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**Embodied Integration: How Expressive Arts Therapy Supports Self-Regulation in Adults
with Complex PTSD (A Literature Review)**

Lesley University

Capstone Thesis

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Expressive Arts Therapy

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Abstract

Complex Post-Traumatic Stress Disorder presents a unique challenge in healing due to the absence of a foundation of safety and self-regulation that results from repeated exposure to traumatic stress. This narrative literature review explores the current research on establishing this foundation as a crucial first step in complex PTSD treatment and examines how engaging in expressive arts therapy can foster self-regulation and create new, positive experiences for these clients. Drawing on clinical experience and neurobiological research, the author proposes a model conceptualizing self-regulation as an embodied, holistic process that results from left and right brain integration at multiple levels of internal neural communication and external perception and interaction. Examples from the literature demonstrate how expressive arts therapy can support this integration through sensory engagement, co-regulation, neural integration, and embodied resilience. The study highlights the potential of expressive arts therapy as a primary treatment modality for complex PTSD, offering significant benefits beyond its traditional role as an adjunctive therapy. The author concludes by calling for further research into the therapeutic value of community arts engagement for individuals with complex PTSD.

Keywords: Complex PTSD (cPTSD), expressive arts therapy, self-regulation, emotional regulation, embodiment, safety, neurobiology, trauma healing, sensory integration, co-regulation, attunement, resilience

Author Positionality Statement: The author identifies as a White cis-gender able-bodied neurodivergent woman living in an urban area in the Northeastern United States.

Introduction

My interest in this topic is motivated by the work that I am currently engaged in at my clinical internship site, where I am providing outpatient therapy at a trauma-focused group practice that specializes in experiential therapy techniques. Through this position, I have had the opportunity to pursue training in Eye Movement Desensitization & Reprocessing therapy (EMDR), which has been substantiated as an effective treatment for Post-Traumatic Stress Disorder (PTSD) by over 20 randomized controlled studies since its initial development in 1989 (Shapiro, 2018). The EMDR model makes use of bilateral stimulation in the form of eye movements or alternating auditory or tactile sensations to facilitate adaptive information processing of trauma memories. To prepare for reprocessing, clinicians guide clients through a multi-phase protocol that includes history taking, assessment, and the installation of grounding and resourcing techniques.

Clients who have experienced more acute or recent forms of trauma are generally able to access a state of safety and embody their resources more easily, allowing them to move forward into the memory processing phases (Shapiro, 2018). Complex PTSD (cPTSD), however, is considered a “more pervasive and complicated” form of trauma that results from repeated exposure to traumatic events over extended periods of time, typically in childhood (e.g. child abuse, witnessing domestic violence in the home, displacement, and attachment trauma). (Courtois, 2004, p. 412). Clients with cPTSD may have never known a sense of safety or support, and because of this, these clients must first create a new foundation of healthy adaptive experience before moving into the memory processing phases of trauma healing (Shapiro, 2018). This process can be time consuming and challenging for client and therapist alike, as survivors of

cPTSD can have significant difficulty with affect and attention regulation and interpersonal relationships (Courtois, 2004; Ford et al., 2005; Herman, 1992).

Other models of trauma healing also emphasize the importance of establishing safety and stability before beginning to reprocess traumatic material (Cloitre et al., 2011; Courtois, 2004; Ford et al., 2005; Lanius et al., 2011). In the first section of this paper, I zoom in on this first phase of trauma healing as I begin with a deeper exploration of the neurobiological research on safety, self-regulation, and embodiment. In the second part of this paper, I provide examples from the literature demonstrating how expressive arts therapy can support self-regulation and help create new adaptive experiences for these clients. My commitment to and belief in the healing power of expressive arts therapy is informed equally by my graduate training in expressive arts therapy, my experience in introducing creative practices to others as a community arts educator, and my lived experience of engaging in music and performing arts throughout my lifespan, which provided me with otherwise missing opportunities for attunement and expression that have contributed to my growth. In this section of the literature review, I connect my felt sense of the power of these practices to specific mechanisms through which the practice of multi-modal expressive arts can help clients establish a sense of safety in themselves.

As I consider my larger purpose for this undertaking, I hope to conceptualize a model for enhancing self-regulation with expressive arts therapy that can serve both clinicians and non-clinical community service providers in supporting clients with complex trauma histories. The practice of expressive arts offers rich, satisfying pathways to connection that can greatly deepen the clinical therapeutic experience. Additionally, facilitators in community settings that provide creative education may benefit from being able to connect the work they are already doing to its potential healing effect on trauma-impacted constituents. It is my hope that this work serves as a

jumping off point for further research and expansion on the use of expressive arts therapy in healing from trauma on a larger scale.

Methods

I began my research on this topic by searching both the Lesley library research database and Google Scholar for articles describing the use of expressive arts therapy and other creative arts therapies in healing from complex PTSD. I used the ResearchRabbit (2023) tool to compile these articles and search for related literature by finding additional articles that cited the research I found. In addition, I used the reference linking function of ResearchRabbit to find the foundational research on which the articles I had compiled are based to help me gain a fuller picture of the current base of knowledge on trauma and creative arts therapy.

My framework for organizing and interpreting this material evolved from my own clinical experience in working with clients who presented with complex PTSD. As I continued to engage in my clinical work, I found that most of our sessions were centered around resourcing practices to help them find an embodied sense of safety and stability in their current situation. My experience was mirrored by other clinicians at the site, who validated the need for establishing a client's baseline level of self-regulation before engaging in other practices targeted toward processing traumatic memories.

