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Effects of Art Therapy Intervention for Chronic Pain and Psychosocial Comorbidities

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EFFECTS OF ART THERAPY INTERVENTION FOR CHRONIC PAIN AND PSYCHOSOCIAL COMORBIDITIES

A DISSERTATION

submitted by

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"Out of suffering have emerged the strongest souls; the most massive characters are seared with scars."
Khalil Gibran

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ABSTRACT

Chronic pain is a multidimensional, phenomenological experience, shaped by physiological, psychological, and social factors. Thus, integrative non-pharmacological adjunctive approaches are gaining recognition for addressing the interplay between these factors. Art therapy is one such approach. However, while art therapy and chronic pain research has shown promising results, it remains a nascent area of inquiry and needs to be expanded. The primary aim of this study was to evaluate and illustrate the effects of a multisite, 6-session, manualized art therapy intervention on client-participants' ($N = 31$) perceptions of chronic pain and psychosocial comorbidities. The study employed an embedded mixed-methods design. Primary importance was placed on quantitative pretest-posttest data. Results from *t*-test analysis showed significant decreases in self-reported pain after each session with significant decreases in pain interference, depression, stress, and anxiety after the art therapy intervention. Results also indicated significant increases in self-efficacy following the intervention. Mean decreases in post-intervention pain severity were not significant. In addition, 66% of client-participants reported a significant, favorable global impression of change after completing the intervention. Measures of manipulation fidelity were used to ensure consistency across multiple settings. Analysis of fidelity checklist data showed strong adherence to study directives, supporting internal validity and reliability of the intervention. Qualitative data in the form of client-participant artwork and comments were gathered and analyzed to produce central themes that would serve to illustrate and enhance understanding of the client-participant experience. Interpretative phenomenological analysis of client-participant feedback produced 4 central themes: *opportunity for visual expression of*

chronic pain, *creating connections*, *relaxation and calming*, and *enjoyment in the artistic process*. These themes confirm findings from the literature and illustrate the effects of specific art therapy approaches and techniques. Overall findings support art therapy as a useful adjunct to chronic-pain treatment regimens.

CHAPTER 1

Introduction

Physical pain, perhaps the most pronounced physiological aspect of medical illness, is also often the most misunderstood. The individual nature of the pain experience makes it difficult to measure as well as to treat (National Institutes of Health [NIH], 2001). A multidimensional experience, pain affects biological, psychological, and social aspects of daily life. When pain progresses past the body's ability to heal and becomes chronic, the interplay between these biopsychosocial factors can cause overwhelming stress and may exacerbate the perception of pain, contributing to increased acuity and prolongation (Loeser & Melzack, 1999). Therefore, while there continues to be much research on improving our ability to manage chronic pain through pharmacology and medical technologies, a growing number of researchers are also beginning to recognize the need for more comprehensive and integrative non-pharmacological adjunctive approaches.

Often used as an alternative or complementary therapy to conventional mental and medical healthcare treatments, art therapy has been successful in addressing not only the emotional, psychological, and social aspects of chronic pain, but the physical implications as well (Dannecker, 1991; Hass-Cohen & Findlay, 2009; Landgarten, 1981; Pavlek, 2008; Trauger-Querry & Haghighi, 1999). While promising, this area of inquiry remains nascent and only a paucity of research studies have endeavored to establish art therapy approaches and techniques for working with chronic pain sufferers, or to evaluate the effects of art therapy on chronic pain and psychosocial comorbidities.

Background

Chronic Pain

A 2006 report from the National Center for Health Statistics found that 1 in 10 Americans, aged 20 years or older, reported having had pain that lasted for at least one year. According to the Institute of Medicine (2011), pain is a leading public health problem. As much as $261 to $300 billion is spent on pain care annually. However, 100 million Americans continue to experience daily pain, resulting in an estimated annual loss of productivity totaling $297 to $336 billion (Institute of Medicine, 2011; American Academy of Pain Medicine, 2014). On a personal level, chronic pain incurs incalculable psychological, emotional, and social costs on the individual as well as on significant others.

Statistics such as these, with implications of reduced worker productivity, high healthcare costs, and abuse of analgesics have prompted the scientific community and government to help improve knowledge and management of chronic pain. Attesting to this endeavor, the 106th Congress passed a bill designating the decade beginning January 2001 as the "Decade of Pain Control and Research" (CDC, 2006). As a result of increased research, the American Pain Foundation (2010) reported an increase in pain-management professionals' recognition of chronic pain as a disease unto itself. On a global level, The International Association for the Study of Pain (IASP) endeavors to raise international pain awareness by sponsoring and promoting the "Global Year Against Pain," an initiative that focuses on a different aspect of pain each year (IASP, 2014).

Chronic pain, by definition, is “an ongoing or recurrent pain, lasting beyond the usual course of acute illness or injury or more than 3 to 6 months, and which adversely affects the individual's well-being” (American Chronic Pain Association, 2014, p. 8). Pain is also defined as chronic when it accompanies a progressive disease like rheumatoid arthritis, fibromyalgia, or back pain (Turk & Winter, 2006). The term “chronic pain” applies to a broad array of injuries and conditions and, as cited above, is sometimes the condition itself (American Academy of Pain Medicine, 2014). Whereas acute pain serves as an indicator of biological injury or danger, signaling an underlying problem that can be easily located and treated, chronic pain follows a much different course. Chronic pain is disrupting and disabling, often lacking an identifiable biological purpose (Gatchel & Epker, 1999). Individuals seeking chronic pain treatment often become enmeshed in the medical system, moving from one doctor to the next in continuous, and seldom successful, efforts to find diagnoses for their conditions and achieve relief from their persistent pain (Turk, 2004).

Historically, approaches to chronic pain treatment have been in line with how pain has been conceptualized (Turk, 2004). Conventional dualistic Cartesian beliefs limited the biomedical definition of pain to that which could be traced to an identifiable, causal pathophysiology (Gatchel, Robinson, & Stowell, 2006). The biomedical model failed to acknowledge the whole person. Assessment practices focused on finding a biological cause while treatment consisted of eliminating that cause. From this perspective, pain that continued on past healing, or in the absence of injury, was labeled as psychogenic or psychologically-generated pain (Hunter, Goodie, Oordt, & Dobmeyer, 2009, p. 271). Although this dichotomous view of chronic pain persists, there is

increasing understanding and acknowledgment that pain is a multifaceted perceptual experience, shaped by an array of psychosocial factors (Turk & Monarch, 2002). For example, Pasero and McCaffery (2001) asserted that pain is defined by the individual experience. Butler and Moseley (2013) claimed that all perceptions of pain are normal in response to what the brain perceives as a threat. Speaking from a therapist's perspective, Thorn (2004) explains that conceptualization of pain requires understanding the client's phenomenological experience of pain. This experience acts as the "perceptual screen through which any physiological stimulus must pass" (p. xiv).

According to Turk (2004), how individuals with chronic pain perceive the chronic pain experience, more than the existence of physical pathology, directly affects how they interact with the world around them and their response to treatment. The mean duration of pain for individuals who seek chronic pain treatment is around seven years (Flor, Fydrich, & Turk, 1992). As a result, all domains of daily functioning are compromised for a significant time period (Turk, Swanson, Tunks, 2008). It is no surprise then that when compared with the general population, individuals with chronic pain have a higher rate of psychiatric diagnoses (Kinney, Gatchel, Polatin, & Fogarty, 1993; Polatin, Kinney, Gatchel, Lillo, & Mayer, 1993). As pain persists, emotional distress, depression, sleep disturbances, isolation, and feelings of anger, helplessness, hopelessness, and frustration set in. Individuals drastically change their daily routines and functioning and worry about the future. A vicious cycle forms a pattern whereby negative thoughts, feelings, and behaviors enhance and perpetuate distress—giving way to a reduction in and avoidance of activities, which the individual feels will exacerbate pain. This then leads to an increase in disability and pain perception (Turk, 2004). Thus appropriate

evaluation and treatment must educate individuals on proper self-management techniques while considering emotions; social and environmental influences; sociocultural background; and personal beliefs, attitudes, expectations, and meanings associated with pain in conjunction with biological factors (Turk & Monarch, 2002).

As medical and mental health professionals have become increasingly accepting of the important role that emotions and cognitions play in the individual's perception of chronic pain, the *biopsychosocial model* of pain has emerged as one of the most comprehensive approaches to chronic pain management. This model improves upon traditional biomedical perspectives by identifying the biological, social, and psychological dimensions of a patient's life as contributing individually and collectively to both the origin and the perpetuation of the pain experience (Gatchel & Epker, 1999). Application of the biospsychosocial model in chronic pain treatment entails a multidisciplinary approach in which the individual's symptoms are looked at from multiple perspectives (Lipman, 2005).

Supporting the biopsychosocial model, research gathered over the last three decades suggests that psychological interventions have positive effects on multiple dimensions of the chronic pain experience. Cognitive behavioral and self-regulatory approaches have received the most empirical support for addressing chronic pain problems and comorbid conditions including but not limited to: pain intensity, health-related quality of life, work-related disability, pain interference, depression (Hoffman, Papas, Chatkoff, & Kerns, 2007), mood, and catastrophizing (Williams, Eccleston, & Morley, 2012). In response to research findings such as these, professional (e.g., the National Institutes of Health) and governmental (e.g., the U.S. Department of Veterans

Affairs) organizations have acknowledged the important role that mental health clinicians play in chronic pain evaluation and treatment. Additionally, the American Psychological Association has designated psychological treatment of chronic pain as one of the 25 areas for which there is empirical support for psychological intervention (Christensen, Martin, & Smyth, 2004; Turk, 2004).

A growing research base, along with emphasis on the biopsychosocial model, self-management, and conceptualization of chronic pain as a phenomenological experience has encouraged a multidimensional approach to treatment. Psychologically supported treatments that are customized to the individual's psychosocial functioning have emerged as complementary adjuncts to medical and rehabilitation programs (Turk, 1990). As a mind-body therapy that acknowledges the influence of psychosocial factors on health and wellness, art therapy has shown viability as one such treatment.

Art Therapy

Art therapy is defined as a mental health profession that uses art making to promote emotional, mental, and physical well-being (Art Therapy Association (AATA), 2011). In practice, art therapy uses artistic media and techniques to create an outlet for self-expression, encouraging active engagement with the creative process and offering an alternative form of communication and meaning-making (Haaga, 2014). Emphasis is placed on providing a supportive environment, fostered by the therapist-client relationship, in which individuals are able to create, share, and explore their images and the meanings they may hold for them (Edwards, 2014). The creative process, as well as the artistic pieces that emerge, are used to help individuals accomplish a wide variety of therapeutic tasks ranging from finding relaxation and stress relief, increasing

socialization, improving motor skills, or pushing oneself to try something new, to examining thoughts and feelings, resolving conflicts, improving self-awareness and self-esteem, managing maladaptive behaviors and mental health issues, and coping with physical and psychological traumas (AATA, 2013).

A review of the literature reveals the multidimensional nature of art therapy as it has been used in addressing a multitude of issues related to the chronic pain experience including: assessing physical symptoms and personal issues (Dannecker, 1991); diverting attention away from pain sensations (Camic, 1999; Russell, 1995; Trauger-Querry & Haghighi, 1999); making meaning of the pain; providing relaxation; mourning loss of physical functioning (Camic, 1999); altering chronic pain perceptions, interpretations, and responses (Pavlek, 2008); helping to communicate pain; acting as means for confrontation of pain behavior; documenting the pain experience; serving as symptom substitution; and providing a tool for insight into attitude towards pain (Landgarten, 1981).

The above studies provide promising confirmation of the benefits that art therapy can offer as an adjunctive treatment to chronic pain management regimens. However, this topic of inquiry remains nascent and lacks quantitative evidence. An observation from Camic (1999), that continues to be true to this day, is that the dearth of outcome research regarding the effectiveness of art therapy on the chronic pain experience has resulted in an underrepresentation of art therapy in the pain management literature. Additionally, much of the art therapy literature fails to include important information regarding the specific methods and techniques that have proven effective and could be used in further development of art therapy approaches with the chronic pain population.

Purpose of the Study

A review of the current literature revealed a three-fold problem that served to establish the purpose of this research study.

As discussed above, one problem is related to the multidimensional quality of the chronic pain experience. Current thinking dictates that chronic pain calls for a treatment approach that identifies the biological, social, and psychological components of a patient's life as contributing individually and collectively to both the origin and the perpetuation of chronic pain (Gatchel & Epker, 1999). The chronic pain population needs more integrative, nonpharmacological adjunctive treatment options that address multiple dimensions of the chronic pain experience, paying attention to chronic pain as well as accompanying psychosocial symptoms.

The two remaining problem areas involve the current research in the field of art therapy. Art therapy researchers often neglect to outline the methods and techniques that are implemented with chronic pain research participants, impeding generalizability and replication. Finally, only a paucity of studies have attempted to evaluate the effectiveness of art therapy in treating chronic pain.

In addressing the three-fold problem presented above, the purpose of this study was to evaluate and illustrate the effects of art therapy intervention on chronic pain and psychosocial comorbidities. Specifically, the study was aimed at addressing three primary questions:

1. Is there a statistically significant change in depression, stress, anxiety, self-efficacy, and physical pain after participating in an art therapy intervention for chronic pain?

2. How do participant responses help to explain the processes involved, and the types of art therapy approaches and techniques that are effective in addressing multiple dimensions of the chronic pain experience?
3. To what extent is intervention fidelity maintained across treatment settings?

Guiding Assumptions

This study made a number of assumptions in approaching the topic of chronic pain. First, chronic pain is a phenomenological experience. As such, individuals may benefit from art-making activities that allow them to express current feelings and cognitions. Additionally, chronic pain remains a mysterious condition. Therefore, art therapists must educate themselves, as well as their clients, in the underlying mechanisms that contribute to the perpetuation and exacerbation of physical and psychosocial symptoms. An art therapy approach to chronic pain should also hold long-term potential and thus work toward improving participants' ability to self-manage their chronic pain. Finally, the art therapy intervention implemented in this study was created with the presumption that, when using art therapy with any unique client population, the benefits increase when the therapist is able to center treatment sessions on the specific issues affecting that population. A therapist who is knowledgeable in the most common concerns within the chronic pain population can also identify causal relationships and areas of overlap with other domains of psychological and physiological functioning. While the connections between influential factors in pain perceptions are not always well defined, the literature confirms that chronic pain is a multidimensional experience. Addressing it as such within the therapeutic realm may contribute to meaningful improvements in the areas of assessment, understanding, and management.

Significance of the Study

This dissertation is significant in that it serves to provide clarification of the potential of art therapy as a treatment strategy for chronic pain, filling the gap where empirical evidence is lacking. It is hoped that this study will contribute to existing bodies of knowledge in the realms of art therapy and chronic pain management. While the literature on art therapy with chronic pain populations tends to emphasize the treatment of psychological and emotional symptoms of pain, this study highlights the role that art therapy can play in addressing the physical symptoms as well. Consequently, this study provides information regarding the underlying mechanisms that contribute to the experience of chronic pain. Additionally, the methods and techniques presented in the art therapy intervention used in this study will serve as a valuable resource in the continued development of more effective and individualized interventions for chronic pain sufferers.

CHAPTER 2

Literature Review

This review examines the existing literature on the topic of chronic pain and art therapy. The first section is organized to give a historical context in which to understand the nature of the chronic pain, establishing a foundation for the present research. The next section focuses on application of art therapy in assessment and treatment of chronic pain. Research findings, art therapy approaches and techniques, and the role of art therapy in pain management are examined. To conclude, implications for art therapy practice and future research are discussed.

Historical Perceptions of Pain

The study of pain can be traced back to the earliest recordings of human history (Gatchel, 1999). Early humans understood little about the etiology of pain and often drew from mystical or religious beliefs in their efforts to understand and alleviate their symptoms. While primitive beliefs dominated popular opinion of the etiology and treatment of pain well into modern times, the 17th century marked the beginning of scientific methods based on objective and quantitative experimentation as opposed to dependence on common sense or outmoded mystical or dogmatic beliefs (Gatchel, 1999; Pain Medicine, 1999). With new advances in scientific investigation, the once-popular notion of a mind-body connection in which the mind or soul could impact the physical body was considered unscientific. Physical medicine was now governed by a biomedical reductionism philosophy, which purported that the physical body was a separate realm with its own mechanisms, unaffected by the mind or soul. The French philosopher René Descartes (1596–1650), who supported and is often credited with popularizing this

dualistic view, contributed to early pain theories with his conceptualization of the pain system as a direct channel from the site of injury to the brain (Gatchel, 1999; Gatchel & Maddrey, 2004). Descartes' "Specificity Theory" held that physical injury activates pain receptors and fibers, which then send pain impulses to a pain center located in the brain via a spinal pain pathway. The individual's pain experience then was considered to be in proportion to the degree of tissue damage or pathology, leaving no room for psychological contributions to pain perception (Melzack, 1993). Consequent theories perpetuated the biomedical reductionism philosophy, only losing influence in the 19th and 20th centuries (Gatchel, 1999; Gatchel & Maddrey, 2004; Melzack, 1993).

While Descartes' theory was enormous, determining how chronic pain was conceptualized and treated up to the middle of the 20th century, there remained many unanswered questions regarding pain conditions in the absence of biological causation (Melzack, 1993). With the influence of psychiatry, and then modern psychology, the dualistic medical model was being called into question. While traditional pain assessment continued to utilize a medical model that treated pain from a physiological perspective, the works of psychiatrists such as Benjamin Rush (1745-1813) and Sigmund Freud (1856-1939), which emphasized the interaction of psychological influences on health and illness, helped to reintroduce the mind-body connection (Gatchel, 1999).

The first model to introduce pain as a multidimensional phenomenon was Melzack and Wall's (1965) *gate-control theory of pain*. Melzack and Wall's theory argued against the idea that the pain system was simply a direct channel that transmitted pain signals from injured tissue to the brain. Instead, the theorists believed that the experience of pain could be attributed to a much more complex processing system

(Gatchel, 1999; Melzack, 1993). This model proposes that the amount of sensory information that is sent to the brain from the peripheral nervous system upon injury or tissue damage, and can therefore determine the intensity of the pain experience, is modulated by a spinal gating mechanism located in the dorsal horn of the central nervous system. The gating mechanism modulates pain by ascending signals from the peripheral nervous system and descending nerve impulses from the brain (Deardorff, 2003; Jensen & Turk, 2014). When an abundance of sensory information is sent to this region, such as in the case of a severe injury, the gates are unable to process all of the information and essentially close, blocking the pain signal and therefore lessening the level of perceived pain (Hunter et al., 2009; Melzack, 1993). Melzack and Wall also proposed that brain processes including those related to attention, affect, interpretation, and memories, are capable of promoting (opening the gate) or inhibiting (closing the gate) the sensory flow of pain messages and can therefore influence the brain's response to painful stimuli (Jensen & Turk, 2014; Thorn, 2004).

