Lesley University DigitalCommons@Lesley

Expressive Therapies Capstone Theses

Graduate School of Arts and Social Sciences (GSASS)

Spring 5-19-2018

Marble Painting with Veterans to Help Symptoms of PTSD in the Mind and Body

Victoria Taylor Lesley University, vtaylor3@lesley.edu

Follow this and additional works at: https://digitalcommons.lesley.edu/expressive_theses

Part of the Art Therapy Commons, and the Social and Behavioral Sciences Commons

Recommended Citation

Taylor, Victoria, "Marble Painting with Veterans to Help Symptoms of PTSD in the Mind and Body" (2018). *Expressive Therapies Capstone Theses.* 82. https://digitalcommons.lesley.edu/expressive_theses/82

This Thesis is brought to you for free and open access by the Graduate School of Arts and Social Sciences (GSASS) at DigitalCommons@Lesley. It has been accepted for inclusion in Expressive Therapies Capstone Theses by an authorized administrator of DigitalCommons@Lesley. For more information, please contact digitalcommons@lesley.edu, cvrattos@lesley.edu.

Marble Painting with Veterans to Help Symptoms of PTSD in the Mind and Body

Capstone Thesis

Lesley University

February 26, 2018

Victoria Taylor

Specialization: Art Therapy

Thesis Instructor: Raquel Stephenson, LCAT, ATR-BC

Acknowledgements

I would like to pay special thankfulness, warmth and appreciation to the persons below who made my research successful and assisted me at every point to cherish my goal:

My Professor, Raquel Stephenson for her vital support and assistance. Her encouragement made it possible to achieve the goal.

My Supervisor, Joanna Martorelli, whose strength and leadership skills helped build my confidence to go forward with conducting research on my own.

The Recreation Team at the VA who supported me throughout my internship and research.

My Dog, River, whose constant reminders for self-care and being out in nature gave me the strength I needed to reach my goal.

My Daughter, Tia, who motivated me to pursue better opportunities and further my education in order to obtain a positive lifestyle and career to not only benefit my life but hers.

My Mom and Dad, family members and friends, who have been important to me in the pursuit of this project. I would like to thank my parents, whose love and guidance are with me in whatever I pursue.

Most importantly, I wish to thank my loving and supportive significant other, who helped me during my three years of graduate school and always pushed me to reach all my goals no matter what life presented to me. I would not have been able to do it without his financial support, encouragement, and leadership skills.

Lastly, I want to thank the Veterans, who have put their life at stake to protect our country, families, and way of life. I want to thank them for not only their service but also for taking the journey into art therapy with me in order to further research on treatment of posttraumatic stress disorder. There are a few veterans who impacted my experience at the VA Hospital who I will never forget and I am so grateful to have the opportunity to have met them and worked with them. It was an honor.

Table of Contents

AKNOWLEDGEMENTS	2
ABSTRACT	5
1. INTRODUCTION	6
2. LITERATURE REVIEW	8
Posttraumatic Stress Disorder (PTSD)	
Neurobiology of PTSD	
Art Therapy and PTSD	
Avoidance	
Art Therapy and Clinical Neuroscience	
Bilateral Stimulation	
Mind Body Approach	
Paint and Therapy	
3. METHOD	16
Research Method	
Research Question	
Participants	
Materials	
Data Collection	
Procedure	
4. RESULTS	19
Overview	
Observations	
Prints	

5. DISCUSSION
New Information
Clinical Concepts
Limitations
Recommendations
Conclusion
REFERENCES

Abstract

This study is a neurologically-based art therapy treatment investigation to better understand if marble painting can help reduce the symptoms of posttraumatic stress disorder (PTSD). Three marbling painting sessions were conducted over three weeks. The group focused on the main goals which included discovering a rhythm while using fast or slow movements, focusing on this rhythm and become aware of any emotion felt during the process. The participants were encouraged to make a series of marble paintings and to experiment with different colors. The observations found from this study suggest that marble painting should be used as an art therapy treatment for those with PTSD to reduce arousal and frustration.

Keywords: veterans, art therapy, marble painting, PTSD

Marble Painting with Veterans to Help Symptoms of PTSD in the Mind and Body

I approached veterans with an attitude of genuine care and respect, I did not consider their PTSD a "disorder" but rather a normal, self-protective response to extremely abnormal situations of war. (Golub, 1985 p. 287).