Out of this personal and communal need, I made the decision to focus my research on exploring the use of expressive arts therapy in the safety and stabilization phase of trauma healing. I conducted more targeted searches for research on complex PTSD assessment and treatment, emotional regulation, safety, and embodiment in trauma healing, formulating my own holistic conceptualization of the integrative process of self-regulation. I then used this model to inform my evaluation and presentation of the research on expressive arts therapy in trauma

healing, highlighting theories and studies that supported or mirrored the concepts I had found in the trauma literature.

Literature Review

Defining Complex Trauma

Herman (1992) argued for a separate diagnostic category for survivors of prolonged traumatic experiences based on observations of adults with a history of childhood abuse. From her analysis of the literature, she identified three common symptom clusters that are outside of the traditional diagnostic criteria for PTSD: somatic symptoms, dissociative symptoms, and affective changes. In addition, she highlighted the “characterological” qualities common to survivors of prolonged victimization (p. 383), including difficulties forming stable attachments in future relationships and the formation of a “malignant” sense of self (p. 386).

Courtois (2004) provides an expanded understanding of complex trauma as “a type of trauma that occurs repeatedly and cumulatively, usually over a period of time and within specific relationships and contexts” (p. 86). In addition to survivors of child abuse, affected populations may include those who have experienced domestic violence and other trauma that takes place in the context of families or intimate relationships. Additional at-risk populations include survivors of catastrophic and entrapping traumatic events, such as prisoners of war, displaced persons, refugees, and those who have been involved in human trafficking.

Although the fifth edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-V)* does not include complex PTSD as a separate diagnostic category, it is recognized in the current edition of the *International Classification of Diseases (ICD-11)* (World Health Organization, 2022). The *ICD-11* outlines the following diagnostic criteria, which include the same symptoms of traditional PTSD plus additional cPTSD-specific symptoms:

Table 1*Comparison of ICD-11 Diagnostic Criteria for PTSD and cPTSD*

Symptoms of PTSD and cPTSD:	cPTSD-Specific Symptoms:
<ul style="list-style-type: none"> · Re-experiencing the traumatic event, in the form of intrusive memories or images, flashbacks, or nightmares, accompanied by strong emotions and physical sensations. · Avoidance of reminders of the event, both internal, such as thoughts about the event, or external, such as people, activities, or situations that may remind one of the event · Persistent perception of being in danger, characterized by hypervigilance or exaggerated startle response 	<ul style="list-style-type: none"> · Persistent affect regulation challenges, which can include heightened emotional reactivity, outbursts, destructive behaviors, stress-induced dissociation, and emotional numbing · Negative core beliefs about the self, including feelings of defeat or worthlessness, as well as persistent feelings of shame, guilt, or failure related to the traumatic event(s) · Difficulties sustaining relationships or feeling close to others

The *ICD-11* also identifies additional clinical features that may be present, such as suicidal ideation and behavior, substance use, symptoms of depression, psychosis, and somatic complaints.

The Client Experience of Complex Trauma

In a compelling research paper co-authored by art therapist Nili Sigal and “Rob,” (2021) an anonymous client, we hear directly about the extensive impact that the client’s prolonged childhood sexual abuse has had on his life:

The first memory I have in this world was being sexually abused which continued on and off until I was about ten or eleven, with that came nightmares, interruptions to my thoughts, triggers from people or certain smells, even vertical blinds would set me off! ... From that I would not be able to sleep properly, I felt disconnected from people and had to create a version of myself I thought people would like but I wouldn't look after myself

– I wouldn't wash, brush my teeth, a lot of the time I would just lay in bed. ... Years and years would layer upon each other and it just felt like no matter what I would do the symptoms of my trauma would not go away or at least ease no matter how much I tried with over working, binge drinking, sex, drug use, over eating – almost any bad habit and some good I tried to get my mind away from the memories. ... I had just had enough of the never ending nasty feelings that were overwhelming, within a constant spiral of crap, where everyone got along but me, neither good or bad whatever I did resulted in everything going wrong somehow. I hated feeling stuck and I hated myself. (p.38)

With my own clients, I have witnessed similar experiences of intrusive thoughts/memories, social disconnection or isolation, self-harming behaviors, feeling stuck in a repeating cycle of traumatization, and low self-worth.

Phase-Based Treatment

In 2011, Cloitre et al. (2011) conducted an expert clinician survey on the best practices in the treatment of complex PTSD and found that the majority of those surveyed endorsed taking a phase-based approach to treating those with complex PTSD. This supported an earlier randomized controlled study finding that phase-based treatment was superior to a single-phase treatment approach (Cloitre et al., 2010).

Several researchers (Cloitre et al., 2011; Courtois, 2004; Ford et al., 2005) support the three-phase model initially developed by Janet (1925, as cited in Cloitre et al., 2011) and applied to complex PTSD by Herman (1992, as cited in Cloitre et al., 2011). This model emphasizes the importance of focusing on safety and stability in the first stage of treatment. Courtois highlights the importance of this phase in work with complex PTSD clients, naming that attention must be paid both to the client's physical safety, in terms of managing any self-harming behaviors and

ensuring sufficient life stability, as well as the client's ability to regulate their emotional state (2004). Ford et al. recommend phase-based treatment as a means to enhance "the recognition (rather than avoidance) of posttraumatic self-dysregulation in tolerable ways and amounts" with the goal of promoting self-regulation in clients (2005, p. 438). Lanius et al. (2011) also emphasize the importance of addressing "the underlying deficits in emotional and self-awareness, emotion regulation, social emotional processing, and self-referential processing" before addressing traumatic memories (p. 331).