With the gate control theory, a more holistic and integrated approach to pain medicine was developing. The growth of health psychology and behavioral medicine in the 1970s produced systematic and empirical research capable of bridging the gap between psychology and medicine (Gatchel, 1999). As these two fields grew, a biopsychosocial model emerged. Introduced by psychiatrist George Engel (1977), the biopsychosocial model of health and illness identified biological, psychological, and sociological systems of the body as interconnected in impacting how individuals experience and heal from illness. This model has been, and continues to be, particularly influential in the field of chronic pain research (Gatchel, 1999; Gatchel, Peng, Peters,

Fuchs, & Turk, 2007). The biopsychosocial model of chronic pain recognizes pain as biological process but also focuses on the important role that experiential factors play. The interactions among these factors are complex and influential in the progression and perpetuation of pain. Therefore, research to identify and better understand the pathways of these interactions has the potential to produce greater understanding of the etiology of pain, which would aid in developing more effective measurement, treatment, and prevention methods (Gatchel, et. al., 2007).

Defining Pain

In line with the biopsychosocial model, modern definitions of pain show the shift in distinguishing between psychological and physical qualities of pain. The Continuum Center for Health and Healing (2014) defined pain as complex and subjective perception that signals the occurrence of tissue damage. The International Association for the Study of Pain (IASP) define pain as "an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage" (Merskey & Bogduk, 1994, p. 211). Pasero and McCaffery (2001) asserted that pain is defined by the individual experience. Butler and Moseley (2013) claimed that all perceptions of pain are normal in response to what the brain perceives as a threat. Turk and Okifuji (2000) defined pain as a perceptual event and explained that all pain has neurophysiological and psychosocial components, with the impact of psychosocial factors becoming more serious as pain becomes chronic.

Pain is often classified as either acute or chronic. Acute pain is generally defined as having a clear cause such as trauma, medical procedures, or illness. Acute pain may last only seconds, days, or weeks and stops before healing is fully achieved (Continuum

Center for Health and Healing, 2014; Loeser & Melzack 1999). Acute pain is the most common type of pain throughout the world.

Chronic, or persistent, pain is characterized by an injury that surpasses the body's ability to heal and therefore continues for a period of months or even years (Continuum Center for Health and Healing, 2014; Loeser & Melzack 1999). Recent reports indicate that more than 1.5 billion people worldwide and 100 million Americans suffer from chronic pain. When compared with other major health conditions, chronic pain affects more Americans than diabetes, cancer, and heart disease combined (American Academy of Pain Medicine, 2014). The most common types of chronic pain include back and neck pain, myofascial pain, fibromyalgia, headache, pain from arthritis, neuropathic pain, and neurogenic pain. Individuals might have two or more co-existing conditions that fit the criteria for chronic pain. Thee conditions may include chronic fatigue syndrome, endometriosis, inflammatory bowel disease, interstitial cystitis, or vulvodynia (National Institutes of Health, 2001). While most definitions of what constitutes chronic pain cite a timeframe of pain lasting for a minimum of three to six months from the onset of injury, the complexity of the chronic pain experience requires looking beyond temporal demarcations.

Gatchel and Epker (1999) highlight the importance of distinguishing between acute and chronic pain. Whereas acute pain serves as an indicator of biological injury or danger, signaling an underlying problem that can be easily located and treated, chronic pain follows a much different course. Chronic pain is disruptive and disabling. Unlike acute pain, which can be attributed to a clear cause, chronic pain may lack a physical pathology or identifiable biological purpose, as it no longer serves as an indicator of

tissue damage. Loeser and Melzack (1999) explain that, because chronic pain is persistent, additional environmental and psychological stresses may exacerbate the perception of pain, contributing to increased acuity and prolongation. An individual seeking relief from chronic pain often becomes enmeshed in the medical system, moving from one doctor to the next in a continuous, and seldom successful, effort to find a diagnosis or effective treatment (Turk, 2004). Thus, as Thorn (2004) contends, conceptualization of chronic pain requires acknowledgement and understanding of the individual's phenomenological experience.

The Chronic Pain Experience

> Pain is now understood to be neither sensation nor emotion alone, but rather an experience that draws upon both: the elusive intersection of three overlapping circles—cognition, sensation, and emotion. When any of these elements is missing, there is no pain. There is no such thing as being in pain without knowing you are. There is no such thing as being in pain without feeling the sensation of pain. And there is no such thing as pain that does not cause a salient emotional reaction. (Thernstrom, 2010, p. 284)

Composed of the unique perceptions of the individual experiencing it, chronic pain is recognized as a phenomenological experience (Butler & Moseley, 2013; Thorn, 2004), shaped by an array of internal and external factors. This section presents findings from the literature regarding the phenomenology of chronic pain, followed by an overview of the biopsychosocial implications of this condition.

Phenomenology of Chronic Pain

Phenomenological research has identified a number of themes that enhance understanding of what it means to experience chronic pain. For example, in their exploration of participants' ($N = 34$) perspectives regarding how chronic pain affected psychophysical unity, Ojala et al. (2014) identified four essential themes from participant-interview data: pain affects the whole person, dominance, invisibility, and negativity. Participants also maintained that psychosocial consequences such as distress, loneliness, lost identify, and low quality of life, rather than the pain itself were their main problems. Pilot research conducted in preparation for the current study also drew on interview data with individuals experiencing chronic pain. When asked to discuss their perceptions of chronic pain in order for the researcher to develop further understanding of the nature of the chronic pain experience, interviewees' ($N = 6$) accounts clustered around five superordinate themes: fighting against the "pain identity;" psychosocial side effects; loss; facing new limitations and boundaries; and working toward adjustment and acceptance (Haaga, 2012). Finally, in their effort to understand the effects of chronic pain on quality of life, Ahmad and Talaei's (2012) interview data ($N = 34$) showed three primary themes: tolerance with life, inactive daily activity, and unpleasant experience. These examples support the frequently cited adage that pain is defined by the individual who is experiencing it (Pasero & McCaffery, 2001).

Cognitive appraisals and beliefs. Many of the influential factors (pain intensity, persistence, behavior, disability, distress, and overall adjustment) in determining the phenomenology of chronic pain are related to cognitive appraisals and beliefs (Gatchel et al., 2007; Turk & Gatchel, 1999). For example, according to Arntz and Schmidt (1989),

an individual's perception that he or she controls the pain experience may alter the threat value and overall meaning of the pain experience. Perceived control refers to the belief that an individual has the ability to influence the probability, intensity, duration, timing, or averseness of an event (Thompson, 1981). In the chronic pain population, a sense of self-control has been associated with lower levels of depression (Turk, 1984) as well as lower levels of expected and experienced pain intensity (Vancleef & Paters, 2011).

Related to perceptions of self-control, self-efficacy beliefs are defined as the perception that an individual can successfully manage a task and achieve the desired outcome (Bandura, 1977). Turk and Okifuji (2002) explain that past experience with mastery is a central factor in developing and enhancing self-efficacy. If individuals believe they are able to control their symptoms, they are more likely to develop a sense of self-efficacy and utilize self-control techniques. Bandura (1977) claimed that self-efficacy beliefs were not fixed cognitive beliefs, and therefore could be modified by experiences.

In the context of chronic pain, Gatchel et al. (2007) assert that individuals with high levels of self-efficacy may exhibit more motivation in adhering to treatment regimens and following healthy behaviors, due to their history of expecting successful outcomes. Demonstrating this idea, findings from Altmaier, Russell, Kao, Lehmann, and Wenstein (1993) show that chronic pain patients who exhibited the highest levels of increased self-efficacy beliefs during their time in rehabilitation also exhibited higher levels of functioning and lower self-reported pain at a six-month follow-up. These findings contribute important evidence of the benefits of enhanced self-efficacy in long-term chronic pain self-management. Enhanced self-efficacy has also been associated

with reductions in disability, depression, pain (Arnstein, Wells-Federman, & Caudill, 2001), and pain tolerance (Bandura, O'Leary, Taylor, Gautheir, & Gossard, 1987). Research has also shown self-efficacy to be predictive of pain behavior and avoidance behavior (Asghari & Nicolas, 2001).

Another cognitive-behavioral hurdle to overcome in the chronic pain experience is the fear and avoidance many individuals encounter in coping with their condition. Originally put forth by Lethem, Slade, Troup, and Bentley (1983) the term fear-avoidance refers to the idea that individuals in pain avoid particular movements or activities as a result of fear. In an effort to describe why some individuals are able to recover from injury while others develop chronic pain, Lethem et al. conceived the fear-avoidance model, which suggests that individuals suffering from pain are faced with two extreme responses: confrontation or avoidance. While confrontation can lead to alleviation of fear and adaptation to injury, avoidance leads to prolonged, exacerbated fear and negative psychological and physical outcomes (Alappattu & Bishop, 2011; Vlaeyen & Linton, 2000). Avoidance and fear of pain perpetuate the pain experience even when no pathological cause can be found (Vlaeyen & Linton, 2000). Corroborated and expanded upon by a number of researchers (e.g., Leeuw et al., 2007; Norton & Asmundson, 2003; Vlaeyen, Kole-Snijders, Rotteveel, Ruesink, & Heuts, 1995; Vlaeyen & Linton, 2000), contemporary fear-avoidance models are based on the premise that pain-related fears, such as fear of the sensation of pain, fear of re-injury, or fear of physical activities that may exacerbate pain, results in pain catastrophizing and avoidance of particular movements or activities. Such avoidance then causes increased fear, distress, negative cognitions, pain, and disability, due to disuse and inactivity. In addition to pain-

related fear, fear-avoidance models also identify pain-related anxiety. Although the terms are often used interchangeably, while pain-related fear produces defensive behaviors, pain-related anxiety produces preventative behaviors such as hypervigilance and avoidance (Alappattu & Bishop, 2011; Leeuw et al., 2007).

Sociocultural context. The phenomenology of chronic pain is also shaped by the individual's sociocultural context. As stated by Callister (2003), "pain is a culturally defined physiological and psychological experience" (p. 207). In their cross-cultural study of pain, pain reaction, and pain coping, Moore and Brodsgaard (1999) found that the most common difference amongst cultural groups was the meaning of pain. The ways in which people behave in response to pain also seems to vary widely and appears to be culturally bound. For example, while some individuals display inward coping, regarding pain as a personal experience, others express their pain verbally and are comfortable with crying out (Callister, 2003). In their comparative study examining pain responses (grimacing, crying, talking about pain, etc.) among college students living in the United States and East India, Nayak, Shiflett, Eshun, & Levine (2000) reported that Indian participants showed a higher pain tolerance than their American counterparts. Indian males and females alike also believed that outward expression of pain was less appropriate than the American students thought it was. The authors postulated that the Americans' willingness to verbalize their pain might be attributed to a belief that pain is bad and needs to be eradicated immediately. Additionally, in American medicine, patients look to medical professionals as their primary source for pain relief and have widespread access to analgesics—powerful reinforcements for pain expression (p. 146). Yet, there are vast divides in how chronic pain is experienced within American culture as

well. For example, the Massachusetts Pain Initiative Survey (2010) found that: a larger proportion of minorities suffered from chronic pain; had pain that was significantly more severe; were less likely to be diagnosed with pain by their health care provider; were much more likely to have visited an emergency room to seek treatment for their pain; and were more pessimistic regarding beliefs that they would find pain relief. The U.S. National Center for Health Statistics (2006) reported that adults living in families who received income that measured less than twice the poverty level reported pain more often than their higher-income adult counterparts. Additionally, non-Hispanic white adults reported pain more frequently than did adults from other races and ethnicities. Finally, according to the Summary Health Statistics for U.S. Adults: National Health Interview Survey (2009), adults with bachelor's degrees or higher were less likely to experience migraine headaches, neck pain, low back pain, or face and jaw pain when compared with adults who never graduated from high school.

Gender. In addition to culture, gender also plays a role in the individual's pain experience. A survey from the U.S. National Center for Health Statistics (2006) found that woman (27.1%) were more likely than men (24.4%) to report that they were experiencing pain. While differences in pain sensitivity between the sexes can be linked to psychosocial factors and social conditioning, laboratory research in this area has also shown differences in sensitivity to noxious stimuli, which suggests that biological mechanisms underlie these differences (Wiesenfeld-Hallin, 2005). Furthermore, researchers have also shown that gender identity issues in the presence of chronic pain affect both sexes. Bernardes and Lima (2010) gathered evaluations of laypeople (n = 316) and nurses (n = 161) regarding written vignettes depicting men and women with chronic

low back pain followed by a list of masculine and feminine stereotypical traits. Results showed that all participants perceived men with chronic low back as less masculine and more feminine than typical men. Women with low back pain were perceived as less feminine and more masculine than typical women. In fact, the male and female chronic-pain patient examples were perceived as more similar to each other than to the typical man/woman.

Clearly, there are a number of underlying factors that shape personal perceptions and determine the phenomenology of the chronic pain experience. Adding to this experience are the consequences of a persistent condition that affects all areas of daily life.

Implications of Chronic Pain

The implications of chronic pain are vast and diverse, as they are both ubiquitous yet unique to each individual. For the purposes of this paper, only the areas of greatest importance and relevance to the current study are examined thoroughly. The two areas of focus that follow—physiological effects and psychosocial effects—provide a foundation of knowledge for developing appropriate treatment interventions with chronic pain sufferers.

Physiological effects. Physical pain is a stressor that is capable of threatening the body's homeostasis. In order to adapt to such stress, the body goes through physiological changes. While these changes may be beneficial or even lifesaving in the initial stages of pain, if the stress response continues it could have a number of harmful or even life-threatening effects (Middleton, 2003).

The cardiovascular response to the stress of unrelieved pain is to increase the activities of the sympathetic nervous system, which subsequently increases the heart rate, the blood pressure, and the amount of oxygen consumed. The body's respiratory response is related to the patient's tendency to limit movement in the thoracic and abdominal muscles. For example, while it may decrease or prevent pain, the hesitancy to cough can cause some amount of dysfunction in the respiratory system (e.g., retention of secretions and sputum). This places the patient at greater risk for pneumonia and atelectasis, a partial collapse of a lung. The stress of unrelieved pain can also result in impaired functioning of the musculoskeletal system and muscle fatigue, increasing the potential for immobility and risk of deep vein thrombosis (DVT). Finally, unrelieved pain can also cause depression of the immune system, increasing the patient's chance of wound infection, chest infection, pneumonia, or sepsis (Middleton, 2003).

The physiological changes that individuals with chronic pain undergo can lead to a state of impairment, a medical term that refers to an anatomical or pathological loss or irregularity (Banks & Kerns, 1996; Gatchel, 2005). Pathological loss could result from disease processes, such as in rheumatoid arthritis, whereas anatomical impairment could be a consequence of injury or trauma. Forms of impairment often associated with chronic pain include paresthesias, muscle weakness, and restricted range of motion (Banks & Kerns, 1996).

While individuals with chronic pain can experience a variety of degrees of impairment, impairment does not always lead to disability (Banks & Kerns, 1996). The term "disability" here refers to the inability or reduced ability to perform certain tasks or activities of daily living—a loss of functioning that is due to impairment (Gatchel, 2005).

In the context of chronic pain, an individual's degree of disability may be determined by more than impairment or pathology, but may also include the person's personal reaction to the pain experience, social expectations, and qualities of the physical environment (Jette, 1994).

Psychosocial effects. Most forms of acute pain are generally straightforward, allowing for quick assessment and treatment. In the case of chronic pain, persistent and complicated symptoms cause added psychological and social stress, heightening vulnerability to the development of comorbid, or the recurrence of premorbid, psychological conditions (Turk & Flor, 1999). Prominent psychologist and pain researcher Robert Gatchel conceptualized the pain experience as a layering of psychological and behavioral issues on top of the initial nociception, or perception of, pain. His three-stage model of the pain experience illustrates the general progression from acute, to subacute, to chronic pain following physical injury. Stage 1 of Gatchel's model involves normal emotions that accompany the perception of pain such as anxiety, fear, and worry. The onset of these emotions is a manifestation of the body's alarm system, alerting the individual to attend to the pain. Perception of pain that lasts beyond typical healing time (2–4 months) is considered to have progressed to the next stage. Stage 2 is characterized by the development and aggravation of psychological and behavioral problems, such as learned helplessness, distress, and somatization. If such problems are not overcome, the individual progresses into Stage 3, in which the interplay between physical, psychological, and social factors is overwhelming. In this last and most chronic stage, psychological and behavioral difficulties are all-consuming (Gatchel & Epker 1999; Gatchel, Bernstein, Stowell, & Pransky, 2008).

Current research findings parallel Gatchel's model of pain progression. For example, in their research on the rates of psychopathology in patients with chronic lower back pain (CLBP) versus patients with acute lower back pain (ALBP), Kinney, Gatchel, Polatin, and Fogarty (1993) found that the CLBP sample ($N = 90$) exhibited much higher rates of depression, substance abuse, personality disorders, and premorbid pathological conditions than those of the ALBP sample ($N = 90$) or the general population. Anxiety diagnoses however, were more prevalent in the ALBP sample. Results from Kinney et al.'s study on chronic pain and psychopathology show that the development of psychopathology is likely related to the advancement of prolonged pain, rather than the onset of pain.

While the precise mechanisms that are involved in the individual's experience of moving from acute to chronic pain remain a mystery, the literature cites a multitude of psychosocial consequences of this transition.

Affective aspects of pain. The relationship between chronic pain and negative emotion has been well documented in the literature. Gatchel et al. (2007) reported that emotion has been found to play a role in predisposition to, amplification or inhibition of, and perpetuation of pain. Emotional distress is also a frequent consequence of chronic pain. Adams, Poole, and Richardson (2006) cite determinants such as the quality and prognosis of the condition; the approach and behavior of health care providers; and the patient's coping skills, social supports, and personal beliefs as influencing the degree of emotional distress experienced by the patient. Further establishing the relationship between chronic pain and emotional distress, a number of studies have shown that

individuals with chronic pain display higher rates of psychiatric disorders than those of the general public (Kinney, et al., 1993; Polatin et al., 1993).

