

Running head: MBAT IN COMPREHENSIVE CANCER TREATMENT

Mindfulness Based Art Therapy in Comprehensive Cancer Treatment

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## ABSTRACT

The following study addresses the advantages of assimilating mindfulness-based art therapy into a comprehensive treatment plan for survivors of cancer. Mindfulness techniques were combined with art directives, used among survivors of cancer in an art studio setting. These sessions took place in a cancer support group in Central Indiana. Mindfulness techniques encourage one to focus on the present moment. This perspective, when connected with art making and creative expression, resulted in a relief of subjective pain intensity, and mood changes relating to a heightened awareness of self and their experience in the art studio. The findings relayed a sufficient decrease in cancer-related pain and discomfort, emphasizing the need to incorporate mindfulness-based art therapy into comprehensive cancer treatment. Making use of the Memorial Pain Assessment Card, a pre- and post-test was administered every session to collect data concerning group and individual participant changes. Results from the analysis showed a clear decrease of overall chronic pain, which participants attribute to stem from lasting cancer related issues. A noted increase of positive mood was also expressed, including but not limited to, happiness, relaxation, or rejuvenation. The feedback from data analysis showed an overall decrease in pain and increase in positive mood, lending to the benefit of an adjacent art therapy treatment within cancer care. Findings also mirror themes from the literature, conclusively supporting the concept of mindfulness-based art therapy as part of comprehensive cancer treatment for survivors of cancer.

Key words: Mindfulness-based art therapy, oncology, art making, expression, creative, mindfulness, mind-body, pain management, Memorial Pain Assessment Card

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## CHAPTER I

### **Introduction**

There are many reasons why a person might make art. Whether it is a hobby, a profession, or used as a vehicle for emotional release, art making can be a meaningful use of expression spanning languages, bridging cultures, and allowing individuals to establish their individuality (Howells & Zelnik, 2009). Art therapy's validity as a tool for healing started gaining attention with the founding of the American Art Therapy Association in 1969 (AATA; AATA, n.d.), but up until recent decades, many dynamics of its potential remained an enigma. A newer focus into art therapy examined the possibility of using it for pain management, differing from its traditional use, emotional and mental healing (Nainis, 2008).

While a cancer diagnosis, as well as the treatment that often accompanies it, has been considered to be one of the most distressing occurrences in one's life, there has been recent optimism regarding the impact of certain expressive therapies, such as art therapy (Shella, 2018). Considering the link between creative expression and physical states of the body, art therapy used within cancer communities primarily addressed stress reduction via creative expression (Shella, 2018). Utilizing the functions of nonverbal communication, it was believed that art therapy allowed individuals to create meaning or achieve insight into their life (Malchiodi, 2011).

As the field of art therapy grows and evolves, there could be skepticism from patients and medical professionals alike as to its efficacy when used in medical settings (Koff-Chapin, 2012). Often medical settings do not require therapists to obtain any professional medical training or expertise, meaning that their knowledge of medicine could be gleaned solely from time spent in medical environments, around treatment teams, and the therapeutic relationships

with clients. Koff-Chapin (2012) studied the process of Touch Drawing among the clientele in a community hospital, engaging many levels of hospital organization. While some individuals were receptive, one woman remarked that the creative expression was an outright waste of her time, saying that she had too many obligations to be playing around (Koff-Chapin, 2012). Art in therapy continues to be seen by some health professionals as an unproductive use of time, at most an enjoyable distraction from the maladies patients are living through. Professionals in other fields, such as psychology, argue otherwise, knowing that there is much to be gained from an adjunct art therapy regime (Shella, 2018).

For those living with, or having survived cancer, a recent focus has been on stress reduction within both the mind and body (Shella, 2018). Additionally, sufficient data exists concerning the mind/body connection and how one's thoughts and feelings could relate to actual chemical changes in the body (Glinzak, 2016). An integration of a mindfulness-based theory of art therapy (MBAT) has been encouraged as a direct method of stress reduction and renewal. This unification balanced the expressive healing of art therapy and mindfulness (Monti, Peterson, Kunkel, Hauck, Pequignot, Rhodes, & Brainard, 2006). Wetherell (2012) addressed the extent emotional states could disrupt the body, although the research on these influences has been shown too restrictive to lay a solid foundation of study. Apart from stress reduction, there has been a lack of data supporting pain reduction as a health benefit of art therapy (Nainis, 2008).

### **Problem Statement**

The purpose of this research was to explore whether less than ten sessions of mindfulness-based art therapy would successfully reduce cancer survivors' subjective levels

of pain and increase positive mood, in a studio based art setting at Cancer Support Community of Central Indiana.

### **Research Questions**

Conducted within a population of cancer survivors, would mindfulness-based art therapy aid in reducing pain levels for cancer survivors? Does MBAT assist in increasing positive mood, by means of relaxation or feelings of renewal? Would MBAT techniques be useful in comprehensive oncology treatment?

### **Basic Assumptions**

It was assumed that a clear response (i.e. changes in pain intensity, mood) will be reported after participating in a MBAT session (hereafter described as a group called Mindful Art), among individuals of varying ages, comparable by their survival through cancer. It was assumed that art therapy would be beneficial in cancer support, specifically tending to the psychosocial needs of cancer patients.

### **Statement of Purpose**

The objective of this research study was to explore the response of clients following an MBAT session, regarding level of pain reduction and positive mood. The aim was to uncover the usefulness of MBAT techniques within those impacted by cancer, using MBAT as treatment within a comprehensive plan.

### **Hypothesis**

It was hypothesized that the majority of participants would notice a decrease in their level of pain following a session of Mindful Art. Additionally, they would notice an increase in positive mood, potentially described, among other descriptions, by feelings of rejuvenation, happiness, and relaxation.

### **Definition of Terms**

**Mindfulness** is a state of consciousness or awareness fully in the present (Smith, Richardson, Hoffman, & Pilkington, 2005).

**Mindfulness-based Art Therapy** is a multimodal approach to therapy combining the expressive qualities of art therapy with the relaxing, centering qualities of mindfulness practices (Monti, Peterson, Kunkel, Hauck, Pequignot, Rhodes, & Brainard, 2006).

One's **level of pain** relates to their self-report of the intensity of feelings of discomfort and physical suffering (Fishman, Pasternak, Wallenstein, Houde, Holland, & Foley, 1987).

The **positive mood** pertaining to this research is an emotional state comprised of characteristics such as calm, relaxation, or contentment (Shella, 2018).

An **art studio** could be described as art making in a closed room filled with a variety of art materials, as well as a group of others also making art (Moon & Lachman-Chapin, 2001).

**Process-oriented art making** does not focus on, or consider too thoroughly, the end product, rather, the steps and journey it took to get there (Ault & Klempner, 1986).

