

Clay Work as a Mindfulness-Based Practice

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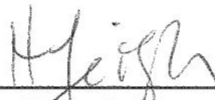
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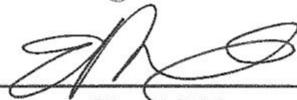
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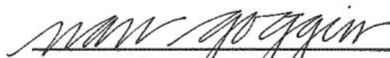


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ABSTRACT

This single subject study sought to explore the potential connection between Clay Work and components of mindfulness using the State Mindfulness Scale for Clay Work (SMS-CW). The study was done by an art therapy graduate student, who was the sole participant of the three week-long study. The researcher was not kept to a time limit when working with clay, and after every session completed the SMS-CW. It was hypothesized that the researcher's self-reported scores on the SMS-CW taken after working with clay would show a connection between Clay Work and the components of mindfulness measured by this instrument. Key finding indicated the potential for Clay Work to promote similar benefits as mindfulness based practices.

Keywords: Clay Work, mindfulness, awareness, attention, mind, body, State Mindfulness for Clay Work

DEDICATION

This work is dedicated to my mom and grandmother, for being the strongest women in my life and raising me to be strong and more accepting of myself. I also dedicate this to my immediate and extended family, for always supporting me and challenging me to be more than I ever believed was possible. And finally, I dedicate this to my life partner who has been there to catch me when I fall and remind why I started this process in the first place.

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CHAPTER I

INTRODUCTION

In a fast paced world that appears to rotate around distractions and anxieties, the art of practicing mindfulness has increasingly become valued in mental health fields (Bishop, et. al., 2004; Coholic, 2011; Drass, 2015; Monti et al., 2006; Monti & Peterson, 2004; Peterson, 2013; Reibel, Greeson, Brainard, & Rosenzweig, 2001; Speca, Carlson, Goodey, & Angen, 2000; Stratton, 2015). The works of Jon Kabat-Zinn integrated spiritually based practices from Buddhism into modern medicine through mindfulness, which he defines as a state that arises from a moment-to-moment, nonreactive, and nonjudgmental state of awareness (Jaworski & Scharmer, 2002). Through this integration he became acutely aware of the benefits of mind/body healing. Subsequently, Kabat-Zinn developed Mindfulness-Based Stress Reduction (MBSR) at the University of Massachusetts, which is an “intensive training in mindfulness (moment-to-moment awareness) and its integration into everyday life” (Sameulson, Carmody, Kabat-Zin, & Bratt, 2007, p. 225). Mindfulness is becoming more researched in the discipline of counseling (Coholic, 2011; Drass, 2015; Reibel, Greeson, Brainard, & Rosenzweig, 2001; Speca, Carlson, Goodey, & Angen, 2000), and even in the newer discipline of art therapy (Monti & Peterson, 2004; Monti et al., 2006; Peterson, 2013).

Depending upon the author or researcher, the definition of mindfulness varies (Stratton, 2015); however, two fundamental consciousness activities appear to be commonalities among these varying definitions: awareness and attention (Brown, Ryan, & Creswell, 2007; Stratton, 2015). Bishop et. al. (2004) defined awareness as “adopting a particular orientation toward one’s experience in the present moment, an orientation that is characterized by curiosity, openness, and acceptance” (p. 232), and attention as a skill that is self-regulated and required to maintain

awareness, incorporating the control of thoughts, feelings, and sensations from moment-to-moment.

In mental-health-related disciplines, mindfulness-based practices have been used to increase improvement in mood disturbances, increase feelings of vigor and decrease symptoms of stress (Specia, Carlson, Goodey, & Angen, 2000), as well as enhance health-related quality of life, reduce physical symptoms such as self-reported medical symptoms and bodily pain and decrease psychological distress (Reibel, Greeson, Brainard, & Rosenzweig, 2001). The most studied mindfulness-based approach related to mental health is Kabat-Zinn's (MBSR) which focuses on the improvement of quality of life, increasing self-regulation, and developing more healthful coping strategies (Monti, Sufian, and Peterson, 2008).

In art therapy, applications of mindfulness-based treatments aim to facilitate both verbal and nonverbal information processing (Monti et. al., 2006), as well as enhance support and expanded coping strategies. Initial research suggests that mindfulness-based approaches to art therapy aid in the decrease of psychological distress and improve health-related quality of life (Monti et. al., 2006). Specifically, Caroline Peterson (2014) created a framework called Mindfulness-Based Art Therapy (MBAT), which consists of the integration of mindfulness, meditation skills, and art therapy (Monti et al., 2006; Monti & Peterson, 2004; Peterson, 2013; Peterson 2014). Additionally, Peterson (2014) developed a materials-focused extension of MBAT: Mindful Exploration of Art Materials (MEAM). The MEAM process "uses pairings of...art media and papers...to practice mindful attention to the awareness of the contact experience with each" (Peterson, 2014, p. 67). The materials used in MEAM include:

Pencils, colored pencils, marker paper, ink pens or markers, pastel paper, pastels, water-soluble crayon, watercolor pan sets and tempera paint, a range of paper types

and sizes, colored construction paper, colors tissue paper, glue sticks, liquid paste, and a selection of brushes (Peterson, 2014, p. 67).

While the MEAM process primarily used the 2-D materials highlighted above, 3-D materials such as clay were also made available, though not prominently investigated (Peterson, 2014).

The purpose of this study was to identify if Clay Work could be an effective tool to use in a mindfulness-based practice. Clay is a naturally occurring material that has been shown to evoke creativity, promote therapeutic processing of repressed emotions, and increase physical and psychological well-being (Elkis-Abuhoff, et. al., 2008; Elkis-Abuhoff, et. al., 2013; Elkis-Abuhoff & Gaydos, 2018; Goldblatt, et. al., 2010; Kimport, & Robbins, 2012; Kimport, & Hartzell, 2015;). The medium of clay has been used in art therapy to enhance mood in college students (Kimport & Robins, 2012), decrease anxiety symptoms for individuals with severe mental illness (Kimport & Hartzell, 2015), as well as decrease in depressive symptoms and obsessive-compulsive thinking, phobia, and stress in individuals with Parkinson's disease (Elkis-Abuhoff, Goldblatt, Gaydos, & Convery, 2013). However, the use of clay has not previously been studied in relation to mindfulness.

This three week-long single-subject study sought to discover if there is a connection between Clay Work and components of mindfulness assessed by the State Mindfulness Scale for Clay Work developed by the researcher based on Tanay and Bernstein's (2013) State Mindfulness Scale and Cox, Ullrich-French, and French's (2016) State Mindfulness Scale for Physical Activity. Clay Work in this study is defined as "the process of handling, manipulating, and sculpting clay" (Sholt & Gavron, 2006, p. 66), including techniques such as wedging, hand building, throwing on the wheel, and decorating. It was hypothesized that the researcher-artist's

self-reported scores on the State Mindfulness Scale taken after working with clay will show a connection between Clay Work and the components of mindfulness measured by this instrument.

Operational Definitions

Art therapist: The American Art Therapy Association (2017) define art therapist as:

Art therapists are master-level clinicians who work with people of all ages across a broad spectrum of practice. Guided by ethical standards and scope of practice, their education and supervised training prepares them for culturally proficient work with diverse populations in a variety of settings. Honoring individuals' values and beliefs, art therapists work with people who are challenged with medical and mental health problems, as well as individuals seeking emotional, creative, and spiritual growth (para. 6).

Art therapy: The American Art Therapy Association (2017) define art therapy as:

Art Therapy is an integrative mental health and human services profession that enriches the lives of individuals, families, and communities through active art-making, creative process, applied psychological theory, and human experiences within a psychotherapeutic relationship...effectively supports personal and relational treatment goals as well as community concerns. Art therapy is used to improve cognitive and sensory-motor functions, foster self-esteem and self-awareness, cultivate emotional resilience, promote insight, enhance social skills, reduce and resolve conflicts and distress, and advance societal and ecological change (para. 2).

Attention: Defined as a skill that is self-regulated and required to maintain awareness, incorporating the control of thoughts, feelings and sensations from moment to moment (Bishop et. al., 2004).

Awareness: Defined as “adopting a particular orientation toward one’s experiences in the present moment, an orientation that is characterized by curiosity, openness, and acceptance” (Bishop et. al., 2004, p. 232).

Centering: Defined as the process of distributing clay on the wheelhead, evenly and centrally, so that there is no wobble when the wheel is turning (Rhode, 2010).

Ceramics: Defined by Kuzmin (2012) as “a general term used for any artifact made of clay” (p. 540).

Clay Work: Defined by Sholt and Gavron (2006) as “ the process of handling, manipulating, and sculpting clay” (p. 66).

Handbuilding: Defined as the act of manipulating clay by hand to construct an object (Rhode, 2010).

Leather hard: Defined as “partially dried clay...can be carved but not bent” (Staubach, 2005, p. 45).

Meditation: Defined as a deliberate practice that begins by simply paying attention and being, that evolves from being deliberate to being effortless over time (Kabat-Zinn, 2005).

Mindfulness: Defined as a state that arises from moment-to-moment, nonreactive, nonjudgmental state of awareness, of which arises through paying attention, on purpose, in the present moment (Jaworski & Scharmer, 2002).

