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# Obsessive Compulsive Disorder and Posttraumatic Stress Disorder in Adults: Analysis of Their Relationship in Treatment and How Dance Movement Therapy Can Play a Role

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Obsessive Compulsive Disorder and Posttraumatic Stress Disorder in Adults: Analysis of Their  
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Capstone Thesis

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### Abstract

The relationship between Obsessive Compulsive Disorder and Posttraumatic Stress Disorder can be dynamic and challenging within treatment when the content of the fear for each disorder is intertwined. To explore the nature of this clinical relationship, a dance movement therapy method was created and implemented at a residential psychiatric facility for treatment-resistant Obsessive Compulsive Disorder. Dance movement therapy was used to examine overlapping symptomology, treatment approaches, and potential benefits in treatment outcomes. Additionally, the research addressed the promotion of bodily awareness, integration of emotional and physical states, a decrease in hyperarousal and anxiety states, and an increase in openness and safety for a given individual with the comorbid diagnosis in order to promote a body-based approach to treatment. Implications for further clinical applications of dance movement therapy and a somatic lens in treatment was explored.

*Key words:* Obsessive compulsive disorder; posttraumatic stress disorder; comorbidity; dance movement therapy; body-based therapy

Obsessive Compulsive Disorder and Posttraumatic Stress Disorder in Adults: Analysis of Their Relationship in Treatment and How Dance Movement Therapy Can Play a Role

**Introduction**

Obsessive-Compulsive Disorder (OCD) is a psychological disorder that is characterized by obsessions, which are intrusive and repetitive thoughts; as well as compulsions, which are mental or physical acts and behaviors intended to neutralize or potentially lessen discomfort due to obsessions (American Psychiatric Association, 2013). Growing research into treatment-resistant OCD has pointed to a potential relationship with Posttraumatic Stress Disorder (PTSD), specifically in regard to etiology of the psychopathology, symptomology, treatment approaches, and outcomes (De Silva & Marks, 1999; Gershuny, Baer, Radomsky, Wilson, & Jenike, 2003). PTSD is a psychological disorder characterized by experiencing or witnessing a threatened death, serious injury, or sexual violence and the presence of intrusion symptoms and intense psychological distress following (American Psychiatric Association, 2013). At present, research suggests that the comorbidity of the two disorders could exacerbate symptoms experienced as well as potentially negatively affect treatment outcomes should an individual's trauma experience directly relate to the function of their OCD (Gershuny, et al., 2003). Specifically, when the content of an individual's fear structure as it relates to OCD is directly connected to their trauma, it is challenging to separate the content of the fear as it corresponds to either disorder. In relation to treatment, specifically exposure therapy, an individual and their treatment team may face challenges in understanding how and when their OCD rituals might alternate with PTSD symptoms, with decreases in one disorder leading to increases in the other and vice versa (Gershuny et al., 2002). In order for habituation towards triggers and anxiety experienced to

occur in exposure therapy, there needs to be a greater understanding of how the two disorders influence one another in treatment (Gershuny et al., 2003).

Exposure therapy involves repeated and direct confrontation with an individual's feared stimuli in order to habituate to the anxiety experienced, as well as to learn a new way of interacting with the stimulus in the absence of maladaptive behaviors (Twohig et al., 2014). For OCD, specifically, an individual must interact with the stimulus in the absence of rituals; however, when an individual has a comorbid diagnosis of PTSD, exposure therapy could potentially serve as a reminder of the danger already experienced or as a further reinforcement of the core fear structure (Gershuny et al., 2003). When the main content of the OCD symptoms is directly tied to the trauma experienced, the nature of the dynamic relationship is most salient and significant in relation to treatment and the outcomes within treatment (De Silva & Marks, 1999). Exposure based treatment of the symptoms of one disorder may not generalize to the symptoms of the other disorder, creating unique challenges for traditional forms of treatment for OCD and PTSD.

For the purpose of this research, the connection between OCD and PTSD was explored in respect to the overlap of symptomology, the approach to treatment, and how the application of dance movement therapy could be introduced as a beneficial form of therapy. Dance movement therapy (DMT) is defined as the psychotherapeutic use of movement to promote emotional, social, cognitive, and physical integration of the individual (American Dance Therapy Association, 2017). As the disorders are treated concurrently through clinical approaches like cognitive-behavioral therapy, exposure and response prevention, and psychopharmacology, the addition and integration of DMT in treatment could serve to improve and enhance the experience of an individual. Introducing DMT to traditional forms of treatment can potentially move

treatment towards a stronger outcome by introducing a sense of safety in the body, integrating emotional and physiological states, and increasing important somatic communication for both the individual (Gray, 2017; Ogden & Fisher, 2015).

By addressing the body as a channel of information and adding a somatic lens to treatment, a given individual with a diagnosis of OCD and PTSD can be introduced to a sense of embodiment with safety and regulation. There is potential for an individual to continue through their treatment with opportunities to incorporate their physical, emotional, and cognitive processes with distinct somatic awareness; this addition of embodiment to treatment can be an additional and considerable resource in treatment to which one might not have had previous access (Shafir, 2015). For the purpose of this research, *embodiment* is defined as lived-body experience which includes somatic awareness of the individual, with attention placed to the interoceptive, proprioceptive, and kinesthetic qualities of an experience (Schmalzl, Crane-Godreau, & Payne, 2014). DMT can address the processing of both non-verbal and verbal aspects of the individual's experience, enhance emotional regulation skills, and introduce kinesthetic self-awareness in order to safely explore sensory information (Van der Kolk, 2014). Additionally, with both implicit and explicit understanding of clinical material to be explored and processed, DMT can expand the window of tolerance for a given somatic and cognitive experience with appropriate body boundaries (Ogden & Fisher, 2015). The window of tolerance is defined as a zone of optimal arousal in which an individual can flexibly process stimuli, such as thoughts, emotions, and physical reaction (Ogden & Fisher, 2015). Therefore, DMT has the potential to directly address hyperarousal and anxiety states as well as triggers within exposure therapy for with OCD and PTSD in a controlled and attuned manner, pointing to a more dynamic approach to address the body in treatment (Gray, 2017).