Courtois (2004) elaborates on goals of the first stage of treatment, stating that "affect-regulation and modulation are perhaps the most important self-regulatory skills that the client needs to learn" (p. 94) She notes that clients that present with complex PTSD often demonstrate a problematic "mind-body split" that leaves them in a "more or less perpetual state of disconnect" (p. 94). Ford et al. (2005) recognize this and suggest that the first stage of treatment focus on assisting the client in becoming aware of their bodily and affective experience and utilizing this awareness to engage in more adaptive responses. They highlight the importance of nonverbal communication in this work, encouraging therapists to track the client's subtle bodily communications and non-intrusively assist them in connecting to their internal experience.

Through this nonverbal process of "co-regulation" (Solomon & Siegel, as cited in Ford et al., 2005, p. 439) both a working relationship and the foundations of self-regulation can be created.

The Connection Between Regulation and Safety

Many who have experienced complex PTSD have never known a sense of safety. Several of my clients will tell me that they can recognize, conceptually, that they are not in any present-day danger, but they still *feel* like they are unsafe. This duality reflects the mind-body split

described above by Courtois (2004) and calls for the concept of safety to be explored and defined as it is experienced at the bodily level.

Steven Porges' polyvagal theory offers a neurobiological lens through which the bodily experience of safety can be understood as a product of the autonomic nervous system (2022). Porges describes safety as a subjective experience that results from the interpretation of internal neural communications between our bodily organs and our brain. Through a process called *neuroception* (p. 7), we use information from our senses to determine whether our environment is safe, dangerous, or life threatening. This information is interpreted in a "top-down" manner by sophisticated brain processes that help us anticipate intention. We also interpret this information in a "bottom-up" manner through the process of *interoception* (p. 8), or the awareness of our internal visceral experience (dubbed the felt sense by Gendlin (1982)).

Cues of safety, which can include warm facial expressions and vocal qualities, recruit the social engagement system, which serves as a regulatory influence on our nervous system by activating a calm (ventral vagal) autonomic state (Porges, 2022). This state supports our homeostatic functions and enables more efficient access to the higher brain functions needed for problem solving and creativity. The social engagement system also sends cues of safety to others, supporting the establishment of trusting relationships.

When the process of neuroception detects threat, it triggers a shift in our autonomic state that disrupts our homeostatic functions and orients us toward survival (Porges, 2022). Our first defense is the activation of our sympathetic nervous system, which organizes us into a mobilized state for fight and flight responses. If this shift does not successfully allow us to move into a situation of safety, we may enter a state of immobilization (collapse or shut down) through the activation of the dorsal vagal system. These responses are evolutionarily adaptive survival

responses and, when occurring in acute episodes followed by periods of recovery, can serve to promote emotional and physiological resilience. However, frequent activation of these responses without sufficient recovery periods can “retune” the autonomic nervous system to be more sensitive to threat detection, limiting access to the calming pathways of the social engagement system.

Since these threat-detecting defenses are evolutionarily older and regulated by lower brain structures, they are not governed by our higher-level thinking processes and therefore are not effectively regulated by cognitive intention (Porges, 2022). While the experience of autonomic state is an instinctive process initiated by the neuroception of outside cues, it can also trigger a reflexive process in which the higher brain functions associate the interoception of different autonomic states with specific thoughts and behaviors. Thus, therapeutic efforts can be oriented in a bottom-up or top-down manner by either helping clients access a calm autonomic state through external visceral experience or by helping the client learn to accept their instinctive nervous system response and its associated bodily feelings without linking it to maladaptive thoughts and behaviors.

How Integration Supports Self-Regulation

Siegel’s (2001) theory of interpersonal neurobiology emphasizes the importance of striving for integration as the key to a healthy self-regulation system. This can occur in multiple dimensions, both as the integration of left- and right-brain hemispheric processes and pathways and as the connection between the “low-road” brain stem and limbic processes and the higher functions of the pre-frontal cortex.

According to Siegel (2001), the right side of the brain develops first and is primarily involved in regulating our body processes, affective expression, perception, images, holistic

processing, and autobiographical recollection. The left brain's main functions are linguistic processing and identifying cause and effect relationships through linear and logical cognitive processes. Siegel refers to the left brain as the "interpreter" of our emotional and sensory experience, proposing that this "bihemispheric coherence" is necessary for optimal functioning (p. 87). Through this integration of left and right brain processes, we gain the ability to form coherent narratives about our lived experiences. We are also able to engage fully in communication with one another, leading to more secure social attachments.

Both Siegel (2001) and Schore (2001) propose that the regulatory functions of the right brain are developed through positive social interactions with attuned caregivers. Schore (2001) argues that the disruption of these vital experiences of secure attachment, as is common in those with early life traumatic experiences such as abuse or neglect, alters the development of the right brain, which then leads to difficulties with regulating affect. In addition, research summarized by both Schore (2001) and van der Kolk (2003) suggests that early traumatic experiences lead to an inadequate development of the corpus callosum, which is the brain structure that connects the left and right hemisphere. As a result, affective information from the right brain, such as internal sensations or observed facial and body cues, is unable to be transmitted to the left brain for processing. Van der Kolk's research suggests that stimulating both sides of the brain through movements such as swinging or rocking, activating the vestibular system, and crossing the midline of the body can help to increase hemispheric integration.