**Oncology** is the study of cancer (The University of Texas MD Anderson Cancer Center, n.d).

### **Justification of the Study**

The current data on the subject of MBAT techniques in cancer research was limited. The objective of this study was to further the field of art therapy, specifically directed toward survivors of cancer. Although cancer might be in remission, or an individual may be cancer free, individuals may still be impacted by lingering symptoms including chronic pain, stiffness, fatigue or energy loss, psychosocial factors, and identity loss (Öster et al., 2014; Hertrampf, & Wärja, 2017). These observed symptoms spiked when survivors experienced unexpected reminders of past cancer distress (Öster et al., 2014).

Information from this research was intended to increase the knowledge of potential health benefits that may carry on into medical environments. There was a need for fuller understanding into the way art therapy works as an adjunct treatment with oncology patients. This study will aid in better understanding the population, and increase knowledge of both physical and emotional outcomes of MBAT. A possible goal of this study is to illuminate the healing powers of art and mindfulness, specifically within oncology research, to a greater audience.

## CHAPTER II

### **Literature Review**

The following literature review examined the advantages of art therapy for those affected by cancer, mindfulness-based art therapy, and the mind-body connection. In this context, art therapy was used as a form of expressive communication for healing among survivors of cancer, focusing on chronic pain. Aspects of art therapy were reviewed, namely stress management and a group art studio setting. Complex brain mechanisms that contributed to the advantages of art in therapy were examined. Literature that analyzes a holistic, or integrative, oncology treatment is emphasized, mentioning mindfulness-based stress relief, creative psychological interventions, and how such strategies relate to MBAT. Additionally, a mind-body connection was presented, heavily influencing the continuation of art therapy within oncology research.

#### **Advantages of Art Therapy**

Nainis (2008) explained that artistic talent was not necessary to successfully participate in art therapy, and there were many ways to therapeutically immerse oneself in art. Bar-Sela, Atid, Danos, Gabay, and Epelbaum (2007) performed a study questioning if art therapy was useful for patients undergoing chemotherapy, in regard to the improvement of depression, anxiety, or fatigue. Discovering worth for future research, they also found art therapy to be a communication aid for those in which verbal expression was limited or insufficient (Bar-Sela et al., 2007). Additionally, a universalist thinking was associated with art therapy, establishing the ability to transcend cultural differences. Art therapy brought together ideals of healing and well-being to a wide variety of people, allowing communication without a common language or shared culture (Warson, 2012). Exchanging information and connecting with others in the absence of words has been seen as more powerful or valuable than verbal explanation (Bar-Sela,

et al., 2007). For some individuals, there is a spiritual component that corresponds with art therapy and a successful healing process. Considering these components within a holistic perspective of wellness, a balance is created throughout the body (Warson, 2012).

**Art therapy studio and group benefits.** In discussing the advantages of art therapy, it would be remiss to disregard what was seen as constituting a proper art studio setting; Moon (2001) reflected that a studio art setting can be achieved in even the seemingly unlikely or less than ideal spaces. The stipulation would be that the space was comfortable and safe, and receptive to honest, albeit vulnerable, creative expression, in accordance with known guidelines of art therapy. Through several vignettes, Moon (2016) emphasized the group aspect of creating within a studio, noting empowering qualities. Moon argued the most important elements to consider were “interactions among the client, media, image, artistic processes, and other members of the group” (p.82). While some individuals enjoyed making art alone, others commented on the innumerable benefits of working within a community, akin to the variables of an art therapy group (Bar-Sela et al., 2007; Peterson, 2015).

Hass-Cohen and Findlay (2009) spoke on the role neuroscience plays in revealing the potentials of visual expression in pain management. Hass-Cohen and Findlay evaluated an art therapy assessment protocol aimed to mitigate the experience for those with chronic pain. These authors also mentioned the value of including interpersonal intervention, indicating strong value in witnessing or being in the presence of others as they create. McNiff (2009) spoke on attentive witnessing, declaring that the role of the other group members was arguably more important for the therapeutic process than that of the group leader. He concluded this from considering the individual forms of creativity and emotions that composed a group. These different perspectives strengthened one another, lending to the whole dynamic (McNiff, 2009). For those with

counseling experience, it was common knowledge that when building a therapeutic relationship, the therapist would support the journey toward well-being. This made warm encouragement from other group members unexpected, and therefore extremely helpful in growth (Moon, 2016).

**Art therapy in medicine.** Art therapy's reach has spread into a multitude of settings and populations, such as oncology research (Glinzak, 2016). Glinzak (2016) conducted research identifying the level of decreased distress after sessions of art therapy with individuals undergoing cancer treatment, concluding that the sessions were beneficial to one's overall health and well-being. Art therapy showed improvements for an individual's emotional health and brought attention to its potential in medical settings, particularly how advantageous the incorporation of art therapy into a comprehensive treatment plan could be. When working with 73 cancer patients undergoing treatment, a vast majority reported decreased amount of distress and negative thinking after art therapy sessions. Participants were selected based on patients who appeared to exhibit physical or mental distress across four locations within a hospital setting. Art therapy was administered in an infusion clinic, oncology unit, individual sessions, and open studio, but no matter the context, participants reported a reduced level of distress following their session. Glinzak (2016) found merit in using art therapy as an intervention, concluding the most improvements in sleep quality and stress reduction. Their responses were measured using The Distress Thermometer as well as verbal feedback. Glinzak (2016) reported that common feedback after art therapy was a boost in feelings of relaxation or distraction from treatment, as well as a new sense of introspection. Notably, the most considerable decrease of stress, measured by a self-report Distress Thermometer, occurred after art therapy among individuals making art in an open studio (Glinzak, 2016), echoing the empowering qualities Moon (2016) reflected upon.

**Art therapy in pain management.** Although considered by some to be a relatively new field, art therapy was accumulating positive, evidence-based studies regarding physical betterment, and consequently, gaining recognition within various fields. In her dissertation, O'Neill-Haaga (2015) focused on the effects of art therapy intervention when used in chronic pain treatment. Analyzing quantitative pre- and post-test data, along with qualitative data in client artwork and feedback, O'Neill-Haaga (2015) deduced four central themes, “opportunity for visual expression of chronic pain, creating connections, relaxation and calming, and enjoyment in the artistic process” (pp. 9-10). Her findings supported preceding research in art therapy as a viable adjunct treatment in a larger chronic pain treatment regimen because of its orientation as a mind-body therapy and its influence on wellness and other psychosocial aspects.

