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Safety First: Fostering the Neurological Experience of Safety in Dance/Movement Therapy Sessions for Survivors of Sexual Trauma

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SAFETY FIRST:
FOSTERING THE NEUROLOGICAL EXPERIENCE OF SAFETY IN DANCE/MOVEMENT THERAPY SESSIONS FOR SURVIVORS OF SEXUAL TRAUMA

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Abstract

The purpose of this clinical case study was to explore and describe how a neurological experience of safety was fostered for survivors of sexual trauma in dance/movement therapy sessions at a community-based rape-crisis counseling center. This study focused on how the theories of trauma-informed therapy and dance/movement therapy were applied to clinical practice with survivors of sexual trauma in order to shift them out of trauma-related responses. Reflections on this process were captured via structured and narrative journaling, which was then synthesized by highlighting and interpreting common themes that emerged. Findings indicated that externalizing trauma-related responses using symbolic imagery and movement, orienting to the external present moment, and befriending the body and its internal processes have been shown to promote feelings of safety and connection within the body of survivors. Additional findings revealed that the therapist's attunement and non-verbal containment of survivors' trauma-related responses through the therapeutic movement relationship was a key component in enabling them to navigate through these responses into a felt sense of internal safety. Implications of this study included the importance of engaging survivors in their creative processes to increase their awareness of and shift their relationship to trauma-related responses, as well as the importance and centrality of the therapeutic movement relationship in facilitating a neurological experience of safety.

Acknowledgements

I would first like to honor and recognize survivors of sexual trauma for their resilience, vitality, and perseverance. It was beyond an honor to work alongside them and bear witness to their stories. They have played a tremendous role in helping me become the therapist I am today and the one I hope to be.

Thank you to my professors for preparing me for this work and supporting me through the confusion, self-doubt, and difficult breakthroughs of being an emerging therapist. Thank you for putting your faith in me and helping me to believe that what I have to offer is of value. I could not have possibly had better professors.

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Introduction

Sexual trauma is of the most invasive and heinous experiences that the human body, mind, and spirit can endure. Regrettably, it is far too common. According to the Rape, Abuse and Incest National Network (2016), someone is sexually assaulted every 98 seconds in America. This information is of critical importance for clinicians. Clinicians are most likely going to work with individuals who have survived this atrocious traumatic experience. Additionally, recent research demonstrates that integrating the body in trauma therapy is paramount to healing (Duros & Crowley, 2014; Gray & Porges, 2017; van der Kolk, 2002; van der Kolk, 2015). It is equally as important to first foster an experience of safety for the client before lasting change can occur (Porges, 2017; van der Kolk, 2015). This clinical case study addressed how this occurred in the context of dance/movement therapy sessions. The primary clinical question guiding this study was: How is the neurological experience of safety fostered for survivors of sexual trauma during dance/movement therapy sessions? Secondary questions that were addressed included: How do I know that neurological safety is being activated/experienced? What other components of safety do I bring into the therapy setting? Additionally, because trauma is such a widely studied topic in the field of psychotherapy, broader questions were considered: How can dance/movement therapy be useful for the healing of trauma survivors? What is the importance of using the body in therapy with survivors? How is dance/movement therapy different from other somatic therapies?

Dance/movement therapy sessions were conducted at a community based rape-crisis counseling center. The orientation of the site was highly client-centered and believed in empowering each individual client, which was especially crucial given that power was taken away during the sexual abuse. The agency stressed the importance of trauma-informed therapy,

requiring all employees, interns, and volunteers to undergo a 40-hour rape-crisis training. The site served children, teens, adults, and their non-offending family members. In addition, the site served a high percentage of Latino families, and clients were often bi-lingual or lived in bi-lingual households. Understanding cultural background and how it impacts clients was also necessary for those working with clients. This is important to consider in this clinical case study due to the fact that I am a non-Latino, white woman, and the cultural backgrounds of my clients differed from my own. Being informed of the cultural and familial backgrounds of clients was essential in understanding certain aspects of their trauma, its context, and their unique responses to it.

Along with the positioning of my cultural background, clinical framework was a vital influence on my work with the clients. Dance/movement therapy was the main modality of treatment, but it was used through a humanistic/existential lens with a focus on person-centered counseling. The empowerment of the client was one of the most important factors of this theoretical framework in my therapeutic work. My therapeutic approach also focused on other aspects of this framework, such as: the belief that all people are basically good; the focus on the client's relationship to self, other, the world at large, and spirituality; getting in touch with the authentic self; and the therapist's role in providing a space for the client to explore and see one's self (Ivey, Andrea, & Ivey, 2012). An additional aspect of my approach was trauma-informed therapy. Important factors in this approach included: the awareness of common trauma responses; recognition of the uniqueness of each experience; an understanding of the brain and body connection; and the awareness of triggers and re-traumatization as well as how to reduce and manage these occurrences (van der Kolk, 2015).

Clinical Case Study

Creswell (2013) delineates that a clinical case study identifies a specific case and seeks to gain an in-depth understanding of a certain aspect of it. The case selected was dance/movement therapy with sexual trauma survivors, and I sought to understand how neurological safety was fostered in those sessions. Furthermore, clinical case studies involve real-life situations that cannot be controlled, and they do not entail gathering information from participants as in an experiment. Rather, such a study is done from the observer's perspective and demonstrates how theory is applied to practice (Creswell, 2013; Cruz & Berrol, 2012). Thus, this clinical case study focused on my work with sexual trauma survivors and examined how the research on trauma and the neurological effects on the body was applied to my therapy sessions.

Information was documented on a secured personal laptop via typewritten journal entries that were structured and narrative. The documentation took place in my office at my internship site after sessions. I wrote one entry per week over the course of 8 months. Interpreting my journal entries, which included highlighting and making meaning of common themes that emerged, synthesized information. Weekly on-site supervision with my internship supervisor served as a means of processing this clinical case study, challenging and validating my unfolding understanding of my application of theory into practice. My thesis advisor also served as a consultant during the process of identifying and synthesizing themes that emerged from my journaling.

