(18\)30439-8](https://doi.org/10.1016/S0193-953X(18)30439-8)

van der Kolk, B. A. (1994). The body keeps the score: Memory and the evolving psychobiology of posttraumatic stress. *Harvard Review of Psychiatry*, 1(5), 253-265.

<https://doi.org/10.3109/10673229409017088>

van der Kolk, B. A., Stone, L., West, J., Rhodes, A., Emerson, D., Suvak, M., & Spinazzola, J. (2014). Yoga as an adjunctive treatment for posttraumatic stress disorder: A randomized controlled trial. *The Journal of Clinical Psychiatry*, 75(6), e559-e565.

<https://doi.org/10.4088/JCP.13m08561>

Woodyard, C. (2011). Exploring the therapeutic effects of yoga and its ability to increase quality of life. *International Journal of Yoga*, 4(2), 49–54. <https://doi.org/10.4103/0973-6131.85485>

World Health Organization. (2019, April). *ICD-11 for mortality and morbidity statistics*.

Retrieved April 4, 2024 from <https://icd.who.int/browse11/1-m/en>

Wright, A. (2020a). *Fear conditioning: An example of the role of the amygdala in learning*.

Neuroscience Online. McGovern Medical School, University of Texas Health Science Center at Houston. Retrieved October 10, 2020, from

<https://nba.uth.tmc.edu/neuroscience/m/s4/chapter06.html>

Wright, J. D. (2020b). Training issues related to touch in counseling. *Journal of Counselor Preparation and Supervision*, 13(1), Article 8.

<https://digitalcommons.sacredheart.edu/jcps/vol13/iss1/8/>

Young, C. (2006a) One hundred and fifty years on: The history, significance and scope of body psychotherapy today. *Body, Movement and Dance in Psychotherapy*, 1(1), 17–28.

<https://doi.org/10.1080/17432970500468299>

Young, C. (2006b). About the ethics of professional touch: v.3.2. *Courtenay Young*. Retrieved January 19, 2024, from [https://www.courtenay-](https://www.courtenay-young.co.uk/courtenay/articles/The_Ethics_of_Touch_v.3.2.pdf)

[young.co.uk/courtenay/articles/The_Ethics_of_Touch_v.3.2.pdf](https://www.courtenay-young.co.uk/courtenay/articles/The_Ethics_of_Touch_v.3.2.pdf)

Yuhas, M. (2020). *Restoring the body's ability to connect: Using principles of contact improvisation in dance/movement therapy to process interpersonal trauma* [Master's thesis, Sarah Lawrence College]. Digital Commons @ Sarah Lawrence.

https://digitalcommons.sl.c.edu/dmt_etd/60