In addition to left and right brain integration, Siegel (2001) argues for the importance of working toward "vertical" integration through strengthening connections between the "low road" brain stem and limbic regions of the brain and the higher functions of the pre-frontal cortex. Through this connection, which is mediated by the orbitofrontal region of the brain, we gain the

capacity to link somatic and emotional information with our capacity for abstract processing. This enables us to generate flexible and adaptive cognitive and behavioral responses to changes in our internal and external environment.

Siegel (2001) proposes that unresolved trauma leads to a weakening of this integrative capacity by bringing us more frequently into “low road” processing states, such as fight, flight, and freeze responses. Neurodevelopmental researcher Perry (2009) brings in awareness of the impact of childhood trauma on the brain’s development. According to Perry, the brain develops from “bottom” to “top,” from the least complex (brain stem) area to the most complex (limbic and cortical) areas. As each area develops, it develops around input from the lower areas of the brain. Thus, any dysregulation in the lower parts of the brain will inhibit the healthy development of the brain’s higher functions.

Both Siegel (2001) and Perry (2009) emphasize the importance of incorporating “bottom up” work to improve the integratory capacity of the brain. Siegel (2001) suggests teaching and practicing mindful awareness of the body and growing the capacity to notice sensation and emotion. Perry (2009) proposes a model that is influenced by the field of restorative neurology, which uses repetitive motor activity to help people recover from brain injuries. He suggests that somatosensory interventions such as music, movement, yoga/breathing, and drumming or massage that provide “patterned, repetitive neural input” to the brain stem areas can serve as an “organizing and regulating” input to form a solid foundation from which to engage in more relational or cognitive work (p. 243).

Trauma and the Embodied Self

Given the duration and intensity of the distress they have experienced, many clients with complex PTSD “are alienated from themselves, their general well-being, and their bodies”

(Courtois, 2004, p. 94). Several researchers emphasize the importance of helping these clients re-connect to their bodies as a foundational step in trauma healing (Courtois, 2004; Ford et al., 2005; Kearney & Lanius, 2022; Lanius et al., 2011; Siegel, 2001; van der Kolk, 2003).

Harricharan et al. (2021) propose a framework based on the synthesis of neurobiological research for conceptualizing this sense of embodiment.

According to Harricharan et al. (2021), our felt sense of embodiment begins at the sensory level as the brainstem receives input about our internal and external environments, through the processes of interoception and exteroception. This information comes into our awareness through a process called interoceptive inference (p. 14), which is mediated by the insula region of the brain, allowing us to identify our emotional feeling states as the information travels on to the pre-frontal cortex. There, through the process of multi-sensory integration, this information becomes organized into personal mental constructs that allow us to enact behavioral responses according to the demands of the situation. The embodied self is attained when we can successfully direct our actions in connection with, and as a response to, incoming sensory information (p. 14).

This process becomes disrupted in the aftermath of trauma, as there is reduced connectivity to the pre-frontal cortex (Harricharan et al., 2021). In those demonstrating the classic hyperarousal and hypervigilance symptoms of PTSD, sensory information is transmitted to the limbic and brainstem structures, which trigger the survival-based fight-flight-freeze responses. In contrast, those who present with symptoms of dissociation may instead transmit sensory information to the occipital cortex, which is involved in implicit memory and visual imagery. This response, while likely a vital adaptation to reduce the metabolic tax of chronic

stress and traumatization, results in the loss of embodiment, leaving us unable to connect to our raw emotion and sensorimotor experience (Harricharan et al., 2021; Kearney & Lanius, 2022).

Kearney & Lanius (2022) highlight the importance of the vestibular and somatosensory systems in the process of integrating exteroceptive and interoceptive sensory input. The vestibular system, which is located in our inner ear, tracks the orientation of our heads in relation to gravity. It works subconsciously and is “inextricable with a sense of security, grounding and safety” as it can trigger autonomic arousal if it detects unexpected acceleration (p. 3). Kearney & Lanius’s research suggests that the vestibular system also plays a role in integrating auditory, visual, and somatosensory input to create the “unified multisensory experience” that becomes our sense of self-awareness (p. 5).