One of the most commonly studied disorders associated with chronic pain is depression. Research has shown high comorbidity rates between chronic pain and depression (e.g., Kinney et al., 1993; Polatin et al., 1993; Poole, White, Blake, Murphy, & Bramwell, 2009) with an estimated 30%–54% of chronic pain patients suffering from major depressive disorder (Banks & Kerns, 1996). The prevalence of depression amongst chronic pain sufferers is especially significant when compared to depression rates of 5.4% in the general population (Pratt & Brody, 2008). Although chronic pain as it relates to depression has inspired more research than any other chronic pain topics in the literature (Dersh, Polatin, & Gatchel, 2002), the lack of longitudinal studies makes it difficult to determine the exact nature of the temporal relationship between chronic pain and depression (Banks & Kerns, 1996). Researchers have debated whether chronic pain causes the onset of depression, is caused by depression, or appears concurrently in a reciprocal, concomitant relationship (Gatchel et al., 2007; Kroenke et al., 2011)

Irrespective of their causal relationship, the concomitancy of chronic pain and depression presents significant implications. Depression in chronic pain patients has been linked to self-reports of lower levels of functioning; less support from significant others; a lack of compliance with treatment; fewer physical and cognitive coping skills; less self-control (Kerns & Haythornthwaite, 1988); decreased sleep time; suicidal ideation; and medical burden (Meeks et al., 2007). Bair, Robinson, Katon, and Kroenke (2003) reviewed the literature on depression and pain comorbidity and found that recognition and treatment of depression are both adversely affected by the addition of pain. Worse

pain and depression outcomes, they found, are associated with comorbidity, as compared with outcomes for diagnosed pain or depression alone.

In addition to depression, a number of studies have found high levels of anxiety disorders in samples of patients with chronic pain (e.g., Fishbain, Goldberg, Meagher, Steele, & Rosomoff, 1986; McWilliams, Cox, & Enns, 2003; McWilliams, Goodwin, & Cox, 2004; Polatin et al., 1993). Data from the National Comorbidity Survey Part II (NCS) showed higher rates of DSM-III-R anxiety disorders (35%) in individuals with chronic arthritic pain as compared with the general population (17%) (Asmundson & Katz, 2009). Panic disorder and general anxiety disorder (GAD) appear to be the most common diagnoses in the chronic pain literature (Dersh et al., 2002). McWilliams, Goodwin, and Cox's (2004) analysis of data from the Midlife Development in the United States Survey (MIDUS) showed significant positive associations between arthritis, migraine, back pain, GAD, and panic attacks.

Feelings of anxiety or worry in response to chronic pain are common. Unexplained symptoms, an unclear future, diminished physical capacity, threat of increased pain with physical activity, or preoccupation with others' perceptions are contributing factors to the development of fear, worry, and anxiety in individuals with chronic pain (Gatchel, et al., 2007). Additionally, the physiological arousal and muscle tension that accompanies anxiety can prolong and exacerbate pain (Robinson & Riley, 1999).

Common triggers to feelings of depression and anxiety are the daily stressors that plague individuals with chronic pain. In their examination of psychotherapeutic interventions for individuals with non-specific chronic low back pain and moderate

depression, Ellegaard and Pedersen (2012) identified an array of psychological stressors affecting participants, including stress related to loss and sorrow, being let down, violations, traumatic events, and reduced functioning. These stressors then led to feelings of distress, powerlessness, reduced self-worth, anxiety, and discomfort. The researchers found that when pain, stress, and depression overwhelm the individuals who have few resources available to them, stress becomes prominent. Consequently, stressors are capable of decreasing the individual's abilities to cope with chronic pain.

Anger, when compared with depression and anxiety, has not received as much attention in the pain literature (Okifuji, Turk, & Curran, 1999; Robinson & Riley, 1999). Robinson and Riley (1999) posited that while many other affective aspects of pain have established diagnostic criteria, anger lacks definitive diagnoses, resulting in greater difficulty in tracking and gathering rates of occurrence. Although there is still no diagnosis for anger, associations between anger and chronic pain have been established in the literature (e.g., Fernandez & Turk, 1995; Okifuji et al., 1999). For example, Okifuji, Turk, and Curran (1999) found that 70% of chronic pain patients ($N = 96$) who agreed to undergo evaluation at a multidisciplinary pain center, reported feeling angry. The most common targets of anger were self (74%) and the health care providers (62%). The researchers found significant associations between anger at self and pain/depression. General anger was significantly associated with perceptions of disability. The researchers concluded that identification of specific targets of anger could increase understanding of how patients psychologically adapt to chronic pain.

A high prevalence of anger in the chronic pain population is not surprising when we are reminded of the stress associated with stubborn symptoms, failed treatments,

unknown etiology, and frustration with self and others. Given that popular perception of anger is often negative, many individuals may find it difficult to admit to such feelings. Therefore, the already high rate of anger in chronic pain patients may be an underestimate (Gatchel et al., 2007).

The degree to which chronic pain patients deny their anger is an important factor in their overall experience. Studies have found associations between suppression or inhibition of anger and greater pain intensity (Kerns, Rosenberg, & Jacob, 1994; Quartana, Bounds, Yoon, Goodin, & Burns, 2010); inhibition of anger and more pain behavior; anger intensity as contributing to predictions of perceived pain interference and activity level (Kerns, Rosenberg, & Jacob, 1994); high pain intensity and maladaptive anger management (Lombardo, Tan, Jensen, & Anderson, 2005); higher levels of anger and poor adjustment to pain (Moghaddam & Julaieha, 2008); and repeated failure of efforts to control pain with increased levels of anger (Janssen, Spinhoven, & Arntz, 2004).

***Social aspects of pain*.** As exhibited above, individuals' cognitive appraisals and beliefs play important roles in shaping their chronic pain experience. In addition to these internal factors, a number of external factors, such as social relationships, communication, and support, each play a role in pain-related outcomes.

Chronic pain patients frequently feel rejected by the medical community and may think that health care providers, family, friends, and employers see them as exaggerators or complainers when treatment is ineffective. Failed treatments and the inability to provide definitive diagnoses often results in conflict between the subjective experiences of patients and the messages they receive from their health care providers. For example,

patients who are told there is no biological basis for their pain, or told there is in fact a biological basis but no available treatments to relieve the pain, may experience confusion, frustration, distress, and a general lack of faith in self as well as in the medical system (Banks & Kerns, 1996; Gatchel et al., 2007). Prolonged pain can also result in the inability to work and subsequent unemployment and lack of financial stability. Consequently, patients may experience depression; anger with others; anger with self for not being able to overcome the pain; anxiety; preoccupation with self; isolation; and demoralization (Gatchel et al., 2007).

Recently, a number of researchers have become interested in the ways in which social support can affect the chronic pain experience (Campbell, Wynne-Hones, & Dunn, 2011; Cho, Zunin, Chao, Heiby, & McKoy, 2012; Feldman, Downey, Schaffer-Neitz, 1999; Kerns, Rosenberg, & Otis, 2002; Turk, Kerns, & Rosenberg, 1992). For example, in Campbell, Wynne-Jones, and Dunn's (2011) review of 17 studies measuring the effects of informal social support (e.g. family, friends, social groups) on spinal pain prognoses, the authors found that although there was inconclusive evidence of an association between social support and pain, there was moderate evidence that social support was associated with better psychological outcomes. The authors concluded that social support may be an important factor in determining the spinal pain patient's psychological well-being. Conversely, according to Romano, Jensen, Turner, Good, and Hops (2000), social support in the form of highly attentive, or solicitous caregiver behaviors that tend to discourage activity and thus encourage a "sick role," has been associated with negative pain-related outcomes. In their study observing videotaped interactions between patients with chronic musculoskeletal pain ($N = 121$) and their

partners participating in seven household activities, the researchers found that solicitous and negative behaviors from the partners were associated with increased verbal and non-verbal pain behaviors from the patients. The researchers concluded that solicitous behavior from partners may encourage the chronic pain patient to take on a sick role due to the fact that the partner's concern dissuades the patient from engaging in activity. Overall findings supported behavioral models of chronic pain.

Conclusions

The preceding overview of the chronic pain experience is by no means exhaustive. However, by highlighting the internal and external factors that contribute to chronic pain, the need for multidimensional treatment approaches is underscored. As exhibited in the literature, the chronic pain experience is highly phenomenological in nature, "composed of highly interactive emotional, cognitive, as well as sensory components" (Gijsbers & Niven, 1993, p. 55). As individuals perceive their surrounding environments, they make meaning out of their experience, which inspires cognitive appraisals, beliefs, coping responses and emotions that then determine future behavior (Thorn, 2004). These behaviors influence how the individual responds to treatment. Thus psychotherapies can play an important role in helping individuals modify perceptions of how pain affects daily life (Loeser & Melzack). Additionally, the implications of chronic pain are immense. Psychotherapeutic approaches to treatment with chronic pain sufferers aid individuals in learning how to self-manage the physiological and psychosocial factors contributing to their pain experience and thereby enhance their quality of life (Turk & McCarberg, 2005). However, as a highly individual, perceptual event, treatment options for chronic pain vary in effectiveness and applicability. Individuals often look for

alternative therapies. Art therapy is one such therapy. With the focus of this paper centered on the role of art therapy in chronic pain treatment, the next section will examine how art therapy is used to address the biopsychosocial dimensions of the chronic pain experience while evaluating the quality of the literature in this realm and identifying implications for future practice and research.

Application of Art Therapy

Artistic expression has long played a role in the human experience. In ancient times, all aspects of life—scientific, spiritual, and philosophical—were explored, imagined, and experienced through the arts. Visual, musical, and physical expressions were ritualized and honored, and played integral roles in healing practices (Achterberg, 1985; Atkins & Williams, 2007). While the connection between arts and healing has been somewhat lost in modern times, artistic expression as a therapeutic modality has been used in the field of psychiatry since the early 20th century (Rogers, 1990). Psychiatrist Carl Jung recognized the inherent value in creative and artistic expression and believed that the free and spontaneous nature of imagination was key to an individual's enjoyment in the process. Such freedom of expression allowed for the release of unconscious material, and provided important opportunities for gaining control through symbolic reenactment of real-life situations (Chodorow, 1997). In examining his patient's visual images and symbols, Jung was able to understand and even diagnose not only psychological, but physiological conditions (Malchiodi, 1999; Siegel, 2007).

Emerging as a profession in the 1940s, art therapy was born from psychiatry's interest in the role of art in diagnosis and testing, as well as from the psychoanalytic movement and beliefs about the presence of symbols within unconscious thought,

images, and dreams (Malchiodi, 1998). By the middle of the 20th century, artistic expression had gained recognition for contributing to enhanced rehabilitation, health, and wellness. Hospitals, clinics, and rehabilitation centers began to include arts therapies programming alongside more traditional "talk therapies" (American Art Therapy Association, 2013; Malchiodi, 1998).

While modern definitions of what constitutes the practice of art therapy can be attributed to the work of a number of individuals, Margaret Naumburg is credited with being among the first to distinguish art therapy from other forms of psychotherapy in the 1940s (Malchiodi, 1998). Rooted in the psychoanalytic concepts of Freud and Jung, Naumburg's practice of "dynamically oriented art therapy" (later termed "art psychotherapy") considered images produced in therapy to be a form of patient-therapist communication, a symbolic language (Naumburg, 1958; Vick, 2003). In the 1950s, Edith Kramer expanded the definition of art therapy with her conceptualization of the creative process as an outlet for self-expression—a space in which individuals can adopt and practice new feelings and attitudes (Malchiodi, 1998). In contrast to Naumburg's focus on the visual product as communication, Kramer's "art as therapy" approach placed primary importance on the creative process as inherently healing (Ulman, 2001). While the founding ideas that established the definition of art therapy resulted in a split between approaches that persists today, this split also serves as an example of how multifaceted the practice of art therapy can be. Founder of the first art therapy publication, *The Bulletin of Art Therapy* (later named *The American Journal of Art Therapy*), Elinor Ulman (2001) recognized both approaches as valid and explained that:

> Art psychotherapy and art as therapy can exist side by side in the same room at the same time, or in the work of the same therapist at different times. In my own life as a clinician I moved between the two, using art as therapy where I could and shifting to art psychotherapy where the situation seemed to call for it. (p. 295)

The American Art Therapy Association's (AATA) reflects this dual approach in its definition of art therapy as a mental health profession that uses art making to promote emotional, mental, and physical well being (AATA, 2011). AATA (2013) described art therapy as a process by which:

> …clients, facilitated by the art therapist, use media, the creative process, and the resulting artwork to explore their feelings, reconcile emotional conflicts, foster self-awareness, manage behavior and addictions, develop social skills, improve reality orientation, reduce anxiety, and increase self-esteem. (p. 1)

It is also important to note that the practice of art therapy is often eclectic and may also include psychodynamic, humanistic, learning and developmental, educational, cognitive behavioral, and other therapeutic approaches (Hughes, 2010; Vick, 2003).

How art therapy is defined and conceptualized is particularly important when it comes to differentiating it from recreational or creative arts activities, often conducted in medical settings as part of arts in health care initiatives. Although both may encourage creativity and improve the patient's overall experience, the goals of art therapy are psychotherapeutic in nature, focused on the emotional and psychological needs of the patient (Wood, 2001). Furthermore, it is important to note that the practice of art therapy requires specialized, master's-level training in human development, psychology, and

counseling theories and techniques in addition to knowledge in the visual arts and creative process (AATA, 2013).

As exhibited above, art therapy is a multidimensional approach that can be used with a number of client populations. In regard to the role of art therapy in chronic pain treatment, there is a dearth of information on the topic, resulting in an underrepresentation of art therapy in the pain-management literature (Camic, 1999). Thus, a survey of relevant literature from the fields of art therapy, arts in healthcare, occupational therapy, clinical psychology, pain management, cancer care, and complementary therapies serves as an overview of research in this area thus far.

The area of study that encompasses pain management is vast, involving a number of different treatment approaches according to the pain condition and causes. In order to provide a thorough overview of potential issues relevant to the use of art therapy with the chronic pain population, use of the visual arts and "therapeutic arts" by professionals, other than trained art therapists makes up a small percentage of the literature reviewed. Primary attention was given to those articles that cited *chronic* pain as a focus of treatment. However, due to the paucity of articles in this area, a few examples from the literature on other pain-related conditions (i.e., cancer pain, migraine pain, unspecified pain) were included in areas of inquiry when they were germane to the chronic pain population (i.e., medical art therapy, art therapy assessment, art therapy methods and techniques).

Assessment

In reference to the role of art expression in experiences of illness, Malchiodi (1999) explained that images assist people in expressing thoughts, feelings, and

experiences that are often too difficult to verbalize. Camic (2008) also considered the arts to be valid tools in the communication of illness. A proponent of the incorporation of arts in health care, Camic noted that, when used as a means of communication between patient and health care provider, the arts have the potential to improve assessment processes, thereby enhancing the overall quality of treatment.

Broadbent, Neiderhoffer, Hague, Arden, and Reynolds (2009) aimed to demonstrate this concept in their examination of whether drawings could be helpful in assessing perceptions of, and reactions to, headaches. The researchers performed a cross-sectional study with college students ($N = 65$) who suffered from persistent headaches. They asked the students to draw how they were affected by their headaches and then assessed the drawings, noting associations between content, size, and darkness of the drawings with perceptions of illness, mood, and health outcomes. Results showed that drawings which were darker, larger, and included trauma to the head, were related to worse perceptions of the headache experience and greater pain levels. The researchers therefore concluded that drawings were in fact a useful tool in for improving healthcare providers' assessment of their patients' pain experiences. While there were limitations to the study, such as the lack of a true definition of "persistent headache," Broadbent et al. presented important evidence of the effectiveness of art making in appreciating nuances about the pain experience that might otherwise go undetected.

Dannecker's (1991) investigation into how art therapy can be beneficial in treating rheumatoid arthritis provided further insight into how patient artwork can be used in assessing physical symptoms and present and future issues. Dannecker hypothesized that art therapy would help reduce pain and encourage expression of a wide range of

emotions in three female rheumatoid arthritis patients who participated in an art therapy group consisting of five patients who met every two weeks. Exploration and analysis of the participants' images yielded evidence of defense mechanisms common to psychosomatic patients. While participants initially desired no more than objective critiques of their artwork, as they progressed and formed a therapeutic relationship with the therapist they were able to express more and more about aspects of their private lives. Dannecker concluded that his hypothesis was confirmed in that, changes in the artistic images resulted in the participants' reports of at least partial relief of physical pain while participating in the art-making process. Dannecker asserted that art therapists should prevent themselves from being seduced by conservative art-making behavior, which may act as a defense against true engagement in art therapy. Such a defense should be acknowledged and used to create more opportunities for personal expression. Additionally, Dannecker suggested that art therapists should apply a diagnostic perspective, like that of a medical doctor, and ask the patient what his or her physical symptoms and visual images can communicate about personal issues. Applying this diagnostic perspective enhances the art therapist's empathic connection to the patient and his or her images. Although the case illustration format prohibits generalizability of findings, Dannecker provided a useful example of the role of patient artwork in assessing and understanding a patient's perceptions of chronic pain.

Padfield, Janmohamed, Zakrezewska, Pither, and Hurwitz (2010) studied the usefulness of photographic images as a resource in patient-clinician communication. Sixty-four color images depicting a variety of qualities of the pain experience were offered to patients while they were waiting for consultations with pain clinicians. Patients

were encouraged to take the images they identified with into their consultation to help facilitate discussion with their clinicians. Both clinicians and patients were asked to complete questionnaires in regard to the value of the images immediately following the consultation. Data analysis showed that 82% (n = 52) of clinicians felt that the images improved communication while 78% (n = 50) felt that the images enhanced understanding of patients' pain experiences. Sixty-seven percent of patients (n = 43) reported that discussing the images with the clinician encouraged dialogue. Researchers identified four central themes from the questionnaire data: expanding verbal dialogue, improving therapeutic relationship, time limitations, and practicality for future use. Such findings provide important evidence of the utility of visual communication in adequately assessing and understanding patients' pain experiences.

Landgarten (1981) used art therapy in assessing of chronic pain patients' self-management abilities. Patients were asked to "draw your pain" upon beginning the their treatment at a pain center, and again, at the end of their treatment. The images were used to assess patients' treatment gains and prognoses for their ability to self-manage their chronic pain in the future. The images were also interpreted and discussed when appropriate. In demonstrating her assessment practices, Landgarten provides three case vignettes, which show patient artwork with accompanying background information and therapist-client explanation/interpretations. While the brief descriptions lack the methodological rigor of a formal case study, they provide valuable insight into the use of art therapy in measuring chronic pain treatment outcomes.