Plasticity: Defined as the ability of a substance (like clay) to hold any shape which it is given (Rhodes, 2015).

Pottery: Defined by Kuzmin (2012) “vessels made of fired or baked clay” (p. 540).

Scoring: Defined as roughing up of the surface of clay for joining (Rhodes, 2015).

Slip: Defined as the “fluid suspension of clay in water, which will flow readily but which will not settle...” (Rhodes, 2015, p. 29).

State-based mindfulness: Defined as the evocation and maintenance of mindfulness that is dependent on the regulation of attention on the experience, of which is state-like (a short-term position, such as relaxation, or periods devoted to mindfulness) in nature versus trait-like (a longer duration, such as an anticipated future event) (Bishop et. al., 2004; Tanay & Bernstein, 2013).

State Mindfulness Scale: A twenty-one item questionnaire, developed by Tanay and Bernstein (2013) to reflect Buddhist traditions and contemporary psychology science models of mindfulness.

Stoneware: Defined as “plastic clays, which mature or become vitreous at 1200 to 1300. Their fired color ranges from a very light grey or buff to a dark grey or brown” (Rhodes, 2015, p. 19).

CHAPTER II

LITERATURE REVIEW

This literature review explores the topics of mindfulness and Clay Work, including: the components and practices of mindfulness; the history of clay, clay objects, and clay techniques; mindfulness and art therapy; and the use of clay in art therapy.

Mindfulness

Greenberg (2012) identifies mindfulness as a mind-body medicine practice as an internal resource inside everyone based on Zen Buddhist meditation techniques. Mindfulness is a state that arises from a moment-to-moment, nonreactive, nonjudgmental state of awareness, that occurs through paying attention, intentionally, in the present moment (Jaworski & Scharmer, 2002). Throughout the literature, defining mindfulness varies to some degree depending upon authors or research. However, Stratton (2015) claimed there to be some commonalities, such as attention and awareness within a present moment.

Components of mindfulness. There are two fundamental aspects of human consciousness and components of mindfulness. They are awareness and attention (Bishop, et al., 2004; Stratton 2015). In addition, Jon Kabat Zinn (2005) highlighted the importance of being non-judgmental during practices of mindfulness.

Awareness. Bishop et. al. (2004) defined awareness as “adopting a particular orientation toward one’s experience in the present moment, an orientation that is characterized by curiosity, openness, and acceptance” (p. 232). When participating in a mindfulness meditation or practice, there is an element of curiosity about the ways the mind wanders and acceptance of those experiences (Bishop et. al., 2004).

Attention. Attention is identified by Bishop et. al. (2004) as a skill that is self-regulated and required to maintain awareness, incorporating the control of thoughts, feelings, and sensations from moment to moment. Conceptually, during mindfulness-based practices attention is directed toward the breath and is expected to wander from time to time. The aim is to acknowledge the wandering of one's attention and return attention back to the breath (Bishop, et. al., 2004). Attention may also be practiced in ways of sustaining attention, switching attention, as well as processing of physical sensation and mental events that arise throughout consciousness (Bishop, et. al., 2004).

Sustaining attention. Bishop, et. al. (2004) identifies skills of maintaining awareness over considerable periods of time needed to sustain attention. "Sustained attention on the breath thus keeps attention anchored in current experience so that thoughts, feelings, and sensations can be detected as they arise in the stream of consciousness" (Bishop, et. al., 2004).

Switching attention. Switching attention is considered by Bishop, et. al. (2004) as the ability to acknowledge one's thought, feeling, or sensation and then bring that attention back to breath, which involves flexibility of attention.

Physical and emotional sensation. When practicing mindfulness, and sustaining and switching attention, Bishop, et. al. (2004) mentioned that in the stream of consciousness, there are different elements of one's experience, such as emotional and physical sensations. Emotional sensations would consist of feelings that are evoked in one's experience, while physical sensations would be such things as once awareness of touch or pressure.

Non-judgment. Kabat-Zinn (2005) highlighted the importance of bringing non-judgmental awareness to mindfulness practice. Greenburg (2012) identified *non-judgment* as the ability to accept that all feelings, thoughts, and sensations have their purpose and to accept them

whenever they arise into consciousness without challenging or attempting to change them, or categorizing them as good or bad.

Mindfulness Based Practices. According to Bishop et. al (2014), “Mindfulness-based practices rely on meditation techniques...to gain insight into the nature of one’s mind” (p. 234). These practices view passing events in the mind as impermanent and located in the moment, rather than as inherent feelings and thoughts about the self or valid reflections on reality (Bishop et. al., 2014; Teasdale, 1999). Mindfulness-based practices “are thought to be associated with improvements in cognitive inhibition, particularly at the level of stimulus selection” (Bishop et. al, 2014). Additionally, there are different ways mindfulness-based practices can be approached (e.g., a secular practice and/or mediation practices) (Stratton, 2015).

A Secular Practice. Stratton (2015) states that within counseling and research, mindfulness is approached as secular practice, meaning that mindfulness in applied and academic settings “...avoids connection to faith-based or transcendental interpretations” (p. 101). This study examines the potential growth of mindfulness through Clay Work as a secular practice, because Clay Work can be practiced by anyone regardless of religion affiliation and related spiritualities.

Meditation. According to Jon Kabat-Zinn (Jaworski & Scharmer, 2002) meditation is more than a Buddhist practice (more so a universal and secular practice), by which one begins practice by simply paying attention, as “a way of being - not a technique” (Kabat-Zinn, 2005, p. 58). It starts as a deliberate practice that requires effort and then becomes a practice that is rather effortless; there is “a shift from ‘doing something;’ to simply being”...becoming more of a way one lives than a technique one does (Jaworski & Scharmer, 2002, p. 68).

History of Clay

Historically clay has been defined based upon the discipline of the beholder; a geologist, a farmer, an engineer, and a potter would all define common clays differently (Mackenzie, 1962). One definition of *clay* is that clay is a naturally occurring material that has plasticity and hardens upon firing (Bankson, 2008; Geggenheim & Martin, 1995; Rhodes, 2015; Staubach, 2005).

Staubach (2005) detailed the history of clay's origins: Beginning billions of years ago, clay started as stone which the molten magma of the earth slowly cooked, crystallizing into a hard crust called granite. Over time the granite was exposed to hot summers, rigid winters, rain, ice, snow, winds, and glaciers, causing the granite to expand and contract. After the weathering of granite, and exposure to organic acids from decaying vegetation, it began to break apart and decompose into feldspathic minerals (Rhodes, 2015; Staubach, 2005). The mineral group, feldspar, is a group of rock forming minerals that encompasses about 60% of the Earth's crust, and is also known as 'mother clay' (Breuer, 2012; Staubach, 2005). Mother clay was abundant and contained two qualities that humans needed, plasticity and durability. There are many different bodies of clay based on characteristics and firing temperatures; most common are earthenware and stoneware clay bodies (Breuer, 2012).

History of Clay Objects. Through the development of civilizations, ceremonial practices and rituals, clay objects have been used in a variety of capacities including utilitarian objects, ritual object, and ceremonial objects. The act of making products from fired clay, such as vessels for food storage and symbolic figures, have been a part of the human existence for thousands of years (Breuer, 2012; Sholt, & Gavron, 2006; Staubach, 2005). However, it is uncertain of the exact order in which these objects were developed. Furthermore, clay objects were being created

across continents in cultures independent of each other (Staubach, 2005; Zhushchikhovskaia, 2012) with no solid evidence suggesting migration and/or diffusion of such technology (Kuzmin, 2013).

According to Staubach (2005) and Zhushchikhovskaia (2012) the oldest pottery vessels date back 12,000 years ago to the Paleolithic era (or Old Stone Age) and early Neolithic era (or New Stone Age), and were constructed by the Jomon peoples in Japan (Rhode, 2010). However, Kuzmin (2013) claimed through chronologically based evidence that “the oldest pottery in the old World is known from greater east Asia” (p. 550), encompassing three large regions: South China, the Japanese’s Islands, and the Russia Far East. During these historical periods, clay pots and figures consisted of imperfections and little skill; skill level eventually grew, leading to the mastery of clay as evidenced by intricate detailing, patterns, and stylistic designs (Zhushchikhovskaia, 2012).

During the late Paleolithic era, small figures identified as men and women, sexless figures, birds, and other animals were used ritualistically (Staubach, 2005; Zhushchikhovskaia, 2012). Some of these figurines had large eyes and oversized thighs and some were stone circles, it is suggested that these were possibly used in religious ceremonies and fertility rites (Staubach, 2005). These ceremonial objects were likely pinched and squeezed out of smooth, plastic clay from a nearby river-bank (Staubach, 2005).

The Neolithic time period is known as the time of transition, from hunter-gather ways of life to farming (Stevanović, 1997). This included the transition from mobile ways of living to the development of more permanent dwelling spaces. According to Staubach (2005) “pottery skills generally developed when a culture embraced agriculture and become sedentary” (p. 5). It is believed, by archaeologists, that women were the potters during this time (Staubach, 2005;

Stevanović, 1997). It is also noted by Staubach (2005) that two vessels were created, the first cooking pots and attendant storage jars, “which lead to the development of culinary arts, enabled security in times of drought, intensified international commerce, and gave us the gift of wine” (p. 2).