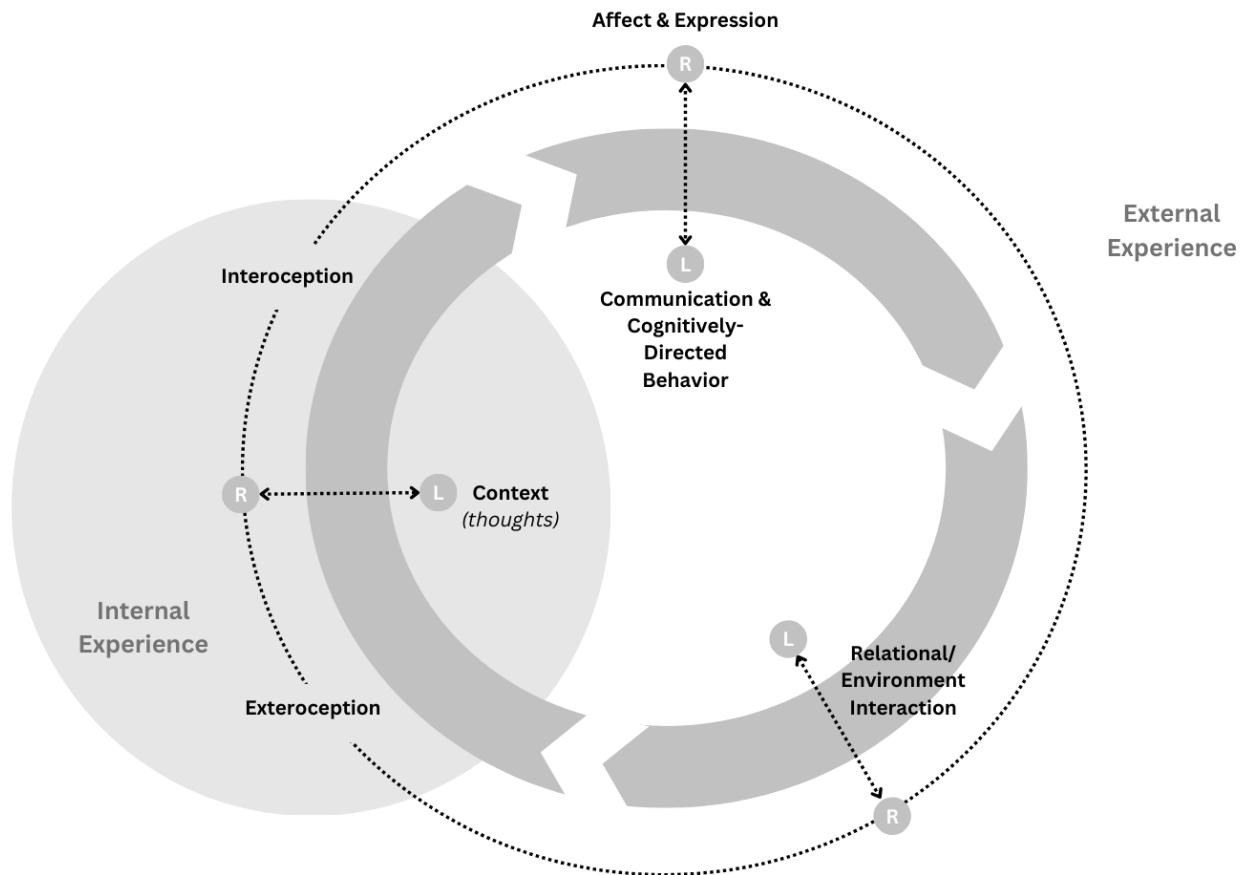
The somatosensory system, which is comprised of the parts of our body that detect touch, pressure, pain, temperature, and proprioceptive input, is also critical to providing awareness of the body in relation to the external environment (Kearney & Lanius, 2022). The researchers propose that both somatosensory and vestibular feedback are principal in integrating exteroceptive and interoceptive input with contextual safety cues from the environment in order to allow us to experience “a felt sense of relational security with our surroundings and with others” (p. 17).

Both Harricharan et al. (2021) and Kearney & Lanius (2022) propose that sensory-based interventions can be influential in restoring the capacity for embodiment in traumatized clients. Harricharan et al. (2021) suggest that sensory-based interventions may be needed in order to “bring online” the pre-frontal cortex in preparation for engaging in cognitive interventions (p. 15). Kearney & Lanius (2022) recommend that somatic sensory input, specifically, be the focus of treatment, encouraging the use of movement and touch within the context of a positive

therapeutic relationship to help clients reconnect with their felt bodily experience. Combining vestibular and somatosensory stimulation with an emphasis on awareness of sensation may “bridge the brain-body disconnect” that contributes to regulation difficulties in clients with complex PTSD (p.30).

Clinical Takeaways

Through this more detailed understanding of the neurological processes underpinning the concept of self-regulation, I have gleaned several helpful takeaways to support the formulation of an approach to working with complex PTSD clients. Porges identifies that the experience of safety is more than a cognitive concept, but rather a sub-cortical felt sense resulting from our ability to engage the ventral vagal nervous system (2022). Synthesizing his work with the work of other researchers (Lanius et al., 2011; Perry, 2009; Schore, 2001; Siegel, 2001), I have come to define self-regulation as a holistic process relying on left and right brain integration at multiple levels of internal neural communication and external perception and interaction (see Figure 1). The felt experience of embodiment results from the integrity of this pathway, particularly the integration of sensory information into the higher meaning-making functions of the brain (Harricharan et al., 2021; Kearney & Lanius, 2022). Complex trauma may cause disruptions in the development of this integrative capacity, leading to emotional regulation challenges and causing a mind-body split to develop in the client’s experience (Courtois, 2004; Ford et al., 2005; Harricharan et al., 2021; Kearney & Lanius, 2022). Intentional activation of the sensory pathway, particularly through vestibular and somatosensory input, may be critical for restoring the capacity for sensory integration that is foundational to higher brain functioning (Harricharan et al., 2021; Kearney & Lanius, 2022; Perry, 2009; van der Kolk, 2003).

Figure 1*Visual Representation of the Integrative Process of Self-Regulation*

Note. Self-regulation is conceptualized here as a holistic process relying on left and right brain integration at multiple levels of communication. Central to this process is the integration of sensory information, both received from the environment through the process of exteroception and felt internally through the process of interoception, with the higher meaning-making functions of the brain.

The Case for Expressive Arts Therapy

The practice of expressive arts therapy offers a multi-faceted approach that engages clients in expression through multiple art forms, either separately, or in succession, to facilitate healing (Estrella, 2023). Through the use of multiple creative modalities including visual arts,

music/sound, dance/movement, drama/enactment, and writing, clients learn to connect to and express the non-verbal felt sense of their internal experience within the container of an attuned therapeutic relationship.