Hass-Cohen and Findlay (2009) characterized the pain experience as a "complex interaction of neurological, emotional, cognitive, social, and cultural factors" and

proposed “an art therapy relational neurobiology (ATR-N) brief assessment protocol” that assesses the multidimensional aspects of pain (p. 175). Using a qualitative exploratory approach, the researchers conducted two ATR-N assessments, spaced two years apart, with a 64-year-old Caucasian female artist who suffered from chronic back pain. The researchers used the visual and interview data gathered from the two assessments to create an extensive report and discussion, connecting their assessment findings to the different dimensions of pain measured by the ATR-N protocol. Anecdotal evidence showed that the subject reported reduction and absence of pain while participating in art making. Researchers posited that the practice of art making in the company of an art therapist who is aware and present might help to elicit additional feelings of security and attachment, thereby reducing chronic pain. The researchers also suggested that participation in an enjoyable art making activity might provide a palliative effect on pain perception. Although the exploratory nature of Hass-Cohen and Findlay’s report limits transferability and full understanding of this phenomenon, the researchers provided a useful assessment protocol for future work with chronic pain populations.

Another tool for understanding chronic pain symptoms is the use of metaphor in the informal assessment of client artwork. Although this is cited in a number of art therapy studies (i.e., Dannecker, 1991; Hass-Cohen & Findlay, 2009; Long, 2004; Savins, 2002), the pertinent research is limited.

Treatment

Pain modulation through distraction. The pain experience is largely characterized by the amount of attention it demands of the senses. Yet, if attention is directed toward other sensory modalities, overall attentional capacity is lessened, and an

individual is less able to process painful stimuli (Depalma & Weisse, 1997; Villemure & Bushnell, 2002). A number of studies have shown that distraction has been effective in reducing perceptions of pain during medical procedures (e.g., Cason & Grissom, 1997; Gold, Seok Hyeon, Kant, Joseph, & Rizzo, 2006; Vessey, Carlson, & McGill, 1994). In the field of creative arts therapies, music remains the most researched medium for providing distraction from pain and has proven its effectiveness with a number of pain populations (Lee et al., 2004; Mitchell, MacDonald, & Knussen, 2008; Nguyen, Nilssson, Hellström, & Bengston, 2010). However, a number of reports show that art and art therapy have also proven to be effective in this area.

In their work with terminally ill patients in hospice care, Trauger-Querry and Haghighi (1999) found art therapy interventions to be effective in diverting attention away from the sensation of physical pain. The authors described this process as one of pain modulation, in which the patient's investment in the creative process encourages a refocusing of pain sensation and perception, ultimately resulting in a decrease in the experience of pain. The authors illustrated the process of pain modulation with the inclusion of case examples, which provide anecdotal evidence. While lacking empirical evidence, the authors' description of their therapeutic process highlights important considerations for future research in the use of art therapy in pain control.

Russell (1995) also used art therapy to distract from physical pain in her work with hospitalized pediatric burn patients. The author purported that art therapy added to the burn patients' ability to cope by providing a diversion from painful procedures and surgeries. Additionally, the art therapist provided a safe environment, away from the pain associated with hospitalization. While the author provided only anecdotal records of her

work, case examples illustrate her adaptive approach to using art therapy to address the psychological phases of burn recovery and offer a framework for future research.

In the field of arts in healthcare, Ferszt, Massotti, Williams, and Miller (2000) conducted an exploratory qualitative pilot study that sought to examine the impact of an art program with inpatient oncology patients ($N = 7$). With instruction from an art educator, patients were shown reproductions of famous artworks as inspiration for their own art making. Following participation in the art-making process, five patients reported that participation in art making distracted them from their pain. Six of the seven nurses interviewed noted that distraction was a benefit of art making, confirming findings from the patient interviews. Although sample size was small and semi-structured interviews did not aim to measure pain reduction directly, the researchers provided important preliminary evidence of the effectiveness of art interventions in distracting from, and thus alleviating, pain.

Alternatively, Vick and Sexton-Radek's (2005) research, examining the relationship between migraine headaches and the practice of art making, challenges our common beliefs about the "healing power" of art. Quantitative and qualitative analysis of survey data gleaned from migraine sufferers ($N = 127$) revealed that the majority of participants found that the practice of art making more often triggered, rather than alleviated, migraine pain. Participants reported that painting was the primary medium used, and content analysis of survey data showed that odor was the most frequent trigger (26.62%). Therefore, researchers emphasized the importance of further inquiry into art making processes and materials that might exacerbate migraine symptoms. Overall, Vick and Sexton-Radek's counterintuitive findings draw attention to the importance of

consistent reexamination and reevaluation of beliefs and practices in attempting to research the pain experience. Their work also demonstrates how practical aspects of study design, such as selection of art media, can potentially confound investigation of the interplay between physiological and psychological features of the pain experience.

Pain modulation through treatment of psychosocial factors. While the Cartesian split between mind and body that once dominated the popular perception of the pain experience still persists, much of the research literature now accepts pain as a multidimensional experience (Depalma & Weisse, 1997; Zaza & Baine, 2002). In addition to biological factors, psychological, emotional, cognitive, and social factors also modulate the pain experience (Sator-Katzenschlager et al., 2003). A number of studies using art therapy to address psychosocial factors have found that art therapy can be effective in improving mood; reducing feelings of stress and anxiety; improving interpersonal dynamics; and decreasing physical and emotional distress (e.g., Angen, Carlson, Goodey, & Speca, 2000; De Petrillo & Winner, 2005; Monti et al., 2006; Walsh & Weiss, 2003). The following studies exhibit the interplay between reduction in psychosocial distress and perceptions of pain.

A preliminary study was carried out by Camic (1999) who measured the effectiveness of a 15-session expressive arts workshop in decreasing depression and anxiety levels and in improving ability to manage pain. The participant population (N = 7) consisted of men with chronic benign pain who were patients of a pain-management clinic. Camic used arts-based interventions within a cognitive-behavioral framework in an effort to help participants better manage their pain. The researcher evaluated the effectiveness of the workshop using both qualitative and quantitative methods. A semi-

structured interview was conducted at the beginning of the workshop in order to provide a thorough assessment of each individual participant. Participants were tested pre- and post-workshop using the State-Trait Anxiety Inventory (STAI), the Multidimensional Pain Inventory (MPI), and the Beck Depression Inventory (BDI). Data analysis showed a decrease in depression levels in six out of seven participants and a decrease in anxiety levels across all participants. Six out of seven participants reported that their pain management abilities had improved. In addition, five participants chose to create studio spaces within their homes in order to continue engaging in the expressive arts. While Camic's study did not provide a control group to account for additional variables, his use of quantitative assessment measures improved overall validity. Description of the formatting for each of the 15 sessions also increases understanding of the researcher's therapeutic approach. Although Camic was not an art therapist, his extensive experience in the incorporation of the arts into health psychology provides valuable information for art therapists in addressing the psychosocial needs of pain populations.

Another art therapy intervention, aimed at addressing both physical and psychosocial aspects of chronic pain was carried out by Pavlek (2008). Pavlek incorporated art therapy into an integrative pain therapy model designed to alter chronic pain perceptions, interpretations, and responses. In developing and testing out the model, Pavlek utilized cognitive-behavioral techniques, progressive relaxation with art therapy, sensory awareness with indirect clinical hypnosis, and formal clinical and self-hypnosis. Using a group therapy approach, the research was carried out over 10 weekly 60–90 minute sessions with three groups (n = 9). Data were collected using a self-developed Likert-type questionnaire, implemented during the first and last sessions, and again 6–12

months after the group ended. Analysis of the questionnaire data showed reductions in perceptions of intensity (59%) and frequency of pain (59%), as well as an increase in functional coping skills (56%). Follow-up questionnaires showed that improvement was maintained (37%, 29%, 43%, respectively). Participants also reported decreases in stress, depression, and anxiety. Overall, Pavlek's findings contributed to existing knowledge of mind-body interventions for effective management of chronic pain, a central goal of the study. However, the small size of the sample group, the lack of a control group, and the lack of a standardized outcome measure make generalizing difficult.

In the field of occupational therapy, "art as therapy" is often used as an intervention approach. Henare, Hocking, and Smythe (2003) examined the meaning of chronic pain as expressed through the use of art. In this small-scale, qualitative study, the researchers recruited participants ($N = 14$) from a pain management program. The artwork, as well as participants' comments regarding its meaning, comprised the data for the study. Data analysis produced five central themes: gaining pain and losing self; redefining self; identity through others; hopefulness; and being on a journey. Researchers concluded that there was a definitive link between participating in a valued occupation (art making) and maintaining or redefining a sense of self, experiencing a sense of competence, and being hopeful about the future. Limitations of the study include possible research bias in interpreting meaning from participant artwork as well as the lack of in-depth questioning regarding the participants' experiences. While this study does not provide empirical evidence of the effects of art therapy per se, it does provide meaningful evidence of the use of art as a means of self-expression—a tenet of art therapy principles of practice.

Approaches and Techniques

McGraw (1999) asserted that verbal expression is not adequate in alleviating the pain and confusion that accompanies physical trauma and illness. Instead, she proposed a studio-based art therapy approach that emphasized art making, rather than verbalization as an outlet for self-expression. A case example using the studio-art concept with a woman experiencing constant pain, anxiety, and depression from numerous medical issues illustrated a number of techniques including: strength-based interventions using poetry, study of art history, art instruction, and media exploration to reframe the patient's identity from "sick patient," to "healthy artist;" multi-media collage to depict the patient's bodily pain sensations and thus reduce frustrations that she felt others didn't understand; and experimentation with different painting styles to explore different perspectives and increase the patient' self-confidence as an artist.

Savins (2002) also regarded chronic and severe pain as a traumatic and overwhelming experience. In using art therapy with children in pain, she utilized metaphor drawings and puppetry to help children explain, describe, and make sense of their pain; explain medical procedures; and understand biological reasons behind their pain.

As mentioned above, Trauger-Querry and Haghighi (1999) used music and art therapy to assist patients in hospice care in diverting attention away from pain and toward other personal aspects of self. In doing so, the authors identified the potential for music and art therapy to alleviate pain, increase insight and awareness, and promote understanding of interpersonal relationships. Case examples included techniques such as

song writing, drawing and painting for relaxation, music and imagery for relaxation, and open studio.

Long's (2004) case illustration of a 79-year-old woman suffering from arthritis showed how art as a primary intervention can result in pain relief. Long used color and metaphor to assist the woman in externalizing the nature of her severe shoulder pain. When the woman created a "pain monster" to represent her pain, Long then directed her to visually depict the defeat of the monster (p. 330). From this process, the woman reported that, as she visually represented the defeat of the pain monster, she felt relief in her shoulder pain. While Long also processed psychological content with the woman, she neglected to examine how psychosocial issues may have related to the woman's chronic pain experience, limiting full understanding of the art therapy process. Although this case illustration is lacking in empirical methodology, limiting generalizability, Long demonstrated art therapy methods and techniques that are relevant to work with the chronic pain population.

Art therapists who employed body-outline templates in working with hospitalized adult cancer patients dealing with pain ($N = 70$) found that the intervention fulfilled a number of expressive needs. Luzzatto, Sereno, and Capps (2003) employed drawing, painting, and collage techniques to help patients create images inside and outside of a body outline. Analysis of responses from each 45-minute session revealed three primary themes in the patients' images: visualization of physical pain, communication of emotions, and a search for meaning. Researchers concluded that the body outline was an adaptable intervention, appropriate for helping patients to communicate painful aspects of their illness.

Many art therapists employ the use of guided imagery to deal with pain. For example, Garai (2001) described using a humanistic-holistic art therapy approach in which he asked patients to imagine different aspects of their pain and how these aspects affected their bodies. Patients were instructed to draw pictures of their pain, and then to imagine and draw the pain exiting their bodies. Garai claimed that some patients who use this process as an alternative to taking pain medication feel pain relief that lasts longer than the effects of medication.

Camic (1999) also used guided imagery as a component of his expressive arts pain-management workshop. Working from a Cognitive Behavioral Therapy (CBT) theoretical perspective, Camic drew from mindfulness meditation, existentialism, art making, and guided imagery practices in creating a rationale and structure for the workshop. Camic provided the group with an assortment of art materials including clay, collage materials, pastels, paints, pencils, and scratchboards. Art interventions included: mindful meditation followed by visual art making; media exploration; meditation with guided imagery to facilitate art making; journaling and poetry; music followed by a response through visual art making; and poetry as a response to art making and music experiences. Having spent much of his career working with pain management, Camic asserted that he had come to realize the value in using the visual arts to distract from pain, make meaning of pain, relax, and mourn the loss of physical functioning that often accompanies the pain experience.

As cited above, Pavlek (2008) incorporated art therapy into an integrative pain therapy model. Using cognitive-behavioral techniques, progressive relaxation with art therapy, sensory awareness with indirect clinical hypnosis, and formal clinical and self-

hypnosis within a group therapy approach, Pavlek aimed to alter chronic pain perceptions, interpretations, and responses. In terms of its application to art therapy research and practice, Pavlek's goal to add to the existing knowledge regarding mind-body interventions for chronic pain is in line with the mind-body concepts, inherent in using art therapy with the chronic pain population. However, the study's use of multiple modalities limits replicability within typical art therapy practice. Additionally, while the researcher provided an overview of each group session, the role of art therapy was neither defined nor explained. Further information on the exact nature of art therapy use within this model would be helpful in advancing knowledge of the art therapy methods and techniques that may benefit the chronic pain population.

Medical art therapy. The term "medical art therapy" refers to the specialized use of the arts with individuals dealing with illness, physical trauma to the body, or undergoing medical treatments. Additionally, it directly addresses the psychological and emotional issues that accompany medical issues such as loss, body image, and social isolation (Malchiodi, 1999). The recent movement towards arts in healthcare, alternative and complementary medicine, and mind-body approaches continues to inform and promote interest in medical art therapy approaches. For example, surgeon and educator Dr. Bernard Siegel (2007) advocated applying Jung's ideas to modern-day medicine. Siegel described the use of exploring self through the use of images, symbols, and dreams as a process by which "the invisible is made visible" (p. 13). He believed that the self-knowledge gleaned from this process is powerful and can play an important role in prevention, treatment, diagnosis, prognosis, and emotional repercussions of an illness.

Recent attention to the benefits of incorporating arts in health care and alternative and complementary treatment is encouraging. However, whether or not art therapy is effective in addressing medical and pain-related issues such as those described by Siegel (2007) must be empirically supported. While there are a number of reports on the use of art therapy with patients dealing with medical illness (Malchiodi, 1999), few studies have sought to quantify the capacity of art therapy in helping patients to manage both the physical and psychological symptoms of chronic conditions. The following studies, carried out by the same research team, extended previous research by focusing on the effects of a single session of art therapy on pain and other illness-related symptoms in medically ill patients (Nainis et al., 2006; Rao et al., 2009).

Nainis et al. (2006) collected data from a sample of oncology patients ($N = 50$) who each participated in one individual art therapy session. The Edmonton Symptom Assessment Scale (ESAS) and STAI were used to quantify pretest and posttest severity of symptoms and level of anxiety. Participant perceptions were also evaluated through open-ended questions. Data analysis showed statistically significant decreases in 8 out of 9 symptoms measured by the ESAS including: pain, tiredness, depression, anxiety, and well-being, as well as statistically significant, positive changes in 15 out of 20 domains measured by the STAI. Analysis of interview data showed that 90% of participants had a positive experience. Additionally, each session was centered on the patient's individualized goals, and session subject matter ranged from fun distraction to insight-oriented investigation into the patient's psychological concerns. Therefore, the researchers showed that the creative arts were just as effective for relieving pain in patients experiencing minimal psychological distress as in those dealing with serious

psychological issues. However, the researchers noted that their decision to use a quasi-experimental design, lacking randomization or control, inherently weakened internal validity and limited their ability to account for extraneous variables. Nonetheless, the study provided important preliminary evidence of the effectiveness of art therapy in achieving immediate reduction in pain and other psychosocial cancer-related symptoms.

In another study, these researchers conducted a randomized, controlled trial to test their hypothesis that one session of art therapy would be effective in relieving physical and psychological symptoms associated with HIV/AIDS (Rao et al., 2009). The researchers used stratified randomization to assign patients ($N = 79$) to either a session of art therapy ($n = 40$) or a viewing of a video about art therapy ($n = 39$). Analysis of pretest and posttest ESAS scores showed a significant improvement in physical symptoms for participants who received art therapy as opposed to participants who watched an art therapy video. Analysis of pretest and posttest STAI scores showed an improvement in psychological symptoms as well, but only for those participants who received art therapy as opposed to watching the video. However, the mean STAI score differences between the two groups were not statistically significant. Additionally, analyses of whether art therapy increased or decreased individual symptoms, such as pain and depression, showed that differences between the mean scores of the art therapy group as compared with the video group were not statistically significant. These findings notwithstanding, the researchers still concluded that those who received art therapy showed greater overall improvement in physical and psychological symptoms than those who watched the video. Researchers posited that psychological symptoms may not be as sensitive to modification

as physical symptoms and suggested the incorporation of multiple art therapy sessions as an area for future research.

While it is unclear whether or not the chronic pain that often accompanies chronic conditions such as cancer or HIV/AIDS was present in these participant populations, research using medical art therapy approaches holds important implications for the chronic pain population.

Long-term art therapy. In addressing the long-term somatic symptoms associated with chronic pain, Theorell et al. (1998) set out to measure the effects of art psychotherapy on chronic pain patients enrolled in long-term psychotherapy. The quantitative two-year longitudinal pilot study followed patients ($N = 24$) before and every 4^{th}–6^{th} month during their art psychotherapy treatment. The patient population consisted of men ($n = 2$) and women ($n = 22$) with long-term psychosomatic symptoms that had resulted in difficulty working and impaired quality of life. Analysis of scores from the General Health Questionnaire (GHQ), administered pre- and post-treatment, showed significant improvements in global health ($p = 0.045$) and anxiety-depression ($p = 0.069$). However improvements in psychosomatic symptoms were non-significant. Follow-up telephone interviews performed anywhere from six months to four years after treatment showed that 25% of the 20 patients who had stopped working or only worked part-time at the time of the study had increased their working activity. Researchers concluded that art psychotherapy was successful in facilitating a slow, partial recovery. While the study lacked a control group, was small in sample size, and did not clearly define "art psychotherapy," the overall format provides a useful model for promoting more longitudinal research in the field of art therapy.