Clay Techniques. Much like mindfulness, the process of working with clay is an ancient practice. Clay Work as art making can be a secular activity that can be practiced by anyone and goes beyond the act of making a vessel; the product itself becomes secondary to the process of being with clay. One of the fundamental characteristics of clay is its plasticity. Breuer (2012) defined the concept of plasticity as the ability of clay to be shaped by an applied force and keep shape unless acted upon by some other force. The ways in which force is applied to clay is through the process of wedging, pinching, and centering, each of which is defined further below.

Wedging. Bankson (2008) interpreted wedging (or kneading) clay as a preparation ritual that if not done efficiently would cause the fired object to break. Wedging is done through a rhythmic motion of the potter pressing downward with the heels of their hands followed by slightly twisting with their fingertips to release and break and release air pockets trapped in the clay, much like a baker kneads dough (Bankson, 2008; Staubach, 2005). The air pockets contain moisture, which expand in heat, and if fired would cause the object to break (Bankson, 2008).

Pinching. The act of pinching can be done by holding a ball of clay in one hand and pressing the clay between once thumb and curled fingers of the other hand making a “form defined by its inner space” (Bankson, 2008, p. 70). Staubach (2005) emphasized to use even pressure to form the walls and base of the pot, and cautioned not to poke a thumb through the other end of clay. Berensohn (1972) wrote about his initial frustration with the process of pinching pots, which later developed into an “earth-connected” mood, encouraging him to move

from an emphasis on productivity to a place of slowness, quiet, and deep attention (p. 19). He compared this process of pinching bowls as that of meditation or prayer, something that he returns to time after time to take a deep breath and center himself (Berensohn, 1972). Bankson (2008) also wrote about the meditative experience of pinching bowls:

Pinching a small bowl from a single piece of clay can be a centering experience, not only for the clay but for us as well. There is something powerful about the direct touch and hang on clay that evokes our deepest human longings. Pressing and stroking the clay into a thin symmetrical bowl in time with our breathing can be a portal for peacefulness, in which we feel as one with the slower rhythms of nature (Bankson, 2008, p. 58).

Centering. Centering is a technique used when forming clay on the potter's wheel; centering has been achieved when the spinning of the mound of clay is no longer visible to the eye (Bankson, 2008). The technique of centering clay on a wheel consists of smooth and rhythmical motions. While the wheel is turning, the clay is braced between two hands that are squeezing the mound of clay up and in, then down and out (Bankson, 2008). Berensohn (1972) described the process of centering clay on the wheel as a metaphor for mindfulness because it requires concentration, focus, a sense of being in the here-and-now with the clay, and a relationship between the potter and clay.

Mindfulness in Art Therapy

The field of art therapy focuses on the therapeutic benefits of making art that can include elements of mindfulness such as awareness of the external environment and physical sensations, as well as inward processes of attention, awareness, integration, and transformation (Peterson, 2014). Compared to other forms of therapy “art therapy looks outward as well as inward,

engaging a people's collective dream life, their hopes and images, their histories and current realities, and their discovery of new ways to go forward" (Kapitan, Litell, & Torres, 2011, p. 64). Research has shown that art therapy benefits many people in respect to mental health (Coholic, 2011; Davis, 2015; Drass, 2015), physical health, and self-exploration and transformation (Coholic, 2011). Expression through art making is perceived as less threatening than verbal expression for many individuals (Monti and Peterson, 2004).

Art therapy practice and research has expanded to intentionally incorporate aspects of mindfulness. Mindfulness incorporated into art therapy practices has been found to promote feelings of self-awareness, and aspects of resilience, such as improvements in coping skills, social skills, problem solving, and feelings of self-esteem (Coholic, 2011). Mindfulness art therapy practices have also been shown to alleviate intrapersonal difficulties, such as an unstable sense of self, affect regulation, self-injurious behaviors and suicidal ideations (Drass, 2015). Two examples of from the art therapy literature are Coholic (2011), who combined mindfulness-based methods with art making, and Drass (2015) who used a Dialectical Behavioral Therapy (DBT) framework, which integrates qualities of mindfulness and radical acceptance with Cognitive Behavioral Therapy (CBT).

Caroline Peterson (2014) created a framework called Mindfulness-Based Art Therapy (MBAT), which consists of the integration of mindfulness and meditation skills and art therapy (Monti et al., 2006; Monti & Peterson, 2004; Peterson, 2013). The formation of MBAT interventions were influenced by Jon Kabat-Zinn's Mindfulness-Based Stress Reduction (MBSR) programs (Monti et al., 2006). Research on MBAT has shown that Mindfulness-Based Art Therapy interventions decreased depression and anxiety, identified more broadly by the researchers as "distress level" (p. 370), and improved quality of life, defined as mental health,

general health, vitality, and social functioning (Monti, et. al., 2006). Additionally, studies using the MBAT have yielded similar results to those of research using the MBSR. These include: significant improvements in mood (decreased anxiety, depression, anger, fatigue, and confusion and increased feelings of vigor), reduction of stress symptoms (Specia, Carlson, Goodey, & Angen, 2000), enhanced health-related quality of life (patient functionality and well-being), and reduced physical symptoms and reduced psychological distress, specifically anxiety and depression (Reibel, Greeson, Brainard, & Rosenzweig, 2001).

Mindful Art Making. Mindfulness practices, such as focus of attention and acceptance of self in the present moment, allow for development of self-awareness through directed observation (Monti et al., 2006; Monti & Peterson, 2004). Art tasks provide the ability to hone in on feelings and emotion in a personally meaningful manner (Monti et al., 2006; Monti & Peterson, 2004). Davis (2015) stated, “When art and mindfulness are paired, this deepens introspection and helps people to turn toward rather than away from emotional pain with openness, novelty, and psychological safety” (p. 65). Davis (2015) delineated that contemplation, art making, and reflection are the elements of mindful art therapy. The benefits of these components were confirmed by Drass (2016) who identified that the act of creating and working on the same piece of art for an extended period of time promotes distress tolerance, emotional regulation, and interpersonal effectiveness (p. 169). **Clay in Art Therapy**

Research has found that clay manipulation in an art therapy setting has the ability to evoke creativity, assist with the therapeutic processing of repressed emotions, and increase physical and psychological well-being (Elkis-Abuhoff, et. al., 2008; Elkis-Abuhoff, et. al., 2013; Elkis-Abuhoff & Gaydos, 2018; Goldblatt, et. al., 2010; Kimport, & Robbins, 2012; Kimport, & Hartzell, 2015). Kimport and Robbins (2012) observed mood enhancement through a

randomized controlled trial using Clay Work. The researchers used a pre-post State-Trait Anxiety Inventory (STAI-T) to gain a baseline and post-study measure on mood. Participants were divided into four groups and participated in either a structured or unstructured directive with clay or were provided with a stress ball. The results showed that clay manipulation reduced negative mood more than manipulation of the stress ball (Kimport and Robbins, 2012). In another study, Kimport and Hartzell (2015) sought to identify if clay manipulation through the act of pinching pots decreased anxiety. They had 49 participants from a private psychiatric hospital who met the criteria for a serious mental illness such as schizophrenia and other psychotic disorders, along with anxiety symptoms. The researchers offered their participants a choice between Model Magic (a man-made clay) and air-dry clay (a natural earth clay) and found that more participants chose the natural air-dry clay over the man-made Model Magic. The results showed that clay manipulation decreased anxiety overall (Kimport and Hartzell, 2015).

Elkis-Abuhoff and Gaydos (2018) researched the effects of clay manipulation on somatic dysfunction and emotional distress in individuals diagnosed with Parkinson's disease. Through a series of three studies, the researchers developed an understanding of the benefits of clay manipulation. Phase I explored the reactions between individuals diagnosed with Parkinson's disease and individuals without Parkinson's disease to clay manipulation directives. During this phase they found that both groups benefited from clay manipulation to reduce somatic symptoms and emotional distress, however the group of individuals with Parkinson's disease showed a greater decrease in depression, obsessive-compulsive symptoms, and phobic anxiety (Elkis-Abuhoff, Goldblatt, Gaydos, & Corrato, 2008; Elkis-Abuhoff, & Gaydos, 2018). Phase II yielded similar results, supporting the use of clay in art therapy to enhance quality of life for individuals with Parkinson's disease (Goldblatt, Elkis-Abuhoff, Gaydos, & Napoli, 2010). Phase III

consisted of a six-week control study to replicate findings from Phase I and II (Elkis-Abuhoff, Goldblatt, Gaydos, & Convery, 2013; Elkis-Abuhoff, & Gaydos, 2018). The directive was to create an object that reflected each week's topic: Week 1: living with Parkinson's disease, Week 2: anxiety and fear, Week 3: relationships, Week 4: getting older/aging, Week 5: emotions and control, and Week 6: goal setting (Elkis-Abuhoff, Goldblatt, Gaydos, & Convery, 2013; Elkis-Abuhoff, & Gaydos, 2018). Results for Phase III showed a consistent overall decrease in levels of depression, obsessive-compulsive thinking, phobia, and stress, which demonstrated the value of clay manipulation facilitated through art therapy (Elkis-Abuhoff, Goldblatt, Gaydos, & Convery, 2013).