**Art therapy in stress reduction.** The goal of stress reduction is paramount when coping with cancer, as stress frequently equates to diminished immune activity (Glinzak, 2016). Relief of stress can be easily attained in the mindful, soothing qualities of art materials and the relaxing, and distracting qualities of art making, cementing its demand to be enabled as complementary therapy to medicine (Shella, 2017; Warson, 2012). The versatility of art therapy virtually had no bounds, propitious for clients who were undergoing oncology treatment, often experiencing overwhelming affliction and calamity (Musial, Büssing, Heusser, Choi, and Ostermann, 2011). Stress management was vital for those impacted by cancer, benefiting participants through emotional expression (Bonacchi et al., 2015).

**Empowering art therapy.** Investigating art therapy's influence on cancer symptoms, Nainis (2008) concluded that art therapy benefited participants by reducing anxiety, encouraging relaxation, and evoking feelings of productivity, overall stimulating well-being. The instruments employed to gauge emotional and physical symptoms were the Edmonton Symptom Assessment

Scale and a portion of the Spielberger State-Trait Anxiety Index (Nainis, et al., 2006). Nainis (2008) observed an inclination for participants to create art as gifts for their caregivers. It was empowering and meaningful for them to create valuable things for the people that they had relied on for basic needs.

A common internal struggle that accompanied cancer diagnosis was sparked by the question, ‘Why did this happen to me?’ Cancer may seize strength from its sufferers, as well as reduce hope and optimism, attacking the body and soul. This was another instance where creative expression via art therapy would be beneficial for healing, as art making was transformative (Warson, 2012). In externalizing fears and unease, individuals could work toward reclaiming authority over their body and their life and although art cannot take the cancer away, it has promoted healthy mindsets propitious for well-being (Bonacchi, et al., 2015). One byproduct of a cancer diagnosis was the feeling of loss of control, predominantly due to an uncertain future or feelings of helplessness (Bonacchi et al., 2015). In art therapy’s structure and flexibility, a sense of control could be regained through empowerment, containment, and the ability to make choices (Nainis, 2008; Glinzak, 2016). Selecting from a variety of art materials served as a metaphor “of taking the fragmented pieces of [participants’] lives and bringing them together into some sense of order” (Nainis, 2008, p. 117). Creative processes gave people the ability to make sense of the chaos and reversing the feeling of defeat was a step toward healing (Glinzak, 2016).

**Transformative art therapy.** The fear and uncertainty that accompanied cancer was difficult to irradiate, and showed damages to quality of life (Bar-Sela et al., 2007). Once cancer appears, the threatening memory of it could remain in some capacity, even after remission and the physical presence of cancer no longer exists (The University of Texas MD Anderson Cancer

Center). A healthier mindset was to focus on the positive impact the presence of cancer had and to honor the struggles it had generated by making meaning of disease and formulating a new identity post cancer (Glinzak, 2016). This meaning making instilled hope and strength, and gave individuals the power to take their life back after it was seized by cancer diagnosis. Art allowed a person to courageously live alongside their fears (Moon, 2016). By engaging in art therapy, participants might have felt inclined to hold a more active role in their treatment, “symptom management and self-care, which contribute[d] to cancer survivorship” (Glinzak, 2016, p.28).

### **Mindfulness-Based Art Therapy**

Art’s capacity to draw away from suffering was invaluable. This healing evolved into the spiritual context of art and what it meant to be present while creating (Warson, 2012).

Considering cancer treatment from a Native American perspective, culturally, the concept of wellness centralized on spirituality and how it was a foundation for healing the body and mind and maintaining quality of life (Warson, 2012). Minding this holistic outlook in medicine, these advances brought an elevated level of expressive healing into therapeutic settings (Warson, 2012). A quality of mindfulness unique to art therapy is called a flow state, which employed a level of consciousness where the stressors of everyday life melted away (Lusebrink, 1990; Nakamura and Csikszentmihalyi, 2014).

**Mindfulness-based Stress relief.** The introduction of mindfulness-based aspects into a comprehensive treatment plan reflected its emergence in popularity of recent decades, with the development of meditation apps and social media yoga gurus, each with hashtags encouraging introspection and self-awareness (Bullis, Bøe, Asnaani, and Hofmann, 2014). Mindfulness-based Stress Relief (MBSR) is a supportive therapy directed specifically at the relief of suffering (Smith et al., 2005). Smith et al. (2005) conducted a systematic review of MBSR used with

adults diagnosed with cancer, noting potential success when used as an intervention for chronic pain and stress reduction. Similar to many other validated forms of therapeutic intervention and treatment designs, MBSR is a malleable vehicle for healing, easily adapted to client need (Smith et al., 2005). MBSR has been used in accordance with participant capability and preferences, for example, using imagery and other visuals as opposed to exercise and physical exertion (Smith et al., 2005, p. 324). Having conducted a meta-analysis, Musial et al. (2011) asserted the advantages in implementing MBSR in cancer care, specifically the way in which it promoted relaxation, as well as addressed the effects on subjective account of quality of life. Additionally, MBSR offered useful skills, such as coping mechanisms that trained an individual to remain in the present moment, not concerning oneself with thoughts and anxieties that already happened or might yet happen. This awareness of the present provided deeper self-awareness of both internal and external sensations, and resulted in positive correlation between increased use and subjective success (Musial et al., 2011; Smith et al., 2005). Managing pain was proven difficult due to the subjectivity involved as well as the likelihood of exacerbation with the introduction of stress and other environmental factors (Shella, 2018). Due to such complexity, any aid in self-management is advantageous for fruitful healing. Working with 195 participants in voluntary, bedside art therapy Shella (2018) found improvement in areas of pain and distress, asserting the claim that healing was compromised by neglecting to manage pain and stress.

Having developed an eight-week intervention with cancer patients, Peterson (2015) married aspects of mindfulness and art expression, striving toward a central outcome of stress reduction. Participants practiced photography and performed breathing exercises while walking about in nature.

**Complementary and alternative medicine.** The idea of a holistic approach to treatment planning has been becoming more widespread within the cancer field, interlacing traditional evidence-based research and medicine, with newer concepts, resulting in complementary and alternative medicine (CAM) (Bar-Sela et al., 2007). CAM could be described as any modality of treatment that was not thought of as a regular or traditional practice of care (Bonacchi, et al., 2015). In their research, Bonacchi, et al. (2015) aimed attention at the needs of cancer patients, including but not limited to, moral, spiritual, and informational support, and symptom control, which has been consistently unmet by traditional treatment procedures, according to data collected via semi-structured interview, as well as the Needs Evaluation Questionnaire. Conventional medicine may leave patients lacking in terms of spiritual and emotional support; gaps in support were likely to service patients' desire take back control over their life although their future with cancer might remain uncertain (Bonnacchi, et al., 2015).