Ethical Considerations

Protecting my clients' confidentiality was my first and foremost concern. My site had Absolute Privilege, which was the highest level of legal confidentiality for the clients, and I was intentional about ensuring and honoring this throughout my study. Thus, no personal client

information was included in this study. My journals did not include names, ages, or other identifying information and were kept on a secured personal laptop that was on my person, in my office, or stored in my personal residence. Another consideration was my relationship with my clients. I did not want to change the nature of the therapeutic relationship with my clients by asking them to participate in research. I wanted to remain in the role of therapist with my clients. Thus, I chose a clinical case study so that the therapeutic relationship was not disrupted. I wanted to primarily focus on the work that was being done in my dance/movement therapy sessions; therefore, I did not change the structure or focus of the sessions. I held myself accountable to keeping my sessions focused on the clients' needs rather than my study by discussing this in supervision at my internship.

Literature Review

Trauma

According to the Diagnostic and Statistical Manual of Mental Disorders (2013), trauma is defined as a direct or indirect experience of actual or perceived threat to life, which causes pervasive and persistent emotional and biological responses and reactions, even after the event has subsided. The ability to respond to and/or cope with the perceived threat is compromised or overwhelmed (Berceli, 2015; Levine, 2008). This experience is incomprehensible and overwhelming in such a way that it leaves an imprint that affects the person's internal structure and relationship to self and reality (van der Kolk, 2015). While trauma is generally understood as a perceived or real life-threatening experience for the individual who experiences the traumatic event, it is not limited to that definition (Cozolino, 2002; Levine, 2010). How one perceives an experience is unique to each individual and is influenced by countless factors, such as genetics, family history, and exposure to other traumas (Levine, 2008). Thus, trauma is not so much *what* happened, but *how* the individual perceived it and how it has impacted the individual's life.

For the purpose of this study, trauma and the effects will be examined in the context of sexual trauma or sexual abuse. According to the Rape, Abuse and Incest National Network (2016), some experiences of sexual trauma might include: vaginal, anal, and/or oral penetration; inappropriate touch to genitals; being made to touch other's genitals; and/or being forced to witness sexual acts. Survivors of sexual trauma are individuals who have experienced any sexual act that was undesired, forced, or done without informed consent. These experiences have led to pervasive trauma-related symptoms in the survivor.

Effects on the Brain

Due to the intense nature of the perception of the trauma event, trauma has immense

effects on the functions of the brain. The traumatic event or events leave imprints on the brain, altering its chemistry (van der Kolk, 2015). The brain continues to act as if it is under threat, so it functions in that manner in day-to-day life, even in the absence of the stressor (Duros & Crowley, 2014). To really understand how trauma affects an individual, it is important to know what happens to the brain when it is under traumatic stress. Traumatic stress is mediated by the limbic system located in the center of the brain (Rothschild, 2000). The limbic system contains the amygdala, hypothalamus, thalamus, and hippocampus. The thalamus is responsible for taking in sensory information, such as sound, sight, and movement and transmitting that information to the amygdala and the hippocampus (van der Kolk, 2015). The hippocampus is responsible for explicit memory and sequencing of events (Siegel, 1999; van der Kolk, 2015). The amygdala determines if information from the thalamus is a threat to survival, and if it does perceive a threat to life or well-being, it acts as an alarm bell and sends out a signal that the organism is in danger. When the alarm bell is signaled, information processing through the hippocampus is bypassed or compromised, because the system focuses its efforts on survival (van der Kolk, 2015). Then, the hypothalamus is activated and releases hormones to the pituitary gland, which secretes hormones that activate the adrenal gland (Bremmer, 2002). The adrenal gland is responsible for releasing the stress hormones, cortisol and adrenaline, which initiate the whole body to respond in either fight or flight (Duros & Crowley, 2014).

If the fight or flight response fails in the face of a traumatic event, immobilization (the brainstem shut down) occurs. The immobilization response is managed by the brain stem, which signals the body to shut down in order to avoid experiencing further pain (Porges, 2011; van der Kolk, 2015). When the body initiates fight, flight, or freeze, there is less access to the frontal lobe (prefrontal cortex) of the brain. The frontal lobe is responsible for making judgments and

assessments about how to respond to stress (Bremmer, 2002). It is the part of the brain that can make conscious choices and predictions about actions and take in new information to inform those choices. Unfortunately, when the amygdala detects high-level threats to survival, it sounds the alarm before the prefrontal cortex has a chance to process information (Bremmer 2002; van der Kolk, 2015). The brain and body are focused on survival, making it highly difficult for rational thinking to occur or new information to be processed (Homann, 2010).

When an individual faces chronic trauma or the brain does not return to its regular functioning after the traumatic event, the brain remains in trauma response mode (Levine, 2010). The response is implicitly programmed in the brain and body; therefore, any sensory information that was originally associated with the trauma sends the body into fight, flight, or freeze (van der Kolk, 2015). Because the function of the hippocampus was compromised at the time of the trauma, the individual may have no explicit memory of the event or awareness of why a certain response is taking place. The trauma is stored as fragmented sensations that the individual cannot choose in the instant moment they occur (van der Kolk, 2002). Additionally, the prefrontal cortex is bypassed when the limbic system is in trauma-response mode, making it even more difficult for the individual to understand the sensory experience based in the nervous system's response (Bremmer, 2002; van der Kolk, 2015). This can be a frightening experience. The body can feel like unknown territory, heightening the feeling of fear and threat (Duros & Crowley, 2014).