Thus, there is a growing body of research promoting the applications of mindfulness in a therapeutic setting due to its benefits for both mind and body. Mindfulness has also found its way in the discipline of art therapy, from therapeutic frameworks such as the MBAT to the mindful application of art materials like the MEAM. The use of clay in art therapy has been found to facilitate both creative and therapeutic process. However, the combination of mindfulness and Clay Work has yet to be researched.

CHAPTER III

METHODS

Design

This study was an art-based, single-subject study that aimed to identify whether the artist's self-reported scores on the State Mindfulness Scale for Clay Work would show a connection between Clay Work and the components of mindfulness measured by this instrument after having worked with clay. For this study the researcher defined the act of working with clay (Clay Work) as the process of "handling, manipulating, and sculpting clay" (Sholt and Gavron, 2006, p. 66). The researcher studied the use of clay as a mindfulness practice in order to examine what aspects of Clay Work led to a state of mindfulness (as defined by the State Mindfulness Scale, Tanay & Bernstein, 2013), with a future goal of creating a mindfulness-based clay protocol to use with art therapy clients. It was hypothesized that data gathered in this study would indicate that working with clay would elicit a mindful experience; specifically, physical attributes of mindfulness (e.g. being more aware of physical sensations and presence of the body).

Location and Time Period of Study

This study took place at Herron School of Art and Design's ceramics studio, in Indianapolis, Indiana. The ceramics studio provided a clay-friendly space to work with access to clay materials (such as earthenware and stoneware clays), glazes, and a variety of kilns. The study was conducted in three sessions of Clay Work over four weeks, starting in February, 2019.

The ceramics studio is a large, open space with a number a ceramic wheels and tables with canvas stretched over them available, open to students. There were two different thirty-two

gallon barrels for clay and two different thirty-two gallon barrels for slip (one of each for the earthenware clay/slip and one for the stoneware clay/slip). There were large sponges and plastic buckets available to assist in the cleanup process as well as hold water; which is needed when throwing on the wheel. The researcher brought her own set of ceramics tools. During the times of data collection, the space was open to other students.

Participant

The researcher participant is a 24-year-old female, second-year art therapy graduate student and ceramic artist.

Clay Methods

The clay methods used in this study included wedging, handbuilding, centering clay (both in handbuilding and throwing on the wheel), trimming, and decorating. These methods are described in more detail below.

Handbuilding consisted of rolling a piece of clay into ball and gently pressing, stroking, and rotating the ball. The act of slowly and evenly pinching and rotating the clay can be a centering experience.

The process of centering on the wheel began by slamming the mass of wedged clay onto the wheel head, followed by drawing the clay into the center of the spinning wheel head with up-and-in followed by down-and-out motions of forms administered through braced hands. The process of centering was complete when the mound of clay appeared smooth and balanced, and the spinning was not visible. “Unlike the popular image of centering as a passive meditative state, centering clay on a potter’s wheel takes focus and a firm touch” (Bankson, 2008, p. 46).

Trimming a pot is done when the clay has become leather hard (i.e., partially dry); the pot is placed upside down on the wheel and re-centered on the wheel. This is done by slowly spinning the wheel and using a steady hand and pointer finger to indicate where the pot needs to be slightly moved. When completed, as the pot slowly spins, all sides of the pot will hit the researcher's finger. The rim of the pot is then adhered to the wheel head by placing coils of clay around it, so that it will not move once the wheel head begins to spin faster. If too much pressure is added to applying the coils of clay, one risks cracking/breaking the lip of the pot, or if not adhered well enough, the pot could be spun off of the wheel head entirely. Trimming is done by taking the metal trimming tools and pressing them into the leather hard clay as the wheel is spinning at a fast pace; this process cuts away any excess clay, and when completed will leave a foot for the pot to stand on.

Decorating the pot is done by adding texture, glazes, color, as well as extensions to the pot, like a handle. This allows for the capacity for play and imagination to flow out of the artist, as described by Bankson (2008).

Instrumentation

The State Mindfulness Scale (SMS) is a twenty-one-item questionnaire developed by Tanay and Bernstein (2013) to reflect Buddhist traditions and contemporary psychology models of mindfulness. The SMS is designed to reflect mindfulness as a mental state, which includes the following attributes, “(a) awareness, (b) perceptual sensitivity to stimuli, (c) deliberate attention to the present moment, (d) intimacy or closeness to one’s subject, and (e) curiosity” (Tanay & Bernstein, 2013, p. 1287). The researchers separated state mindfulness into two levels: (1) the object, or “what,” of a person’s mindful attention, and (2) the qualities, or “how” a person focuses their attention (Tanay & Bernstein, 2013, p. 1287). In this study the object, or “what,” of

mindfulness is the clay. It is hypothesized that the “how” may relate to the sensory aspects of Clay Work.

Cox, Ullrich-French, and French (2016) developed the State Mindfulness Scale for Physical Activity (SMS-PA) which was revised from the SMS (Tanay & Bernstein, 2013) to measure only mindfulness of an individual’s physical experience. The researcher contacted the co-originator of the State Mindfulness Scale, Amit Bernstein, and the researcher of the adapted scale for physical activity, Anne Cox, to obtain the categories and wording used for the Likert scale as these were not included in their published articles. Anne Cox, who adapted the scale, provided this information via email. The five-point Likert used for the SMS-PA is: 0 = Not at all, 1 = A little, 2 = Moderately, 3 = Quite a bit, 4 =Very much (Cox, personal communication, January 29th, 2019).

The researcher developed the State Mindfulness Scale for Clay Work (SMS-CW) (see Appendix C), which included the questions from the SMS (Tanay, & Bernstein, 2013) and the Likert Scale from the SMS-PA (Cox, Ullrich-French, & French, 2016). The SMS and SMS-PA included both mental and physical components of mindfulness. These were combined in order to create a mindfulness scale to study both the mental and physical components of mindfulness in relation to Clay Work. The SMS-CW was used to measure the researcher’s self-reported state of mindfulness after each Clay Work session in order to see if there was a connection between the clay tasks of each session and her self-reported state of mindfulness. The full 21-item scale used in this study is included below (see Appendix C). It is important to note that the literature on the SMS does not include a scoring guide, nor does it define how to interpret the scores in relationship to an overall mindfulness experience, thus leaving interpretations up to the researcher.

Data Collection

After each session of Clay Work, the researcher answered each question on the SMS-CW by placing a mark on a five-point Likert scale indicating perceived level of attention or awareness: 0 = Not at all, 1 = A little, 2 = Moderately, 3 = Quite a bit, 4 = Very much. There was no documentation of informed consent or confidentiality agreement due to the participant being the researcher.

Data Analysis.

The data gathered using the SMS-CW were analyzed using side-by-side comparison to identify whether the researcher's self-reported experience of working with clay was connected to elements of mindfulness listed on the SMS, and to what degree. These included the attention of the researcher being more on physical sensations or mental events in the present moment, or both, and how she was mindful to the physical sensations and/or mental events.

The researcher began her analysis by adding the total numbers scored on the SMS-CW for each session and compared them side-by-side. Following this initial step, the researcher separated the questions on the SMS-CW into two categories: mind and body. Out of the 21 questions, 14 were categorized as mental events (mind) and 7 as physical sensations (body). Within each of these categories, the researcher identified the questions that most related to attention and those that most related to awareness. Out of the 14 items categorized as mind, 12 were related to attention and 2 were related to awareness. Out of the 7 items categorized as body, 1 was related to attention and 6 were related to awareness. The researcher then compared the results of these four categories: mental events (mind), physical sensations (body), attention, and awareness. The overall scores were added and the average was found to compare the data.

Limitations and Delimitations

Delimitations were placed on the current study, such the researcher choosing to be the sole participant; therefore, results gathered from this study are neither representative nor generalizable. Data collection methods were also self-reported, leading to problems with validity and subject to research/participant bias. Additionally, this study consists of only a three-week data collection period and is a non-experimental design, which lacks manipulation of variables and controls by which this study is unable to draw upon a causal conclusion.

Limitations for the current study include the studio space used for this study was open to the public, of which could have impacted the researchers ability to obtain a sense of mindfulness and influence the score she marked on the SMS-CW.

CHAPTER IV

RESULTS

Self-reported scores on the SMS-CW were added up by the researcher for each session, with 84 being the highest possible total score for all 21 questions, indicating that on the 5 point Likert scale (0-4) a 4 for all questions, indicated that the participant's experience of mindfulness ranked as 'very much'. The total score for session one was 51, and the average score was 2.43, identifying that the participant's experience of mindfulness ranked as 'moderately'. The total for session two was 58, and the average score was 2.76, identifying that the participant's experience of mindfulness ranked as 'moderately' moving towards 'quite a bit'. Session three's total was 65, and the average score was 3.09, identifying that the participant's experience of mindfulness ranked as 'quite a bit'. (see Figure 1; see Appendix C). These scores demonstrate that there was an increase in mindfulness scores from session one to session three with a total increase of 14 points. These increases may indicate that there is a connection between Clay Work and mindfulness.