This thesis will explore marble painting as a neurologically-based art therapy treatment method with veterans at a VA Hospital who have been diagnosed with Posttraumatic Stress Disorder (PTSD). This research study aimed to investigate marbling painting as a treatment method for veterans with PTSD. Does marble painting help reduce the symptoms of PTSD in veterans? It will explore bilateral stimulation using both hands at the same time to move marbles through paint and across paper inside of a container. Bilateral stimulation of the left and right side of the brain can help integrate verbal and nonverbal for those with PTSD. Integrating both verbal and nonverbal can help make both sides of communication linear and decrease stress responses.

In order to understand PTSD it is necessary to understand the neurobiology and how PTSD affects the brain. This thesis will integrate the neurobiology of PTSD and art therapy and neuroscience as a foundation for using marble painting as a method for treatment. The Broca's area of the brain which is responsible for speech becomes inactive. Traumatic material is not able to come out verbally and it becomes crucial to treat PTSD using a nonverbal treatment. Art therapy allows those who suffer from PTSD to express themselves creatively and nonverbally.

Veterans with PTSD tend to know what draws out their symptoms and try to use avoidance. Thus, the stress response can be mobilized not only in response to physical or psychological insults, but also in expectation of them (Sapolsky, 1998, p.8). It is easy to be in expectation of a negative feeling or symptom when faced with things that cause anticipation. In order to move away from expectation and anticipation it is best to use an art therapy intervention as a nonverbal treatment. Acting out the experience within the body when faced with these external factors could help shift the anticipation. A traumatic event is able to be processed through a nonverbal format rather than a verbal format.

Looking at marble painting in the lens of a mind-body treatment method for PTSD allows nonverbal expression as well as movement. "The person may still feel trapped in the moment of emotional trauma, unable to escape that past as it constantly invades and dominates the present" (Carr, 2011, p.476). It integrates art and movement to stimulate the mind and body and release the emotional trauma invading the body. The rolling of the marbles through paint while moving the arms and upper body creates rhythms and movements. The act of creation while moving helps stimulate the brain and attune the body.

Marble painting is a method that acts as a literal container for traumatic material and helps transition internal material into external content. The present moment for a veteran with PTSD is unsafe and symptoms of PTSD often get in the way of being able to release the tension carried within the body. "The first lesson is to slow down and look, to lend yourself to time and to the world around you" (Stienhart, 2004, p.66). Focusing on an art task can help release the tension in a safer positive way. Having outlets for stress can help improve symptoms of PTSD.

Jackson Pollock seemed to intuitively understand the healing role of movement when, early in his career and suffering from mental illness, he entered analysis with a Jungian psychiatrist and introduced drawings into the therapeutic process (Wysuph, 1970, as cited in Hinz, 2009 p. 41). Through movement and art he was able to enact what was happening in his mind and body while at the same time discharging energy. Lusebrink's (2004) article identified, all art experiences involve motor action and movement, but the motor action itself can be used as a stimulus and as a reconstitutive agent. Art and movement therapeutically help clients who suffer from PTSD to foster an outlet for arousal and traumatic memories while stimulating the mind and body.

Literature Review

This review will highlight the current literature as it is relevant to marble painting as a neurologically-based art therapy treatment method for veterans who have symptoms of PTSD.

Posttraumatic stress disorder (PTSD)

According to the American Heritage Medical Dictionary (2016),

Posttraumatic stress disorder (PTSD) is a psychiatric disorder resulting from a traumatizing experience, such as torture, rape, or military combat, characterized by recurrent flashbacks of the traumatic event, nightmares, persistent negative emotions such as anger, fear, or shame, and difficulty experiencing positive emotions. (p. 656).

Veterans may have symptoms of intrusive thoughts or memories of a traumatic event, recurrent and disturbing dreams or nightmares which cause difficulty sleeping, and frustration with angry outbursts. Veterans with PTSD may have an exaggerated startle response, detachment from others, and hypervigilance.

The DSM-5 criteria for diagnosing Posttraumatic Stress Disorder (PTSD) involves an exposure to actual or threatened death, serious injury, or sexual violence which is either direct exposure, witnessing the trauma, learning that a relative or close friend was exposed to a trauma, or indirect exposure to aversive details of the trauma usually during professional duties (American Psychiatric Association, 2013). Veterans with PTSD may have experienced traumatic events during war exposure or during military training. Many women veterans experienced

military sexual trauma or physical violence during training and not necessarily during war exposure.