**Integrative oncology and creative psychological interventions.** Cassileth and Vickers (2005) described the synthesis of the optimum oncology treatment, dubbing it 'integrative' oncology. One example of integrative oncology, Creative Psychological Interventions (CPIs) utilized expressive qualities of the arts to increase the absolute well-being of an individual, set apart from using expressive outlets in a recreational way (Archer, Buxton, and Sheffield, 2015). Akin to art therapy practices, artistic talent was not necessary to engage in a CPI, and was recommended as part of a fuller, comprehensive therapy regimen, supporting the mind-body connection (Archer et al., 2015). In assent with the potential for wellness associated with CPIs, Nainis (2008) notes how they were exceptionally useful when implemented in cancer treatment. Again, coping mechanisms were revealed, allowing adults to adapt to the hardships of their

cancer journey (Nainis, 2008). Along with stress alleviation, Peterson (2015) evaluated other benefits including meaning making and an increased sense of freedom or independence.

Reflecting on the aforementioned avenues of treatment, one contemporary and ingenious approach that encompassed the ideals of such methodologies is mindfulness-based art therapy (MBAT) (Monti et al., 2006). Art making has been seen as soothing by means of media choice alone; sensory aspects to media can create feelings and sensations, releasing energy well before a direction of art making has been decided (Hinz, 2009). This aspect to quality of materials promoted mindfulness in its power to induce expression. The Expressive Therapies Continuum (ETC), represented a foundational model of creative functioning in art therapy (Kagin & Lusebrink, 1978). Hinz (2009) later illustrated how established media variables could evolve along the ETC. Further, she mentioned particular emotions and the experiences commonly evoked by certain materials. Effects were based on specific client need, although it was clear that quality of media served as a vehicle for safe, emotional expression (Hinz, 2009). MBAT specifically combined aspects of MBSR (being in a non-judgmental environment, observing the present, noticing thoughts and emotions) with artistic, visual expression (Musial et al., 2011). These innovative concepts and objectives offer relaxation, and promote the development of coping mechanisms for emotional and physical distress, deeming MBAT to be an integrative component within oncology treatment (Monti et al., 2006).

A foundational article by Ault and Klempner (1986) introduced concepts that contributed significantly to the field of art therapy. Ault developed a therapeutic triangle analyzing the art product, artist, and art therapist. This idea, that art making with different intents elicited different creative impressions, propelled art therapy frameworks and approaches that followed. It paved the way for therapeutic intervention, reiterating the argument that the purpose of making

art did not solely rely on the final product. Originally described by Robert Ault, this became known as ‘process-oriented’ art therapy. This relationship interceded on the exchange between a person and the objects and people in the environment (Ault and Klempner, 1986). More recent literature conceded to the foundations, and stated the clear difference of motivation in making art for the process and the outcomes (Gilroy, 2006). Gilroy (2006) advocated for more evidence-based practices into the intricacy of a process-oriented approach, that involved internal shifts and unconscious processes.

### **The Mind-Body Connection**

The concept of a mind-body connection was prevalent in expressive and alternative medicines, centering around the argument that the mind and body were always partnered (Nainis, 2008). The potential of such versatility was thrilling, as it would be a tremendous advancement not only within art therapy, but several other fields as well. Hass-Cohen and Findlay (2009) approached the prospect of pain management from an interpersonal biology perspective, an idea that connected brain growth and development with a potential for healing. This concept held the potential for innovative developments in pain management. Working with a population of patients with chronic back pain, Hass-Cohen and Findlay (2009) hypothesized that a key to pain management might lie in nerves and shared neuropathways. Along with their expertise as board certified art therapists, these authors used their understanding of overlapping emotions and nerves to develop a sensory assessment. Their research led them to disclose that a non-verbal, visual approach might be advantageous in pain management (Hass-Cohen and Findlay, 2009). Engaging both the emotional and cognitive neuropathways, the coping mechanisms of participants were revealed, providing information beneficial in treatment planning (Hass-Cohen

and Findlay, 2009). Insight into the inner workings of the brain held potential for new developments, moving toward unlocking the healing powers of art therapy.

**Engaging the mind and body in cancer treatment.** Musial et al. (2011) conducted a systematic review, and searched for the usefulness of a mindfulness intervention during cancer treatment. Noteworthy findings included the possibility of beneficial effects of physical symptoms, although most studies were limited and in a state of infancy (Musial et al., 2011). In overcoming the complexity of cancer's plight, one would need to acquire coping mechanisms that encompassed both emotional and physical distress (Hass-Cohen and Findlay, 2009; Nainis, 2008). Conducting a systematic review into the usefulness of art therapy to manage symptoms of cancer in adults, Wood, Molassiotis, and Payne (2011) concluded that art therapy integration had distinct, positive effects on participants' spiritual and psychological well-being. These effects generally challenged the existential crisis many faced with cancer, most notably experiencing loss and uncertainty (Wood et al., 2011). Interventions, which drew in qualities of mindfulness and creative expression, were arguably superior because they required engagement of both the mind and body. This resulted in relief from chronic pain and stress, producing an advantageous form of complementary medicine (Musial et al., 2011; Archer et al., 2015). Having conducted a systematic review on the effectiveness of utilizing mindfulness-based stress reduction as adjunct therapy in cancer care, Smith et al. (2005) concluded that there have been no reported side effects in utilizing mindful qualities in the attempt to reduce stress, but instead a certain, positive connection between continued practice and interest. This could translate to success in persistence, a characteristic that mirrors a habitual mindfulness routine.

The connection of mind-body healing is illustrated by Bar-Sela et al. (2007) in the research of cancer patients undergoing chemotherapy. Art therapists led weekly sessions to

gauge improvement in physical symptoms of treatment, such as fatigue, depression, and anxiety. Using Statistical Products Solutions Series 12.0 software, the most significant improvement was seen in alleviation of fatigue, which was assumed to then relate to improvements of emotional distress. Researchers described how participants using watercolor navigate past their creative block,

Another example is telling the patient to make circular movement of the paintbrush with the blue color. What was jammed in one place begins to move. One must always be able to see that a movement comes from somewhere and that it goes in a certain direction. It gives the patient a perspective that he can move from a dark place to the direction of light (Bar-Sela et al., 2007, pp. 981-982).

This sense of awareness, reaching a problem and creatively moving past it, was evidence of the mental clarity and calm that MBAT provided. These moments of solace could be a gift for those with long, hectic treatment days.