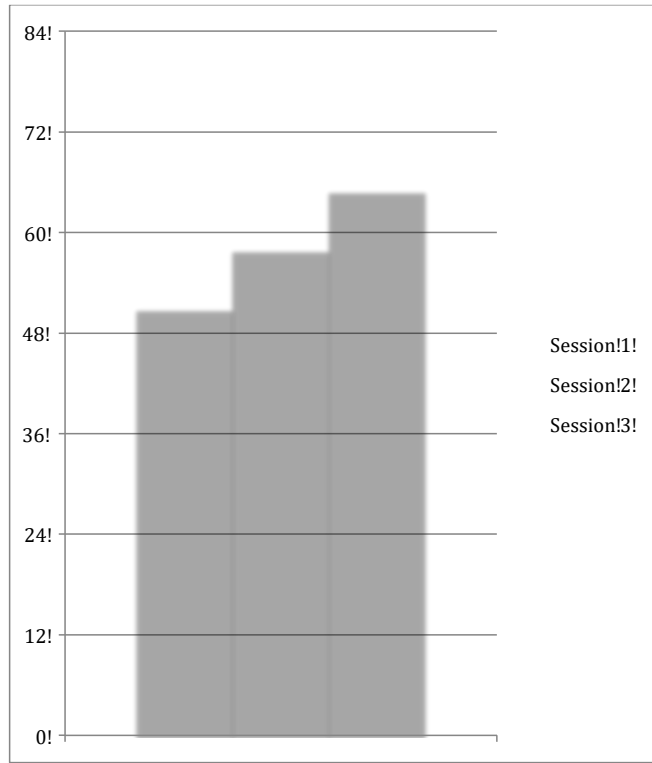


Figure 1. 21-item State Mindfulness Scale of Clay Work (Sessions 1, 2, and 3). The highest possible total for all 21 questions would be 84; this score signifies that all questions on the SMS%W were given a 4/Very much. The total score for session one was 51, the total for session two was 58, and session three's total was 65.

Mind and Body

The researcher separated the questions into categories of mind and body for further analysis. The mind category had a total of 14 questions, with the highest possible score of 56, which means that the participant ‘very much’ agrees with the questions (see Figure 2; see Appendix C). The total score for session one was 34, and the average score was 2.43, identifying that the participant’s experience of mindfulness ranked as ‘moderately’. The total for session two was 38, and the average score was 2.71, identifying that the participant’s experience of mindfulness ranked as ‘moderately’ moving towards ‘quite a bit’. Session three’s total was 43, and the average score was 3.07, identifying that the participant’s experience of mindfulness ranked as ‘quite a bit’.

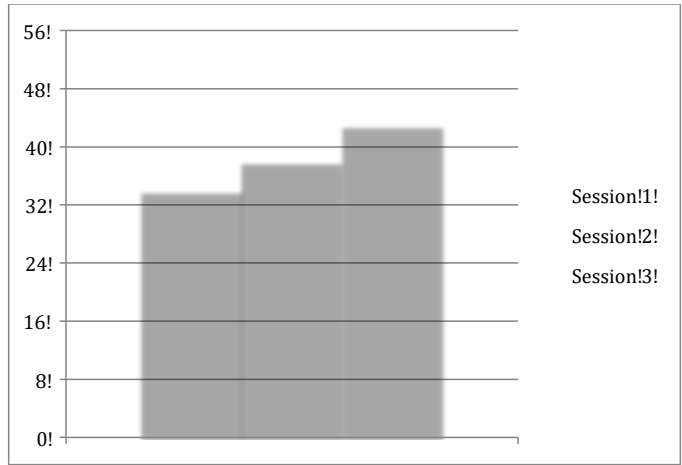


Figure 2. The mind category, containing questions from the 21-item State Mindfulness Scale of Clay Work related to mental components of mindfulness for session 1, 2, and 3. The highest potential total for all 14 questions would be a 56; this score signifies that all questions of the SMSCW, under the mind category, were given a 4/Very much. The total score for session one was 34, the total for session two was 38, and session three's total was 43.

The body category had a total of 7 questions, with the highest possible score of 28 (see Figure 3; see Appendix C). The total score for session one was 17, and the average score was 2.43, identifying that the participant's experience of mindfulness ranked as 'moderately'. The total for session two was 20, and the average score was 2.86, identifying that the participant's experience of mindfulness ranked as 'moderately' moving towards 'quite a bit'. Session three's total was 22, and the average score was 3.14, identifying that the participant's experience of mindfulness ranked as 'quite a bit'. The data demonstrates that the mind had an increase of 9 points overall; and the body showed an increase of 5 points overall. The connection to the body may have been facilitated through a kinesthetic, tactile, movement based art making process that consistently engages the body.

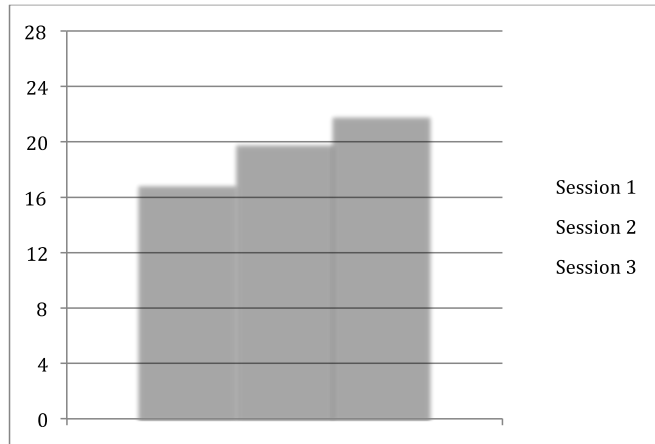


Figure 3. The body category, containing questions from the 21-Item State Mindfulness Scale of Clay Work related to physical components of mindfulness for session 1, 2, and 3. The highest potential total for all 7 questions would be a 28; this score signifies that all questions of the SMS-CW, under the body category, were given a 4/Very much. The total score for session one was 17, the total score for session two was 20, and session three's total was 22.

Furthermore, the researcher identified the questions that most represented attention and awareness in each of the categories of mind and body. Of the 14 questions in the mind category, 12 were identified as attention and 2 were identified as awareness. Of the 7 questions in the body category, 1 was identified as attention and 6 were identified as awareness.

Mind. There was a total of 12 questions related to attention, with the highest possible score of 52 (see Figure 4; see Appendix C). The total score for session one was 26, and the average score was 2.16, identifying that the participant's experience of mindfulness ranked as 'moderately'. The total for session two was 29, and the average score was 2.42, identifying that the participant's experience of mindfulness ranked as 'moderately'. Session three's total was 34, and the average score was 2.83, identifying that the participant's experience of mindfulness ranked as 'moderately' moving towards 'quite a bit'.

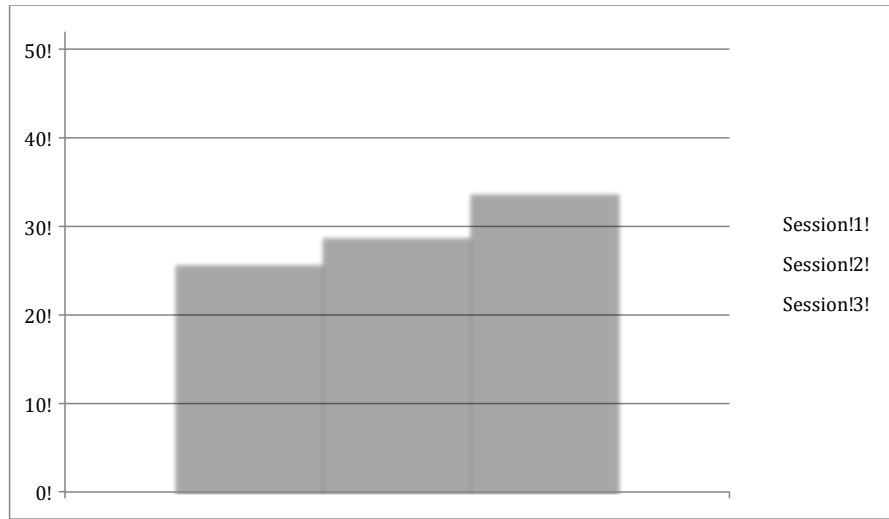
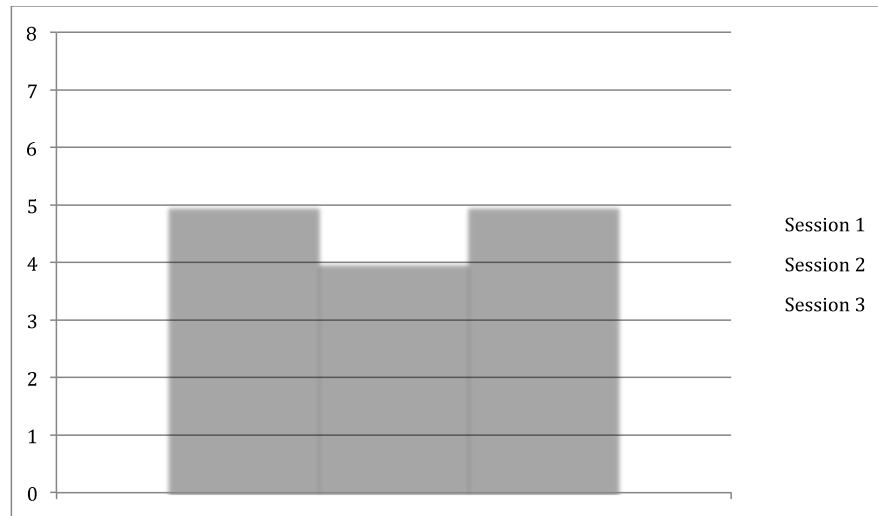


Figure 4. The attention within the mind category, containing 12 questions from the 21-item State Mindfulness Scale of Clay Work for session 1, 2, and 3. The highest potential total for all 12 questions would be 52; this score signifies that all questions of the SMS&W were given a 4/Very much. The total score for session one was 26, the total for session two was 29, and session three's total was 34.