Behavioral therapeutic interventions, cognitive-behavioral therapy, and psychopharmacology are utilized as traditional and current treatment of OCD and PTSD. However, when there is a comorbid diagnosis of OCD with the presence of severe and intertwined PTSD symptoms, traditional forms of behavioral treatment can still lead to negative treatment outcomes (Merrill, Gershuny, Baer, & Jenike, 2011). With the addition of DMT, the connection between the two disorders can be further explored to increase the understanding of the influence of each disorder in relationship. Additionally, the individual's experience in processing symptoms can be heightened and aid in the integration of the various parts of the self more effectively (Ogden & Fisher, 2015).

Within this specific focus, the addition of DMT can be fruitful, not only for the individual in treatment, but for the field of DMT and its clinical applications. A DMT method was implemented for this research with the intention of bringing about awareness of the body in relation to shifting emotional and physiological states. Additionally, the applied method was intended to foster skills to promote a present-focused sense of safety in relation to the body to directly target overlapping symptoms of OCD and PTSD for a given individual. For an individual with the diagnosis of OCD and PTSD, the physiological experience of anxiety, emotional reactivity or numbing, or hyperarousal may not be directly addressed without DMT and with such an addition, awareness and understanding of the body can be promoted (Gershuny et al., 2003). Specifically, DMT will be highlighted as a means of endorsing somatic awareness, promoting a sense of grounding and safety, introducing a body and mind relationship; further clinical implications, such as promoting improved treatment outcomes will be addressed.

This research aimed to build a theoretical foundation for DMT in clinical treatment and to act as a stepping stone for potential research to be performed in the future with a specific

population. The research methodology allowed for the opportunity to both theoretically explore DMT and the role of the body as context as well as to expand upon clinical methods and applications of DMT. The call for a somatic lens is of importance, not only to delve into trauma related material in relation to OCD fear structures and behaviors, but also as a means of strengthening internal resources to serve the needs of the population addressed in this research. DMT and its use within this population has the potential to formulate guidelines for clinical practice in order to cement a space for expressive therapies in traditional treatments.

### **Literature Review**

In assessing the established research surrounding the relationship of OCD and PTSD and D/MT, there is not a clear overlap, pointing to the need for cohesive and integrated research. The elements that guided the included research were current clinical treatment of OCD and PTSD; the dynamic nature of the relationship between the two comorbid disorders; physiological and somatic research surrounding trauma; and the application of DMT in trauma research. There is limited research surrounding the application of DMT in OCD treatment, and this exploration was intended to add to the field. Both qualitative and quantitative research methods were used with clear foundations in cognitive-behavioral therapy, attachment theory, and trauma theory; additionally, an arts-based form of research is included to inform the research.

### **Relationship Between OCD and PTSD in Treatment**

In regard to the etiology of treatment-resistant OCD, there is a subset of individuals for whom a previous traumatic event or experience may have played a role in the development and severity of the disorder (De Silva & Marks, 1999). Following exposure to trauma, the onset of OCD may serve as a protective function as well as an intended coping mechanism. In a case presentation of individuals with the comorbid diagnosis, obsessive compulsive symptoms

originated in the immediate aftermath of the traumatic event (De Silva & Marks, 1999). Based on this research, Gershuny et al. (2003) conducted a naturalistic, retrospective review of four cases in which the individual met the criteria for both OCD and PTSD, focusing on the connections between the traumatic event, symptoms of PTSD, symptoms of OCD, and the treatment outcome. OCD symptoms presented as protective and coping mechanisms for trauma-related material; the OCD symptoms did not substitute symptoms experience from PTSD, but rather served a purpose to aid the individual in emotional regulation and distress tolerance related to trauma cues (Gershuny et al., 2003). The individuals involved in the case review had significantly poorer treatment outcomes due to the inability to habituate to the OCD-related obsession; furthermore, individual's fear and cognitions related to previous traumas were reinforced during exposure therapy (Gershuny et al., 2003). If the overlapping and core fear structure of the individuals cannot be appropriately discerned within exposure therapy, limited relapse prevention will occur. While the reviews of the case studies directly address why the relationship is challenging in regard to treatment, both case reviews consisted of small sample sizes and did not distinguish to what extent the effects of trauma hinder contemporary treatment approaches like cognitive-behavioral therapy and psychopharmacology over the course of treatment.

Additionally, Miller and Brock (2017) performed a meta-analysis on the effect of trauma on the severity of OCD symptoms, reinforcing theory surrounding the interconnectedness of the two disorders. Of note to this research, the effect sizes for specific types of interpersonal trauma revealed that past violence, emotional abuse, sexual abuse, and neglect were associated with a higher severity of OCD symptoms (Miller & Brock, 2017). Trauma exposure can be a complex combination of sensory, physiological, emotional, and cognitive experiences; OCD can result

and be exacerbated by trauma exposure, and the implications are vast for treatment in the long-term as well as how an individual might be clinically assessed and enter into a specific course of treatment (Miller & Brock, 2017). Moreover, a component within OCD theory is thought-action fusion, which arises when an individual believes their unwanted thoughts regarding an action are the same as completing the action or willing an action to occur; such maladaptive interpretations of thoughts can transform into obsessions (Miller & Brock, 2017). Trauma exposure and PTSD can influence the development of OCD as intrusion symptoms, like intrusive thoughts about a fear or anxiety, can crystallize into clinical obsessions. Therefore, the severity of the hyperarousal or anxiety state can be reinforced (Miller & Brock, 2017). In regard to behavior, if there is an association between trauma exposure and increased severity of OCD symptoms, there may be a more automatic behavioral response for individuals, creating significant challenges within treatment and reduction of maladaptive behaviors (Miller & Brocker, 2017).

Of note, confounding symptoms such as rumination and additional diagnoses such as Major Depressive Disorder (MDD) can further muddle the relationship between OCD and PTSD (Merrill et al., 2011). Specifically, depression has been found to be a mediating factor within the two disorders, further entangling the overlap of symptomology as well as increasing the severity of OCD and PTSD symptoms (Merrill et al., 2011). Merrill and her colleagues (2011) proposed that OCD may serve as maladaptive coping mechanisms against the particular trauma experienced as well as depression, with depression acting as a conduit between PTSD and the expression of OCD. This relationship is made more challenging within treatment, as how to address and disentangle the symptoms of disorders present, especially when severe PTSD symptoms are preventing behavioral efforts to treat OCD (Merill et al., 2011). While depression was not addressed within this specific research, it further illuminates the dynamic nature of OCD

and PTSD within treatment and the implications of how DMT can address the variances in the expression of symptoms.