**Combating reduced quality of life in cancer treatment.** Every cancer journey is unique, encompassing a variety of complications when attempting to continue normative functioning. Quality of life has been seen as in jeopardy when individuals started experiencing cancer side effects like neuropathy, fatigue, sleep disturbance, chronic pain, and emotional distress in the form of isolation, depression, hopelessness, helplessness, frustration, and anger (O’Niell-Haaga, 2015). Functioning could potentially diminish in a number of areas. There was much to discover about potential benefits creative expression had on the psychological and physical states of the body. MBAT may connect to a feeling of lucidity and renewal of the mind, culminating in an act of expressive mindfulness. While research remained in the early state of investigation, it was clear that mindfulness-based interventions have been declared

clinically valuable in the alleviation of cancer related ailments to psychological and physical health (Nainis et al., 2006).

There was a sense of insufficient evidence in the field of art therapy. The quality of studies was limited; there were small sample sizes, as well as an inability to secure quantifiable data. There is a scarcity of data verifying the prosperity of implementing MBSR as supportive cancer therapy to reduce physical side effects, let alone studies which tied in healing from art making. The significant variance in all areas demanded a need for continued research of a high quality. An examination into this topic was so integral to the continuation of oncology research because the mind-body connection attributed to art therapy has been known to connect serene thoughts and feelings with actual chemical changes in the body (Hiltebrand, 1999). Any acumen into the inner workings of the body, and the potential control over personal circumstances, was preeminent. The mind-body connection was notably employed in a mindfulness-based approach to art therapy, harnessing stress reduction via creative expression. Optimism existed albeit seemingly slow progress at times. O'Neill-Haaga (2015) validated art therapy as a successful treatment recognizing psychosocial factors in mind and body on health and wellness.

The advantages of art therapy for those affected by cancer showed a greater potential for success when combined with mindfulness-based practices that engaged the mind-body connection. The advantage of a mind-body connection was that it prompts both the physical and emotional healing processes. Art therapy's success in improving emotional health brought attention to its potential in medical settings. Prior studies have shown a decreased amount of distress and negative thinking, propitious for healing among those impacted with cancer, namely

in stress and pain management. Increased stress has been equated to diminished immune activity, even more crucial for those in cancer treatment to manage.

In this context, MBAT was used as a form of expressive communication for healing among those impacted by cancer, focusing on chronic pain and stress reduction. Aspects of art therapy were reviewed, describing the benefits of a group art studio setting, the potential for empowerment in MBAT, which may add value or meaning to one's life, coping mechanisms attained in art making and the interpersonal connection of being in the presence of others as they create.

Literature that analyzes a holistic, or integrative, oncology treatment was emphasized, mentioning mindfulness-based stress relief, creative psychological interventions, and how such strategies relate to MBAT. Mindfulness is achieved in the soothing qualities of art materials and the distracting qualities of art making, achieving a sense of clarity and calm. Mindfulness allowed one to remain in the present moment, and provided deeper self-awareness of both internal and external sensations. A holistic, integrative oncology treatment is needed for future studies, implementing mindfulness-based stress relief and a mind-body connection, heavily influencing the continuation of art therapy within oncology research.

## CHAPTER III

### **Methodology**

#### **Participants**

Participants were five female survivors of cancer, who took part in art therapy directives, offered by a non-profit organization dedicated to those impacted by cancer. Adhering to the mission, the Cancer Support Community strived to empower participants through knowledge and action, impelled by community support and experience. Guided by five pillars, the focus was on wellness, education, social support, psychosocial support, and information assistance and referral. This facility offered educational programs, an array of therapeutic interventions via individual counseling and support groups, and enjoyable community events for cancer patients and caregivers alike. Adhering to the mission, they regularly attended programs at the main facility for support and empowerment. Of the convenience sample collected, individuals varied in age as well as ethnic or racial identity. The sample was all females and ranged in age from 70 to 80.

Each participant was given a form expressing informed consent, indicating that (a) the study concerned the potential change in mind and body throughout sessions of MBAT, (b) the individuals were not required to participate, and (c) if they chose to participate, they retained the right to withdraw their cooperation at any time. All individuals in attendance signed the forms and participated fully. The self-report assessments were given in a spacious, open studio setting, where participants had the capacity to spread out and conceal their responses. After completing assessments, participants were instructed to place them upside down in a singular pile before leaving the art studio. At the completion of the study, once all data had been collected and appropriately recorded, the questionnaires were destroyed. This was done

to ensure participants identity would not be compromised. Coded data was then filed in a locked box inside of a locked office where only the researcher had access.

### **Research Design**

The research was constructed using quantitative questionnaires asking participants to relate their pain experience. This questionnaire, repeated throughout sessions, measured level of pain, pain intensity, level of relief, and mood. The data, communicated via the Memorial Pain Assessment Card, was examined by staff and students in the mathematics department at Rose-Hulman Institute of Technology in Terre Haute, Indiana. The statisticians were looking within subjects for changes in participant rating from page one pre-test to page one post-test, page two pre-test to page two post-test, and so on. They focused on individual changes of subjective account from the start of the session to the end of session. Group figures were examined as well to gauge any trends. To illustrate a Mindful Art session, participants entered the studio and completed the Memorial Pain Assessment Card as a pre-assessment. Putting it aside, face down, art materials were then placed on the table and a handout was distributed describing the day's topic. For instance, one topic covered during this research was Patience. The researcher began a discussion explaining what it means to practice patience in a mindful way that allows one to show compassion to oneself. As the group discussion unfurled, a connection was made regarding practicing patience and a feeling of equanimity, or a calmness of mind. It became clear that life is easier when calm, patient, and compassionate. After about 45 minutes of discussion, the researcher explained a new art technique called stippling, a way of painting that was time consuming, meticulous, and requires patience. Implementing a mindfulness practice of patience, the participants worked

and continued discussing. The session ended with a guided meditation on compassion and being still. Further sessions are elaborated in Appendix A.

### **Research Instrument**

**Instrument.** The Memorial Pain Assessment Card (MPAC) was an instrument used to evaluate subjective pain experience. It allowed for the description of pain, relating to mood and relief, in addition to a measure of psychological distress, in a rapid, efficient manner (Fishman, et al., 1987). It was sectioned into four parts, comprised of visual analog scales and a verbal rating scale. Each part was presented separately on notecard-sized pieces of paper. The MPAC was administered by distributing the four sections separately. The first part showed a line alongside a numbered scale, indicating the level of pain the participant was experiencing from one to ten. The participant was to make a mark along the line to communicate how they would rate their pain intensity. The second part was a word bank for further explanation of pain from a choice of descriptive words. The last two sections utilized the same type of scale using a line alongside a numbered scale indicating the level of relief felt from one to ten. The participant was to make a mark along the line to communicate and rate relief. The third section asked the participant to mark the amount of relief felt and the fourth section asked the participant to document mood.

### **Data Collection**

The instrument was administered by the researcher two times per session, as a pre- and post-assessment in the art studio before Mindful Art began and again at the conclusion of the session. It was utilized as a pre- and post-assessment used to gauge levels of pain and mood. On average, it took participants about three to five minutes to complete the MPAC one time.