Rothschild (2002) identified that "understanding how the brain and body process, remember, and perpetuate traumatic events holds many keys to the treatment of the traumatized body and mind". Those who suffer from PTSD experience physiological arousal and are often unable to process trauma through communication. Research suggests that it is important to understand how the brain and body hold trauma, and how it is processed, in order to implement treatment.

Van der Kolk (2003) recognized that "the person may feel, see, or hear the sensory elements of the traumatic experience, but he or she may be physiologically prevented from being able to translate this experience into communicable language" (p. 187). The person is experiencing sensations of the trauma in the mind and body where it is held and stored. These sensations are stored in the body and frozen in time. It can be emotionally numbing for veterans whose PTSD goes untreated.

Neurobiology of PTSD. Levine (1992, as cited in Talwar, 2007) argues that PTSD is a highly activated, incomplete, biological response to threat, frozen in time, and that trauma gets "locked" in the body. Those who suffer from PTSD experience traumatic memories, heightened arousal, and tension in the mind and body. Emotions and words seem to become frozen for those who experienced trauma and are in constant survival mode. It is important to know what is happening in the brain to understand the behaviors and symptoms of PTSD.

PTSD affects brain areas related to perceiving and responding to the environment such as the hippocampus, amygdala, and medial prefrontal cortex. Veterans with PTSD have a heightened arousal and are experiencing survival mode within the limbic system. Hass-Cohen (2008) described that "unconscious stimuli that was dangerous in the past presents as a threat in the present moment and causes a quick reaction". Veterans with PTSD have a hyperactive amygdala which has a conditioned fear response due to trauma exposure. In addition Hass-Cohen (2008) notes that "implicit or automatic memories regulated by the amygdala correspond to a set of circumstances close enough to match a past threatening experience and, before the conscious mind can interfere, a stress response occurs" (p.115). Art therapy can help assist in regulating the limbic system and help achieve stable mental states in the brain.

Hass-Cohen (2018) describes that the orbital frontal cortex processing of limbic emotions is regulated by the anterior cingulate cortex functioning (p.35). The anterior cortex helps regulate emotions and symptoms in the mind and body caused by chronic stress.

Art Therapy and PTSD

Collie (2010) noted that PTSD was not recognized as a diagnosis until 1980, the use of art expression in trauma intervention appeared in the late 1970s. Art was used as a method for survivors of traumatic events who had trouble verbalizing their experience. As a result, the contemporary practice of art therapy in the treatment of trauma, and more recently PTSD, emphasizes the usefulness of art expression in the reconstruction of the trauma narrative and also in the management of stress, physical symptoms, and psychological disorders resulting from acute or chronic trauma (Ballou, 1995; Cohen, Barnes, & Rankin, 1995; Morgan & White, 2003; Rankin & Taucher, 2003 cited in Collie, 2010).

Talwar (2007) discussed that in trauma treatment it is not the verbal account of the event that is important, but the non-verbal memory of the fragmented sensory and emotional elements of the traumatic experience. Posttraumatic Stress Disorder (PTSD) affects the Broca's area in the brain which is responsible for speech. Since this area becomes inactive, it is important for PTSD to be treated in a nonverbal format. In recent years, advances in neurobiology and psychotherapy have informed the practice of art therapy, which has increasingly been utilized when verbal psychotherapy has failed to help clients (Talwar, 2007). Through the arts, those who suffer from PTSD are able to process through self-expression and creativity what they are unable to verbally speak.

Johnson and colleagues (1997 as cited in Collie, 2010) designed a study to determine differences of a specialized inpatient PTSD program (SIPU) from general units and which were most effective. They found that art therapy was the only component among 15 standard SIPU components, such as group therapy, drama therapy, community service, anger management, and journaling that produced the greatest benefits for veterans with the most severe PTSD symptoms.

Walker, Kaimal, Koffman, and DeGraba's, (2016) article is a case study on a senior active duty military service member's therapeutic journey with art therapy as treatment for PTSD and TBI. The participant was in treatment at an interdisciplinary patient centric intensive outpatient program for treatment on his inability to focus on his work due to PTSD and TBI. The case study gave a brief history of the patient's life and experiences in the military. The patient attended approximately 15 art therapy sessions, although the original treatment plan was 4 weeks with just 2 art therapy sessions. The article broke down art therapy with the patient into three clusters: Initial expressions, delving deeper into traumatic incidents, and managing self-care through connecting the therapies. The case study included images of artwork and narratives from the participant related. It included any changes in symptoms if observed or noted. This article aimed to focus on the participant's therapeutic journey with art therapy as treatment for PTSD and TBI, and found that creating art helped decrease PTSD symptoms which included flashbacks/nightmares. This study revealed the importance of using art making for non-verbal discovery.