In a study performed by Gershuny et al. (2002), the effect of PTSD on behavioral and psychopharmacological therapy treatment outcome was analyzed with a sample size of fifteen patients at a specialized OCD unit within a hospital. The study discovered that patients who had a comorbid diagnosis of PTSD responded less well to the behavioral therapy of exposure and response coaching and psychopharmacology. The small group within the study exhibited a significantly negative outcome in regard to their OCD treatment (Gershuny et al., 2002). Patients who responded negatively demonstrated and endorsed intensification of trauma-related intrusive thoughts, flashbacks and nightmares, and intensified and more frequent OCD symptoms and behaviors (Gershuny et al., 2002). Specifically related to this research, subjects whose trauma directly related to their obsessions and compulsive behaviors were unable to habituate to the triggers and often exhibited trauma-symptoms, like flashbacks and dissociation, immediately following exposure treatment (2002). The distinction of how the two disorders interrelate in treatment is still of clinical focus in determining how to treat specific symptoms effectively.

### **Physiological and Somatic Effects of Trauma**

When an individual experiences, or is witness to, a significant and traumatic event, the physiological effects can be vast and directly interwoven to the cognitive symptoms experienced in the aftermath of the event. As a result of a trauma experienced, alexithymia can result as a common phenomenon by which one does not have words or verbiage to describe a feeling or feelings; individuals who experience alexithymia have a limited ability to understand their physical experience in relation to their emotional or cognitive experience (Van der Kolk, 2014). Additionally, depersonalization and dissociation are symptoms of PTSD, which are both

experiences of feeling detached and separate from oneself and splitting from one's physical self; such symptoms can further disconnect a person from their felt experience or their somatic awareness (Ogden & Fisher, 2015). Elevated levels of stress hormones, raised by activity of the amygdala; limited access to the prefrontal cortex of the brain related to decision-making; and the limited response of the thalamus to filter sensory information are some of the physiological reactions in the body in response to trauma (Van der Kolk, 2014). Arousal states can be triggered and sustained by memories of the trauma, whether the trigger is a sound, an image, a thought, or a sense of touch or smell (Talwar, 2007). Parallel to the experience of disconnection or numbing from somatic sensation, living in a hyper-aroused state can reinforce the threat of establishing a relationship between mind and body.

The physiological reactions to trauma is significant in the treatment of OCD, as such triggers may directly relate to behavioral treatments like exposure therapy. While exposure therapy is a current treatment for both OCD and PTSD, the trajectory of the habituation might be different or affect the symptoms of either disorder differently. Most importantly, a heightened state of arousal in the body is often referred to as a "somatic memory" and research has elucidated that many individuals who have experienced trauma process their symptoms from the bottom-up, or body to mind (Talwar, 2007). The non-verbal, fragmented memory of trauma is significant in treatment, as it would be for an individual with a comorbid diagnosis of OCD and PTSD, which draws a distinct link to the need for a body-based approach and an integrated approach to treatment (Van der Kolk, 2014).

A foundation of the physiological aspects has been included, as the developed method attempts to target the parasympathetic nervous system, which promotes self-preservation functions, lowering arousal, slowing of heart rate, and relaxing of muscles (Van der Kolk, 2014);

however, the further literature on the physiological and neurobiological effects of trauma is not addressed. With the somatic focus of DMT, some of the physiological effects of trauma which can exacerbate OCD symptoms experienced, could begin to be targeted.

### **DMT and Trauma**

Within the treatment of trauma, a somatic and body-based lens has the power to integrate shifting states of an individual and provide cognitive, emotional, and physiological links between present and past experiences (Gray, 2017). When a potentially triggering stimulus is introduced, an individual can experience implicitly encoded neuromotor responses as a result of trauma and in relation to emotional and physiological dysregulation; one of the many goals of trauma treatment is to resolve such dysregulation on the somatic level through the nervous system, as well as foster more self-regulating responses, emotionally and cognitively (Shafir, 2005). Resolving dysregulation or hyperarousal with grounding postures or movements can be a continuous process as the individual begins to work with trauma-related material. Within DMT, grounding can be defined as an individual's sense of being at home and present within both body and mind (Van der Kolk, 2014; De Tord & Brauninger, 2015). Physical, sensory, emotional, and social grounding can occur in DMT individual sessions as well as group sessions; grounding techniques to safely access somatic information from an individual can include bringing attention to the feet in different physical exercises; repetitive movements and moving rhythms; and engaging in active and weighted exercises (De Tord & Brauninger, 2015).

Movement can serve as an access point to emotions that have been excluded due to trauma. The sensory world and the body of an individual is largely off-limits to the individual who has experienced trauma (Van der Kolk, 2014). Establishing, acknowledging, and identifying spaces of the body and self that are able to be safely accessed begins the process of

understanding how an individual still experiences the symptoms of their trauma. DMT can create a space for curiosity about triggers or beliefs that make somatic sensations regulating and understood, rather than threatening (Ogden & Fisher, 2015). Through developing awareness, or interoception, which is the sensing of the physiological state of the body, an individual can note sensations, cues, discomforts, pain, tension, and pleasure (Dieterich-Hartwell, 2017).

Interoception and kinesthetic awareness can be considered similar processes in DMT and are both vital to an informed, body-based trauma approach; the ability to track and identify physical sensations through breathing, translating bodily sensation into movement and language, and exercising new awareness can be fostered through DMT (Dieterich-Hartwell, 2017). The work of DMT can potentially give rise to an informed, whole sense of self, allowing an individual to gain a sense of safety, control, and regulation through movement and an understanding of the body.