### **Data Analysis**

Participants were assigned a letter by the researcher to secure anonymity. In every session of Mindful Art they were reminded by the researcher to mark their MPAC with that letter. This record of participants was done not only to uncover possible trends among the group, but individual progress as well. Following the sessions, the MPACs were compiled and organized in ascending session number. The degree to which a participant scored their physical and emotional states was then measured. Each MPAC was evaluated by the researcher, making note of the length, in centimeters, that participants marked on scales, for parts one, three, and four. Those figures, as well as the word choice for section two, were transferred into a table and given to the statisticians, at which point the team converted the data into visual representations to better communicate the results with a larger audience.

### **Validity and Reliability**

While the first adoption of the MPAC into pain treatment was in the late 1980's, the validity and efficiency remain current (López-Sendín, Albuquerque-Sendín, Cleland, and Fernández-de-las-Peñas, 2012). Fishman et al., (1987) first expound on its legitimacy as an instrument to assess multidimensional pain, while López-Sendín et al. (2012) found the assessment helpful when implementing alternative medicine with terminally ill cancer patients. Realistically, pain has not been seen to live on one plane; it was intricate and complex. It was comprised of several, distinct components that interacted with one another, resulting in an individual's overall pain experience. Not only is the MPAC valid, the brevity of the assessment is also advantageous to its administrators. This form of assessment is easily understood and can be completed quickly with little effort. A participant familiar with such a test could

complete it fully within seconds (Fishman et al., 1987). Instruments that take a long time to complete could cause stress on participants, negating the benefits that MBAT provided.

### **Ethical Implications**

In an effort to respect this research and the participants involved, the main objective was to do no harm, while assessing and including only relevant material. Those involved maintained complete confidentiality and anonymity. Their participation was voluntary and could have been withdrawn at any time, as per the guidelines of the informed consent. The research strived to ensure quality and integrity of research that ventured to be both independent and impartial.

### **Researcher Bias**

It was a concern that because of a connection with the researcher, the participants' scores may have been skewed in some way. Arguably the most influential bias affecting the study was the relationship the participants had with the researcher. All participants regularly attended programs at the facility, sometimes multiple times a week. Because of this time spent, they had come to know all individuals associated with the organization on a personal level, and might feel compelled to complete their assessments in a way they believe the researcher would want them to. Although the attendance did not solely consist of regulars; some newcomers attended sessions. These new participants were unfamiliar with the others in the Mindful Art group, potentially affecting their artmaking. It was possible that their inexperience may have been intimidating, in contrast to individuals who normally attended and have grown very comfortable in the space.

**Analysis**

The MPAC recorded participant physical and emotional states before and after the Mindful Art sessions. The researcher separated those completed before from those completed after. Adhering to the work established by Fishman, et al. (1987), data was organized and compiled to create a comprehensive outlook of the experience. The statisticians approached the data with the initial research objectives in mind. The first objective concerned possible bodily responses that occurred post session. These responses are physical and, following the second objective, can combine mind and body to address any existing cancer symptomology.

## CHAPTER IV

**Results**

The study asked the following questions: Could MBAT aid in reducing pain levels among survivors of cancer? Does MBAT assist in increasing positive mood, by means of relaxation or feelings of renewal? Would MBAT techniques be useful in comprehensive oncology treatment? Participants were led in a discussion addressing a topic of mindfulness (i.e. motivation, containment, gratefulness, acceptance), eventually incorporating artmaking in a guided directive. A review of the data indicated two overarching themes relating to the usefulness of MBAT techniques within this population. These included (a) a decrease in reported overall pain related to one's cancer treatment, (b) an increase in positive feelings analogous to mood, namely, relaxation, rejuvenation, clarity, etc., diminishing overall distress. Out of the five participants, five reported a decrease in pain. Furthermore, all participants described an increase in mood. A reduction of feelings of chronic pain associated with a lasting cancer impact directly followed MBAT activity.

Figure 1 demonstrated self-reported post-therapy percent pain relief for all individuals at each session while accounting for session topic and pre-therapy mood. Percent pain relief was calculated by taking each pain relief value and dividing by 10 because the length of the pain relief line on the data collection card is 10cm. Each individual's pre-therapy mood was captured in the gradient coloring of the corresponding point, with red being the worst possible mood and white being the best possible mood. Points which are black do not have pre-therapy mood data available. Session number and topic are listed along the x-axis. Albeit some participants communicated a low or near worst possible mood in the initial test, the relief among all participants was incontestably greater at the post-test.

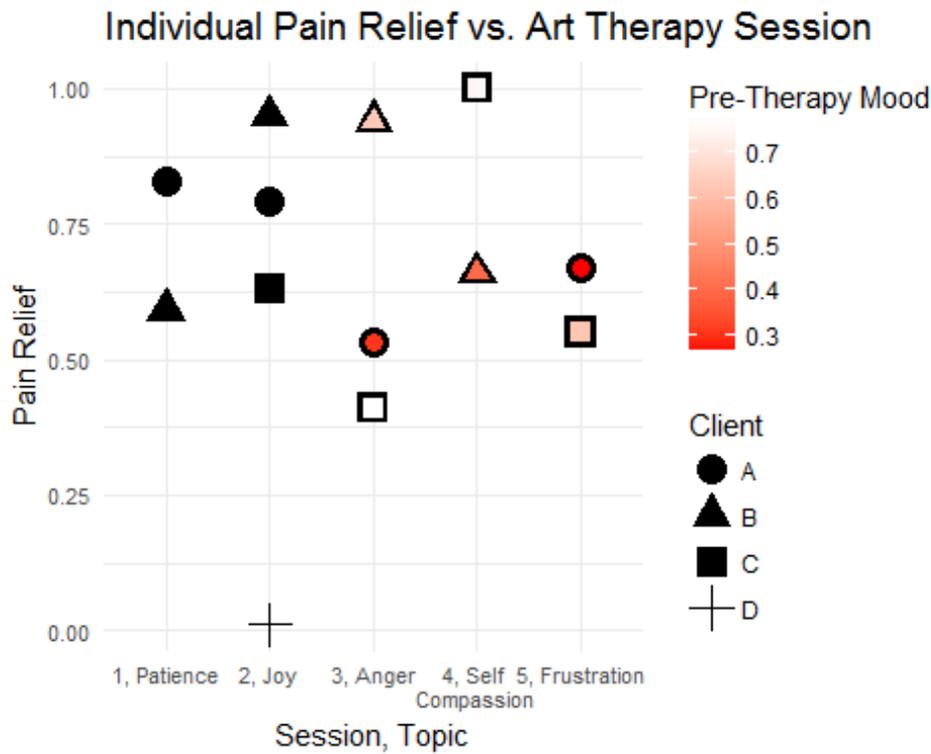


Figure 1. Scatter plot of reported pain relief in terms of session and accompanying topic. The red color inside the symbols indicated participants’ pre-therapy mood level. The vertical location of the symbol represented their pain relief associated after the session, measured with the left-hand side scale.