Multidisciplinary art therapy. Landgarten (1981) explained that the goal of art therapy in the treatment and rehabilitation of chronic pain is to encourage self-acceptance and adjustment with a focus on promoting self-management. As part of a multidisciplinary team approach, art therapy serves to provide diagnosis, treatment, and prognosis for the patient's ability to self-manage. Landgarten defined the art therapist's role in pain management as one that functions as a:

> 1) communication vehicle for describing pain; 2) means for confrontation of behavior related to pain; 3) documentation of emotions and attitude towards pain during treatment; 4) tool for insight into attitude towards pain; 5) symptom substitution; 6) relaxation technique; 7) imagery recruitment for mind-controlled analgesia; 8) catalyst for expanding verbal information regarding the pain; 9) instrument for graphing gains during treatment. (p. 337)

Case studies and vignettes illustrated Landgarten's process for working through the trauma of chronic pain and included the following goals and interventions: "self-expression" through free association collage; "reality confrontation" through creation of abstract symbols; "concretizing disability" through drawings of self, pain, family, and incidents that caused the chronic pain; "expression of rage" through sculpture; "guilt and punishment fantasies" through drawing "why me?" answers; "expression of fear" through inner- and outer-self collages; "alternatives for adaption" through drawing symbols that represent new ways of dealing with problems; "regain sense of identity and increase self-esteem" through multi-media collages of self before and after the incident that caused chronic pain; and "rehearsal for home return" through sculptures of rooms in houses and themes of going home (pp. 340-347).

Just as Landgarten (1981) described above, as a member of a multidisciplinary treatment team in an inpatient, chronic pain relief unit, Shapiro's (1985) role as "art therapist" was to promote self-acceptance and adjustment. In reinforcing the general team goals of relieving the emotional stress of chronic pain and reducing use of pain medication, Shapiro's goal was to support patients in integrating their physical and psychological aspects of self. In doing so, she aimed for patients to develop a new understanding of their symptoms and pain, and thereby experience relief. Shapiro used art therapy to elicit metaphorical and symbolic images that could provide patients with the opportunity to examine themselves and their issues. A case example of a woman in her early 60s who had experienced life-long issues with pain demonstrated the tasks that Shapiro used in her work on the unit. Assessment of the woman's progress throughout the 12 weeks of treatment showed a greater sense of independence, a desire to decrease her inactivity, and an improved ability to deal with emotional issues. A psychiatric follow-up, one month after discharge, showed that she was experiencing reduced pain and depression. However, the treatment team's goal of decreasing pain medication was not achieved during or after treatment. In reflecting on the role of the multidisciplinary approach to working with this client, Shapiro felt that her understanding of patient artwork was enhanced by input from multiple members of the treatment team. The artwork served to inform therapists from other modalities about different facets of the patient's experience that had not been revealed verbally. Shapiro concluded that art therapy within the multimodal approach enriches her patients' treatment experiences. While the case-example format does not allow for generalizable results of the effectiveness of art therapy within the multidisciplinary treatment setting, Shapiro's

description of the role of the art therapist within this team setting offers a unique perspective in using integrative and mind-body approaches in treatment with chronic pain patients.

Preliminary Inquiry

Considering the significant gap in the literature regarding art therapy and chronic pain, the current researcher conducted a pilot study (Haaga, 2012) with the purpose of cultivating understanding of the phenomenology of the chronic pain experience, specifically with the aim of formulating an appropriate framework for using art therapy with the chronic pain population. The intent of the mixed-methods exploratory sequential design employed in the study was to use qualitative results as a means of developing quantitative methods. Therefore, data collection was conducted in phases (Creswell & Plano Cark, 2007).

The first phase of this study involved the use of qualitative research interviews (n = 6) as a means of understanding and exploring the phenomenology of the chronic pain experience. Art-based analysis, followed by interpretative phenomenological analysis (IPA) of interviewees' perceptions of pain and experiences with using art therapy produced five superordinate themes in regards to the nature of the pain experience: fighting against the "pain identity;" psychosocial side effects; loss; facing new limitations and boundaries; and working toward adjustment and acceptance; and eight superordinate themes in regards to the role of art therapy: a broadened perspective, looking beyond and within; facilitating connection and compassion; contributing to others; shifting focus away from the pain; increasing confidence and eliciting a sense of accomplishment;

increasing physical activity and motor functioning; embracing the creative process; and finding joy and humor.

These themes then informed an interim phase which was focused on the development of a framework for using art therapy with the chronic pain population. The resulting multidimensional framework outlined influential factors in pain perception (*psychological, cognitive and behavioral, social, and physiological*) along with relevant art therapy strategies for addressing these factors.

In the second phase of the study, the framework was adapted and applied to clinical work with individuals (n = 5) living with chronic pain. A quantitative approach was used to assess the effectiveness of a five-session art therapy intervention in alleviating physiological and psychosocial symptoms associated with chronic pain and improving participants' abilities to self-manage their chronic pain. Analysis of self-reported pain scores, as measured by the Numeric Pain Rating Scale (NPRS) before and after each session, indicated reduced pain after Sessions 2, *Negative Thoughts Collage* (p = .05) and 4, *Healing Mandala* (p = .007). Analysis of scores from the Depression Anxiety Stress Scale (DASS-21) and Pain Self Efficacy Questionnaire (PSEQ) showed improvements in stress levels (p = .03) and self-efficacy (p = .04). Yet, analysis of pretest-posttest data from the Brief Pain Inventory Short Form (BPI-SF) and Multidimensional Health Locus of Control Scales Form C (MHLC-C) showed no significant differences after art therapy intervention.

Overall, the pilot study accomplished its primary goal of using individuals' lived experiences to inform development and implementation of a framework that can be used to improve assessment, understanding, and management of chronic pain. Results

demonstrated the meaningful role that art therapy can play in living with and managing chronic pain and comorbid psychosocial issues. However, limitations of the study included the small scale and pre-experimental design of the pilot study, which limit the statistical power and preclude generalization of findings. Additionally, the dual role of researcher-therapist introduced the possibility of procedural bias.

This preliminary research provided a foundation for the current study, which attempts to gain further understanding of the role that art therapy can play in addressing chronic pain and psychosocial comorbidities.

Conclusions

While the effects of art therapy on chronic pain have not been firmly established in the research literature, a review of the literature indicates positive outcomes when the arts and art therapy are incorporated into assessment and treatment practices with individuals who are in pain.

The literature demonstrates the important role that art therapy can play in offering another form of self-expression and communication of the chronic pain experience that could aid in improving patient-healthcare communication and understanding of the chronic pain experience (Dannecker, 1991; Broadbent et al., 2009; Hass-Cohen & Findlay, 2009; Landgarten 1981; Padfield et al, 2010).

A number of studies examined the role of art and art therapy in distracting from perceptions of pain (Ferszt, et al., 2000; Russell, 1995; Trauger-Querry & Haghighi, 1999; Vick & Sexton-Radek, 2005). However, generalizability of findings from the above studies to the chronic pain population is limited. Although pain is an individual and subjective experience, distraction techniques have generally been found to be less

effective for patients with chronic, as opposed to acute pain (Depalma & Weisse, 1997). Thus, findings regarding persistent, cancer, or palliative pain may also present differences in pain perception as compared with pain perception in chronic pain populations. Nevertheless, many of the collateral issues that accompany these types of pain mirror those related to chronic pain. Additional research on art therapy's ability to address both visual and tactile sensory modalities, and thus distract from pain would help to establish consistent art therapy methods and techniques for all pain populations.

While the literature addresses multiple dimensions of the chronic pain experience, few studies directly address the connection between psychosocial distress and perceptions of pain. However, Camic's (1999) expressive arts workshop, aimed at decreasing depression and anxiety levels and improving ability to manage pain, and Pavlek's (2008) integrative therapy model, designed to alter chronic pain perceptions, interpretations, and responses provide frameworks for future inquiry in this area. Findings from these studies show a phenomenon in which psychosocial symptoms decrease while perceptions of pain (Haaga, 2012; Pavlek, 2008) and the ability to self-manage pain both increase (Camic, 1999).

It seems that art therapists employ a variety of approaches and techniques in working with pain and pain-related issues. Yet, with so few research studies on this subject matter, there remains a lack of information on the specific methods utilized with the chronic pain population. Many of the above studies do not specify the timing of sessions or whether art therapy interventions were done in a group or individual setting. With the exception of Landgarten (1981) and Camic (1999), few art therapists provide

thick description of the methods and techniques they employ within each session, thus limiting determination of efficacy, generalizability, and replicability.

While art therapy approaches for chronic pain management do exist (Camic, 1999; Hass-Cohen & Findlay; Pavlek, 2008; Landgarten, 1991), they lack empirical evidence of their utility in alleviating perceptions of pain. Additionally, the literature shows that art therapy, as a complementary pain-management intervention, can be part of a multidisciplinary treatment within medical settings. But because few art therapists document their work in this area, many health care providers and consumers do not perceive art therapy as a clinically proven complementary intervention. Furthermore, much of the literature illustrating multidisciplinary art therapy approaches to chronic pain is outdated. Landgarten (1981) and Shapiro (1985) provide invaluable information on this topic, but readers would benefit from more in-depth and current accounts of multidisciplinary treatment.

In sum, as art therapy research findings in these areas are sure to influence the future of the profession. Although the underlying mechanisms by which art therapy may work in alleviating chronic pain and comorbid symptoms are not always clearly defined, the above literature provides a rationale for further examination in this area.

CHAPTER 3

Method

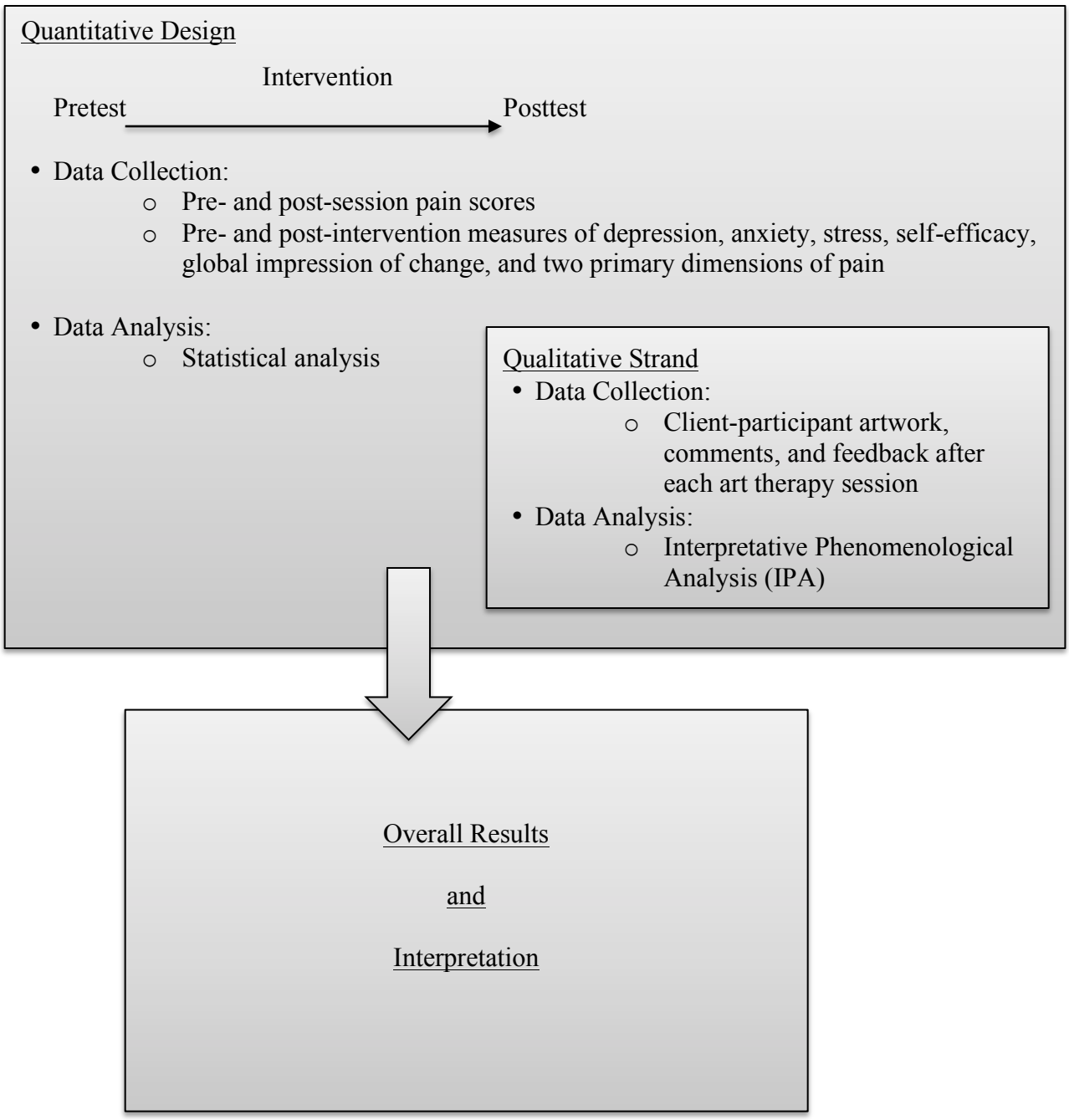
This study employed an embedded design in which quantitative and qualitative data were collected and analyzed simultaneously so as to evaluate and illustrate the effects of art therapy intervention on chronic pain and psychosocial comorbidities (Creswell & Plano Clark, 2011). The embedded design is a mixed-methods approach that facilitates the use of one data set in providing a supportive, secondary role in a study that is based primarily on the other data set (Creswell, Fetters, Plano Clark, & Moreales, 2009). This design assumes that a single data set is not always sufficient; different types of data have the potential to augment the overall design and address the primary purpose of the research (Creswell & Plano Clark, 2011).

For the purposes of this study, primary importance was placed on the quantitative strand of the research design, which was implemented within a one-group, pretest-posttest design. This design involved three pretest measures and four posttest measures for a single group of participants who received a six-session art therapy treatment intervention for chronic pain. The quantitative strand measured changes in depression, anxiety, stress, self-efficacy, global impression of change, and two primary dimensions of pain. Changes in self-reported pain ratings before and after each session were also assessed. Measures of fidelity were obtained in order to ensure consistency of implementation of the treatment intervention. A secondary, supplemental qualitative strand of the research design used interpretive phenomenological analysis (IPA) to derive themes from client-participant artwork, comments, and feedback. These themes served to illustrate and enhance understanding of aspects of the intervention processes and

participant experiences that could not be quantified. Figure 1 depicts the research process chosen for the present study.

Figure 1

Embedded Mixed-Methods Design



Research Protocol

Study Setting and Participant Population

The setting for the current study was broad in both conceptualization and implementation due to the nature of working with multisite study samples. A participant sample was obtained through reaching out to art therapists by way of the American Art Therapy Association (AATA) member directory, social media (i.e., Facebook, LinkedIN, and Pinterest), expressive arts and counseling agencies, and a public website, www.arttherapyandchronicpainstudy.com. Via these platforms, art therapists were asked to volunteer to use a six-session art therapy intervention for chronic pain with current or potential clients. Study inclusion required that therapists meet the following criteria:

- (a) ATR (Registered Art Therapist) credentials; or (b) master's degree in art therapy from an AATA-accredited graduate school (or international equivalent) with completion of, or current access to, post-graduate clinical supervision; or (c) master's degree in related mental health field with certificate in art therapy and completion of, or access to, post-graduate clinical supervision
- Ability to carry out the six sessions from the study manual with consenting clients
- Ability to carry out the six sessions from the study manual over the course of 6 consecutive sessions (either weekly or biweekly)
- Ability to ensure that if a client-participant were not able to complete the confidential pretest and posttest measures via the www.arttherapyandchronicpainstudy.com website, then the art therapist would be able to organize hard-copy administration by another person, other than the therapist (office-mate, friend, etc.)

Volunteer art therapists then recruited client-participants for the study. Participation inclusion criteria for client-participants included:

- 18 years of age or older
- Currently experiencing chronic pain, as defined as: "An ongoing or recurrent pain, lasting beyond the usual course of acute illness or injury or more than 3 to 6 months, and which adversely affects the individual's well-being" (American Chronic Pain Association, 2014, p. 8)
- Currently: (a) under the care of a primary care physician or specialist or (b) covered by health insurance in order to ensure the client-participant's safety and physical treatment of chronic pain.
- Ability to complete the pretest and posttest measures online via the www.arttherapyandchronicpainstudy.com website. If unable to access the Internet, then able to complete the pretest and posttest measures in hard-copy format.

Participation exclusion criteria for client-participants included:

- Chronic pain related to headache, pelvic pain, or cancer
- Inability to speak or write in English
- Inability to participate in weekly or biweekly sessions
- Substance use or mental health issues of a severity requiring a higher level of care than provided through this study (particular mental health issues not suited to this study would include current suicidal ideation and/or active trauma symptoms such as flashbacks).
- Current participation in another form of psychological treatment for chronic pain

- Current diagnosis of a terminal illness or receiving palliative care

Prior to taking part in the study, volunteer art therapists and client-participants who fit the inclusion criteria listed above were asked to complete informed consent forms. These forms were approved by the Institutional Review Board (IRB) of Lesley University and contained information regarding the purpose of the study, an outline of inclusion and exclusion criteria for study participation, confidentiality measures, anticipated risks and benefits, study procedures, and Lesley University IRB and researcher contact information.

Participant recruitment took place from October, 2012 through May, 2014. It was expected that obtaining one to four client-participants per volunteer art therapist would result in an appropriate cross section in terms of demographic profiles. Therefore, the study aimed to recruit a minimum of 10, maximum of 40 volunteer art therapists who would then recruit a maximum of 40 combined client-participants. However, although 63 art therapists requested the study manual and materials for administering the intervention with their clients, the number who completed the study was 26. Reasons for inability to follow through with the study to completion included: personal hardships (i.e., illness, job loss, death of a loved one); deterioration of physical health on the part of the client-participant; deterioration of mental health on the part of the client-participant; loss of a client-participant through death; loss of a client-participant through premature discharge; inability to find client-participants who fit the inclusion criteria; lack of study approval from agency supervisors; job transitions; and study interventions that were incompatible with current client population or treatment goals. Thus, while the preliminary client-participant sample reached the study goal of 40, only data from those who received and

completed all six sessions of the intervention were submitted for data analysis, bringing the final sample size to 31.