Preliminary interdisciplinary research with DMT suggests that by engaging the body in treatment, it has the potential to reduce the length of treatment due to the creation of connections between thoughts, feelings, neurobiology, and somatic responses (Levine & Land, 2016). Specifically, a reduction of the length of treatment or a strengthened treatment outcome for a dynamic OCD and PTSD diagnosis is of great importance. DMT can potentially serve as beneficial in treating overlapping symptomology of the two disorders as well as reduce the length of treatment-resistant OCD and comorbid PTSD. While this research question does not target the reduction in length of treatment or increase in a positive treatment outcome, it is a considerable implication for the field. DMT can theoretically provide a groundwork for integration of body and mind, to occur, as it is at a nexus of body-based psychotherapies and expressive arts therapies, providing a unique opportunity to actively address the difficulties in treating OCD and PTSD concurrently and strengthen a treatment outcome.

### **Application of DMT to OCD and PTSD**

Specific to this particular comorbid diagnosis and relevant to the area of question in this research, DMT can target experiential avoidance, increase somatic awareness and understanding, and provide a holistic approach to treatment to promote a stronger treatment outcome. As defined by Michelle L. Miller and Rebecca L. Brock (2017) in relation to trauma, experiential avoidance is when the individual who has been exposed to trauma is unwilling to remain in contact with their internal mental imagery, whether that be thoughts, emotions, or bodily sensations. In conjunction with OCD, the individual goes to great lengths as to avoid a distressing internal event and only further isolates themselves from their felt sense and experience (Miller & Brock, 2017). DMT can directly address experiential avoidance, as it can be a protocol to slowly introduce and accept bodily sensations, signals, and information in a safe and supportive way (Dieterich-Hartwell, 2017).

When an individual has experienced trauma, the relationship to the body is altered, as the individual is simultaneously holding the experience in the body as well as defending it against an intense emotional experience (Levine & Land, 2016). Movements like gentle swaying, shifting of the weight from each foot, or rhythmic tapping of the feet can help modulate brainstem dysregulation and provide positive feedback to the amygdala (Dieterich-Hartwell, 2017; Van der Kolk, 2015). For an individual with comorbid OCD and PTSD, a trigger in relation to the overlapping fear structure can be a catalyst for a somatic memory and the fear-freeze bodily response; movement with DMT can be an opportunity for the individual to not only develop skills to cope with certain situations but speak to the body directly through the relationship of movement to physiology. DMT can also foster a level of adaptive resilience in new behaviors and somatic resources in order to handle triggering bodily responses; increasing the focus on

adaptive behaviors, coping mechanisms, or skills, without the presence of rituals, and can support the individual both during and after treatment (Levine & Land, 2016).

By including DMT in the approach to an individual's treatment, there is potential for growth in relation to the body and mind relationship and an integration of adaptive coping mechanisms above maladaptive compulsions and rituals. Specifically, in regard to exposure therapy, an individual has the opportunity to gain somatic awareness and understanding of somatic reactions and bodily responses to triggers or anxiety inducing experiences; rather than engaging in the trauma response to the presence of a core fear or fear structure, there is potential for inhibitory learning to occur and an eventual adaptation in behavior (Levine & Land, 2016). Movement and DMT can aid in establishing curiosity about a relationship with the body; increase the ability to identify and track physical sensations; translate the bodily experience into language; and recognize and implement new patterns in behavior (Dieterich-Hartwell, 2017). Individuals can develop the ability to identify and track physical sensations and re-pattern their own beliefs and fears around internal body-based communication (Dieterich-Hartwell, 2017). With DMT, an individual can potentially continue treatment for OCD and PTSD with increased body awareness and body-based adaptive coping skills for anxiety and hyperarousal states; with such awareness and skills, there is possibilities and avenues for more positive treatment outcomes. Of specific focus and purpose for this methodology, an increase in somatic awareness, facilitation of grounding, an increase in both movement and verbal group participation, and the integration of emotional and physical states were chronicled to add to the field.

## **Methodology**

**Participants**

The methodology was created as a warm-up for a weekly expressive therapy group for individuals with a primary diagnosis of OCD and comorbid diagnosis of PTSD. The expressive therapy group is a mandatory group held biweekly for two separate groupings of patients at residential treatment facility for treatment-resistant OCD. The group is approximately twelve participants in total; approximately five participants in total had a comorbid diagnosis of PTSD. Within group A, there were three individuals with a comorbid diagnosis of OCD and PTSD; within group B, there were two individuals with the same comorbid diagnosis. Each group was held in the same room for the implemented methodology; the room is arranged with large armchairs along the periphery with the center of the room open. The group is a closed group with the door closed to the room to facilitate safety and confidentiality.

**Procedure**

Group A participated in the warm-up and closure sequence two times in total; group B participated in the sequence two times in total as well. The sequence was performed once at the beginning of each group over a series of two weeks.

The methodology, which is a progressive series of movements, was incorporated as a warm-up for the group process in order to facilitate an awareness of the body; a grounded state for the individual; integration of physical and emotional state; as well as increased participation, both verbally and physically within the group. A progression from a seated position to a standing position was implemented with a paralleled progression of small, near-kinesphere movements to larger, more fluid and in far-kinesphere movements; the progression was established in order to facilitate bodily awareness with a simultaneous feeling of security and safety. For this method, kinesphere is defined as “the sphere of movement space immediately adjacent to the mover’s

body” and has length, width, and depth (Moore, 2014, pp. 92; Bartenieff & Lewis, 1980). The sequence additionally was informed by Irmgard Bartenieff’s fundamentals, which is a developmental sequence in relation to body connectivities that supports increased mobility and full expression of an inner experience through movement (Bartenieff & Lewis, 1980).

Visualization, metaphoric imagery, and naming of repeated movements were incorporated in order to further promote awareness of the body as well as foster a sense of meaning in moving for each individual, introducing a potential relationship between physical and emotional states (Levine & Land, 2016). Music was played throughout the entire session in order for participants to maintain an external focus and be grounded to a steady rhythm. Additionally, the music acted as a container to hold the space. Musical playlist is included in Appendix A.