Effects on the Autonomic Nervous System

It is equally important to understand how trauma affects the autonomic nervous system as it is to understand how it affects the brain, because the functions of the brain are inseparable from the nervous system. According to Rothschild (2000), "the limbic system has an intimate

relationship with the autonomic nervous system (ANS)" (p. 8). The ANS is comprised of two branches called the parasympathetic nervous system (PNS) and the sympathetic nervous system (SNS). The SNS is what essentially activates the fight or flight response. The PNS connects to the vagus nerve, which contains two branches called the ventral vagal complex (VVC) and the dorsal vagal complex (DVC). The VVC is what enables the body to slow down and/or feel a sense of calm in order to participate in social engagement and connection (Duros & Crowley, 2014; Porges, 2011). In the case of extreme and/or chronic stress, immobilization may occur, which occurs in the DVC of the PNS (Porges, 2011).

When the limbic system detects a threat and goes into survival mode, it activates the SNS and prepares the body for fight or flight by increasing heart rate, respiration, and oxygen to the blood, organs, and muscles (Rothschild, 2000). Conversely, it may send the nervous system into freeze response and activate the DVC, causing the heart rate to rapidly slow down and muscles to become passive (Porges, 2011). When fight, flight, or freeze are engaged, the ventral vagal branch of the vagus nerve, which is the largest nerve of the ANS, is disengaged (Porges, 2011). The vagus nerve connects the brain to the major organs of the body, such as the viscera, and enables them to slow down (van der Kolk, 2015). If the vagus nerve does not signal to the brain that the organism is no longer in danger, "the body continues to remain in a…short circuit loop with the brain continuing to believe it is still in danger" (Berceli, 2015, p. 28). Therefore, this keeps the brain signaling to the nervous system to keep the body in a state of alert. Just as the brain gets locked in the trauma-response, so does the nervous system and body (Bremmer, 2002). This alteration of the brain and nervous system plays a significant role in an individual's capacity to experience an internal sense of safety.

Effects on the Experience of Safety

For the purpose of this study, safety is defined as an internal, visceral experience of stability, familiarity, and security that enables an individual to be connected to self and others, take in new experiences, and feel pleasurable sensations (van der Kolk, 2002). Moreover, it is an internal state in which the body's neurological survival defenses are not engaged (Porges, 2011; van der Kolk, 2015). The three major aspects of internal safety include neuroception, social connection to others, and emotional regulation.

Neuroception. Porges (2004) coined the term neuroception, which describes the process of how the nervous system perceives something as either safe or threatening. This system picks up cues and sensory information from the environment and people, such as familiarity, facial expressions, vocal tones, sounds, and tension levels. When the processes within the nervous system detect sensory information as safe, it inhibits defensive reactions and activates the VVC of the PNS for pro-social engagement (Duros & Crowley, 2014; Porges, 2011). When an individual is exposed to an event that induces fear or terror, their reaction to that exposure is what catalyzes the cascade of communication between the brain, nervous system, and stress hormones. This caustic communication often continues long after the event has subsided. The ability to experience safety and a calm nervous system has been hijacked by the survival mechanism (van der Kolk, 2015). Porges (2011) describes this as "faulty neuroception" (pg. 13). Trauma causes this system to become dysregulated in such a way that it has difficulty distinguishing between internal and external threats, thus further increasing the feeling of danger (van der Kolk, 2002). The more this cycle occurs, the more challenging it is to recover a healthy capacity to decipher threat from safety as the individual no longer knows on a visceral level whether to stay or to run (van der Kolk, 2015).

Social connection. When the nervous system is impaired and has difficulty detecting threat from safety, this has severe adverse effects on an individual's ability for social connection. This altered nervous system can make the world feel like a crowd of potentially dangerous strangers (van der Kolk, 2015). Trauma "displaces social engagement behaviors with defensive reactions" (Porges, 2017). Thus, relationships no longer feel like safe havens for connection and relief, but threats to one's security and well-being. This is extremely difficult for the individual who has experienced trauma, because the human brain is structured and organized around social connection (Siegel, 1999). Being able to experience safety in connecting with others is paramount to mental health (van der Kolk, 2015). Connection to others, in itself, is how humans experience safety (Levine, 2008; Porges, 2011). The brain is developed from infancy to look to others for physiological feedback to notify the brain and body if it is safe to relax (Siegel, 2012). Without the ability to accurately discern who is safe and who is threatening, the individual does not know when to put survival defenses down, thus being unable to experience the safety that comes naturally from connecting to other humans (van der Kolk, 2015). This further alienates the individual, heightening the sense of fear and threat, which can ultimately lead to immobilization. Not only does the external world feel frightening, but also the internal world. The individual may feel betrayed by his or her own internal experience.

Emotional regulation. Emotional regulation is the ability to acknowledge, assess, and modulate states of internal arousal that occur within the body/mind in order to return to a state of balance and connection (Betty, 2013; Levine, 2010). Trauma dysregulates the system in such a way that it is challenging to decipher safety from threat, internal from external, and past from present. At the time of the traumatic event or events, the functioning of the hippocampus is compromised so that emotions and sensations were not stored in the proper context of the past

(Cozolino, 2002). The memory is not stored in a way that indicates that the traumatic event had a beginning and an end, and that it is no longer occurring in the present. Thus, when the thalamus and amygdala detect something that is trauma-related, the body experiences a wave of intense emotional sensations without the awareness that the trauma is in the past (Berceli, 2015). These sensations communicate to the individual that the trauma is still occurring. The nervous system activates the body for fight, flight, or freeze. This happens rapidly and automatically, causing the individual to feel unsafe in his or her own body (Betty, 2013). The person may be aware that he or she is in a safe place and not exposed to danger, but the body screams otherwise (Duros & Crowley, 2014). In other cases, individuals may not be aware that they are in a safe place if they are experiencing a flashback or are dissociated from present, external reality. These emotional states of arousal provoke more fear, making them difficult to observe and control (Levine, 2008; van der Kolk, 2015).