Expressive arts therapy is similar to other creative arts therapies (e.g. art therapy, music therapy, dance/movement therapy) in that it offers opportunities for sensory-based expression, it uses the “language” of aesthetics to communicate experience, and it engages clients in the creative process to facilitate healing (Estrella, 2023). Qualitative research studies by Gerge et al. (2019) and Samaritter (2018) have embraced these similarities and sought to identify factors common to all disciplines under the larger umbrella of creative arts therapy that serve as agents for change. Samaritter (2018) identifies five core themes that are present in the creative arts therapies: embodied presence, somato-sensory engagement, emotional engagement, nonverbal communication, and intercultural involvement/social relatedness (p. 5). In Gerge’s study with complex PTSD clients, subjects reported that the incorporation of the arts in therapy helped them access a felt sense of security, allowed them to explore and express internal feeling states, and provided opportunities for containment as well as a tangible record of their therapeutic experience (Gerge et al., 2019, p. 12-14).

Expressive Arts Therapy as an Integrative Process

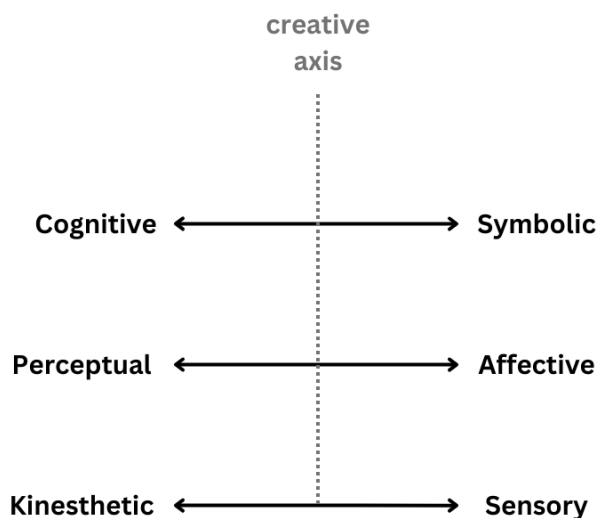
In conceptualizing how the creative arts therapies can be applied to support healing in clients with complex trauma, the Expressive Therapies Continuum (ETC) offers a helpful framework that connects elements of engagement in artistic processes to corresponding levels of functioning (Lusebrink, 2010). It identifies three levels of engagement based on their order of developmental complexity, with the Kinesthetic/Sensory level at the bottom of the continuum, followed by the Perceptual/Affective level, and finally, the Cognitive/Symbolic level at the top.

In addition, each level is conceptualized as a continuum between two poles, with the Kinesthetic, Perceptual, and Cognitive functions occupying the left pole of the three levels and the Sensory, Affective, and Symbolic functions occupying the right (see Figure 2).

According to Lusebrink (2010), creativity results from successful integration of the qualities represented in the left and right poles, mirroring Siegel's (2001) concept of "horizontal integration" between the left and right hemisphere of the brain. Additionally, movement through the different levels of the continuum may strengthen connections between the "low road" brain processes and the higher functions of the brain (Lusebrink, 2010), increasing the capacity for "vertical integration" that supports embodiment and adaptive response (Kearney & Lanius, 2022; Siegel, 2001). The ETC can be a helpful diagnostic tool, as difficulties that are demonstrated with a certain level may indicate a weak point in the client's brain functioning (Lusebrink, 2010).

Figure 2

The Expressive Therapies Continuum



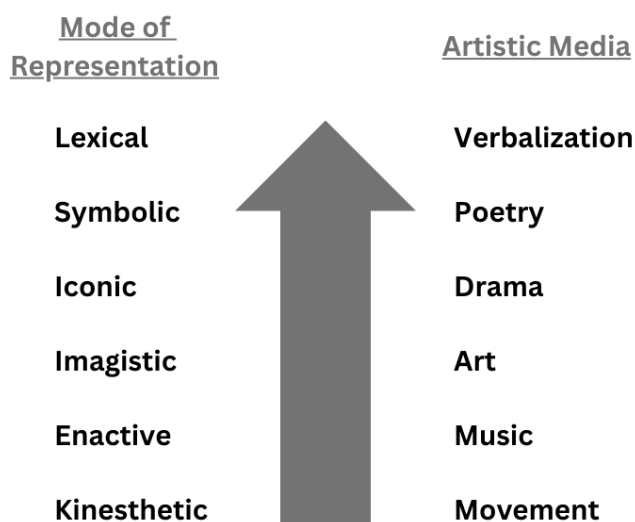
Note. Adapted from "Assessment and Therapeutic Application of the Expressive Therapies Continuum: Implications for Brain Structures and Functions" by V. B. Lusebrink, 2010, *Art Therapy*, 24(4), p. 173.

Additionally, a creative therapist can use the ETC to intentionally support the strengthening of a client's integrative capacity by engaging the client in interventions that specifically target a desired function.

Johnson and Sandel (1977, as cited in Johnson, 1999) have proposed another developmental model of the arts therapies that organizes the different creative modalities into categories of corresponding developmental complexity. The categories used in this model reflect the process of cognitive development as observed in infants, and they grow in complexity from kinesthetic to lexical (See Figure 3). While this reductive conceptualization may be helpful for choosing which modalities to use or avoid with certain populations, the authors acknowledge that within the individual modalities themselves there are often many ways of practicing, which can vary in their level of developmental complexity.

Figure 3

Developmental Model of Creative Arts Therapies



Note. Adapted from *Essays on the Creative Arts Therapies* (p. 169) by D. R. Johnson, 1999, Charles C. Thomas Publisher, Ltd.