The number of client-participants per volunteer art therapist ranged from one to three, with an average of one client-participant for every volunteer art therapist. The volunteer art therapist sample was mainly female (99%), representative of the art therapy profession. Most worked primarily in mental health and private practice settings. One volunteer art therapist carried out the study intervention using internet-based art therapy. All volunteer art therapists fit the inclusion criteria outlined above. Table 1 provides the credentialing information of the volunteer art therapist sample.

Table 1

Volunteer Art Therapist Credentials

Credential ($N = 26$)	*n*	%
ATR-BC (Registered Art Therapist - Board Certified)	11	42%
ATR (Registered Art Therapist)	9	35%
LCAT (Licensed Creative Arts Therapist)	3	11.5%
LCPAT (Licensed Clinical Professional Art Therapist)	1	3%
LPAT (Licensed Professional Art Therapist)	1	3%
LMHC (Licensed Mental Health Counselor)	2	8%
LPCC (Licensed Professional Clinical Counselor)	2	8%
LPC (Licensed Professional Counselor)	4	15%
LPCS (Licensed Professional Counselor Supervisor)	1	3%
LCPC (Licensed Clinical Professional Counselor)	1	3%
LMFT (Licensed Marriage and Family Therapist)	4	15%
Art Therapy Certifications/International Equivalent of US Credentials	3	11.5%

As recruitment largely took place via Internet and social media platforms, the study drew interest from art therapists across the United States and abroad. The final client-participant sample represented three countries: The United States (*n* = 29), Spain (*n* = 1), and Canada (*n* = 1) and 15 US states: MN, CA, NJ, CO, MT, IL, MD, NY, OR, OH, NC, NM, PA, VM, WI.

As specified in the above inclusion/exclusion criteria, client-participants did not participate in any other form of psychological treatment for chronic pain while taking part in the study. Forty-two percent of client-participants were enrolled in other (non-psychological) pain management treatments/programs including: chiropractic therapy, massage therapy, physiotherapy, acupuncture, and physical therapy, or seeing physicians for their specific conditions (e.g., fibromyalgia specialist, pain management physician, rheumatologist). Sixty-two percent of client-participants were taking pain medication for their symptoms.

In addition to chronic pain, many client-participants were dealing with a number of psychosocial and environmental problems including: economic (42%) problems (i.e., inadequate finances or insufficient disability compensation); occupational (45%) problems (i.e., unemployment; inability to work due to disability/chronic pain; reduced productivity; difficult work conditions/schedule; or work resulting in increased pain); and relational (48%) problems (i.e., lack of family support; concern regarding how self is perceived by others; problem associated with caring for others; or abusive relationships). Additional data, gathered from the *Client-Participant Demographics Form* (see Appendix A), is provided in Table 2.

Table 2

Client-Participant Demographic Data

Characteristics ($N = 31$)	*n*	**%**
Gender		
Female	26	84%
Male	5	16%
Race/Ethnicity		
Asian American	1	3%
Black or African American	3	10%
Hispanic or Latino	2	7%
White	25	81%
Multiracial	2	7%
Age (mean ± *SD*, range in years)	45.6 ± 12.95	
Marital status		
Single	22	71%
Married	9	29%
Chronic Pain Condition/s		
Neuropathic pain (e.g., nerve damage, sciatica, radiculopathy, complex regional pain syndrome)	6	19%
Cervical pain (e.g., degeneration, disc herniation, intervertebral disc d/o	9	29%
Back pain (e.g., bulging or herniated disc, spondylolisthesis, scoliosis, intervertebral disc d/o)	13	42%
Shoulder pain	4	13%
Hip pain	2	6%
Knee pain	2	6%
Arthritis (e.g., rheumatoid, osteoarthritis, Lyme, lupus)	7	23%
Abdominal pain (e.g., irritable bowel syndrome, ulcerative colitis)	3	10%
Pelvic pain (e.g., interstitial cystitis)	1	3%
Fibromyalgia	6	19%
Generalized musculoskeletal & joint pain (e.g., chronic fatigue syndrome)	4	13%
Mental Health Condition/s		
Depressive disorders (e.g., major depressive d/o; dysthymia; situational depression; unspecified)	16	52%
Bipolar disorder	2	6%
Anxiety disorders (e.g., anxiety d/o due to chronic pain; generalized anxiety d/o; social anxiety d/o; panic d/o; panic attacks)	14	45%
Obsessive compulsive disorder	2	6%
Post traumatic stress disorder	4	13%

Characteristics ($N = 31$)	*n*	%
Substance-related and addictive disorders (e.g., alcohol use d/o, in remission; stimulant use d/o)	3	9%
Schizophrenia	1	3%
Neurodevelopmental disorders (e.g., attention-deficit/hyperactivity d/o)	3	9%
Neurocognitive disorders (e.g., traumatic brain injury, unspecified)	2	6%

Data Collection

Data collection took place from October, 2012 through September, 2014. First, volunteer art therapists were sent an *Art Therapy and Chronic Pain Study: Art Therapist Manual* (see Appendix B) that outlined a six-session art therapy treatment intervention for working with the chronic pain population. Along with the study manual, volunteer art therapists were also sent a *Study Materials Packet* for use with each prospective client-participant. The content of these packets included consent forms, study information for client-participants, fidelity checklists, demographics forms, client-participant session handouts, pain rating scales, hard copies of pretest and posttest outcome measures, and pre-addressed, pre-stamped envelopes for mailing back those forms that were to be returned to the researcher after completion of the study. Volunteer art therapists were responsible for supplying the art materials required for administering the intervention directives as specified in the study manual.

Prior to beginning the first session of the intervention, volunteer art therapists were directed to provide each client-participant with information regarding the study format, researcher contact information, and instructions on how to use the study website (www.arttherapyandchronicpainstudy.com) to complete the following confidential pretest outcome measures: the Depression Anxiety Stress Scale-21 (DASS-21), the Pain Self-Efficacy Questionnaire (PSEQ), and the Brief Pain Inventory Short Form (BPI-SF).

Following completion of the six sessions, volunteer art therapists were directed to provide client-participants with instructions for completing the confidential posttest using the same three outcome measures with inclusion of the Patient Global Impression of Change Scale (PGIC) as an endpoint measure. As cited in the volunteer art therapist inclusion criteria, if the client-participant was not able to complete the pretest or posttest via the study website, then the art therapist was required to organize hard-copy administration by a third person (office-mate, friend, etc.). Overall, 61% of client-participants completed both the pretest and posttest via the study website while 22% did so using hard-copy versions. The remaining 16% completed the pretest online but used the hard-copy paper version to complete the posttest.

Data were also collected throughout the intervention period. Volunteer art therapists administered the NPRS prior to and following each of the six art therapy sessions. Additionally, volunteer art therapists completed a *Client-Participant Demographics Form* (Appendix A) and *Session-by-Session Fidelity Checklist* (Appendix C). Further sources of data included client-participant artwork and accompanying titles, comments, and feedback reported on the *Client-Participant Artwork Form* (Appendix D).

Quantitative measures.

Numeric pain rating scale. The NPRS is the most widely used instrument for assessing pain in a variety of healthcare settings. A 0-10 point scale, the NPRS prompts individuals to rate their pain on a scale from 0 = *no pain* to 10 = *worst pain imaginable* (Krebs, Carey, & Weinberger, 2007). The NPRS has demonstrated moderate to high reliability. While criterion validity has not been established for the NPRS due to a lack of

agreed upon standards for pain measurement, the NPRS has shown convergent validity when correlated with other pain measurements (Kahl & Cleland, 2005).

The goal in administering the NPRS before and after each art therapy intervention session was two-fold. While it was hoped that this practice would provide a measure of the effects of art therapy on physical dimensions of pain, NPRS scores also served to ensure the client-participant's well-being by alerting the volunteer art therapist to any possibility of causing further pain or discomfort.

Depression anxiety stress scale-21. The DASS-21 (Lovibond & Lovibond, 1995) is a 21-item self-report questionnaire yielding three scales of seven items each: depression, anxiety, and stress. Each item is scored on a 4-point scale from 0 (*did not apply to me at all*) to 3 (*applied to me very much, or most of the time*). Higher scores on the DASS-21 subscales are indicative of greater psychological distress. The DASS-21 was designed to assess the severity of symptoms typical of depression, anxiety, and stress over the past week (Lovibond & Lovibond, 1995). Scores between 0 and 42 are possible for each subscale and can be compared to a severity-rating index (see Table 3). The DASS-21 has shown high internal reliability (Nicholas, Asghari, & Blyth, 2008) and has demonstrated the capacity to reliably discriminate between clinical and non-clinical populations (Antoney, Bieling, Cox, Enns, & Swinson, 1998). The measure has also shown high convergent validity with other anxiety and depression measurements (Henry & Crawford, 2005).

Table 3

Severity Rating Index for the DASS-21

	Depression	Anxiety	Stress
Normal	0-9	0-7	0-14
Mild	10-13	8-9	15-18
Moderate	14-20	10-14	19-25
Severe	21-27	15-19	26-33
Extremely Severe	28+	20+	34+

Note. From *Manual for the Depression Anxiety Stress Scales (2nd Ed.)*, by S.H. Lovibond and P.F. Lovibond, 1995, Sydney: Psychology Foundation.

Pain self-efficacy questionnaire. The PSEQ (Nicholas, 1989) is a 10-item questionnaire designed to assess the confidence levels of individuals living with ongoing pain in regard to their ability to perform activities at present, despite the pain. Items are rated on a 6-point scale that ranges from 0 = *not at all confident* to 6 = *completely confident*. Scores can range from 0 to 60. The total score equals the sum of all 10 items. Higher scores represent stronger self-efficacy beliefs. Normative data for a pain clinic population have been established (Nicholas, 2007). Asghari and Nicholas (2001) have demonstrated high internal consistency and test-retest reliability of the PSEQ.

Brief pain inventory short form. Designed to assess two primary dimensions of pain, sensory pain and reactive pain, the BPI-SF (Cleeland, 2009) was developed with the premise that pain is a multidimensional phenomenon. The sensory pain dimension is represented by measurement of *pain severity* using an 11-point numeric rating scale in which 0 = *no pain* and 10 = *pain as bad as you can imagine*. Individuals are asked to complete four items that ask them to rate their pain: 1. *at its worst in the last 24 hours*, 2. *at its least in the last 24 hours*, 3. *on average*, and 4. *right now*. The reactive pain dimension is represented by *pain interference*, the degree to which pain interferes with

seven daily activities, including walking, work, mood, enjoyment of life, relations with others, and sleep. This component is also scored using a numeric rating scale, with 0 = *does not interfere* and 10 = *completely interferes* (Atkinson et al., 2010; Cleeland, 2009). A number of studies have demonstrated the internal consistency of the BPI, however test-retest reliability has been variable (Atkinson et al., 2010).

Patient global impression of change scale. The PGIC is a 7-point categorical scale that asks the participant to consider the degree of change since beginning treatment and to "…describe the change (if any) in activity limitations, symptoms, emotions, and overall quality of life, related to your painful condition" (Hurst & Bolton, 2004, p. 28). Participants are asked to identify one score and are given the following options: 0 = *no change (or condition has gotten worse)*; 2 = *almost the same, hardly any change at all*; 3 = *a little better, but no noticeable change*; 4 = *somewhat better, but the change has not made any real difference*; 5 = *moderately better, and a slight but noticeable change*; 6 = *better, and a definite improvement that has made a real and worthwhile difference*; and 7 = *a great deal better, and a considerable improvement that has made all the difference*. A significant, favorable change is a score of 5-7. Additionally, the scale is dichotomous, where 5-7 = *yes* and 1-4 = *no*. Thus, a significant, favorable change is a score of 5-7 whereas no significant change is a score of 1-4. The PGIC is a common and validated assessment used in measuring patients' perceptions of their conditions (Hurst & Bolton, 2004).

Qualitative measures.

Session-by-session fidelity checklist. To ensure consistency in implementation of the treatment intervention across all 31 client-participants, all six intervention sessions

were submitted to independent fidelity checking. As volunteer art therapists used the study manual to follow each step of the intervention, they were asked to use the *Session by Session Fidelity Checklist* (see Appendix C) included in the study materials packet. In asking volunteer art therapists to check off each element that was addressed in providing the six sessions, the researcher was able to identify any manipulation deviations. Manipulation checking is a measure of fidelity and is a recommended practice of psychotherapy interventions studies as it provides a way to confirm that therapists followed the treatment manual and facilitated therapy competently (Waltz, Addis, Koerner, & Jacobson, 1993). Without measurement of adherence to the proposed intervention directives, it is impossible to determine whether unsuccessful outcomes were due to a fault in the directives or a fault in the implementation of the directives as the researcher intended (Mowbray, Holter, Teague, & Bybee, 2003). Fidelity is especially important in cross-site studies in order to guarantee that interventions are defined in the same way across treatment sites (Baer et al., 2007; Waltz et al., 1993). The researcher developed the *Session-by-Session Fidelity Checklist* form as a way to quantify volunteer art therapists' fidelity to the art therapy intervention for chronic pain directives. This fidelity checklist serves as a methodological strategy to enhance internal validity and reliability of the intervention while identifying any possible confounding variables.

Client-participant demographics form. Client-participant demographic information was collected using the *Client-Participant Demographics Form* (see Appendix A) developed by the researcher. This form provided a standard method to gather sociodemographic and medical information regarding the client-participants' age,

sex, race/ethnicity, marital status, chronic pain conditions, mental health diagnoses and issues, and current pain management or treatment.

Client-participant artwork form. The researcher developed the *Client-Participant Artwork Form* (see Appendix D) to gather titles, comments, and feedback on art tasks. This form allowed the researcher to obtain concrete information regarding each client-participant's experience in completing the interventions.

Intervention

Development. The development of the art therapy intervention for chronic pain began with drawing out key principles from the literature on art therapy, cognitive behavioral therapy, and mind-body therapies, integrated with advances in research on chronic pain management and comorbid psychosocial symptoms. With this conceptual background, six art therapy treatment sessions were created and applied within the *Art Therapy and Chronic Pain Management: A Multidimensional Framework* (see Table 4) developed from the researcher's pilot study findings (Haaga, 2012).

Table 4

Art Therapy and Chronic Pain: A Multidimensional Framework

Influential Factors in Pain Perception	Art Therapy Strategy
Psychological Factors	
Affective Depression Anger Anxiety Stress	- Facilitate visual identification of maladaptive thought and belief patterns - Stimulate creative imagination to inspire new ways of thinking - Increase activity level to release tension - Examine past and current experiences with health care providers and use art making and the therapeutic relationship to validate and honor individual perceptions of pain - Implement visual journaling to understand and identify pattern of symptoms - Use regular art making as a coping skill - Use joint art making to facilitate modeling - Teach visualization/imagery as relaxation
Cognitive & behavioral Loss Fear-avoidance Locus of control Self-efficacy	- Facilitate search for meaning and acceptance through personal and universal symbols and metaphors - Use art making as a process of ritualization and honoring of loss - Focus on achievement and sense of worth through visual reflection of positive experiences - Emphasize choice in art-making materials and methods - Provide success-oriented art-making tasks - Use media exploration to practice problem-solving skills
Social Factors	
Isolation	- Provide a safe creative environment that promotes connection with others through: socialization and interaction with peers; group art-making; sharing and identification of universal symbols and themes; and a supportive therapeutic relationship - Implement art tasks that encourage expression of individual perceptions of pain and use final image as a tool for improving assessment practices and communication with healthcare providers
Identity adjustment	- Promote self-awareness of personal beliefs, values, goals, and positive attributes through artistic expressions of "self" - Use art-making tasks that identify and validate inner and outer worlds (McGraw, 1999) to promote integration of identity before and after pain

Influential Factors in Pain Perception	Art Therapy Strategy
Physiological Factors	
"Constant pain"	- Engage visual and tactile sensory modalities to shift focus away from pain sensations and perceptions (Trauger-Querry and Haghighi, 1999) - Teach visualization/imagery replacement methods to achieve balance and centering and shift focus toward positive and healing images - Create a visual representation of the pain to assess physiological and psychosocial dimensions of the chronic pain experience
Impairment, disability, and reduced mobility	- Use art making to identify goals that promote acknowledgement and acceptance - Create adaptations for physical limitations - Use art making to work on improving motor functioning - Stimulate and reconnect with kinesthetic and mind-body processing and perceptual channels through active engagement with art making (Lusebrink, 2004)

Note: From Haaga, M. (2012). *Art therapy and the chronic pain experience: A pilot study*. Manuscript in preparation.

Design, organization, and implementation. The intervention was designed as an alternative or complementary chronic pain treatment approach that could be used in traditional art therapy settings and alongside traditional pain management regimens. Individual session content represents an integration of art therapy, cognitive behavioral therapy (CBT), and mind-body approaches in order to address multiple dimensions of the chronic pain experience. The multidimensional framework provided the structure for addressing the psychological, cognitive, behavioral, social, and physiological factors that influence pain perception through visual and creative expression. While a mind-body perspective inspired art therapy methods and techniques (i.e., visualization, personal mantras, and mindfulness), CBT guided the rationale (i.e., psychoeducation, externalizing

of inner processes, cognitive restructuring, problem solving, positive affirmation, relaxation training, relapse prevention) for using these methods and techniques to address chronic pain, and helped to explain why they were effective (Camic, 1999). Drawing from these foundations, the art therapy intervention aims at providing individuals with an alternative mode of communication and meaning-making while promoting the problem-solving and coping skills needed to improve self-management of chronic pain and psychosocial comorbidities. Thus, this intervention is multidimensional in nature and aimed at achieving a number of objectives:

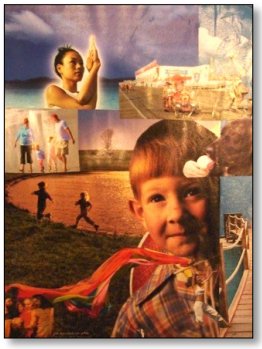
- Provide an opportunity to explore and examine personal responses to chronic pain in order to achieve better understanding of connection to its role in daily life
- Encourage individuals to take an active role in self-management of chronic pain
- Teach a variety of strategies that may be helpful in managing pain and other negative emotional states
- Enhance self-efficacy, improve mood, decrease stress and anxiety, and promote adjustment and acceptance

The intervention was organized into six consecutive—weekly or biweekly—individual treatment sessions. The decision to limit the intervention to six sessions was based on: (a) the frequency of client attrition due to chronic pain-related issues, (b) the feasibility of conducting intervention research across multiple treatment sites, and (c) the typical structure of brief cognitive behavioral therapy which reduces the average 12−20 therapy sessions into 4−8 sessions (Cully & Teten, 2008). The six sessions were organized into four stages: *assessing* (Session 1), *understanding* (Sessions 2 and 3), *managing* (Sessions 4 and 5), and *honoring* (Session 6). Table 5 provides an abbreviated

description of the session content. Please refer to Appendix B for a full description and outline of session directives, materials, and procedures.