There was a total of 2 questions identified as awareness, with the highest possible score of 8 (see Figure 5; see Appendix C). The total score for session one was 5, and the average score was 2.5, identifying that the participants experience of mindfulness ranked as 'moderately' moving towards 'quite a bit'. The total for session two was 4, and the average score was 2, identifying that the participant's experience of mindfulness ranked as 'moderately'. Session three's total was 5, and the average score was 2.5 identifying that the participant's experience of mindfulness ranked as 'moderately' moving towards 'quite a bit'. These results demonstrate a fluctuation of the scores in awareness in the mind category.



Figure'5. The awareness within the mind category, containing 2 questions from the 21-Item State Mindfulness Scale of Clay Work for session 1, 2, and 3. The highest potential total for all 2 questions would be an 8; this score signifies that all questions of the SMS-CW were given a 4/Very much. The total score for session one was 5, the total for session two was 4, and session three's total was 5.

Body. There was 1 question related to attention, with the highest possible score of 4 (see Figure 6; see Appendix C). The total score and average for session one for attention was 3, identifying that the participant's experience of mindfulness ranked as 'quite a bit'. The total and average for session two was 4, identifying that the participant's experience of mindfulness ranked as 'very much'. Session three's total and average was 3, identifying that the participant's experience of mindfulness ranked as 'quite a bit'. These results demonstrate a fluctuation of the scores in attention in the body category.



Figure 6. The attention within the body category contained 1 question from the 218 Item State Mindfulness Scale of Clay Work for session 1, 2, and 3. The highest potential total for the question was a 4, signifying that the question was ranked 'very much' on the SMS&CW. The total score for session one was 3, the total for session two was 4, and session three's total was 3.

There were 6 questions identified as awareness in the body, with the highest possible score of 24 (see Figure 7; see Appendix C). The total score for session one was 17, and the average score was 2.83, identifying that the participant's experience of mindfulness ranked as 'moderately' moving towards 'quite a bit'. The total for session two was 19, and the average score was 3.16, identifying that the participant's experience of mindfulness ranked as 'quite a bit'. Session three's total was 23, and the average score was 3.83, identifying that the participant's experience of mindfulness ranked as 'quite a bit' moving towards 'very much'.

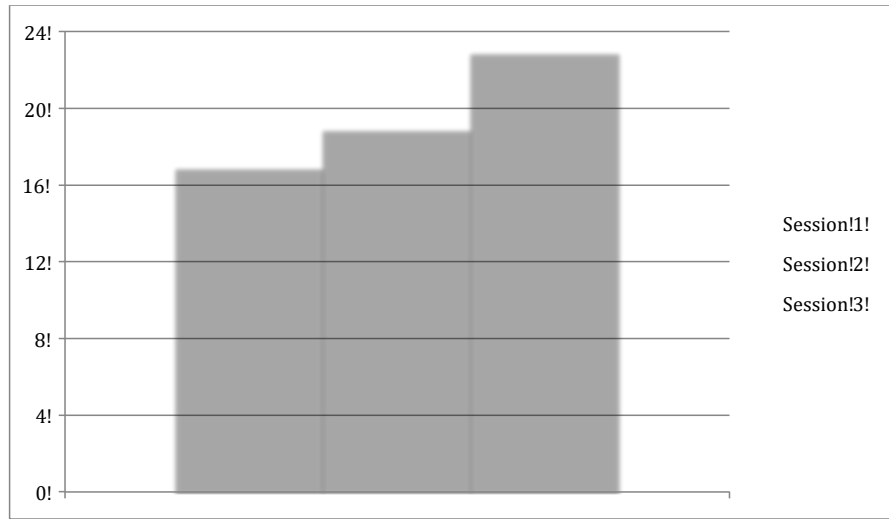


Figure 7. The awareness within the body category, containing 6 questions from the 21-Item State Mindfulness Scale of Clay Work for session 1, 2, and 3. The highest potential total for all 6 questions would be 24; this score signifies that all questions of the SMS: CW were given a 4/Very much. The total score for session one was 17, the total for session two was 19, and session three's total was 23.

Similar to the scores for the overall SMS-CW, the scores for mind and body increased from session one to session three. The highest average scores were found in the body. For session two, attention in the body average was 4 and for session three, awareness in the body was 3.83. These results demonstrate that the experience of mindfulness in the body was increased from session to session, further supporting the use of clay through a kinesthetic and tactile experience to enhance mindfulness.

CHAPTER V

DISCUSSION

The focus of the current study was to identify if there is a connection between mindfulness and Clay Work. The study is also intended to further support the literature on mindfulness as a therapeutic or health enhancing process by demonstrating that Clay Work can be used to a mindfulness experience. While this study does not investigate Clay Work specifically as a therapeutic modality, the researcher is an art therapy graduate student and ceramic artist who is interested in incorporating both mindfulness and the use of clay into her practice as an art therapist.

The purpose of the study was to identify if Clay Work could be an effective tool to use in a mindfulness-based practice. The researcher self-reported her scores on the State Mindfulness Scale for Clay Work (SMS-CW) and compared the data for an indication that Clay Work could be used in a Mindfulness-Based Practice. The discussion below will cover the following topics in relation to the study results: benefits of mindfulness, application to art therapy, and mindfulness in the context of mental health.

The overall results showed an increase in 14 points moving the participant's experience of mindfulness from 'moderately' to 'quite a bit'. In the category of mind, there was an increase in 8 points showing increase in the 'moderate' scale. In the category of body, there was an increase in 6 points, moving from 'moderately' to 'very much'.

Benefits of Mindfulness in Mental Health

The benefits of mindfulness in mental health includes an increase in mood (Specia, Carlson, Goodey, & Angen, 2000) and attentiveness (Bishop et. al., 2014; Teasdale, 1999), as

well as reduction in physical symptoms of bodily pain and psychological distress (Reibel, Greeson, Brainard, & Rosenzweig, 2001). Research in the field of counseling using Jon Kabat-Zinn's MBSR model conducted by Speca, Carlson, Goodey, and Angen (2000) indicated significant improvement in mood disturbances (e.g., decreased anxiety, depression, anger, fatigue, and confusion and increase feelings of vigor) as well as a decrease stress symptoms.

Research has also found benefits between mind/body healing and has since become increasingly more valued in mental health-related fields. At the heart of mindfulness-based practices is the acceptance of passing events as they are, in the mind, rather than as inherent feelings and thoughts about the self or valid reflections of reality (Bishop, et al., 2014; Teasdale, 1999). Eventually, this ability to accept passing events as they are becomes more effortless, shifting from a state of practicing and doing, to a state of being or a way that one lives (Jaworski & Scharmer, 2002).

This research was supported through the researcher's subjective experience and her ability to use Clay Work and promote a more balanced sense of self and well-being, as well as an increase in mood and released the build of stress that she carried in her neck and shoulders.

The researcher felt more aware of the different emotions that arose inside her, such as anger and frustration that was then converted into the physical exertion of energy as she wedged the balls on clay on the table and participated in handbuilding and centering on the wheel. This is also seen in the scores of questions 1 and 7 on the SMS-CW. Question 1 showed an increase from session one to session two, moving from 'moderately' to 'quite a bit' in respect to mindfulness, while question 7 maintained the score of 'quite a bit' throughout all three sessions.

Awareness of what was happening inside the researcher as far as noticing the coming and going of both emotions and thoughts were also present in the scores found in questions 14 and 19. The questions stated: Question 14, I noticed emotions come and go and Question 19, I noticed thoughts comes and go. Both questions 14 and 19 showed an increase from session two to session three, moving from ‘moderately’ to quite a bit’ in respect to mindfulness.

Through the researcher’s subjective experience, the process of working with clay through a mindfulness lens was one that decreased stress and physical pain, as well as improved mood disturbances, sense of self, and well-being. The researcher recalled feeling less stressed and more relaxed after having worked with the clay. Any anger, anxiety, or depressed mood seemed to melt from the researcher and pour into the exertion of energy used to form the figure of the pot. The researcher’s subjective experience of Clay Work aligned with Jaworski and Scharmer (2002)’s on how practice becomes a way of living. Question 1 showed an increase from session one to session two, moving from ‘moderately’ to ‘quite a bit’ in respect to mindfulness, while question 7 maintained the score of ‘quite a bit’ throughout all three sessions, in respect to mindfulness.

Mind and Body.

Questions from the SMS-CW were first divided into categories of mind and body, based upon the relation each question had to the mental events and physical sensations involving mindfulness (see Appendix D; see Appendix E). Questions within each of these categories were then categorized into sections that are attention and awareness (see Appendix F; see Appendix G).