The ability to regulate emotions and sensations is what allows an individual to feel at home in the container of one's own body (Levine, 2010). However, since trauma-related emotions and sensations were stored as fragments during the trauma, they feel like unwanted strangers. The emotions are not yet stored as part of the self-concept in a conscious, cohesive narrative (Siegel, 2012). Moreover, being able to recognize these trauma-related emotions as finite sensations that can shift with attention can offer the individual a sense of ownership and safety within the body (van der Kolk, 2002). The body will feel less like a house of dangerous strangers and more like familiar territory that can be trusted and navigated, rather than fought against (Berceli, 2015; van der Kolk, 2015).

Dance/Movement Therapy with Trauma Survivors

For the purpose of this study, dance/movement therapy is understood as creative,

movement-based therapy that "encourages observation and tracking of internal phenomena through body awareness" (Hindi, 2012). While there are numerous studies that include the use of dance/movement therapy with trauma survivors, there are specific studies that recognize its ability to help foster these three components of safety with clients (Betty, 2013; Harris, 2007; Harris, 2009; Harvey, 1995; Ho, 2015; Homann, 2010; Kornblum & Halsten, 2006; Levine & Land, 2016; Mills & Daniluk, 2002; Pierce, 2014; Winkler, 2013). Dance/movement therapists Kalila Homman (2010) and April Betty (2013) both incorporated an understanding of the work of Porges and the neurological processes that occur in DMT. Specifically, Homann (2010) discussed how DMT interventions that focus on sensory awareness could have a positive impact on the nervous system, helping clients to feel safe in their bodies and recalibrate neuroception. She delineated how DMT encourages individuals to take an internal focus on the sensations of the body to further physiological awareness. When there was increased awareness of the body and its processes, there was greater ability to regulate trauma-related sensations and emotions (Homann, 2010). Furthermore, Homann (2010) explained that movement exploration facilitated awareness to emotional experiences and the dynamic relationship between emotions and the body. Individuals could then discover new ways to relate to these emotional processes in the body and gain a sense of control and regulation over their internal experiences.

Betty's (2013) work focused explicitly on emotional regulation with traumatized children. Betty (2013) stated that DMT provides attuned connections and body-based skills that shift internal states, which helps clients feel safe and emotionally regulated. She drew a close link between safety and emotional regulation, stating that one cannot happen without the other. Betty (2013) emphasized that safety and threat are detected via non-verbal cues, thus making DMT a fitting therapeutic approach for establishing a sense of safety. DMT uses the body to

communicate and reflect what an individual is presenting and can use these non-verbal movements as inroads to regulate trauma-states (Betty, 2013).

In a study by Mills and Daniluk (2002), dance/movement therapy helped female survivors of child sexual abuse intimately reconnect to their bodies by becoming conscious of the physical sensations that occur. With increased awareness and intimacy with their own bodies, survivors were able to utilize "their bodies to anchor themselves in the safety of the present time and place" when experiencing or processing trauma-related emotions and sensations, which facilitated emotional regulation (p. 80). Dance/movement therapist, Pierce (2014) described how DMT established a felt sense of safety through social connection in the therapeutic movement relationship. The therapist's attunement to the movement of the client interactively regulated trauma states. Pierce (2014) also emphasized how DMT's use of creative expression aids survivors in "their effort to digest the physical and emotional toll of their traumatic histories" (p. 10). Moreover, the use of creativity helped survivors to regulate and manage intense trauma-related emotions and sensations that arose in the body's nervous system.

This research lays a crucial foundation for clinical work with survivors of sexual trauma, and presents a strong case for the use of DMT in the establishment of the neurological experience of safety. In the literature, safety is often addressed as a secondary focal point rather than the primary topic. This clinical case study addressed that gap and focused on the evidence of how safety is fostered for survivors of sexual trauma from a body-based, creative arts therapy framework.

Description of Client and Case

The focus of this study was on the trauma-informed therapeutic work that I conducted with survivors of sexual trauma, ranging from children to adult, at my internship site. These clients attended individual sessions once a week, ranging from two to nine months, with the occasional family session if the client desired. Presenting issues included a range of trauma-related symptoms and behaviors, including: fear, anxiety, isolation, difficulty managing and/or expressing anger, impulsivity, outbursts, depressed mood, difficulty trusting others, difficulty communicating with others, lack of assertiveness, passivity, flashbacks, nightmares, feeling as if they were re-experiencing traumatic emotions, and intrusive memories and thoughts. No identifying information is included in this study.

The structures of the sessions were improvisational and exploratory, with the content primarily coming from the clients. A verbal check-in at the beginning informed the direction of the session. A flexible plan for session was always prepared beforehand, but was only utilized if it would be beneficial for the client. Props and/or toys were always available during sessions to enhance the therapeutic process if needed.

If the client was a child, I had consistent contact with the caregivers in order to provide additional support and to communicate any noteworthy behavioral changes. Likewise, caregivers would inform me of marked behavioral changes, whether positive or negative, that occurred at home or school. Therapeutic guidance and resources were given to caregivers when needed to promote consistency between therapy and the child's home environment. Responsiveness to therapeutic advice varied among families, as some caregivers implemented new strategies to improve family support to the child and other caregivers made minimal changes to the home and school environments.