Table 5

Abbreviated Description of Art Therapy Intervention for Chronic Pain: Session Content

Session	Goals	Art Task	Homework
1	-Provide visual way of communicating chronic pain experience -Build trust and therapeutic rapport -Assess current functioning -Validate personal perceptions	*Body Outline* 	*Overview of Chronic Pain & Art Therapy*
2	-Provide continued space and time to express, communicate, connect with, and work toward understanding of chronic pain and how it affects multiple domains of functioning -Teach practice of using art as a tool for personal insight and communication of past and current thoughts, feelings, and experiences	*Negative Thoughts Collage* 	*Automatic Thoughts Visual Log*
3	-Promote continued communication and understanding of the pain experience -Teach implementation of positive self-statements to transform maladaptive thoughts and behaviors and improve physical, social, and emotional functioning	*Challenging Negative Thoughts Collage* 	*Personal self-statement/ mantra*

Session	Goals	Art Task	Homework
4	-Introduce coping strategies for self-management of pain -Use visualization and imagery techniques to achieve balance and reorient focus toward positive and healing images	*Healing Mandala* 	*Mandala exercise materials*
5	-Continue process of identifying art and chronic pain self-management techniques	*A Place Away from the Pain* 	N/A
6	-Provide opportunity to review work over the past 6 sessions -Use art to express and honor personal experience	*Pocket Inspiration* 	N/A

The study manual provided volunteer art therapists with the specified goals, materials, and outline for each session. As volunteer art therapists were responsible for supplying the art materials specified in the study manual, each session was designed to utilize art media that is readily accessible in typical art therapy settings. Additional materials included in the study manual and study materials packets consisted of client-participant session handouts that were created by the researcher as way of (a) engaging client-participants in the session, (b) providing additional psychoeducational information

regarding chronic pain and comorbid psychosocial symptoms, (c) teaching art therapy and cognitive behavioral therapy techniques, and (d) providing therapeutic homework assignments to solidify session content.

Each session outline was formatted to begin with administration of the NPRS, followed by a review of the previous week's session topics and/or homework before introducing the current session topic and art task. Session outlines also included time for therapeutic processing, ending with explanation of any homework activities, distribution of appropriate handouts, and administration of the NPRS.

Data Analysis

All quantitative data gathered from pretest/posttest outcome measures were scored according to the procedures outlined by each individual measurement and then analyzed using SPSS to provide descriptive statistics, determine effect sizes, and confirm statistical significance. Cohen's *d* (1988) was used to determine effect size. The Cohen's *d* statistic provided a standardized estimate of the difference between pretest and posttest means in standard deviation units with effect size thresholds as follows, small: $d = .20$, medium: $d = .50$, and large: $d = .80$. Paired *t* tests were used to compare before and after scores of each of the four pretest/posttest measures with respect to statistically significant differences. For the purpose of this study, the statistical significance level of 0.05 was considered adequate. A two-tailed test was used to test the possibility of the relationship in both directions.

Intervention fidelity was scored using the *Session-by-Session Fidelity Checklist* that volunteer art therapists completed as they progressed through the intervention. Fidelity was scored as either the presence (score = 1) or absence (score = 0) of each of

the following session components: (a) use of specified materials and (b) completion of directives as stated in the manual.

All qualitative data gathered from the *Client-Participant Demographics Form* were analyzed using descriptive statistics. All qualitative data gathered from the *Client-Participant Artwork Form* were submitted to interpretative phenomenological analysis (IPA). IPA is a qualitative research approach based on the examination of how individuals create meaning out of life experiences, valuing personal perspectives and acknowledging meaning-making as a double hermeneutic that involves both the researcher and the individual's personal perceptions. Often used in studying issues related to health and illness, IPA research is conducted on small and relatively homogenous sample sizes so as to identify central themes as well as divergent differences (Smith, Flowers, & Larkin, 2009). The IPA approach does not prescribe a single method for data analysis, but is instead characterized by a set of common yet flexible processes and principles based on reflective engagement with the participant's account (Smith, Flowers, & Larkin, 2009).

Data from each *Client-Participant Artwork Form* were analyzed using IPA methods to identify central phenomenological themes. In line with IPA's assumption that the researcher is interested in learning about the participant's psychological world through the process of meaning-making, sustained interpretative engagement with the text was used as an attempt to understand the essence and value of those meanings, as opposed to measuring their rate of occurrence (Smith & Osborn, 2003). Each *Client-Participant Artwork Form* was read and reread a number of times in order to continue to develop as much familiarity with the account as possible. Similarities, differences, and

contradictions in the client-participants' comments were noted and key quotes were labeled and clustered into groups that reflected each emerging theme. Themes were then titled, connected, and clustered (Smith & Osborn, 2003). Finally, a table showing each higher-order theme and its subthemes was created. Once this process was completed with each client participants' data, all client-participant data were examined as a whole and shared themes, as well as any conflicts or inconsistencies, were identified. Data were prioritized, and a final list of superordinate themes was constructed (Smith & Osborn, 2003).

Establishing Validity

Multiple approaches were used in establishing validity. First, triangulation of the data was attempted by drawing from several sources, including outcome measures, fidelity measures, client-participant narratives, demographic information, and client-participant artwork. Second, multiple domains of assessment, including cognition, affect, behavior, and physiology, were used. Measuring the functioning level of client-participants in each of these domains involved a more comprehensive approach than any individual level alone and allowed the researcher to determine change across a broad range of areas (Behar & Borkovec, 2003). Third, the use of a detailed study manual provided the operational definitions of the independent variable needed for experimental outcome research while measures of fidelity ensured that art therapy directives reflected only those techniques defined by the independent variable manipulation (Behar & Borkovec, 2003). Fourth, the intervention was applied across multiple treatment sites, by different art therapists, increasing generalizability and reducing procedural bias. Finally, any disconfirming evidence has been reported (Creswell & Plano Clark, 2011).

Ethical Considerations

Client-participant health, wellness, and safety. Due to the fact that the study centered on chronic pain, a serious condition that can be exacerbated by physical, psychological, and social influences, specific ethical practices guided the treatment and nature of client participation. First, all volunteer art therapists were required to meet specific educational and supervision requirements in order to ensure that they were properly trained to carry out the intervention according to professional ethical standards and principles. Second, volunteer art therapist inclusion criteria also required that art therapists make efforts to ensure client-participant safety and physical treatment of chronic pain. This was done by requiring that client-participants be under the care of a primary care physician or specialist, or have health insurance coverage while participating in the study. Additionally, those clients who presented with substance use or mental health issues (i.e., current suicidal ideation and/or active trauma symptoms such as flashbacks) of a severity requiring a higher level of care than that provided through the study were excluded from participation. Third, intervention directives stipulated that the NPRS be used not only as a measure of the effects of art therapy, but also as an indicator of client-participant symptom stability. The NPRS offered a way for volunteer art therapists to assess the health, wellness, and safety of client-participants throughout the study, and provided a safety net for identifying any need for a higher level of care. Finally, the study website, www.arttherapyandchronicpainstudy.com, provided client-participants and volunteer art therapists with study resources and the potential for direct contact with the researcher at all times.

Confidentiality and anonymity. While volunteer art therapists were responsible for administering the NPRS each session, it was important that the intervention pretest and posttest data remain confidential from all persons except the client-participant and the researcher, so as to prevent treatment bias and ensure reliability of reported treatment effects. Therefore all client participants were asked to use the study website, www.arttherapyandchronicpainstudy.com, to access a link to confidential pretest and posttest outcome measures via www.surveymonkey.com. Hard copies of the pretest and posttest outcome measures were also included in the study materials packet for situations in which the client-participant did not have access to the Internet. In such cases, the volunteer art therapist was directed to organize administration of hard copy outcome measures by a third party.

As this study utilized a within-subjects, pretest-posttest design, observances of client-participants' scores at different times was required and thus prohibited complete anonymity. Each client-participant was asked to provide his or her name or initials on all submitted outcome measures and forms. Confidentiality was maintained for both client-participants and volunteer art therapist by coding the forms with pseudonym identifiers instead of names and by keeping all study forms, including consent and demographic forms (containing both names and identifying information), only accessible to the researcher. Client-participants were informed of confidentiality procedures that stipulated that all client-participant data would be kept in a locked file cabinet in the researcher's possession and would be used in completion and publication of a research dissertation, with no use (without further consent) beyond scholarly presentation.

Sociocultural perspective. A primary purpose of clinical outcome research is to obtain evidence of effective methods and techniques that will lead to improvement in therapeutic practices. Thus, it is important to include participants who represent an array of cultural backgrounds. This study attempted to meet a sociocultural perspective by obtaining participants from across the United States and beyond. Although it should be noted that while the research intervention and outcome measures utilized in this study were not culturally adapted to any one particular racial or ethnic background, they are inevitably, like most counseling and psychotherapy theories, representative of primarily Western values.

It is also important to acknowledge that this study took the biopsychosocial perspective that culture and biology both contribute to pain. What constitutes pain varies across individuals, cultures, and times (Morris, 2009). Therefore, the results of this study are not necessarily generalizable to chronic pain populations outside of this participant sample.

CHAPTER 4

Results

Quantitative

In order to test the effects of an art therapy intervention for chronic pain, paired *t*-tests were conducted to compare pretest and posttest scores for four outcome measures (NPRS, DASS-21, Pain Self Efficacy Questionnaire, and BPI-SF).

Table 6 presents a comparison of the pretest and posttest scores for self-reported pain, gathered through administration of the NPRS.

Table 6

Comparison of NPRS Scores Before and After Art Therapy Sessions (N = 31)

Art Therapy Task	Mean (Range, SD)	*t*	*p*	*d*
1. *Body Outline*				
Before	5.6 (1-9, 2.09)			
After	4.8 (1-9, 2.11)	2.87	.008	.38
2. *Negative Thoughts Collage*				
Before	5 (0-8, 2.14)			
After	4.3 (0-8, 2.17)	3.38	.002	.60
3. *Challenging Negative Thoughts Collage*				
Before	5.6 (0-9, 2.04)			
After	4.3 (0-8.5, 2.12)	4.31	< .001	.62
4. *Healing Mandala*				
Before	5.7 (0-10, 2.35)			
After	4.4 (0-10, 2.53)	3.82	.001	.53
5. *A Place Away from the Pain*				
Before	4.9 (1-8, 2.25)			
After	4 (.5-8, 2.16)	4.06	< .001	.41
6. *Pocket Inspiration*				
Before	4.9 (0-9, 2.45)			
After	3.7 (0-8.5, 2.44)	3.53	.002	.49

Note. NPRS = Numeric Pain Rating Scale.

Statistical significance was demonstrated across all six sessions. The *p*-values reported are not adjusted for multiple comparisons. However, in applying the Bonferroni (1936) correction to control for Type I error in repeated administration of the NPRS, the more conservative statistical significance threshold of an adjusted alpha of .05/6 = .008 showed retention in statistical significance. Effect sizes for sessions 1 (d = .38), 5 (d = .41), and 6 (d = .49) fell in between Cohen's (1988) convention for small (d = .20) and medium (d = .50) effect sizes while sessions 2 (d = .60), 3 (d = .62), and 4 (d = .53) met the threshold for a medium effect.

Table 7 presents a comparison of the pretest and posttest scores for each of the three outcome measures that were administered prior to and following the art therapy intervention.

Table 7

Comparison of Depression, Anxiety, Stress, Self-Efficacy, and Pain Scores Before and After Art Therapy Intervention for Chronic Pain

Outcome Measures	Mean (SD) Pretest	Mean (SD) Posttest	*t*	*p*	*d*
DASS-21 (n = 27)					
Depression	16.1 (11.75)	11.5 (9.99)	2.16	.040	.42
Anxiety	16 (9.01)	12.4 (9.43)	2.33	.028	.39
Stress	21.7 (10.5)	17.8 (10.8)	2.16	.040	.37
PSEQ (n = 28)	29.9 (12.66)	36.6 (13)	-3.22	.003	.52
BPI-SF (n = 29)					
Pain Severity	5.1 (1.65)	4.6 (2.07)	1.77	.088	.27
Pain Interference	5.9 (1.94)	4.9 (2.09)	2.41	.023	.99

Note. DASS-21 = Depression, Anxiety, Stress Scale; PSEQ = Pain Self-Efficacy Questionnaire; BPI-SF = Brief Pain Inventory Short Form.

Paired *t* tests showed statistically significant differences between mean pretest and posttest scores of depression ($t(26) = 2.16$, $p = .04$, $d = .42$), anxiety ($t(26) = 2.33$, $p = .028$, $d = .39$), and stress ($t(26) = 2.16$, $p = .04$, $d = .37$) with effect sizes for each analysis lying in between Cohen's (1988) convention for small ($d = .20$) and medium ($d = .50$) effect sizes. Comparing these scores with those of the DASS-21 severity-rating index (Lovibond & Lovibond, 1995) outlined in Table 2, there were slight changes in severity of depression scores from moderate (14–20) to mild (10–13); severity of anxiety scores from severe (15–19) to moderate (10–14); and severity of stress scores from moderate (19–25) to mild (15–18).

In regard to self-reported perceptions of self-efficacy, as measured by the PSEQ, comparison of mean pretest-posttest scores revealed significantly higher self-efficacy levels post-treatment, $t(27) = -3.22$, $p = .003$, $d = .52$. The effect size for this analysis ($d = .52$) met Cohen's (1988) convention for a medium effect size ($d = .50$)

There were no statistically significant differences between mean pretest and posttest pain severity scores, as measured by the BPI-SF, $t(28) = 1.77$, $p = .088$, $d = .27$. However, comparison of mean pain interference scores showed statistically significant differences post-intervention with an effect size exceeding Cohen's (1988) convention for a large effect ($d = .80$), $t(28) = 2.41$, $p = .023$, $d = .99$.

Figure 2 presents the results of participants' global impression of change, as measured by the PGIC, since beginning the art therapy intervention. Sixty-six percent of client-participant scores were within the measure's definition of a significant, favorable change (a score of 5–7).

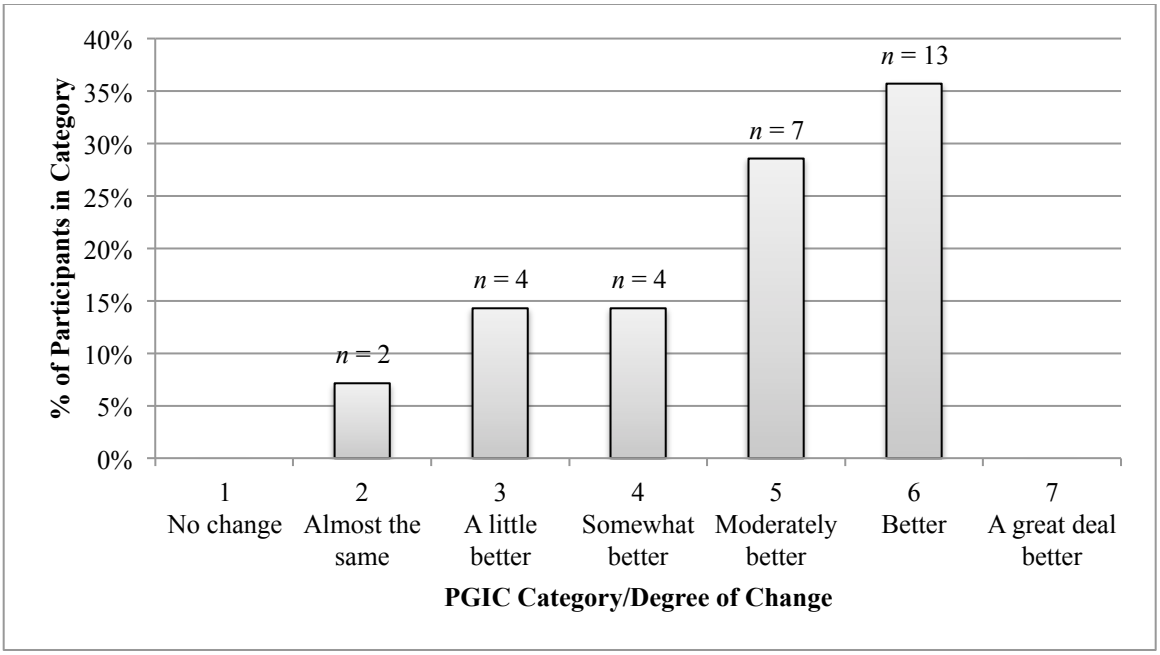


Figure 2. Histogram showing participants' global impression of change after art therapy intervention for chronic pain. PGIC = Patient Global Impression of Change Scales.

Qualitative

In regard to fidelity, only those *Session-by-Session Fidelity Checklist* forms that were fully completed were analyzed, resulting in a total of $n = 29$. As exhibited in Table 8, intervention fidelity percentages were calculated for two intervention components: a) the use of specified materials and b) completion of directives as stated in the manual.

Table 8

Intervention Fidelity, Percentage of Intervention Components Completed

Use of Specified Materials	*n*	%	Completion of Directives	*n*	%
All 6 sessions	19	66%	All 42 directives	21	72%
5 out of 6 sessions	6	21%	41 out of 42 directives	1	3%
4 out of 6 sessions	2	7%	40 out of 42 directives	3	10%
1 out of 6 sessions	1	3%	39 out of 42 directives	1	3%
0 out of 6 sessions	1	3%	38 out of 42 directives	3	10%

Twelve client-participants completed and submitted the *Client-Participant Artwork Form*. Interpretative Phenomenological Analysis (IPA) of their comments and feedback resulted in the emergence of four central themes: *opportunity for visual expression of chronic pain*; *creating connections*; *relaxation and calming*; and *enjoyment in the artistic process*.