The results of this study appear to indicate that attention involved more mental processing, such as thoughts, feelings, and sensations from moment to moment. The data gathered showed that more of the SMS-CW questions assessing attention fell into the category of mental components (mind) of mindfulness. Awareness appeared to involve more aspects of curiosity, openness, and acceptance, along with the physical (body) experiencing sensations the present moment. Questions that were categorized in awareness fell into the same category as physical components of mindfulness. Clay Work showed an increase in bodily awareness of mindfulness, likely due to the kinesthetic and tactile experience of working with clay leading to the enhancement of mindfulness.

Research supports the value of incorporating mindfulness-based practices into mental health practices, and it would be beneficial to continue to explore different avenues of reaching a mindfulness state to better individualize treatments for all people.

Applications of Art Therapy

The incorporation of mindfulness into art therapy practices has been found to promote feelings of self-awareness and aspects of resilience, such as improvements in coping skills (Coholic, 2011), development of self-awareness through direct observation (Monti et al., 2006; Monti & Peterson, 2004), as well as, alleviate intrapersonal difficulties (Drass, 2015). Research also supports the experience of the creative process as one that allows for an individual to hone in on feelings and emotions in a personally meaningful manner (Peterson, 2014); this was subjectively experienced by the researcher as she participated in Clay Work.

Perhaps the most influential contribution to integrating mindfulness and meditation skills, and art therapy would be that of Caroline Peterson (2014), who created the Mindfulness-Based

Art Therapy (MBAT) framework. Research on the MBAT has shown that Mindfulness-Based Art Therapy interventions decreased depression and anxiety, as well as improved many aspects of quality of life (Monti, et al., 2006). In addition to the MBAT, Peterson (2014) developed a materials-focused extension of the MBAT: Mindful Exploration of Art Materials (MEAM). The MEAM process integrates the use of art media and mindfulness, through the application of mindful attention to the awareness of the contact experience with the different medias (Peterson, 2014). However, out of the materials explored, clay was mentioned by the researcher but not specifically investigated.

Clay. Accessibility of literature regarding clay as a therapeutic modality and/or as mindfulness-based practice is limited, and the field of mental health would benefit from more research and more literature. Clay has been shown to evoke the process of creativity as well as the therapeutic process of psychological distress and physical health to promote well-being (Elkis-Abuhoff, et. al., 2008; Goldblatt, et. al., 2010; Elkis-Abuhoff, et. al., 2013; Elkis-Abuhoff & Gaydos, 2018; Kimport, & Robbins, 2012; Kimport, & Hartzell, 2015).

The results gathered from the present study indicate that there was a connection between Clay Work and mindfulness, for which the researcher believes is largely due to the subjective/personal connection she has towards working with this medium. It appears the researchers past experience with Clay Work could have influenced by her familiarity with the process of working on the wheel. She found an increase in her attention and awareness as she sat at the wheel and began to pull the walls of the vessel up and shaped them.

For someone who has little to no experience with clay, and is still learning, working with clay could be a frustrating experience. This could influence how mindful they would perceive Clay Work to be, or interfere with the experience of “non-judgment”.

Art therapy research often highlights the importance of process versus product, however, product holds a valuable role in the therapeutic process as well. Based on this study, the process of Clay Work lent itself to be a more mindful experience rather than the focus on the product (related to decorating, etc). Subjectively, the researcher found that her experience of mindfulness (being able to sit with the clay and the wheel, focused on that moment, and in tune with the self without judgment) in session two, during which point she pulled and shaped the walls of the vessel. During this process the researcher recalled the sensory experience of the clay slipping through her fingers, along with the build up of tension in her arms and hands. The researcher even carried the physical sensation of this action in her hands the next day.

This is what the researcher was left with, even days after the working with the clay—the process and experience of throwing the form and trimming it. The finished pieces were not kept or fired in the end, rather, they were cast into the slip bucket, leaving the researcher with a feeling of letting go. The clay was, for the researcher and her subjective experience, the mediator between mindfulness, and was through the integration of Clay Work and mindfulness, was to sitting with the self, identify emotions, and increase her sense of wellbeing.

Session One

For the first session, the researcher began by making the clay using one-part dry mix and one-part slip mix and adding the mixture into the “clay mixer” (Bluebird 24S Mixer 240V 1P). The ingredients for the dry clay mixture and the directions for making the clay can be found in Appendix A and B. After the clay was successfully mixed, the clay was taken out of the mixer and brought into a separate room with tables for hand building and ceramic wheels for throwing. The researcher wedged the clay until properly wedged done; indicated by the smoothness and even texture of the clay.

After three balls of clay were successfully wedged the researcher began a process of handbuilding by pinching, finishing with three pinch pots. The researcher practiced this technique for forty-five minutes before she moved on to prepping the wheel for throwing; in addition, she gathered the tools needed (synthetic sponge, loop tool, ribbon tool, needle tool, wire clay cutter, and metal rib) and a plastic tub with water.

The researcher wedged three more balls of clay and began the process of throwing (pulling the walls of the form) on the wheel. She completed three pots and placed them on a wooden bat (a platform to that holds clay) in front of a fan to help in the drying process. When the pots were leather hard (or partially dry), she then took them back to the wheel to trim. To trim, the researcher centered the pot upside down on the wheel, securing it using a few coils of soft clay, and used the loop tool to trim the foot of the pot. After she completed this process for all three pots, she placed them on a wooden bat in a plastic bag to finish the drying process. As the first session came to a close, the researcher cleaned the ceramics wheel, her tools, and surrounding area. This session lasted four hours.

Session Two

For the second session, the researcher began by wedging three balls of clay. She then prepped the ceramics wheel and centered the clay onto the wheel followed by throwing the pot. She then scored the bottom of the pot (which is done by adding water to the wheel, at the base of the pot, and dragging the ribbon tool across the bottom of the pot to release it from the wheel) and continued by throwing the walls of the clay form. This process, from wedging to throwing forms, was done twice before trimming each pot. The researcher then followed the steps of the previous session: setting pot to dry leather hard in front of fan, trimming, wrapping pots in

plastic, and placing pots on a wooden bat to continue drying. She ended by clean the workspace. From start to finish this session lasted six hours.

Session Three

For the third session, the researcher began by wedging three balls of clay and prepping the ceramics wheel. The researcher threw five pots the end of the session; three bowls and two cup. Bowls were placed in plastic bags after having been trimmed while the researcher constructed the handles for the cups out of clay. She scored (dragging the needle tool across the leather hard clay to resemble hash marks) and slipped (“slip”; liquefied suspension of clay in water) the handles to the leather dry clay and then wrapped the two cups in plastic and set on the shelf with the three bowls. The researcher wrapped up by cleaning the workspace. This session lasted six hours.

On the first day of data collection one of the students was playing music through a speaker, which may have affected the researcher’s experience and her mindfulness scores for that day. The other dates of data collection students were in and out of the studio, however no one was playing music.

CHAPTER VI.

CONCLUSION AND RECOMMENDATIONS

This study sought to identify a connection between Clay Work and mindfulness using the SMS-CW. It was hypothesized that scores related to mindfulness would indicate that Clay Work can be used as a mindfulness-based practice. As well, that more physical components of mindfulness would be given scores indicating more mindful compared to the mental components of mindfulness. The current study could provide as a framework for future studies to continue to explore the connection between Clay Work and Mindfulness.

This three-week long, art-based study, allowed for the researcher to identify Clay Work as a mindfulness-based practice, as demonstrated by the increases in mindfulness scores of the SMS-CW from session one through session three, with an overall increase of 14 points. When questions were separated into categories based on different components of mindfulness, mindfulness appeared to increase in both mind and body, as well as attention within the mind and awareness within the body. Scores of awareness within the mind and attention within the body demonstrated a fluctuation of scores in respect to mindfulness. Results also demonstrated that the experience of mindfulness in the body was increased from session to session, further supporting the use of Clay Work as a mindfulness-based activity, and the highest average scores were found in the body; session two, attention in the body average was 4 and session three, awareness in the body was 3.83. The connection seen between the body and mindfulness could have been facilitated through a kinesthetic, tactile, movement based art making process that consistently engages the body. Potentially, these scores could indicate Clay Work elicits more physical aspects of mindfulness. Further research is needed to draw upon conclusions grounded in more experimental designs, however the current research supports the value of incorporating

mindfulness-based practices into mental health practices, and it would be beneficial to continue to explore different avenues of reaching a mindfulness state to better individualize treatments for all people.

Recommendations

Bias. Results of the current study could have been impacted by researcher bias due to the researcher's support of the results based on the qualitative factors and subjective experience, which could have been influenced by her desired results, as well as the fact that the researcher was the sole participant. For the current study it would have been beneficial to have had a witness during the sessions, which could have limited the bias of the researcher.

Future Research. Though the present research cannot explicitly state that Clay Work is a mindfulness-based practice, the researcher believes that it does support the need for further research. It would be beneficial, for future research, to have a larger sample size from which to have participated in Clay Work and self-report their SMS-CW scores. It would also be beneficial to keep in mind the participants' past experiences with clay, which could interfere with accurate scores keeping for mindfulness experiences, such as judgment. In addition, to minimize judgment of the self, the researcher recommends that group work might also interfere with mindfulness experiences, based upon feelings of comparison between other participants, potentially leading to judgment. So, it is recommended for future research to be conducted in a private studio space.