### **Observation and Tracking**

Laban Movement Analysis (LMA) was used to examine effects of trauma on the bodies of particular patients, as well as to inform how to restructure an individual’s processing of sensory information, physical awareness, and sense of self through movement. LMA is a somatic practice of observation to capture and document qualities, patterns, and concepts that exist in movement (Moore, 2014). The methodology was documented in a sequenced format to promote an awareness and understanding of somatic sensation in relation to processing, emotional regulation, distress tolerance, and adaptive coping behaviors. Additionally, a focus in observation was for an increase in far-reach movements, increase in free flow, an increase in willingness to participate, and openness to share feelings and thoughts within the group. Body connectivities, which are areas of the body considered to be major intersections of function; descriptions of the Efforts; and the use of kinesphere and space were integrated in order to create safety in the slow progression of movement. For this research, the Efforts are defined as inner

attitudes toward the motion factor of space, weight, time, and flow (Bartenieff & Lewis, 1980). Of note, the connectivities of the spine, arm and scapula joint, the juncture of the thigh and the pelvis, and cross-lateral connection were included. Accompanied by the focus and integration of breath, which can be used and monitored as an inner shaping and regulating experience, the body can explore shapes and space through self-motivated movements (Bartenieff & Lewis, 1980).

This writer included observations of each step of the methodology to document each individual's participation and engagement in movement. The documented observations are based on what was most salient for specific group members of focus; the LMA coding sheet of observations will be included in Appendix A without any identifying information or demographic information from the group. Two descriptions of a felt sense were documented; one description included the personal experience of performing the sequence and the secondary description included a felt sense of the observations reflected in the group. Both descriptions are included in the results section.

Additionally, an emotional scale was created as a means of documenting and tracking this writer's felt experience pre- and post-group. The categories chosen for the emotional scale were chosen in accordance to LMA categories, as well as emotional content addressed for the expressive therapy groups. The means of the scales are included in the results; the scales without data are included in Appendix A. A paired sample *t*-test was performed to examine significance of the data for pre- and post-test means of each emotional category. Group members did not learn LMA. No identifying information, nor data identifying participants of the group, was included in the results to preserve confidentiality and to be compliant in the research process without an institutional review board.

### Warm-Up Sequence

1. Breath: the supportive process of breath is the first focus to begin mindfulness of the five senses activity and begin to introduce later spatial changes and shapes.
  - a. Introduction of the five senses with mindfulness: without changing breath, group members were prompted to use the visual sense to observe various qualities or parts of the room. Group members were prompted to choose to close their eyes, lower their gaze, or choose a space in the room on which to focus in order to promote safety. Individuals were prompted to use the auditory sense; following auditory sense, smell, followed by touch and taste. Group members were seated. Music played throughout session.
2. Introduction of core-distal movement through articulation of spine (e.g. head/tail connection). Breath was a focus but encouraged not to be controlled or changed.
  - a. Group members were prompted to lower chin to chest and lift chin to open throat and chest; individuals completed four movements of lifting and lowering chin. Following, members lowered right ear to right shoulder and repeat on the left side; individuals completed stretch on each side twice. Head circles were introduced to bring about mobility and alleviate tension in the arm/scapula connection and upper body (Bartenieff, 1980). Timing was chosen by group members with group leader stating aloud visualizations.
  - b. Instructions were provided to center head and return to a neutral cervical spine. Members engaged in shoulder rolls, first with right shoulder, next left. Group

members engaged with shoulders rolls in both directions with right, left, and in unison.

- c. Group members were prompted to engage in the rounding and gentle arching of the spine. Members were prompted to lower chin to chest and round spine, lowering upper torso over thighs; individuals held position for approximately six seconds. They were encouraged to release all the way over their body should they choose; the option to only round slightly and create a concave torso was offered. Members were prompted to press into feet, roll up through the spine to bring body upright. Following, they were prompted to slightly arch the lower spine, lift and open chest to ceiling, and lift chin upwards. Sequences of rolling over thighs and gently arching spine was performed four times. Movement was completed for approximately three to five minutes. A yield and push rhythm with feet was used to both establish and soften boundaries of the body (Bartenieff & Lewis, 1980).
- d. Group members were prompted to reach right arm along vertical dimension and stretch across horizontal dimension towards the left side. Repeat on the opposite side. Group members extended both arms upwards along the vertical dimension, interlace fingers, and press palms upwards. As they extended arms upward in the vertical dimension, prompts were included to press into their feet as they pressed palms upwards. Engaging the arm and scapula connection and stretching was performed four times.
- e. Check-ins were used by group facilitator throughout the process. Visual metaphor and imagery were incorporated to bring meaning into movement. Emotional connection to movement was not addressed to facilitate distance.

3. Movement towards a neutral spine was encouraged. Group members were instructed to focus on their feet as grounded into the floor. If group members had closed eyes, they were asked to open them and orient themselves to the room. All participants were able bodied and asked to stand.
  - a. Movement sequence (#2) was repeated standing.
    - i. #2c. was performed standing. Group members were encouraged to bend knees as they reached towards their feet, in order to protect hamstrings and facilitate a stretch across the lumbar spine.
  - b. Group members were prompted to add a twisting of the upper body, allowing arms to swing naturally from side to side with free flow. Members were prompted to feel the body grow and shrink, expand and enclose (horizontal axis), rise and sink (vertical axis), and advance and retreat (sagittal axis). In order to build interoceptive awareness and increase the use of kinesphere (Bartenieff & Lewis, 1980).
  - c. Lower body integration was introduced as a gentle bend of each knee, a sway, or step simultaneously with the reach of either arm to facilitate rhythmic grounding and movement in unison.
4. Expansion of movements into the far-kinesphere with greater fluidity and free flow were prompted. Visualization was included.
5. Movement into the development of the theme of the group.
6. In closure of the group, members were prompted to bring their focus to their feet and the image of feeling grounded, strengthened, and rooted. Four breath sequences with eyes open (inhale for two counts, exhale for four counts) was utilized.

7. Group members were asked to offer a movement or verbal phrase, or combination of both, to end the group.

### **Results**

Specific to this research, self-reflection was used as a means of observation for the group process as well as what the warm-up yielded in regard to bodily awareness, group participation, and a sense of grounding for both emotional and physical states. A first-person narrative was used for observational data for both the group and self of narrator. Laban Movement Analysis was used to document specific bodily observations in regard to how group members moved and how they utilized specific movement qualities. Additionally, a felt sense scale is included to further document and analyze observations in a self-reflective manner.