Thus, it may be more helpful to consider the developmental sequence of engagement within each individual modality. In a manner similar to the use of the ETC, Johnson and Sandel's model can be used to identify and integrate weaknesses and strengths in a client's level of "vertical integration" through directive or exploratory use of specific modalities and levels of engagement within them.

Johnson expands on this model by breaking down creative forms into their developmental foundations at the level of the primary sensory experience upon which each form is built (1999). Beginning with the experiences of auditory, visual, and kinesthetic (tactile and proprioceptive) sensation, elements of expression are developed that explore the various qualities of their corresponding sensory experience. In a process that balances play and precision, expressive elements are purposefully varied by the creator in an attempt to communicate feelings or thoughts. This can occur in an embodied form, where the object of expressive variation is the human body (as in singing or dance) or in a projected form, where the expressive variation is taking place on an external object (such as when painting or playing a musical instrument).

The practice of expressive arts therapy is uniquely positioned to make use of these developmental and integrative frameworks by using multiple art forms to explore and strengthen the full range of sensory engagement and emotional expression with clients. This process, called the intermodal transfer, fosters the experience of "crystallization" (Knill, 1994), in which a client's internal felt sense may find its most authentic expression after being explored through multiple artistic modalities (Rappaport, 2008). In addition, it may facilitate a gradual progression from modes of expression that feel safer for a traumatized client (e.g. projected rather than embodied art forms) to less comfortable areas in which a client may need to engage in order to build new integrative capacity.

Trauma Approaches in Expressive Arts Therapy

Researcher Cathy Malchiodi has written extensively about using expressive arts therapy in her work with traumatized clients (2020, 2022b, 2022a). Malchiodi's approach conceptualizes trauma as a "mind-body experience" and advocates for the use of a neurobiology-informed framework when working with traumatized clients (Malchiodi, 2022b, p. 145). According to Malchiodi, the use of non-verbal and expressive techniques can help clients improve self-regulation, explore and alleviate the body's reactions to traumatic stress, work toward experiencing safety and forming positive attachments, and embody new strengths and an enhanced sense of resilience.

Malchiodi (2020) considers self-regulation to be the "critical competency" that creates the foundation for successful work with traumatized clients, pinpointing the sensory-based nature of the arts as central to this process (p. 165). Introducing simple sensory experiences such as using aromatherapy scents or the tactile sensation of holding an object can be highly effective tools for grounding clients who are experiencing overwhelming distress responses. In addition, sensory experiences can provide an important anchoring element to practices that encourage mindful awareness, such as listening to music or tonal sounds as a meditative practice, focusing on the sensation of the feet on the ground to practice being in the body, or using drawing to visualize the inhale and exhale of the breath.

Co-Regulation, Rhythm, and Attunement

The sensory-based nature of the arts is also powerful in creating opportunities for attunement in the therapeutic process (Kossak, 2009; Malchiodi, 2020). Research on attachment and emotion points to the process of parent-infant co-regulation as being critical to the development of a child's self-regulatory capacities and ability to experience safety (Schoore,

2001; Siegel, 2001). Expressive arts therapists can introduce arts-based co-regulatory interactions to assist traumatized clients with developing and enhancing this capacity (Malchiodi, 2020). Through the introduction of practices that involve mirroring, such as when encouraging clients to follow a therapist's movements or engaging in a joint scribble drawing together, moments of attunement can emerge. In addition, engagement in the arts can also foster a sense of entrainment, or rhythmic synchronization, that supports the co-regulatory process (Kossak, 2009; Malchiodi, 2020).

In expressive arts therapy, rhythmic synchronization can be literal, as when clients engage in shared music making and naturally entrain with the music's rhythm, which can alter their physiological state (Kossak, 2009; Malchiodi, 2020). Kossak's work expands the concept of synchronization to include "a rhythmic flow of energies between self and material, self and sound, self and space, or self and other" (2009, p. 16). Kossak highlights that "the deep connectedness with material," such as how a sculptor relates to the clay or a musician responds to the sound of an instrument, is itself a form of entrainment, contributing to a felt sense of mutual resonance that fosters a greater sense of connection to self and others. This concept is explored in a qualitative study by Diamond & Shrira (2020) with Holocaust survivors, who found that the practice of engaging in the creative process allowed them to experience a sense of attunement:

Holding space of sensitive attunement to subjective inner states, the space of creative engagement emerges as an environment of accurate attunement to the internal life of the creator, where each line, each stroke of the brush, is directed in accordance, synchrony and constant dialog with his or her inner states. The fulfillment, pleasure, and sense of security derived from this seemingly external activity, but in fact, intricate intimate

transaction, may very possibly be explained by the way it touches upon the fundamental formative human need for experiences of being synchronized with and gently directed toward what will bring inner harmony and equilibrium (p. 10-11).

For clients with complex PTSD who may have never known a sense of interpersonal safety, finding this source of synchronization and attunement through engaging in a creative process can be an important pathway toward developing more self-regulatory capacity.

Integration through Bilateral Stimulation

The practice of expressive arts therapy can also be inherently regulating when it makes use of bilateral movement, which can help to integrate the two sides of the brain (Malchiodi, 2020; van der Kolk, 2003). Activities such as full body movement, drumming or playing another instrument that uses both hands, and bilateral drawing can be useful as grounding techniques with clients who are prone to states of hyper- or hypoarousal (Malchiodi, 2020). While bilateral expressive arts approaches have not been formally evaluated by quantitative research (Malchiodi, 2020), there is a growing body of evidence validating the use of bilateral stimulation in EMDR therapy to support trauma healing (Shapiro, 2018).