In current research, Melissa Walker's (2017) study uses a grounded theory approach to analyze visual and narrative data from military service members in order to highlight the invisible wounds of war associated with TBI and PTSD. The study was conducted over 5 years at the National Intrepid Center of Excellence (NICoE) in a 4-week interdisciplinary intensive outpatient program. This study consisted of 390 participants with persistent symptoms from combat and mission related TBI and PTSD. It was discovered in this study that active-duty military struggle with their physical and psychological wounds and were able to use mask making as a way to communicate nonverbally.

Avoidance. Kaiser et al., 2005 discussed that "traumatic memories manifest themselves largely outside of the control of the individual, either arising involuntarily and obsessively or, in the process of suppression, motivating avoidant and maladaptive behaviors" (p. 3). Art therapy helps veterans with PTSD translate nonverbal information into verbal. Externalizing feelings using art therapy can help with avoidance and face the symptoms in a non-threatening manner. The art acts as a container for the traumatic material and holds the content outside of the body.

Collie (2005) notes that "it is generally less threatening to express and reveal traumatic material non-verbally than verbally because the level of symbolism can be more easily modulated" (p. 160). Art therapy can create distance between the individual and the traumatic material because the content becomes symbolized through art. Viewing the content from outside of the body helps with processing it at a safe distance rather than avoiding it.

Art Therapy and Clinical Neuroscience. Hass-Cohen (2018) describes how neuroimaging studies can allow clinical neuroscientist to connect observable human activity with measurable brain activity (p. 21). Art therapy and clinical neuroscience can come together in order to understand what is happening in the brain while making art and see if any of the structures are altered. Art therapy can help integrate the left and right hemispheres of the brain and help assist clients in emotional regulation, decision making, and traumatic memories by regulating the limbic system.

Mechelli et al. (2004) and Stein et al (2006) in Cohen-Hass (2018) describe that "greater brain usage increases neuronal activity, which increases dendrites and synaptic activity, thickening brain gray matter and resulting in heavier brains" (p. 30). Art making involves greater brain usage due to the nature of art making. Art making can help change the plasticity of the brain over time.

Steinhart (2004) described "art as an extension of our human abilities to make mental images and to hold ideas in the form of symbols" (p. 39). What is kept within can be translated through art outside of the mind. This translation goes from the mind through the body and into an artistic expression. While creating art the artist is rewiring the brain and building new connections. Steinhart (2004) discussed that neural cells transmit impulses across connections which pass signals from areas of the brain that have to do with perceiving shapes and comparing them with words to connect with those shapes (p. 49). The mind translates what it sees from the nonverbal to verbal.

Bilateral Stimulation

Gazzaniga (1998) focused on and explored the functions and structure of the brain in relation to the right and left hemispheres. It was understood that the left hemisphere controls

language and speech while the right hemisphere controls visual motor activities. Using both the left and right hemispheres together using art helps communicate the verbal and nonverbal.

McNamee (2003) integrated elements of mental health, the biology of neuroscience, and art therapy to explore bilateral art through scribble drawing with clients. Bilateral art focuses on the stimulation of the left and right hemispheres of the brain using both hands. "These hemispheres communicate primarily through the corpus callosum, a mass of neurons situated between the two hemispheres" (McNamee, 2004, p. 137). McNamee found in her case study that her client with symptoms of anxiety, panic attacks, and depression, was able to integrate her right-hemisphere experiences with left hemisphere understanding. The nonverbal was driving the verbal throughout the process.

Siegel (2003) discussed that trauma may induce separation of the hemispheres, impairing the capacity to achieve these complex, adaptive, self-regulatory states and reveal incoherent narratives (p. 15). The separation of the two hemispheres causes speech containing traumatic content to be nonlinear and difficult to talk about. Bilateral stimulation of the left and right hemispheres while creating art can help process trauma content.