#### **Felt Sense Description of Personal Practice**

In implementing the method on my own time, I felt a distinct turn to my inner experience. I focused distinctly on each new sensation as it arose. I was mindful of my own bias, as I am a much more body-based as an individual and my lens is focused towards those sensations in immediacy. Even so, the awareness of subtle sensations like the stretching down the back of my neck or the opening across my chest and heart space felt in the forefront of my experience. I moved with sustained time as to take the time to understand and articulate somatic sensations or urges in order to understand what was presented for the mover. In moving over my thighs, I was at a pause, because there is a strong connection to the lower body as well as the weight of one's own body. From my own sense, I felt a release as I gave into gravity and I found the position to be soothing. I was concerned of my reaction, as I felt this might not be the same for an individual with whom I would be working. For someone with OCD and PTSD, I was concerned for the group members that the sense of weight of their own body would be triggering or jarring. The

goals surrounding the warm-up are meant to expand the awareness of one's body, but I was concerned that the group members' experience could be quite different. I noted for myself that many options should be given in this sequence. Upon rolling up, I felt a sensation of power and control as I pressed my feet into the floor, articulated my spine, and rolled up slowly and smoothly. I felt most drawn to this series within the progression, as articulating the spine was organizing and lengthening. While using bound flow, there was still a sense of grounded weight and sustained time, which I felt would provide safety and control. The transition from seated to standing was a moment of which I felt uncertain, as I wanted it to act as a fluid motion to orient group members to space and introduce group members from an internal space towards a safe external space. Future movement progressions will be adjusted for that moment. I felt more comfortable in opening my eyes prior to standing and walking around my own space prior to rolling down and articulating my spine. I noted this in practice, as external variables such as the space or social anxiety, were of strong influence. Following the articulation of the spine, I felt movements like shoulder rolls or head rolls were most appropriate, as it began the process of opening the arm/scapula connection and would lead into larger gestural movements through the arms and into the mid to far-kinesphere; the change in sequencing will be addressed in the discussion portion of the study. In personal practice, I consistently found myself feeling thankful for the time allotted for recuperation and exploration of my internal space, as if being a witness to my own experience, and I feel that in continued practice, it will be a strength of the warm up method.

### **Felt Sense Description of Group Observation**

In observation of the group members, I noticed how readily many individuals closed their eyes and listened intently to the prompts while seated. Group members seemed more at ease with

music playing in the background, as it held the space and acted as a container. Throughout the seated process, there were a few group members who opened their eyes to look around, notably those individuals have been diagnosed with Social Anxiety Disorder. For the individuals with a comorbid diagnosis of OCD and PTSD, I noticed their eyes were not closed but their gaze was lowered. I felt more at ease following this observation, as I felt there was a distinct shift towards their own internal experience in a way that felt comfortable for each member of the group. All members participated in the movements, which also enhanced my own attunement to the group. I felt a softening within my torso and heart space and allowed myself to drop into my body's state to attune to the group. It felt as if the small and sustained movements were a welcome invitation, if only to stretch and distance themselves from an emotional place. The seated portion felt meditative and a unique experience, for both myself and the group members. I was almost surprised at how readily group members moved, which emboldened my own confidence in facilitation.

In the transition from seated to standing, I did notice the particular group members of focus cross arms and narrow through the shoulders, as if for self-soothing and protection from being seen. Additionally, movement slowed and there was stillness; I had a moment of concern that movement would cease and the group would have a lull in progression. Once prompted, however, group members entered back into small movements and I felt a large sense of relief. While there was a distinct narrowing through the upper, group members' lower body, notably feet and knees, were moving in time with myself and the music. I felt that in their own way, the subtle shifts and sway allowed them to participate. With my prompts to allow the arms to release and float freely or to add more energy and reach with their arms, I did notice a disarming from the group members of focus, especially with the group moving as whole. While their movements

were still in their near-kinesphere with a bound quality, there was a shift from the beginning of the group in comparison to the closure of the group. At the completion of the group, their offered movements were larger and, I felt, coming from an authentic place, without judgment for what they were presenting and putting forth. In comparison to previous groups, there is often hesitation or resistance in putting forth an offering, but the transition into the closure felt seamless and united. Group members were observed to readily join their peers in their movement, allowing space for each individual to be seen, heard, and felt. I felt highly attuned in my observations, and the practice felt as if it were a communal meditation. While facilitating, I felt a deep sense of gratitude, not only for those individuals embracing the experience but a felt sense from the group in their experience of relaxation and a sense of joy. The progression of movement felt foundational for the unification and participation of the group.

### Felt Sense Scales

Table 1

*Pre/Post Self-Reported: Positive Felt Sense*

Self reported sense	S. 1 (Pre/Post)	S. 2 (Pre/Post)	S. 3 (Pre/Post)	S. 4 (Pre/Post)	Mean (Pre/Post)
Warmth	3/8	2/9	4/8	2/6	2.75/7.75
Openness	5/7	4/5	5/6	3/6	4.25/6
Bodily awareness	6/8	6/8	6/8	4/8	5.5/8
Safety	5/6	5/6	5/5	5/5	5/5.5
Active	7/8	5/6	5/7	5/6	5.5/7.25
Relaxed	2/6	2/7	4/5	2/8	2.5/6
Joy	2/7	3/8	4/4	2/5	2.5/6
Energized	4/7	3/8	4/6	4/8	3.75/7.25
Mean (pre/post), $p = .002$					

Table 2

*Pre/Post Self-Reported: Negative Felt Sense*

Self reported sense	S. 1 (Pre/Post)	S. 2 (Pre/Post)	S. 3 (Pre/Post)	S. 4 (Pre/Post)	Mean (Pre/Post)
Tension	6/4	7/3	5/4	6/3	6/3.5
Hesitation	8/3	9/4	6/5	6/2	7.25/3.5
Closed off	4/3	5/2	3/3	6/3	4.5/2.75
Passive	3/3	4/5	6/2	5/2	4.5/3
Anxious	8/4	8/5	6/4	6/2	7/4.25
Sadness	3/3	1/1	3/3	3/2	2.25/2.25
Fatigued	6/4	7/4	6/5	6/3	6.25/4

Mean (pre/post)  $p = .003$

The mean value for each pre- and post-test was significant for both the positive felt sense scale as well as the negative felt sense scale, indicating that the warm-up yielded a change, specifically in regard to an increase in body awareness, activity, and energy level, and a decrease in tension, hesitation, and anxiety level.