Case Discussion and Conclusions

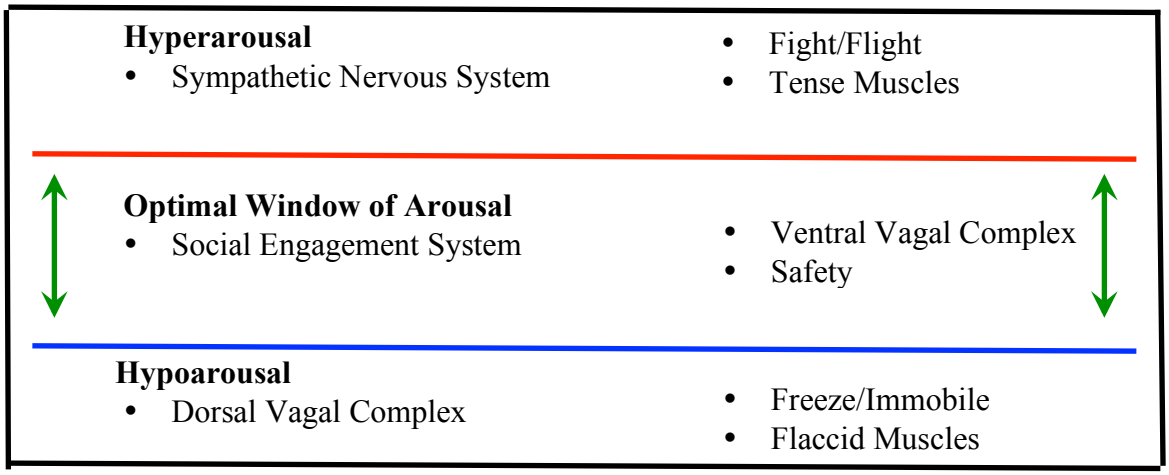
This section delineates how trauma responses commonly manifested in clients during dance/movement therapy session as revealed through the journal entries. Subsequently, it discusses what trauma theory-informed interventions were implemented in order to foster a neurological experience of safety and clients' responses to those interventions. Along with the efficacy of interventions, this section examines the centrality of the therapeutic movement relationship and the necessary characteristics of a trauma therapist.

Trauma Responses

Trauma responses that occurred in session were characterized by hyperarousal and hypoarousal of the nervous system. Hyperarousal is mediated by the sympathetic nervous system and includes fight and flight responses. Hyporarousal is mediated by the DVC, in which the body immobilizes, shuts down, or freezes. Figure 1, adapted from Homayoun (2017) and Gray and Porges (2017), depicts these states of arousal and the neurological and physiological components of each state.

Figure 1

States of Arousal



Hyperarousal. One of the components of hyperarousal observed during DMT sessions was emotional dysregulation. This was portrayed in various ways including the re-experiencing of fear that was associated with the traumatic event, sudden onsets of panic, emotional flooding, fits of rage, and marked changes in speech, such as tone, speed and clarity. Physical activation was another component of hyperarousal that manifested in clients' responses. In the context of the session, this was evidenced by disorganized movement, rapid or shallow breathing, muscle tension, aggressive outbursts such as hitting and throwing, restlessness, and frequent shifting of weight. These physical responses were frequently coupled with emotional dysregulation. However, there were occasions in which a client would exhibit physical activation, but appear emotionally disconnected.

Hypoarousal. Evidence of hypoarousal included emotional flatness and physical passivity, reflecting the activation of the dorsal vagal complex and a disengaged ventral vagal complex. Emotional flatness was characterized by emotional and social disconnections as well as difficulty identifying and/or communicating any emotions. Clients were either unable to find words to describe how they were feeling or gave no emotional response. This generally manifested as an expressionless face with disengaged facial muscles, flat affect, one-word answers, minimal responsiveness to questions or interactions, and lack of appropriate social connection given the time spent together. When a client presented with physical passivity in DMT sessions, this was evidenced by a lack of core engagement as well as disconnection from the body. Even in the midst of a movement activity, clients would appear to be limp, fatigued, or physically disengaged. The clients seemed to lack awareness of or connection to the parts of their bodies.

Interventions to Establish Safety

Symbolic externalization of trauma responses. Externalization of trauma-related responses included the use of props and/or movement as representations of trauma-related emotions or memories. Instead of these responses occurring solely inside the body as an abstract experience, the client would externalize the emotion, image, or sensation using props or a representative movement or gesture. By working with the externalized symbol, clients began to safely and creatively explore movement around these responses. As a result, the clients could relate to these responses in new and different ways. This intervention helped clients shift the neural patterns underlying fear, rigidity, and disengagement to patterns of creativity, curiosity, and empowerment over their responses. Engaging in creative movement with the body supported neuroplasticity, as movement enables neural pathways to be altered and new connections to be established and strengthened (Siegel, 2012). The creation of these new neural pathways allowed the client to begin the process of re-patterning trauma-responses in the brain and nervous system in the body (Hindi, 2012; Siegel, 2012). Moreover, engaging in creative movement and re-patterning responses to traumatic stimuli facilitated in recalibrating neuroception. Since the nervous system was able to inhibit defensive survival responses, clients had greater ability to detect that the environment was safe rather than threatening (Porges, 2011). Likewise, this re-patterning of responses was essential to emotional regulation, which is another key component of experiencing safety. Due to the use of symbolic externalization, clients were able to tolerate the trauma-related emotions and sensations in the body and begin to identify what they were, rather than feeling threatened and strengthening neural patterns of fight, flight, or freeze. Simply being able to name feelings and sensations helped to shift them into more regulated states (Levine & Land, 2016).

Additionally, the use of symbolic externalization through movement supported clients in expelling the traumatic energy held in the nervous system, which was unable to occur directly after the traumatic events (Levine, 2008). The ability to move and make an active choice to "protect oneself is a critical factor in determining whether or not a horrible experience will leave long-lasting scars" (van der Kolk, 2015, p. 55). Thus, it was important to create these new responses through movements if they could not occur at the time of the event due to physical restraints, circumstances, or power differentials. Clients were given the opportunity and space to expel this traumatic energy in safe and healthy ways, thus giving them a sense of power and control over their experiences. Engaging in new responses in which the client was in an active role interrupted the feedback loop of threat between the body and brain. The vagus nerve, connecting the main organs of the body to the brain, is the essential component of this feedback loop (Porges, 2011). Thus, when clients no longer felt threatened in their bodies, it sent the neural message to their brains that they were safe, supporting accurate neuroception.