Tripp's (2007) article focuses on a short term approach to processing trauma focusing on the body and physical sensations. The research method used is a qualitative case study of a single participant who is a middle aged woman who was a marital therapist struggling with a conflict in supervision. The study focused on an integrated Eye Movement Desensitization and Reprocessing (EMDR) and art therapy protocol. The participant created scribble drawings while the researcher encouraged her to verbally say or think negative thoughts related to her trauma. This study focused on trauma and building the participant's self-esteem in a contained and safe space. The article provides a description of what happened in session with the participant and the artwork. Tripp (2004) explains in the method section that the art work produced becomes a tangible series that can visually track the steps and progress made by the client. The study provided a clear picture of integrating the bilateral auditory and tactile stimulation while using a scribble drawing technique.

Mind-Body Approach.

Hass-Cohen (2018) noted that the mind-body connectivity happens in the nervous system which consists of the brain and spinal cord. The brain and spinal cord connect the body organs and extremities through the peripheral nervous systems which divides into the autonomic nervous system and somatic nervous system. The autonomic nervous system controls involuntary responses to stimuli and restores homeostasis while the somatic nervous system sends sensory information to the central nervous system. Stressors such as PTSD can alter these systems in the body. Hass-Cohen (2018) explained that art therapy activities can ground affective-sensory experiences and bring relief though kinesthetic and voluntary action of art making. Mind-body approaches link physiological and psychological changes in immune, nervous, endocrine systems.

Bremner et al. (2017) created a pilot study on the effects of mindfulness-based stress reduction on posttraumatic stress disorder symptoms. Mindfulness training exercises focus attention on the here and now while noticing sensations and feelings. This method provides a sense of control and builds skills toward living in the present moment rather than on recurrent flashbacks of the traumatic event, nightmares, persistent negative emotions such as anger, fear, or shame, and anxieties.

Paint and Therapy

Cathy Moon (2010) noted that using paint can help access emotions that are hard to reach because of surprising outcomes. The fluid quality of paint allows for the freedom of thoughts and feelings. Paint can be layered and worked over many times especially if the outcome is disliked or brings out a reaction. Some limitations to paint is that it is difficult to control due to its fluidity. It can be frustrating for a person who needs control or is unable to accept spontaneous outcomes. Rolling marbles through the paint brings even less control and more movement. The focus is less on control and more on letting go of control and using movement.

Hinz (2009) discusses that the affective component of the expressive therapies continuum help clients access emotions when using fluid media and vivid colors (p. 101). Paint is a fluid media that can help amplify the expression of feelings and support access to identifying emotions. Internal sensations can be noticed when using fluid media such as paint.

Method

The inspiration for this technique came from my experience marble painting in my kindergarten class as a child. It was a unique art experience that I never forgot about and I remember how my teacher helped each of us create spider webs for Halloween using this technique. I chose to carry this technique into art therapy because of its contained and fluid elements. I conducted this technique with veterans diagnosed with PTSD through the following methods as a way to help symptoms of PTSD.

Research Method

This study implemented three marble painting sessions at a VA Hospital with a total of 16 participants who were men and women veterans with a history of PTSD. This art therapy

method was integrated into regular programming at the hospital. Women participated in a directed art therapy group which was carried out within one session of group therapy where the women meet once a week for art therapy. The room the women met in was a large bright room with windows. Men participated during art therapy open studio group which was held in a dining room that was bright with windows.

Participants

Participants consisted of 16 veterans who were male and female with a majority diagnosis of PTSD. Some veterans had dual diagnosis of PTSD and other mental health disorders such as substance abuse, depression, and military sexual trauma (MST). All participants had difficulty with managing symptoms such as heightened arousal, frustration, and anxiety.

Materials

The main material used in this method was plastic Sterlite containers which were 11.0 inches x 14.0 inches. A lid was included in all sessions as optional for participants who used fast or rapid movements. Plain and colored paper was used and it was sized down to 5x7 to fit into the container. Tempera or acyclic paint was poured into one side of the container and marbles were added at the end.

Data Collection

During the marble painting sessions notes were recorded on body language, group dynamics, themes and quotes from the discussion. After sessions process notes were recorded and process art was made around mimicking and embodying movements observed. All participants kept art that they made. It was recorded how veterans felt before and after the session. A group process note was created for the purposes of data collection which made it easier to understand what happened with each individual group member and anything notable during the sessions. As a clinician it is important to process the group experience and understand what is happening with each individual but it is also necessary to understand what is happening within the witness. Noting anything felt about the process as the researching can also bring valuable information.

Using a group process note that includes each individual member and the therapist's thoughts or impressions can be helpful in future art therapy studies. Keeping track of what happens in an art therapy group can be complicated with only one facilitator and it is important to capture the important information.