**Movement Observation: Laban Movement Analysis**

The observations included from the group are qualities most salient from group members with the comorbid diagnosis of OCD and PTSD. The observation structure and results are included in Appendix A.

**Discussion**

The presented warm-up was based on the premise that introducing directed movements in small ways can facilitate a stronger somatic awareness within individuals, as well as increased mobility, sense of grounding and safety, and increased participation, both in movement and language, for group members. For individuals with OCD and PTSD, hyperarousal, emotional and physical numbing, and a heightened somatic experience of anxiety can be challenges in the course of treatment as well as in their daily lives. The use of cognitive behavioral treatment, exposure and response prevention, and psychopharmacology is the current treatment approach

for OCD and PTSD; however, if the core fear structure is overlapping between the two disorders, there is potential for still negative treatment outcomes. The research conducted herein demonstrates that DMT can be of potential aid in addressing specific treatment challenges. In part, this research placed focus on the challenges surrounding the somatic experience of an individual who is diagnosed with both PTSD and OCD and where and when such somatic challenges can negatively influence treatment. The implemented method supported the initial research question as to how DMT can be used to target somatic awareness, increase participation within groups, and increase in safety and grounding in the body. Additionally, positive feedback from group members and the felt sense of the group facilitator encouraged the initial research question in regard to addressing challenges within treatment.

The felt sense from this writer in addition to observations made supported the initial research question and the areas of benefit from the addition of DMT. While supported, there are significant implications and limitations in regard to the research presented. First being, the analysis of the method was mainly composed of self-report from this writer, and a personal bias, while avoided and accounted for, was inevitable. Additionally, grouping qualitative data in the felt-sense scale, such as the contingents of “positive” and “negative” can have varying and influencing definitions. The words were chosen to denote aspects of the felt experience that would have a negative impact on areas of treatment; however, further definition and clarification will be needed. In future research opportunities surrounding this topic, self-report from the facilitator will be of smaller focus. Observational data was limited and a larger focus in non-biased and detailed observation should be included. Furthermore, self-report and survey from participants would be crucial in assessing measurable targets; gathering qualitative data from participants would be vital in creating a larger foundation for this research.

Additionally, while the same warm up method was executed in each group in which individuals with a comorbid diagnosis of OCD and PTSD were present, other group members changed or were absent from the group. Moving forward, it would be beneficial to have a closed group of the same participants with a larger majority compromising the focused comorbid diagnosis. Furthermore, implementing the method over a longer period of time would be of benefit as to chronicle data and assess for significant changes over time in somatic awareness, treatment goals, and increases in movement and verbal participation within the group.

In assessing the warm up method utilized for this method, this writer feels that adjustments will need to be made, specifically around the transition from seated to standing. The seated portion of the warm up brings about a distinctly internal experience, especially if group members can obtain enough trust in the group and the space to close their eyes. While the guided introduction to the internal experience can have considerable gains surrounding internal tracking of somatic information, it will be of importance to safely guide group members from an internal space towards an external orientation with steadfast body boundaries. The flexibility by which group members can regulate the observation internal sensations, impulses, or thoughts, and then adjust and adapt towards an external orientation, with a focus on interpersonal connection and safety in experience, can allow for potentially unique and advantageous treatment gains; with this understanding, future alterations to the warm up method can be applied.

An additional consideration for this method is that it operates on the premise of the diagnosis of PTSD, rather than the nature of the trauma experienced by the individual. While common in diagnosis, the content of the fear structure could be of importance and have implications for the approach to treatment, and this method might need to be altered accordingly. While an individual's trauma history might be complex and of varying nature, this method

operates off the supposition that an individual can experience a general state of fear or anxiety following trauma, and a general approach to target an internal and external feeling of somatic awareness and grounding may be beneficial within treatment. The nature of the individuals' trauma within the group process was known to the writer but not used within the formulation of the warm up.

In regard to adding literature to the field of DMT, there are distinct avenues in regard to the implementation of DMT in treatment, not only for the comorbid diagnoses of OCD and PTSD and treatment outcome, but to inform exposure and response prevention therapy. A somatic focus in treatment can have potential benefits in exposure and response prevention therapy and in OCD treatment as it can further inform the individual of their felt experience to promote understanding of anxiety states. When an individual has skills to track and identify feelings, sensations, or other aspects of their internal somatic experience, exposure and response prevention can be a greater learning experience, and in turn, have longer lasting treatment gains. The clinical applications of DMT can be expanded into behavioral practices in order to introduce embodiment to an individual and how it can inform their lived experience, body and mind.

In many ways, the relationship between OCD and PTSD has garnered clinical attention; however, there are nuances to the relationship that make it highly individualized within treatment. The structure of treatment for a given individual with OCD and comorbid PTSD should aim to target both disorders concurrently, as the symptoms and function of each disorder may become cyclical in traditional behavioral therapy (Merrill et al., 2011). Comorbid PTSD can often interfere with OCD treatment, and research similar to the one performed should focus on the process and outcome of treatment to further elucidate the nature of the relationship (Huppert et al., 2005). With the integration of DMT or a body-based psychotherapeutic

approach, the process of treatment can further highlight and enhance future research surrounding OCD and PTSD.