External orientation. External orientation was used to orient clients to the present moment in the immediate, external environment. This was often accomplished through the use of tactile props or five-sense perception. During sessions clients would often become overwhelmed by trauma-related responses and needed a physical sense of stability and grounding. According to van der Kolk (2015), grounding is "using sensory awareness to acknowledge the external and/or internal environment" (p. 70). Props, such as large pillows, scarves, and toys were used as an anchor to the present sensory experience and provided a sense of external safety and comfort. On several occasions, this meant physically building a safe space in the therapy room with objects such as large pillows, tables, and blankets.

Furthermore, clients were invited to use their five senses to orient to the present environment around them in order to signal to the limbic system that the trauma was not occurring in that moment. Clients were often invited to notice the textures, colors, and shapes in the room, as well as the sounds around them. Other sensory-oriented interventions included holding or touching a soft prop and engaging with it to stimulate tactile sensory awareness. They were able to experience the safety and stability of the therapy room, which facilitated the minimization of defensive responses. Being able to feel safe in the same room every week was a significant building block in being able to detect safety in themselves and others. This ability to more accurately detect safety could then be transferred outside the therapy setting. This re-orientation to a non-threatening, present environment gave the client the opportunity to move past learned fears and recalibrate neuroception (Hindi, 2012; Porges, 2011). As stated by van der Kolk (2015), "being anchored in the present while revisiting trauma opens the possibility of deeply knowing that the terrible events belong in the past" (p. 70). Present moment connection in a safe environment signals to the amygdala that the danger is not occurring.

Befriending the Body.

Interoception. Interoception is the awareness "of shifts in internal bodily states that influence…affective arousal" (Siegel, 2012, p. A1-42). Interoceptive information "is received from inside the body, such as muscle tension and tingling" (Hindi, 2012). Additionally, interoception is shown to have connections to the amygdala, a critical component of the brain's threat detection system. Thus, tracking internal stimuli supported response flexibility of the amygdala and the nervous system's perception of threat (Hindi, 2012). Befriending the body included interventions that enabled clients to increase interoception by observing and tracking internal sensations and other experiences of the body. As trauma often left the nervous system in

a caustic feedback loop, drawing conscious awareness to this process could activate the prefrontal cortex of the brain, which modulated "the hardwired automatic reactions preprogrammed in the emotional brain" (van der Kolk, 2015, p. 62). Clients were invited to notice sensations as they occurred and identify their qualities and where they were experienced in the body (Levine, 2008). For example, clients were asked to identify temperature, intensity, and any imagery associated with these sensations. This awareness of interoceptive sensations correlated "to one's ability to experience a range of emotions and feel efficacy in navigating those emotions" (Hindi, 2012 p. 130). In tending to internal sensations, clients gained access to a greater repertoire of emotion and increased familiarity with their internal emotional experiences. Being able to navigate through difficult emotions and sensations in the body was fundamental to clients' capacity to regulate trauma-related emotions (Homann, 2010). Emotions became less threatening as clients began to develop curiosity for their internal processes. Equally, the mere ability to feel, recognize, and identify what is occurring internally is "the first step to recovery" (van der Kolk, 2015, p. 68).

Breath. Befriending the body also included interventions that connected clients to their breath. Trauma-related responses in DMT sessions were often evidenced by a lack of core and breath engagement, thus focusing on the very act of breathing in a way that was comfortable to the client decreased the intensity of responses. Inviting clients to connect to and become familiar with the experience of breathing allowed them to slow down when becoming overwhelmed by trauma-related emotions (Homann, 2010). For some clients, engaging with breath was easy and comfortable, so they were able to participate in deep breathing exercises for a few minutes at a time. For other clients, short and simple breath techniques were sporadically practiced throughout the session, as extended focus on deep breathing was difficult. Connecting to the

inner experience of breathing acted as brakes when they started to feel dysregulated, even if it was for a short moment (Levine, 2008). Regulating emotional responses through breath activated and engaged the autonomic nervous system, thus enabling its recalibration (van der Kolk, 2015).

Consequently, breathing supports the ANS in signaling to the brain and body that the individual is not under threat. More specifically, when slowly exhaling one is activating the calming effects of the ventral vagal complex of the vagus nerve, "which functions as the 'enabler' of our interactive social engagement system" (Gray & Porges, 2017, p. 114). Not only did engaging clients in breathing exercises help to regulate emotions, it enabled them to better experience social connection. As clients felt less hypervigilant in their own bodies, they were able to participate in the therapeutic movement relationship through play, moving together, and/or verbal expression (Gray & Porges, 2017). Since the survival responses fight, flight, and freeze changed breathing-patterns and how one interacts with the environment, using the breath in therapy was paramount to recovering a sense of stability and grounding in the body as it decreased heart rate and activated the vagus nerve (Betty, 2013; Porges, 2011). When clients felt a greater sense of safety, ease, and connection to their own bodies, they were more readily able to participate in relationship.

Body awareness. Another aspect of befriending the body during the DMT sessions included body awareness exercises and interventions. Clients often appeared or reported feeling disconnected, unaware, or uncomfortable with their bodies. Body awareness exercises allowed clients to identify and claim ownership over individual parts of the body, helping them to feel a sense of control and safety (Levine, 2008; Mills & Daniluc, 2002). Claiming their body as their own also created a boundary between self and the environment; the body was a safe haven (Levine, 2008). When clients had a deeper understanding of and connection to their body as an

integrated whole apart from the external world, this facilitated a greater sense of feeling "more at home in their own nervous system" (Siegel, 2012, p. 14-6). Conclusively, clients were able to utilize their bodies in the processing of trauma-related responses when they felt integrated and connected to them. When clients recognized that the body was an organism that worked on their behalf and contained their experiences, it became a tool of creative healing. For example, clients could use skills such as self-holding of certain body parts to anchor themselves into the present experience of their bodies as they underwent difficult emotions and sensations. This facilitated emotional regulation as the body was utilized as a form of self-support (Betty, 2013).