Procedure

There were three marble painting sessions, two were in a close women's group and one was in an open studio group. The marble painting session with the woman began with a brief scribble drawing check-in to reduce any arousal or anxiety. This process helped transition participants into the marble painting process while also providing grounding. Each open studio session began with directions on how to tape paper inside the container and where to place the paint. The amount of marbles used depended on the participant. It was encouraged that participants make a series of paintings using different colors while becoming aware of the movements they were making. Participants were asked to notice any rhythms they noticed or felt during the process.

Results

Overview

Group 1

During the first marble painting group 6 women veterans attended the mandatory 120 minute art therapy group session which is part of a treatment and recovery program. This was a closed group and was held in a large room with windows and two doors. Veterans seemed anxious and this facilitator began the group with a 10 minute scribble drawing before beginning the marble painting process. One of the participants was frustrated before group had started and expressed some personal struggles she was facing outside of the group. During the marble painting process this facilitator showed veterans how to tape the paper and add the paint into the containers. Each of the women chose their own color paint to work with and were encouraged to make a series. One of the participants shook the container rigorously and proceeded to stand up and do this. The noise was disturbing to some of the group members but they chose to stay in the room. Two participants chose not to use lids on their containers while the rest did. Those who did not use lids were observed watching the marbles and trying to control where they went. Some participants had trouble peeling the paper out of the containers as they did not want to get paint on their hands and this facilitator assisted. Two participants decided to lay paper over excess paint in the container to make prints. Participants shared that they enjoyed laying the paper down in the containers and peeling them out to see how the patterns came out. It seemed to be very calming to use what was left in the container.

Group 2

During the second marble painting group 4 men attended a 60 minute open marble painting session. It was held in a dining room with windows and two doors which were open allowing other veterans to come and go as they wanted. This session only included 4 men who made at least one piece of art. Some veterans came into the room and observed but did not engage in art making and were not counted as participants as they did not engage with the 4 men who were making art. The participants of this group were given containers that had paper taped and ready to begin marble painting right away. Two of the men created a series of paintings and used fast motions to move the containers. One participant decided to use a paintbrush to outline something he saw in his dried marble painting. Two participants used the excess paint in the container to make prints and did not want to waste it and liked the pattern left behind in the containers. Participants in this group were observed talking to each other and shared how their marble paintings came out. The movements in this group were more limited than the other two marble painting sessions as these members were in wheelchairs. Something I noticed about this group was how loud the conversations among participants were in parallel with how loud the marbles were. This group was comfortable with the loudness from the marbles rolling in the containers.

Group 3

During the first marble painting group 4 women veterans attended the mandatory 120 minute art therapy group session which is part of a treatment and recovery program. It was held in a large room with windows and two doors at a large table. This facilitator began the session with a 10 minute scribble drawing. This group of women did not begin the group showing any nervousness or anxiousness and seemed comfortable as a group dynamic. This facilitator gave instructions and helped assist those who needed it. During the session participants were observed

choosing paints and adding 2-3 different colors at a time. Some participants explored using only one color at a time. Two participants had some issues peeling their pictures out of the containers and touching the paint and this facilitator offered assistance. One of the participants used too much paint and became frustrated that it did not come out the way she wanted. This facilitator offered assistance and helped problem solve with her to wipe out the paint and start a new piece. This group also discovered making prints using the excess paint in the container and were observed adding paint to make different colored prints.

Observations

Observations made during marble painting showed that veterans were increasingly engaged throughout the process. A few participants were observed shaking the containers rigorously while others moved it slow and methodically. A few participants decided to make a series of marble paintings using different colors. The movements were on a continuum of slow and careful to fast and rigorous. Some of the notable comments made during marble painting were, "I got my anger and frustration out", "I had trouble not having control", and "I couldn't get them to do what I wanted". Marble painting worked with veteran's frustration tolerance while acting as a creative outlet for negative feelings.

Some participants were observed standing up while shaking containers. A few put full energy into shaking the containers which moved the marbles very quickly making loud sounds. Some participants discussed that it was an energetic process and somewhat loud but it reduced frustration and anxiety. A few participants were observed being hesitant with their movements because of a lack of control they felt with the marbles and the paint. These group members observed their peers letting go and getting into a rhythm and shortly followed but in a slower manner. The marble painting process and the discussion about the participants experience with the art making process seemed to run parallel with reduction of PTSD symptoms. It was noted that participants described feeling a reduction of frustration and anxiety. The majority of participants appeared focused and talked with peers during the process about color choices and movements observed.