Bilateral drawing, in which both hands are used to make visual impressions, has been implemented and studied by several art therapists. McNamee (2003, 2006) developed a bilateral drawing protocol based on one introduced by Cartwright (1999, as cited in McNamee 2003), documenting its efficacy in a series of qualitative and mixed-methods studies. In her work she found that using a structured bilateral drawing intervention helped her clients integrate their cognitive awareness with their felt experience (McNamee, 2006). In a single case study by Warson & Warson (2023), movement-focused bilateral drawing was found to be effective in regulating emotions. Elbrecht (2018) has also developed a method that uses bilateral drawing to

access and express areas of somatic distress and to explore movements that can alleviate those areas.

Cultivating Capacity, Cultural Expression, and Resilience

Malchiodi offers a final compelling argument for the role of expressive arts therapy in trauma healing, and that is to provide the opportunity for “restorative embodiment” (Malchiodi, 2022a, para. 11). She defines this as a somatic shift away from focusing on distress to focusing on increasing the body’s capacity to experience positive and pleasurable experiences. In contrast to the idea of the “window of tolerance” our clients hold for withstanding stress (Siegel, 2009, as cited in Malchiodi 2022), Malchiodi encourages the consideration of our clients’ “circle of capacity” as the framework for evaluating trauma healing (Malchiodi, 2022b, p. 146). Engaging in the expressive arts can help our clients expand their circle of capacity through “active participation in novel experiences that reacquaint individuals with curiosity, playfulness, efficacy, and pleasure” (Malchiodi, 2022a, para. 13).

Engaging in creative expression is a cultural, human experience which is often inherently pleasurable. In many cultures throughout the world, practices such as dancing, drumming, singing, and storytelling are used in healing rituals (see Draper-Clarke & Green, 2023; Nyiransekuye, 2011). In Western clinical settings, introducing the use of the arts in therapy can serve to “decenter” traumatic material (Knill et al., 2005, p. 83) and allow the client to connect with their innate creative energy to cultivate greater resilience. This shift in focus may be necessary to make the process of healing from complex PTSD feel sustainable for clients. In addition, therapists can incorporate processes that are culturally relevant to the client, such as using types of music, movement/dance, or artistic mediums that are part of their cultural creative

practices, to make the therapeutic process more approachable and relevant to diverse populations (Malchiodi, 2020).

From Theory to Practice

Gaining a deeper understanding of expressive arts therapy's ability to engage clients on multiple developmental levels and pairing this understanding with my holistic conceptualization of self-regulation, I have been able to engage in responsive therapeutic work that supports my clients as they strive toward more integration. While I feel it would be overly simplistic to suggest a sequence of interventions to use with clients, I have noticed that I often begin with simple exercises that promote nervous system regulation through sensory and kinesthetic attunement. Some examples of these are guiding my client to mirror me as I make slow and simple movements, or engaging in a side-by-side experience of “pen dancing” with my client as we each create a simple continuous line drawing while listening to soothing music. When appropriate, connection can then be made to the client’s internal experience using activities that pair kinesthetic and sensory action with awareness of the breath. I may invite the client to move their arms up as they inhale and release them down as they exhale, mirroring their movements, or instruct the client to draw the motion of their breathing on a piece of paper.

Inviting artistic expressions of a client’s internal felt sense or inviting clients to represent their feelings visually on a body outline can provide a powerful way to help clients strengthen their sense of interception. This can also provide an outlet for the expression of emotions and an opportunity for attachment to be strengthened through the attuned witnessing of the therapist. Through the process of intermodal transfer, these felt sense expressions can then become the basis for higher-level meaning making. An example of this would be engaging in a dramatic dialog with a visual art expression or writing a poem or story that is inspired by a movement

expression. The progression from the initial nonverbal experience to the final verbal expression often results in experiences of insight and an expansion of cognitive awareness in the client.

The above provides one account of how the expressive arts can be used in the context of an individual therapy session to support a client with complex PTSD through the process of self-regulation. In this example, the client is supported through co-regulation and sensorimotor engagement, interoceptive awareness and emotional expression, and eventually through cognitive or symbolic interpretation, mirroring a developmental sequence of processing. Some clients may respond better to a “top down” approach, however, beginning by exploring a story or metaphor as an access point to emotion and the corresponding sensory experience. By remaining present with the client and attuning to our mutual experience, I have found myself beginning to cultivate a sense of “process attunement” that guides me in introducing opportunities for expression that support my clients in strengthening their integrative capacity.

Discussion

The purpose of this study was to synthesize the present research to gain a deeper understanding of the process of self-regulation in clients with complex PTSD and to provide supportive evidence for the use of expressive arts therapy with these clients. The results suggest that engaging in expressive arts therapy can provide valuable opportunities for sensory engagement, co-regulatory attunement, neural integration, and embodied resilience. This literature review does not position itself as empirical evidence but rather represents a preliminary attempt to draw connection between these two areas of research in order to guide future efficacy studies. Its findings support the rationale for the use of expressive arts therapy with those impacted by complex PTSD, identifying specific areas for future empirical investigation.

It is my hope that this work highlights the value of engaging in expressive arts therapy as a primary modality for therapeutic healing, rather than simply an adjunctive or recreational service. In addition, the research suggests that the healing properties inherent in sensory nature of the arts themselves may offer significant benefit to those impacted by complex PTSD. To further explore this, future research could examine the healing impact of engagement in community arts settings as well as therapeutic ones. These valuable resources, which may have a much greater reach on the public than clinical therapy environments, could play an important role in addressing the impacts of trauma on a larger scale.

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