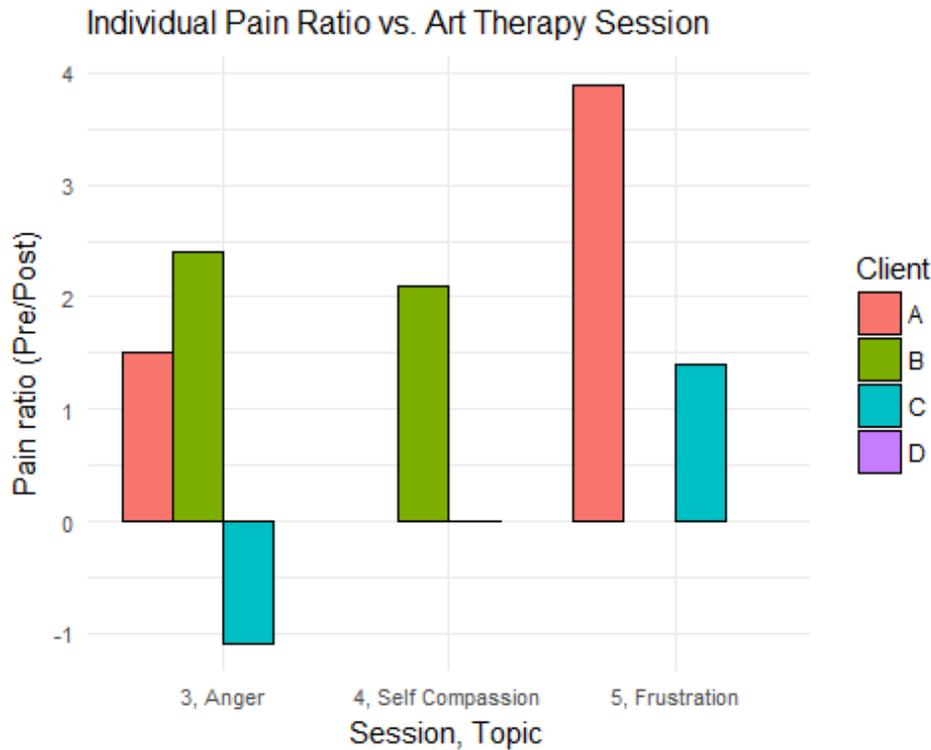


Figure 2. Bar chart illustrating pain levels of participants in different sessions. Colors denoted different participants, measured against the axis correlating with a pre- and post-test pain ratio.

Participants in Figure 2 were captured in the coloring of each bar. Session number and topic were listed along the x-axis. On the y-axis a value of zero meant there was no perceived change in pain, a value greater than 0 means there was a perceived decrease in pain, and a value less than zero means there was a perceived increase in pain.

**Pain relief confidence interval.** Analysis on the post-therapy pain relief data was done through creation of a 95% confidence interval. The data was consistent with a percent pain relief in the confidence interval of 0.53 and 0.80 (53% to 80% relief). The paired t-test was performed to with the hypotheses: H0: The mean difference between pain post-therapy session and pre-therapy session is equal to zero. H1: The mean difference in pain is not equal to zero.

The test returned a p-value, which is a number between 0 and 1 and corresponds to the probability that H1 is correct assuming that H0 is true. Since the p-value ( $=0.0559$ ) was not less than the predetermined value of 0.05 (also a typically used value in many studies), we cannot reject H0. There is not enough evidence to suggest that the mean difference in pain scores is different from zero. As additional data was added and analysis was re-ran, this p-value got closer and closer to 0.05, but it did not quite dip under. In future studies, this could be combated by collecting more data by either trying to get more individuals to participate or hold more therapy sessions.

**Change in pain paired t-test.** Analysis on the change in pain data was done by performing a paired t-test on the pre-therapy and post-therapy self-reported pain levels. This analysis was done to see if there was evidence that the mean change in pain was different from zero. With a p-value of 0.0559 and an alpha level of 0.05, there was not enough evidence to suggest that the mean change in pain was different from zero. A Sign Test was considered on the same data if the response variable appeared to not be approximately normally distributed. The Sign Test is non-parametric and would have been a better choice if the response variable did not appear to come from a normal distribution; however, since that assumption was met and more data would be collected over time as more sessions were conducted, the paired t-test was selected.

### **Limitations**

The scale for pain relief begins at no relief (0) and goes to complete relief (1). Since the scale begins at zero, there is no opportunity to account for feeling less relieved than when the therapy session began. This could skew the confidence interval to capture greater mean values of relief than in actuality. A non-parametric test was considered, although because of the

smallness in sample size, the ambition was that a t-test run would be robust enough to hold out. Assumptions could be difficult to verify with such a small sample size. Representativeness of the sample may be hard to assume/determine due to the small number of participants and data available. The assumptions for a paired t-test are (1) that the response variable (i.e. self-reported pain after an art therapy session) being measured is continuous, (2) that each observation of the response variable is independent of all the rest, (3) that the response variable is approximately normally distributed, and (4) that the response variable does not contain any outliers. In the case of this research, pain relief was marked on a continuous scale, so assumption (1) is met. Based on the setup of the art therapy sessions, it is reasonable to assume that the relief felt by one individual is independent of the relief felt by any of the others, so assumption (2) is reasonable. For assumption (3), a Normal Q-Q was plotted to determine if the response variable came from a normal distribution. If the data seemed to lie along the solid diagonal line then it is reasonable to assume that data came from a normal population. Aside from the left/right tails of the data, assumption (3) seems reasonable. Lastly, the data also did not contain any outliers, so assumption (4) was reasonable.

## CHAPTER V

### Discussion

This study examined the inclusion of MBAT within a comprehensive treatment plan for survivors of cancer. An accompanying MBAT regimen that incorporated valuable qualities of art therapy, namely nonverbal communication, safe expression, and a cleared state of mind, was instrumental in allowing patients in medical settings to develop meaning in their lives.

The primary purpose of this study was to explore the responses reported by individuals impacted by cancer brought on by MBAT activities completed in a studio-based art setting. The intent of the study was to examine the degree of pain reduction, and changes in perceived mood. This study was meant to illuminate the usefulness of MBAT among a population of individuals impacted by cancer. Hypotheses were formulated, projecting a subjective decrease in pain as well as an increase in positive mood.