Discussion

New Information

The results of the marble painting sessions were based on my experience and impression while working with 16 veterans who were diagnosed with PTSD and who participated in the marble painting sessions. Marble painting was introduced to veterans as a method to help sensations of PTSD symptoms in the mind and body which include heightened arousal and frustration. The current literature provides evidence that in trauma work it is not the verbal piece that matters but the nonverbal. Van der Kolk (2004) described that a deactivation of the left hemisphere directly impacts the ability to organize experience into logical sequences and translate emotion and perceptions into words. During the marble painting a common theme noted was that participants identified they were able to put the frustration into the marbles. Integrating the right hemisphere experience of marble painting with the left hemisphere understanding of the experience helps translate the nonverbal into the verbal communication.

Themes

Some of the common themes from the different groups were a sense of freedom, putting frustration into the marbles, getting the anger out, control issues, and calming rhythm. These

themes came up across the three different groups and all groups expressed how marble painting is a non-intimidating painting technique that anyone can do.

Marble painting was done in a safe environment and in a literal container. It also helped increase self-esteem as it was an easy art technique for all participants to do especially those who have never painted before. Participants with little art experience enjoyed the marble painting session because they were able to create art without worrying about details and a theme that came out of this was a sense of freedom, focusing on trauma and building self-esteem in a contained and safe space (Tripp, 2007).

During the marble painting sessions, traumatic experiences were not discussed but symptoms of PTSD were reported reduced. Movement in both arms seemed to bring on concentration and focus for participants. Talwar (2007) discussed that bilateral stimulation of the frontal lobes helps with the integration of traumatic experiences. Emotions such as frustration and anxiety were reported to be slowly reduced during the process. Participants seemed to be in the zone during the marble painting process and were noticed to be individually into what they were doing. It was noticed that participants would occasionally laugh or smile with one another while moving the containers to roll the marbles.

During the marble painting sessions this facilitator witnessed each member use their hands and body to shake or move the containers to roll the marbles. Unexpectedly, a performance piece emerged from the sessions while participants were all moving at their own pace and focusing on the marbles in the container. There seemed to be an attunement to the rolling of the marbles and the movement in the body during the process. Some participants would begin to shake the containers with the same rhythm or synchrony as those next to them or across from them. Some participants looked up at others and witnessed how others were moving the marbles in the containers. This performance aspect of the art making was an important piece in the art therapy sessions (McNiff, 1992). The movements, sounds, and environment intensified the art making experience.

There were some participants who had trouble with the lack of control of the paint and the marbles and had to let go of control. There seemed to be a group realization about how important control was when creating art but marble painting allowed for a freedom to make mistakes or to look at art in a different way than originally thought by participants. During the sessions participants used vibrant colors and were observed experimenting with how colors blended with the marbles, helping participants access hard to reach emotions (Moon, 2016). The paint offers fluidity and symbolic meaning while the marbles offer grounding but also a rolling movement. Participants were able to direct the marbles but could not control the marbles fully.

Recommendations

Marble painting would be a good technique to use within art therapy sessions for PTSD. It is recommended that these sessions be for no longer than an hour as engagement with this technique lasts for about 45 minutes. Most participants created a series of about 4-5 pieces. Finding a way to create a directive with marble painting needs to be further explored.

Limitations

A limitation noticed during the process was the noise of the marbles which some participants seemed to be effected by the noise level. Participants who shook their containers made loud sounds that bothered some group members. It is important to inform the group of the loud sounds before beginning. Those who have a low frustration tolerance may have a hard time having a lack of control with the marbles and the paint. It can be hard to let go of control and allow the marbles and paint to work with the movement of the container. Using too much paint can make the paper oversaturated and disable the marbles from rolling which could increase frustration.

My interpretation may have been affected by my own experience with marble painting. I saw some participants have issues with control and letting go which was something I never experienced with this technique.

Conclusion

The findings from this study discovered the capabilities and challenges of marble painting as a method to help with PTSD symptoms in veterans. Focusing on the rhythm of the body while moving and rolling marbles in a container provided a moment of letting go and focus. Marble painting was reported to help with frustration and anxiety for most participants and proved to be a method that allowed for a creative outlet.

There are many qualitative studies regarding art therapy treatment with veterans who are diagnosed with PTSD but there are few quantitative studies. It would be beneficial to do further research involving measurable elements and neuroimaging.