Therapeutic movement relationship. The therapist's role in fostering safety surfaced as a point of great significance in sessions. The therapeutic movement relationship is defined as the following:

> A shared presence of body, mind, and spirit between the dance/movement therapist and client where healing occurs within the safe containment of a creative collaboration, and results in a resonance. Rooted in the tenets of humanism, it is born out of one's ability to kinesthetically attune and respond to the implicit and explicit movements of another informed by knowledge of one's own body sensations and movements as well as continual observation and assessment of the client's movement (Young, 2017, p. 104).

The centrality of attunement to the therapeutic movement relationship speaks to the importance of the therapist's ability to attune both verbally and physically as a critical component in the reflection and regulation of trauma-related responses as well as fostering social connection (Betty, 2013; van der Kolk, 2015). Moreover, it was the emphasis on social connection and relationship that was indispensable in fostering safety with those who have experienced interpersonal trauma (Gray, 2001). This social connection occurred in various forms, which

often shared common denominators including mirroring, attunement, kinesthetic empathy, and empathic reflection.

Mirroring is "witnessing and reflecting the nonverbal expression of the client" (Gray & Porges, 2017, p. 115). This is usually done by joining in the movements of clients and capturing their essence in a shared experience. Attunement is the basis for healthy attachment and social connection (Gray & Porges, 2017; Homann, 2010; Siegel, 2012; van der Kolk, 2015). Likewise, attunement refers to the ability to focus on the internal states of another in a way that makes that individual feel seen and acknowledged (Homann, 2010; Siegel, 2012). Kinesthetic empathy, a term coined by Marian Chace, is the "nonverbal somatic expression of empathy between a client and a therapist" (Gray & Porges, 2017, p. 115). In other words, it is the therapist's ability to embody the client's experience in order to convey understanding and compassion. Empathic reflection is "a therapist's reflection of the most poignant or vivid aspects" of clients' emotional, physiological, and physical responses and behaviors (Downey, 2016, p. 24). The therapist not only acts as a witness to their experiences, but a reflective sounding board to help clients gain deeper awareness of themselves and their emotional processes.

While engaging in mirroring and attunement with clients in DMT sessions, I was able to sense in my own body when clients were experiencing physiological state changes. This ability to mirror clients' emotional and neurological states is a result of mirror neurons, which "enable us to simulate the internal states of others" (Siegel, 2012, p. 19-3). Because of this capability to feel another's internal state, I was able to kinesthetically attune to cues of clients' hyper or hypo arousal and sense a shift in my own nervous system as a result of the bidirectional feedback of the therapeutic movement relationship. When I recognized certain trauma responses in clients and received signals from my own body, I would empathically reflect this to the client to ensure

that I was accurate in my assessment and work to interactively shift clients' internal states using my own body. Some of the sensations I experienced in my body that indicated a client was experiencing a trauma-related response included vibrations in my core, tension in my muscles, holding of breath or lack of connection to breath, physical discomfort and uneasiness, physical sensations of heat in my face or core, and difficulty feeling grounded or stable as evidenced by frequent shifting of weight.

Attuning to the experiences of the clients and physically reflecting trauma responses through mirroring and/or moving together allowed them to feel seen, validated, and socially connected. In mirroring and empathically reflecting clients' movement back to them, I became the holder and witness of their experiences (Gray, 2001). This shared process frequently involved the use of kinesthetic empathy and empathic reflection to communicate understanding of clients' experience and then gradually meeting the clients' activated state with a stable, regulated state reflected through my tone of voice, posture, and movement (Betty, 2013). This occasionally included verbal validation and communication of safety and stability, as well as the embodiment of it. Ensuring that my vocal tone was prosodic, my body was relaxed, and my facial muscles were not cueing defensive responses was critical in moments when clients became hyperaroused and physically activated (Porges, 2011). It was imperative to kinesthetically signal to the clients that this was a safe relationship.

Along with interventions that mirrored and empathically reflected clients' emotions and experiences, alternative ways of expressing their emotions were offered in order to re-pattern neurological responses to trauma-related stimuli. I offered the use of movement, props, art, or verbal expression. For example, if a client was having great difficulty choosing, or was too hijacked to use decision-making, I would attune to the needs of the client and offer a new

expression through the use of my own body and movement. At times, this meant taking deep breaths while holding the hand of a client or changing the speed and intensity of my movement. This allowed for co-regulation, which developmentally precedes and assists with self-regulation (Gray & Porges, 2017).

Using my own body, even small gestures of the face, can send the message to the client, *you are safe with me.* Being mindful and aware of position in relation to client, tension in face and voice, and comfortability within the body can all communicate explicit and/or implicit messages to the nervous systems of clients (Betty, 2013). The therapeutic movement relationship sends these messages all the time through the use of attunement, mirroring, kinesthetic empathy, and empathic reflection. Using the therapeutic movement relationship is crucial in supporting the recalibration of faulty neuroception and building a sense of safety and trust through activating the social engagement system in the containment of attuned relationship (Porges, 2011).

Another crucial way that trust and safety were built in the therapeutic relationship was by meeting clients at their levels of readiness to engage in the therapy process. In other words, it was important to allow sessions to unfold at the pace of the client. Before trying a new intervention or collaborating with the client in movement, I would ask clients for their permission to do so. Asking them what they would prefer and how they want the session to go enabled them to feel a sense of empowerment and control over the events in therapy. Likewise, asking for permission helped them to see that I was never going to take advantage of them or make them do something that made them feel unsafe. They were able to experience healthy social connection in which there is shared responsibility and power.

Responses to Interventions

When clients experienced trauma-related emotions and sensations and trauma-informed interventions were implemented, positive shifts in affect and physiological states occurred. These were reflected emotionally, physically, and cognitively. Emotional responses to these interventions included the following: a sense of ownership over emotion; reported feelings of freedom, joy, authenticity, and energy; and positive social engagement. Physical responses included a release of physical tensions, greater access to breath, decreased muscle tension in the face, brightness of eyes, smiling, decreased sense of physical dissociation, and increased physical expression through movement. Cognitive responses included increased verbal expression and articulation, increased ability to focus, and increased capability to be oriented to present reality. These responses were congruent with a functional social engagement system, as clients were no longer out of the optimal window of arousal (Porges, 2011, Siegel, 2012). When defensive systems are inhibited and an individual is operating from a regulated ANS, positive social engagement, creative play, and emotional expression can occur (Porges, 2017).