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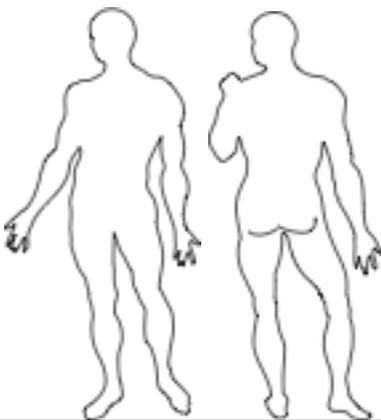
Appendix A

**A. Movement Observation & Assessment: CODING SHEET**

Person under observation: Group A and B

Location of observation: Treatment facility for treatment-resistant OCD

**I. BODY**

Stance (MOST prevalent):						
normal / balance	<u>narrow base</u>	broad base	knees	ankles	pelvis	
Body Part Relationship (rank): min. max.						
head	0	1.	2.	<u>3.</u>	<u>4.</u>	5.
arms	0.	1.	<u>2.</u>	<u>3.</u>	4.	5.
legs	<u>0</u>	<u>1.</u>	2	3.	4.	5.
upper torso	0.	1	<u>2.</u>	<u>3.</u>	4.	5.
lower torso	<u>0.</u>	<u>1.</u>	2.	3.	4.	5.
Uprightness: <u>neutral</u> <u>concave</u> convex						
Held / Active body parts: <b>held-</b> arm/scapula connection; head and cervical spine/ <b>active-</b> hands, head/tail connection; spine						
POSTERIOR ANTERIOR						
						

Breath: **limited in breath; shallow breath**

**MOVEMENT CHARACTERISTICS**

Connectivity (X= used; O= missing):
-------------------------------------

(O; near kinesphere)core-distal (X-held)head-tail (O=missing)upper-lower (X)right-left (O)cross-lateral				
<b>Body splits / blocks (circle): the limbs and torso were not integrated together.</b>				
head / torso	<b>limbs / torso</b>	left / right	front / back	<b>upper / lower</b>
<b>Movement initiation (circle):</b>				
central	<b><u>distal</u></b>	<b><u>upper-body</u></b>	lower-body	

**II. EFFORT**

**ELEMENTS**

Body Part Relationship (rank):	
INDULGENT	FIGHTING
Space: <u>indirect</u>	<b>direct</b>
Weight: <b>light</b>	<u>strong</u>
Time: <b>sustained</b>	<u>sudden</u>
Flow: <u>free</u>	<b>bound</b>

<b>AFFINITIES</b> (defense-scale):	
Weight / Vertical: strong • <b><u>sink.</u></b>	<b><u>light</u></b> • rise
Time / Sagittal: accelerate • <b><u>retreat.</u></b>	decelerate • advance
Space / Lateral: <b><u>narrowing • direct</u></b>	spreading • indirect

**INNERSTATES** (tick marks):

Awake (T/S)	Dream (F/W)
<b>Rhythm (T/W) IIIII</b>	Remote (S/F)
<b>Stable (S/W) IIIIIIIIIII</b>	Mobile (T/F)

**DOMINANT EFFORT ACTION DRIVES** (tick marks):

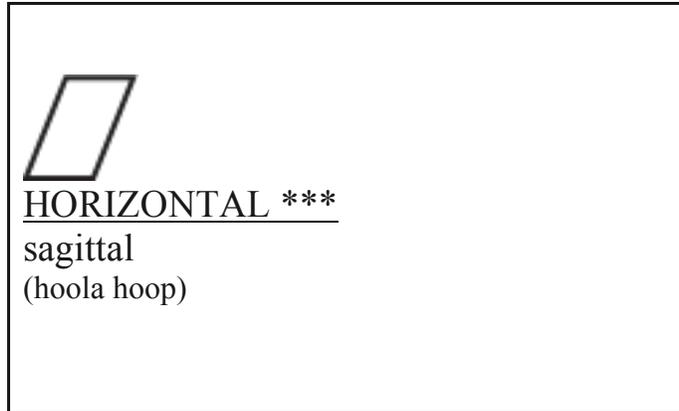
<b>Float III</b>	Punch
<b>Glide IIIII</b>	Slash
Wring	Dab
Flick	<b>Press IIII</b>

**TRANSFORMATION DRIVES** (tick marks):

Passion (spaceless) W / T / F
Vision (weightless) F / T / S
Spell (timeless) F / W / S
Weight - <b>sensing</b> / intention
Time - <b>intuiting</b> / decision
Space - <b>thinking</b> / attention
Flow - feeling / participation

**KINESPHERE USE:**

Planes
 <p><b>VERTICAL *****</b> horizontal (door)</p>
 <p><b>SAGITTAL *****</b> vertical (running)</p>



**A. Felt Sense Scale (Pre/Post Group; 1=Low, 10=High; Self-Report)**

Tension. 1 2 3 4 5 6 7 8 9 10.

Warmth. 1 2 3 4 5 6 7 8 9 10.

Hesitation. 1 2 3 4 5 6 7 8 9 10.

Openness. 1 2 3 4 5 6 7 8 9 10.

Closed Off. 1 2 3 4 5 6 7 8 9 10.

Bodily Awareness. 1 2 3 4 5 6 7 8 9 10.

Safety. 1 2 3 4 5 6 7 8 9 10.

Active. 1 2 3 4 5 6 7 8 9 10.

Passive. 1 2 3 4 5 6 7 8 9 10.

Anxious. 1 2 3 4 5 6 7 8 9 10.

Relaxed. 1 2 3 4 5 6 7 8 9 10.

Sadness. 1 2 3 4 5 6 7 8 9 10.

Joy. 1 2 3 4 5 6 7 8 9 10.

Energized. 1 2 3 4 5 6 7 8 9 10.

Fatigued. 1 2 3 4 5 6 7 8 9 10.

**B. Group Playlist (Song Title, Artist, Album)**

1. *You Were Only but a Dreamer*, Trying to Be Forgotten, Analogue Dear, Sonder
2. *The Light*, Shu & Tefnut, Focus Your Brain
3. *Eyes Closed and Traveling*, Peter Broderick, Eyes Closed and Traveling
4. *September Song*, Agnes Obel, Aventine
5. *Etude No. 2*, Philip Glass, Etudes for Piano Vol. 1 No. 1-10
6. *Reel*, Dmitry Evgrafov, Collage
7. *Santa Barbara, 1979*, Roger Neill, 20<sup>th</sup> Century Woman (Original Motion Picture)
8. *Adam Forever*, U137, Adam Forever/The Great Leap
9. *Tracking Aeroplanes*, The Echelon Effect, Field Recordings
10. *Wood*, Rostam, Wood
11. *Masollan*, Balmorhea, Stranger