Participants reported pain reduction, relating to their chronic cancer-related pain, directly following a MBAT session. Rarely did participants rate their pain higher than a five on the first portion of the MPAC pre-assessment. Upon entering a new session, often participants disclosed body aches and joints, often located in the back. It impaired functioning as they were unable to do the weekend tasks they planned, for example. In attempting to ignore aches and function normally despite their pain, or neglect pain management, it was realized that healing was compromised (Shella, 2018). This hindrance was discouraging, but made a positive progression by the end of every session. Most notably, participants relayed the highest improvement in pain in the sessions that ended with a guided meditation. The success in reducing chronic pain reflected Hass-Cohen and Findlay's (2009)

work utilizing visual expression in pain management. Creating in the presence of others seemed to add value to what they were creating and further mitigate pain sensations. It put them in a relaxed stage of mind where they connected with their bodies and altered their pain experience.

Participants reported increase in positive mood (i.e. relaxation, happiness, clarity of mind), with a focal point in stress elimination. When disclosing physical ailments, participants also often reported a negative mood in the form of stress, frustration, and mental exhaustion. If they entered the session particularly agitated, they might begin Mindful Art with some free painting or drawing. There was no directive to accompany this; they were instructed to loosen up and prepare their mind for the session, making art in whatever way they needed to in order to do so. The ability to make choices provided them with a sense of control and choices to make (Nainis, 2008); this power of choice is sometimes a rarity in dealing with cancer. Mirroring one result from Bar-Sela et al. (2007), there seemed to be a correlation between an improved fatigue score and improved emotional distress. The initial art making also aided in forming a therapeutic space for them to open up in session. As the lesson ensued, there was a definite change in the studio atmosphere. What felt perturbed at the start slowly faded into a harmonic calm. All participants recorded an improvement in mood after spending time mindfully making art. Bonacchi et al. (2015) promoted healthy mindsets were propitious for well-being. Turning frustration into harmonic calm allowed participants to make sense of their situation, honoring their strength and courage, and formulate new identities (Glinzak, 2006; Moon, 2016).

**Assets of the Study**

The studio atmosphere and non-judgmental administration of the questionnaires proved conducive to honest and open reports from participants because it created an atmosphere, which felt secure and supportive (Moon, 2001). The questionnaires and activities took less time than anticipated, mitigating burnout or creative exhaustion. The large effects observed, seen in the exclusively fruitful responses of the participants, hint at the advantages to MBAT and its integration into comprehensive treatment for individuals of this population.

**Limitations**

Limitations included a small number of participants, which may or may not have related to a feeling of insecurity when making art, as is a common reaction with the adult population. While the aim was to discover positive, physical responses to MBAT, it was assumed that many participants experience ailments and pains, which might prevent them from engaging fully in any given activity. Even individuals who have finished their cancer treatment, or have been cleared, still feel the effects that might prevent them from engaging. It should be noted that the researcher had no formal training in MBAT or the proper ways to execute a session in such art making, although it was not necessary for facilitating sessions of Mindful Art. Additionally, there is a possibility of perceived constraint or pressure on participants as this researcher, acting as administrator for the assessments, neglected to exit the room while the questionnaires were administered, both before and after session. The fact that this might have been an important factor in candid, reliable data was an afterthought. The presence of the researcher may influence participants' reporting and arguably removes the feeling of confidentiality for written report.

There were a great number of demographics that were not collected, which may have influenced participants. These outside factors may have included the type of cancer diagnosed or other health stressors, and undisclosed traumatic events.

### **Recommendations and Future Studies**

Because the literature was entirely lacking in this area of exploration, there exists a fundamental need for continued study. In its immense growth, art therapy lacks sufficient empirical research to justify efficacy in a variety of settings and populations, such as this one. An effort toward integrating mindfulness-based techniques alongside art could prove powerful in oncology treatment advancements.

This study was quite inclusive as far as participant eligibility. In future studies, there is an option to establish restrictions. For example, a study could only allow participants with a current cancer diagnosis, excluding survivors or those in remission. Conversely, a study exclusive to survivors of cancer would be informative as the effects of cancer can exist long after treatment has ended. Another option is to specify type of cancer or cancer treatment (i.e. chemotherapy, radiation), or specify individual cancers. An application of the sessions could be improved by the inclusion of a wider variety of participants, ranging in age and gender. Any of these things could make an impact on the reception of a MBAT session.

### **Conclusion**

If success akin to that in this study was reflected across future studies, this could significantly demonstrate the demand for the assimilation of mindfulness-based expressive therapies into existing treatment modalities in integrative oncology care, thereby introducing patients to a deeper range of healing. The activities in this study provided participants with therapeutic support, as well as an expressive outlet that combined elements of mind and body.

Continued research that integrates mindfulness-based techniques with art making holds the potential to advance art therapy, oncology, and several other fields. There is use for an alternative, art approach in medical settings, aiding in emotional healing and alleviation of pain.

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## Appendices

### APPENDIX A

#### **Description of MBAT Directives and Exercises**

To illustrate what sessions looked like, a projected two-month schedule of sessions was as follows:

1. The focus is on motivation. Participants will create watercolor paintings, experimenting with different effects achieved by utilizing different techniques. Materials required are watercolor paper, watercolor paint, paint brushes, water, and bold markers. The session will be guided by a discussion about motivation and the power of incorporating mantras into daily life. After art making, a reflective conversation begins where participants may share their art piece and thought processes. Session is concluded with an open heart guided meditation. The duration of the session is accompanied by aromatherapy and soothing music.
2. The focus is on containment. Participants will create jars in which to contain their difficult emotions and feelings, using tissue paper and glue on glass. Materials required are empty glass jars with lids, an array of different colored tissue paper, liquid glue, water, and paint brushes. The session will be guided by a discussion about containment. After art making, a reflective conversation begins where participants may share their art piece and thought processes. Session is concluded with a guided meditation. The duration of the session is accompanied by aromatherapy and soothing music.
3. The focus is on gratefulness. Participants will first discuss gratefulness, guided by an exercise called Gratefulness A-Z. Then participants will create mandalas meditating on their revelations brought on by the prior exercise. Materials required are drawing paper, drawing materials (colored pencils, markers, crayons, ink pens, etc.), and stencils. After art making, a reflective conversation begins where participants may share their art piece and thought processes. Session is concluded with some chairside stretches. The duration of the session is accompanied by aromatherapy and soothing music.
4. The focus is on acceptance. Participants will explore string art, experimenting with different ink techniques. Materials required are drawing paper, kite string, a multitude of different colored inks, water, and markers. Art making is guided by a discussion on acceptance. After art making, a reflective conversation begins where participants may share their art piece and thought processes. Session is concluded with a guided mediation. The duration of the session is accompanied by aromatherapy and soothing music.