In addition to my observations of the clients' shifts in states, I would notice significant transformations in my body, mind, and spirit. When I was able to witness clients shift from a place of fear to a place of safety and freedom, a deep sense of joy and purpose would occur. My nervous system resonated with theirs as I attuned to their internal states (Siegel, 2012). I could sense that a neurological experience of safety had been fostered when I felt an openness of my chest, a greater ability to breathe deeply, tingling sensations in my face, alignment and verticality of my spine, and connection to the core of my body. As clients' behaviors indicated that their social engagement systems were activated, I sensed shifts in my own internal states and experienced greater social connection with the clients as a result.

Therapist Skills

Physical. Being a therapist for those who have experienced unforeseen physical trauma requires a great deal of physical awareness and skill. Due to the hyperaroused state of the clients, it could be easy to become physically overwhelmed. Therapists may notice that they are experiencing somatic countertransference, as they are having subjective, embodied responses in reaction to clients' trauma related emotions (Pallaro, 1995). Thus, it is in the best interest of the client for the therapist to be aware of personal physical responses and find grounding and stability in one's own body. There is a wide range of ways to do this and it is dependent on the individual therapist and the relationship to the client.

Oscillating between the neurological experience of the client and the experiences of my own body was a method used to remain stable and aware of the client's shifts in states. In order to return to a physiological state of stability and present-moment orientation, I often utilized breathing techniques. It was my responsibility to be aware of arousal states and thus implement skills to remain calm in the presence of hyper or hypoaroused clients. This typically meant taking a few deep breaths while I was listening to or moving with clients who were experiencing an overwhelming trauma-response. Another skill used was grounding through bringing the awareness back into the present sensations of my body, such as verticality of the spine, connection to the floor through weight sensing, and engagement of core muscles.

Emotional. Similar to the physical states of clients, it was important to remain differentiated from their emotional states. It could be challenging to witness intense and heavy emotional states without also being hijacked by those emotions or wanting to immediately remedy clients of their suffering, thus dismissing their pain. Consequently, the goal was to be able to mirror and resonate the emotions of the clients, while resisting being fused with them

(Siegel, 2012; van der Kolk, 2015). It was important to allow the expression of pain to bring validity to their experiences, while also remaining the stable witness-observer who was separate from their current emotional experiences. This capacity to differentiate the self was largely due to self-awareness (Siegel, 2012). It involved deeply knowing my own emotional responses and emotional pain, while being open and compassionate toward those experiences. Having self-awareness enabled me to decipher what emotions were mine and what were the clients', so that the relationship could offer a safe haven for them as they traversed through their pain. Moreover, having awareness of my own emotions allowed me to have deeper empathy for the emotions and responses of clients, enabling collaboration with them as they navigated through their own emotional experiences.

Summary and Future Implications

The inseparable connection between safety and the therapeutic movement relationship that was revealed through this clinical case study suggests that the therapeutic movement relationship is an essential component in fostering safety. Regardless of whether clients first needed to focus on internal states of the body or external orientation, the therapeutic movement relationship was present. Whether clients moved frequently and expressively or scarcely and timidly, the therapeutic movement relationship was the common denominator. Without it, healing might be nearly impossible. This is largely due to the fact that it is in the context of human relationship that both sexual trauma and healing occur (van der Kolk, 2015). Interpersonal trauma has profound effects on an individual's attachment system. This attachment system is the way in which individuals experience all relationships, which stems from the non-verbal relationship between child and caregiver (Siegel, 2012). It is this attachment that determines if an individual perceives the world and relationships as generally safe or dangerous (Gray & Porges, 2017; Porges, 2011; Siegel, 2012; van der Kolk, 2015). The therapeutic movement relationship provides the framework for a secure attachment in which the individual feels attuned to and safe. It is is the largest agent of healing in the context of social connection for trauma survivors. Social connection provided through the therapeutic movement relationship offers and supports co-regulation of the nervous system within the body, enabling feelings of safety (Porges, 2017). Dance/movement therapy enhances social connection and deepens the experience of safety by using the body. Clients are not only seen and heard verbally, but also physically. This is essential in trauma work because survivors often have difficulty verbalizing their experiences (Harris, 2009). Thus, the therapeutic movement relationship offers another

layer of connection and security. It communicates, “I am with you in my mind; I am with you in my body.”

Another point that developed throughout the study was the need to understand how dance/movement therapy is different from other somatic psychologies and therapies. In researching body-based therapies, such as somatic experiencing, I noticed a great deal of overlap. I began to question whether I was doing dance/movement therapy or simply somatic therapy. However, I realized a crucial component that set dance/movement therapy apart from other body-based therapies: creativity. Not only does DMT focus on the internal and external processes of the body in movement, it also encourages the creative expression of clients. Clients were able to bring awareness to the body and trauma’s impact through creative means, even if it was primarily through the use of symbolism (Harris, 2009). Examples include the creation of a story, the use of props, authentic movement, dance parties, and the embodiment of animals. The creative expression was left wholly to the client, as well as creatively collaborating with the therapist. This facilitated the clients’ learning about their bodies and empowered them to take ownership over their narratives. In fact, it was the use of creativity that gave the clients a sense of empowerment. They were the authors, directors, dancers, and choreographers in their stories. They could use the same body that was wounded as their creative source of healing (Gray, 2001; Harris, 2009). This is the work of dance/movement therapy with survivors of trauma: to collaboratively and creatively reconnect survivors with their bodies in a way that helps them to feel safe and at home.

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