Veterans do not have as much access to art therapy as other populations. It would benefit the veteran population if more large scale research was conducted on art therapy with veterans. Art therapy is still a developing field and it is not common in the VA healthcare system. One of the only well-known art therapy programs in the VA healthcare system is called Giant Steps at the Mental Hygiene Clinic at VA Connecticut.

References

- American Heritage Medical Dictionary Editors (2018). The American Heritage Medical Dictionary. Boston, MA: Houghton Mifflin Harcourt (HWH).
- American Psychiatric Association. 2013. Diagnostic and statistical manual of mental disorders (5th ed.). Arlington, VA: American Psychiatric Publishing.
- Bremner, J. D., Mishra, S., Campanella, C., Shah, M., Kasher, N., Evans, S., & Carmody, J. (2017). A pilot study of the effects of mindfulness-based stress reduction on posttraumatic stress disorder symptoms and brain response to traumatic reminders of combat in Operation Enduring Freedom/Operation Iraqi Freedom combat veterans with posttraumatic stress disorder. *Frontiers in Psychiatry*, 8(157).
- Carr, R. (2011). Combat and human existence: Toward an intersubjective approach to combat-related PTSD. *Journal of Psychoanalytic Psychology*, 28, 471-496.

Gazzaniga, M. (1998). The split brain revisited. Scientific American, 279(1), 51-55.

- Golub, D. (1985). Symbolic expression in posttraumatic stress disorder: Vietnam combat veterans in art therapy. *The Arts in Psychotherapy*, *12*(4), 285-296.
- Hass-Cohen, N., & Carr, R. (Eds.). (2008). Art Therapy and Clinical Neuroscience. London: Jessica Kingsley.
- Hinz, L. (2009). Expressive therapies continuum: A framework for using art in therapy. New York: Routledge.

- Johnson, D. R., Rosenheck, R., & Fontana, A. (1997). Assessing the structure, content, and perceived social climate of residential posttraumatic stress disorder treatment programs. *Journal of Traumatic Stress*, 10(3), 361-376.
- Levine, P. (2005). Healing trauma: A pioneering program for restoring the wisdom of your body. Boulder, CO: Sounds True.
- Lusebrink, V. B. (2004). Art therapy and the brain: An attempt to understand the underlying processes of art expression in therapy. *Art Therapy: Journal of the American Art Therapy Association*, *21*(3), 125-135.
- McNamee, C. M. (2003). Bilateral art: Facilitating systemic integration and balance. *The Arts in Psychotherapy*, *30*(5), 283-292.
- McNamee, C. M. (2004). Using both sides of the brain: Experiences that integrate art and talk therapy through scribble drawings. *Journal of American Art Therapy Association*, 21(53), 136-142.
- Moon, C. H. (Ed.). (2010). Materials & media in art therapy: critical understandings of diverse artistic vocabularies. New York: Routledge
- Ogden, P., Minton, K., & Pain, C. (2006). *Trauma and the body: A sensorimotor approach to psychotherapy*. New York: W. W. Norton.
- Rothschild, B. (2000). *The body remembers: the psychophysiology of trauma and trauma treatment*. New York: Norton.
- Sapolsky, R. M. (1998). Why Zebras don't get Ulcers. New York, New York: W.H. Freeman and Company.

- Siegel, D. J. (2003). An interpersonal neurobiology of psychotherapy: The developing mind and the resolution of trauma. In M. Solomon & D. Siegel (Eds.), *Healing trauma: Attachment, mind, body, and brain* (pp.168-196). New York: W. W. Norton
- Talwar, S. (2007). Accessing traumatic memory through art making: An art therapy trauma protocol (ATTP). *The Arts in Psychotherapy*, 3422-35. doi:10.1016/j.aip.2006.09.001
- van der Kolk, B. A. (2003). Post-traumatic stress disorder and the nature of trauma. In M. Solomon & D. Siegel (Eds.), *Healing trauma: Attachment, mind, body, and brain* (pp.168-196). New York: W. W. Norton.
- Walker, M. S., Kaimal, G., Gonzaga, A. L., Myers-Coffman, K. A., & DeGraba, T. J. (2017).
 Active-duty military service members' visual representations of PTSD and TBI in masks. *International Journal of Qualitative Studies on Health and Well-Being*, *12(1)*, 1267317.
 doi:10.1080/17482631.2016.1267317