Based on this study and the subjective experience of the researcher, it is also recommended that as a mindfulness-based practice, it is the process of Clay Work rather than the focus on the product (related to decorating, etc) that is a more mindful experience. For future studies, it would

be recommended to work with the clay without pre-determined prompts such as were discarded in this study. Due to the increase of mindfulness-based practices in mental health fields, such as counseling (Bishop, et al., 2014; Reibel, Greeson, Brainard, & Rosenzweig, 2001; Speca, Carlson, Goodey, & Angen, 2000) and art therapy (Coholic, 2011; Davis, 2015; Drass, 2015; Monti et al., 2006; Monti & Peterson, 2004; Peterson, 2013; Peterson, 2014), further exploration of media is suggested.

The current study is a good jumping off point for further researcher in identifying the body's role in the mind, as well as, identifying how clay is connected to the body, how other materials are used and their role in mindfulness. In researching more materials, the SMS-CW could become, or help develop, the State Mindfulness Scale for Art Therapy; introducing a new way to explore a more broad understanding of materials and mindfulness. For future research it would also be beneficial to have a standardized protocol, including taking an initial base line of all participants, which was not done for the current study. Further research could identify different ways to interpret the data more fully as well.

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APPENDICES**Appendix A**

Dry clay mixture:

- a. How to make the dry mix: Δ6 Stoneware
 - i. 2 scoops Gold Art
 - ii. 1 scoop Hawthorn
 - iii. 2 scoops Kaolin (EPK)
 - iv. 1 ½ scoop Ball Clay
 - v. ½ scoop Custer
 - vi. 1 scoop Silica
 - vii. 1 scoop Fine Grog
 - viii. 1 ½ cups Frit 3124
 - ix. ½ cups Sand

Appendix B

Using water and dry mix:

1. Fill container for water x2 (4 liters x2 = 8 liters)
2. Add 18 scoops of dry mix
3. Mix.
4. Repeat step 1 and 2.
5. Mix and check consistency.

Appendix C

21#temState(MindfulnessScale#ClayWork(Questionnaire(

!	!	Not at all!	A little!	Moderately!	Quite a bit!	Very much!
1.!	I was aware of different emotions that arose in me.!	0!	1!	2!	3!	4!
2.!	I tried to pay attention to pleasant and unpleasant sensations.!	0!	1!	2!	3!	4!
3.!	I found some of my experiences interesting.!	0!	1!	2!	3!	4!
4.!	I noticed many small details of my experience.!	0!	1!	2!	3!	4!
5.!	I felt aware of what was happening inside of me.!	0!	1!	2!	3!	4!
6.!	It was interesting to see the patterns of my thinking.!	0!	1!	2!	3!	4!
7.!	I noticed pleasant and unpleasant emotions.!	0!	1!	2!	3!	4!
8.!	I actively explored my experience in the moment.!	0!	1!	2!	3!	4!
9.!	I clearly physically felt what was going on in my body.!	0!	1!	2!	3!	4!
10.!	I changed my body posture and paid attention to the physical process of moving.!	0!	1!	2!	3!	4!
11.!	I noticed some pleasant and unpleasant physical sensations.!	0!	1!	2!	3!	4!
12.!	I felt that I was experiencing the present moment fully.!	0!	1!	2!	3!	4!
13.!	I notice some pleasant and unpleasant thoughts.!	0!	1!	2!	3!	4!
14.!	I noticed emotions come and go.!	0!	1!	2!	3!	4!
15.!	I noticed various sensations caused by my surroundings (e.g., heat, coolness, the clay on my hands).!	0!	1!	2!	3!	4!
16.!	I noticed physical sensations come and go.!	0!	1!	2!	3!	4!
17.!	I had moments when I felt alert and aware.!	0!	1!	2!	3!	4!
18.!	I felt closely connected to the present moment.!	0!	1!	2!	3!	4!
19.!	I noticed thoughts come and go.!	0!	1!	2!	3!	4!
20.!	I felt in contact with my body.!	0!	1!	2!	3!	4!
21.!	I felt aware of what was going on in my mind.!	0!	1!	2!	3!	4!

Note. (This scale was developed by the author based on the scale that represents the SMSOPA (Cox, Ulrich French, & French, 2016), as well as the SMS questionnaire (Tanay, & Bernstein, 2013).)

Appendix D

Mind%scale%

!	!	Session!!!!	Session!	Session!
		1!	2!	3!
1.!	I!was!aware!of!different!emotions!that!arose!in!me.!	2!	3!	3!
3.!	I!found!some!of!my!experiences!interesting.!	3!	3!	3!
4.!	I!noticed!many!small!details!of!my!experience.!	2!	2!	3!
5.!	I!felt!aware!of!what!was!happening!inside!of!me.!	2!	3!	2!
6.!	It!was!interesting!to!see!the!patterns!of!my!thinking.!	2!	2!	3!
7.!	I!noticed!pleasant!and!unpleasant!emotions.!	3!	3!	3!
8.!	I!actively!explored!my!experience!in!the!moment.!	3!	2!	2!
12.!	I!felt!that!!I!was!experiencing!the!present!moment!fully.!	2!	3!	3!
13.!	I!notice!some!pleasant!and!unpleasant!thoughts.!	2!	3!	2!
14.!	I!noticed!emotions!come!and!go.!	2!	2!	3!
17.!	I!had!moments!when!!I!felt!alert!and!aware.!	3!	3!	3!
18.!	I!felt!closely!connected!to!the!present!moment.!	2!	2!	3!
19.!	I!noticed!thoughts!come!and!go.!	2!	2!	3!
21.!	I!felt!aware!of!what!was!going!on!in!my!mind.!	2!	2!	3!

Note. %This!scale!was!developed!by!the!author!based!on!the!scale!that!represents!the!SMSPA!(Cox,!!Ulrich(French,!!French,2016),!as!well!as!the!SMS!questionnaire!(Tanay,!!Bernstein,2013).!

Appendix E

Body % scale %		Session!!!! 1!	Session! 2!	Session! 3!
2.!	I!tried!to!pay!attention!to! pleasant!and!unpleasant! sensations.!	3!	3!	4!
9.!	I!clearly!physically!felt!what! was!going!on!in!my!body.!	3!	3!	4!
10.!	I!changed!my!body!posture!and! paid!attention!to!the!physical! process!of!moving.!	2!	4!	4!
11.!	I!noticed!some!pleasant!and! unpleasant!physical!sensations.!	3!	3!	4!
15.!	I!noticed!various!sensations! caused!by!my!surroundings! (e.g.,!heat,!coolness,!the!clay!on! my!hands).!	3!	3!	3!
16.!	I!noticed!physical!sensations! come!and!go.!	3!	3!	4!
20.!	I!felt!in!contact!with!my!body.!	3!	4!	3!

Note. This scale was developed by the author based on the scale that represents the SMSPA (Cox, Ulrich French, & French, 2016), as well as the SMS questionnaire (Tanay, & Bernstein, 2008).

Appendix F

		Session 1	Session 2	Session 3
Attention	1. I was aware of different emotions that arose in me.	2	3	3
Attention	3. I found some of my experiences interesting.	3	3	3
Attention	4. I noticed many small details of my experience.	2	2	3
Awareness	5. I felt aware of what was happening inside of me.	2	3	2
Attention	6. It was interesting to see the patterns of my thinking.	2	2	3
Awareness	7. I noticed pleasant and unpleasant emotions.	3	3	3
Attention	8. I actively explored my experience in the moment.	3	2	2
Attention	12. I felt that I was experiencing the present moment fully.	2	3	3
Attention	13. I notice some pleasant and unpleasant thoughts.	2	3	2
Attention	14. I noticed emotions come and go.	2	2	3
Attention	17. I had moments when I felt alert and aware.	3	3	3
Attention	18. I felt closely connected to the present moment.	2	2	3
Attention	19. I noticed thoughts come and go.	2	2	3
Attention	21. I felt aware of what was going on in my mind.	2	2	3

Note: This scale was developed by the author based on the scale that represents the SMSQPAI (Cox, Ulrich, French, & French, 2016), as well as the SMS questionnaire (Tanay, & Bernstein, 2013).

Appendix G

		Body Scale %		
		Session 1	Session 2	Session 3
Awareness	2. I tried to pay attention to pleasant and unpleasant sensations.	3	3	4
Awareness	9. I clearly physically felt what was going on in my body.	3	3	4
Awareness	10. I changed my body posture and paid attention to the physical process of moving.	2	4	4
Awareness	11. I noticed some pleasant and unpleasant physical sensations.	3	3	4
Awareness	15. I noticed various sensations caused by my surroundings (e.g., heat, coolness, the clay on my hands).	3	3	3
Awareness	16. I noticed physical sensations come and go.	3	3	4
Attention	20. I felt in contact with my body.	3	4	3

Note. This scale was developed by the author based on the scale that represents the SMSPA (Cox, Ulrich-French, & French, 2016), as well as the SMS questionnaire (Tanay, & Bernstein, 2008).