These themes aim to provide a rich descriptive account of the experience of taking part in the art therapy intervention for chronic pain. However, it is important to acknowledge that the themes serve only to illustrate a small sample of personal experiences and are not necessarily generalizable to the larger chronic pain population. They in no way cover all facets of the client-participants' experience and are acknowledged as subjective interpretations. The themes presented below were present in the majority of client-participant comments and feedback. Yet, there were also instances of divergence, which are also included in the analysis.

The following exploration of these themes is based on the phenomenological experience of the client participants and is therefore accompanied by personal artwork and verbatim excerpts from the *Client-Participant Artwork* forms they submitted. In presenting artwork and excerpts, all identifying information has been removed or altered to maintain client-participant anonymity.

Theme 1: Opportunity for visual expression of chronic pain. Seventy-five percent of client-participants wrote about the experience of visually depicting physical, psychological, and social aspects of their pain, perhaps for the first time. Session 1 appeared to elicit the most thought in this area as it asked client-participants to use line, shape, and form to show how pain affects body, mind, heart, and spirit using a body

outline template with follow-up directives to depict the person's thoughts, feelings, and environment. It appeared that client-participants appreciated the opportunity to express and examine what they were experiencing in a tangible way. One client-participant described Session 1 as follows:

> *It was good to see visually where I hurt the most and [art therapist's] comments about the realities of my frustration to have so many limits when I like to be with people*.

Figure 3 shows her visual depiction of her chronic pain experience, using the body outline template.

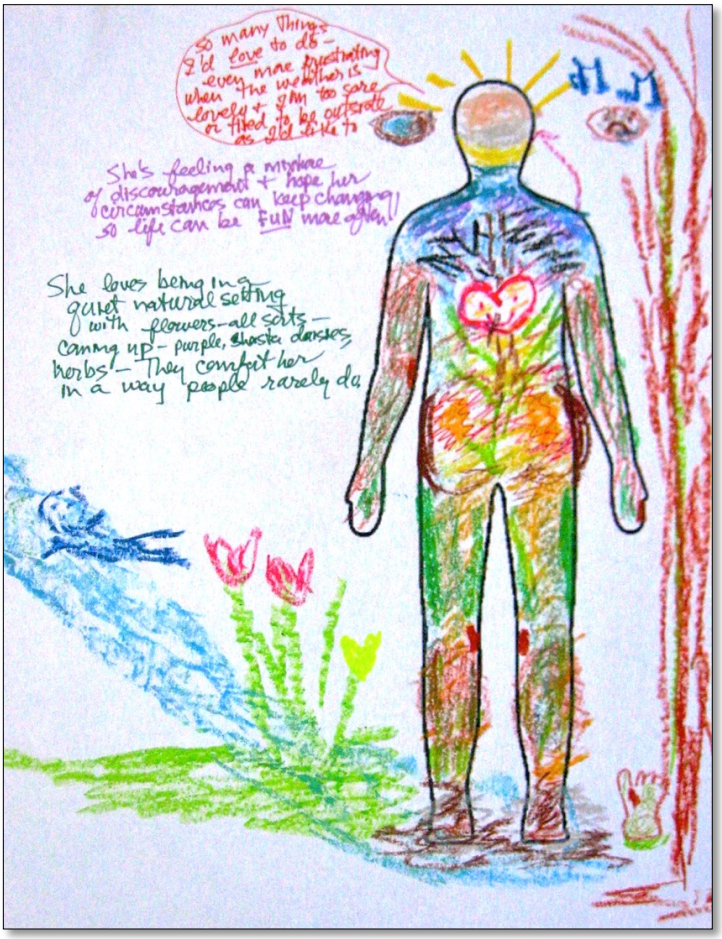


Figure 3. "Body Outline"

Another client-participant, who suffered from a lower-back injury and was dealing with symptoms relating to trauma, anxiety, addiction, a traumatic brain injury, and financial stress, titled her body outline "Get Me the Hell Out of Here," commenting that it was, "*Good to see on paper how bad my pain really is.*" Also commenting on her experience of creating the body outline, a client-participant who was dealing with shoulder pain that then triggered headaches explained:

> *It was nice to put into words and picture all the places in the body the pain transfers to. Makes you think about how it can affect your entire body if not taken care of.*

The theme was also frequently represented in Sessions 2 and 3, which employed collage to identify and then challenge negative thoughts regarding the chronic pain experience. For example, in commenting on her experiences in Session 3, one participant explained:

> *I find it hard to discuss my pain. I guess maybe because I'm not used to talking about it because I don't feel like anyone understands. It felt nice to be able to share and put down on paper what I'm thinking in my head and see it visually.*

Theme 2: Creating connections. All client-participants described a process of stepping back to see the "bigger picture," or "reality of the situation," and make connections between multiple dimensions of the chronic pain experience. Client-participants were able to connect their chronic pain experience to their current emotions, behaviors, and relationships. For example, Session 2 in particular seemed to promote the most cognitive examination as it asked client-participants to create a collage representing

negative thoughts about the chronic pain experience. One client-participant characterized this process as "eye opening," while another client-participant described the artwork she created in this session as, "*seeing how the pain makes me angry and irritable*" (Figure 4).

Figure 4. "Trapped and Angry"

One client-participant whose presenting chronic pain conditions included a bulging disc in her lower back, spondylolysis/anteriolisthesis, sciatica with radiculopathy, chronic knee pain, chronic tearing of meniscus, and Lyme's arthritis described a change in perspective after participating in Session 2. She had been diagnosed with dysthymia and was experiencing stress and occasional feelings of hopelessness due to workman's-compensation requirements that she must work full-time, which in turn caused increased pain. She described the process of creating a collage depicting her negative thoughts regarding her chronic pain experience as follows:

This was nice in that it gave some physical representations to negative thoughts

I've been having and was actually able to help me challenge them. It helped show what was fact as opposed to my emotional/pain view of my situation(s).

Mind-body connections were present in many client-participant statements. In responding to Session 3, in which client-participants were asked to create a collage of a positive, alternative thought that challenged their negative thought/s, one client-participant connected her positive thinking directly to her experience of illness and pain:

Positive thoughts help me to control my pain. Thinking of good thoughts keeps my mind off of being sick and in a lot of pain.

Many client-participants also identified a re-connecting with self through examination of their chronic pain experience. For example, in response to Session 3, a client-participant who suffered from depression and anxiety related to chronic back pain had been "struggling with self-care," as it pertained to her mental and physical well-being. In deciding on the subject of her positive thoughts collage, she decided to focus on "loving oneself."

Theme 3: Relaxation and calming. Sixty-six percent of client-participants expressed a feeling of relaxation or calming in response to taking part in the art therapy intervention. For example, in sharing her experience in Session 5, in which client-participants were asked to paint a safe/calming/healing place away from the pain, one woman commented:

This truly is a wonderful project for me. The act of painting this project gives me an escape from the stress of life and what causes some of the discomfort/pain that I feel on an everyday basis. This project is also giving me the ability to express how I want to feel/be, moving while being still and healing.

Figure 5 shows the image she created in Session 5.

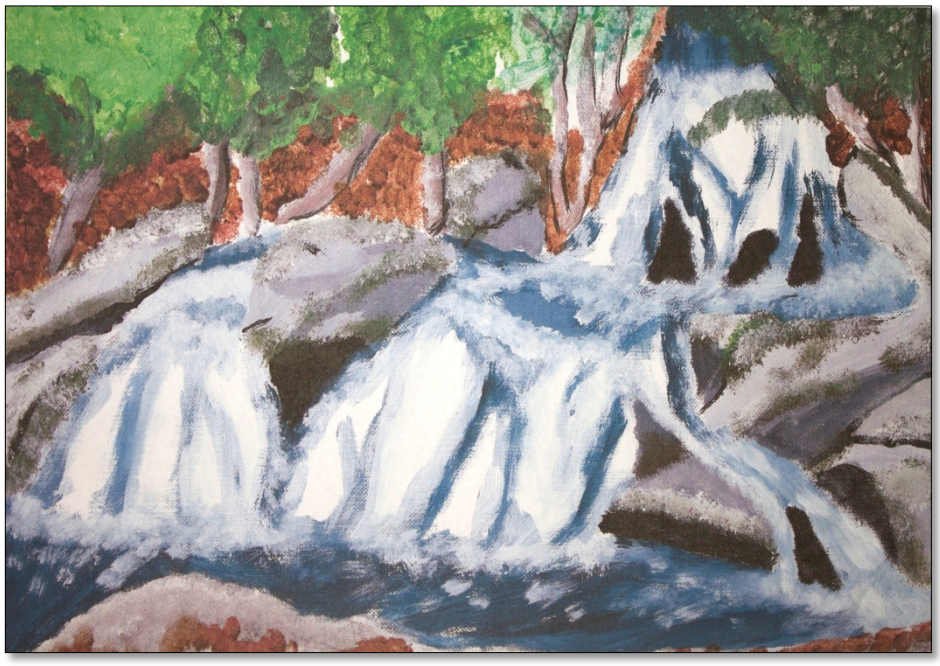


Figure 5. "Calming Image"

Also in response to Session 5, another client-participant, suffering from intervertebral disc disorder caused by a work injury, commented:

> *Painting was very relaxing, especially when thinking of a healing place. I enjoyed the actual painting process.*

Diagnosed with major depressive disorder, social phobia, and dealing with occupational and financial problems, this same client-participant also found Session 4, in which client-participants were asked given directives on how to create *Healing Mandalas* to be relaxing, commenting:

> *I used it more as a power image rather than healing – internal/external mandalas are very relaxing as you get lost in them.*

Yet, IPA respects differences in participant perspectives. Thus, although the majority of client-participants reported that they experienced relaxation through art

therapy, 15% of client-participants, including those who had also reported relaxation, acknowledged that it could also aggravate their pain. For example, the same client-participant who found Sessions 4 and 5 to be relaxing also shared instances in which participating in the art therapy sessions increased her pain. In response to creating her body outline image (Figure 6) in Session 1, this client-participant commented:

> *I was feeling relaxed and pain started to fade until I started adding in environment and for personal reasons of not being able to finish [my] degree got tense and upset pain came right back.*

Figure 6. "Color Pain in Self"

Later on in Session 3, the client-participant reflected on the nature of this process whereby art therapy appeared to increase her pain:

> *Images didn't come as easy, but I enjoy collaging. I find my pain level rising with intense subjects, but can be brought down as the subject smoothes out.*

In addition to the subject matter as a trigger for pain, the client-participant also identified physical triggers that increased her pain during art therapy sessions:

> *Hardest part for me is sitting for an hour while completing artwork. It causes back pain to sit for a while.*

Other pain triggers cited by client-participants included emotions such as "grief" and "sadness," elicited within the content of the session, and the physical demands of "looking down" while making art.

Theme 4: Enjoyment in the artistic process. Eight-three percent of client-participants described a sense of enjoyment in the artistic processes involved in the art therapy intervention. A sense of personal satisfaction was one source of enjoyment cited by client-participants. For example, one client-participant, in recounting her process of creating an image of a safe place (Session 5) commented, "*It was a peaceful experience. I was happy with how I felt and my artwork*." This same client-participant shared a similar response to the sixth and final session (which asked client-participants to create pocket inspiration card that would serve as a reminder in continuing to work toward self-management), commenting, "*I took pride in making something for myself*."

Another source of enjoyment cited by client-participants involved art media and materials. One client-participant whose presenting problems included fibromyalgia, scoliosis, depression, and financial stress due to disability, described her process of

creating a pocket inspiration card (Figure 7) in Session 6 as follows:

> *This was fun for me, permission to use colors broadly and my 1st intro. into Mod-Podge—I like this stuff. Little can be beautiful too!*

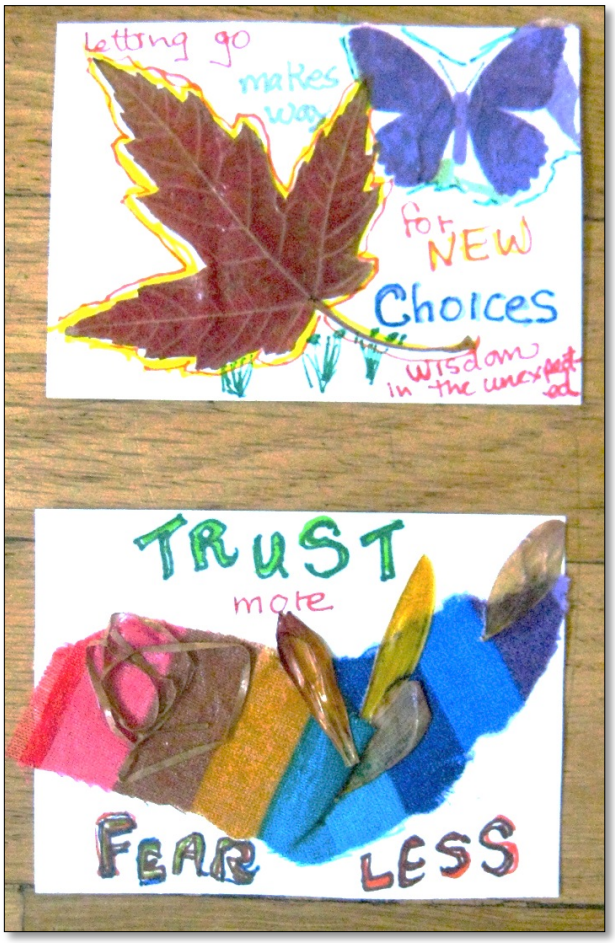


Figure 7. "Gift Cards to Help Relieve Pain"

CHAPTER 5

Discussion

The purpose of this study was to evaluate and illustrate the effects of art therapy on chronic pain and psychosocial comorbidities. Specifically, the study endeavored to address the following questions:

1. Is there a statistically significant change in depression, stress, anxiety, self-efficacy, and physical pain after participating in an art therapy intervention for chronic pain?
2. How do participant responses help to explain the processes involved, and the types of art therapy approaches and techniques that are effective in addressing multiple dimensions of the chronic pain experience?
3. To what extent is intervention fidelity maintained across treatment settings?

The study used an embedded mixed-methods design, in which both quantitative and qualitative data were gathered and analyzed simultaneously. Primary importance was placed on the quantitative strand of the research design, which used *t*-test analysis and measures of effect size to assess the impact of the art therapy intervention. Results indicated significant decreases in self-reported pain, pain interference, depression, stress, and anxiety with significant increases in self-efficacy, after art therapy intervention. In addition, the majority of client-participants reported positive impressions of change since beginning the art therapy intervention. Measures of manipulation fidelity were used to ensure consistency across multiple settings. Analysis of fidelity-checklist data showed strong adherence to study directives, supporting internal validity and reliability of the intervention. Qualitative data in the form of client-participant artwork and comments

were gathered and analyzed to produce central themes that would serve to illustrate and enhance understanding of the client-participant experience. Interpretative phenomenological analysis of client-participant feedback produced four central themes: *opportunity for visual expression of chronic pain*, *creating connections*, *relaxation and calming*, and *enjoyment in the artistic process*. These themes confirm findings from the literature and illustrate the phenomenological experience of art therapy intervention with the chronic pain population.

The next section presents conclusions and implications of these findings, followed by limitations and recommendations for future research.

Conclusions

Quantitative Findings

The significant decrease in self-reported pain, as measured by the NPRS, across all six art therapy sessions provides statistical evidence of the effects of art therapy methods and techniques on perception of pain. For example, Session 4 was designed to teach relaxation and stress relief as coping strategies through creation of *Healing Mandalas*. Significant findings of pain reduction after Session 4 ($t(29) = 3.82$, $p = .001$, $d = .53$) may provide evidence of the interplay between stress and pain, which would support current research findings that mandala art can reduce anxiety (Curry & Kasser, 2005). While reports of decreases in pain after Session 4 were not surprising, the reported decreases in pain after completing Session 1, *Body Outline* ($t(30) = 2.87$, $p = .008$, $d = .38$), and Session 2, *Negative Thoughts Collage* ($t(29) = 3.38$, $p = .002$, $d = .60$), were not anticipated. These sessions were perhaps the most difficult for many of the participants, as they were asked to depict the multiple dimensions of their chronic pain experience and

face how their true beliefs and values may be shaping this experience. Findings that show decreases in self-reported pain across all sessions are important considering that, while Sessions 1 and 2 employed art tasks that required focusing on the chronic pain, Session 4 promoted a shift in focus away from the pain and onto positive visualizations. While much of the literature relates reductions in pain after art therapy to the element of distraction, this study shows that art therapy may be just as effective in relieving pain through cognitive focusing on pain issues as through meditative and relaxation-based tasks that shift cognitive focus.

Although the results of the NPRS show short-term alleviation of pain, comparison of pretest and posttest BPI-SF results show only a slight, non-significant change in mean scores of pain severity ($t(28) = 1.77$, $p = .088$, $d = .27$) after completion of the art therapy intervention. However, comparison of mean scores in the area of pain interference showed significant positive change with a large effect size ($t(28) = 2.41$, $p = .023$, $d = .99$). As the pain interference scale measures both affect (relations with others, mood, enjoyment in life) and activity (walking, work, general activity, sleep), the art therapy intervention appears to have promoted change across multiple domains, supporting its goal to address the multidimensional nature of the chronic pain experience.

While it was assumed that measures of pain severity would parallel measures of pain interference, the study findings regarding pain perception support research studies showing immediate relief of pain after art therapy (Nainis, et al., 2006; Rao, et al., 2009) but indicate a lack of longitudinal relief.

The significant increase in self-efficacy scores ($t(27) = -3.22$, $p = .003$, $d = .52$) supports art therapy as a useful adjunct to chronic-pain management regimens, as

research has shown that enhanced self-efficacy in regard to chronic pain is related to: higher self-confidence; belief in personal ability to perform certain behaviors or tasks, despite the pain (Nicholas, 2007); more motivation in adhering to treatment regimens; increased following of healthy behaviors (Gatchel, et al., 2007); reductions in disability and depression (Arnstein, et al., 2001); higher levels of functioning and lower levels of self-reported pain (Altmaier et al., 1993); and increased pain tolerance (Bandura, 1977).

Participant global impression of change (PGIC) in activity limitations, symptoms, emotions, and overall quality of life, as they relate to chronic pain is promising. Results showed that most participants (93%) reported a degree of positive change. However, only 66% of client-participant scores were within the measure's definition of a significant, favorable change (a score of 5–7). These results correlate with quantitative changes in pain and pain interference, depression, anxiety, stress, and self-efficacy and are reflected in client-participant comments such as: "I feel I was given a gift to learn how to decrease my pain…" and "This is truly a wonderful project for me." Furthermore, the majority of client-participants had been receiving art therapy prior to the beginning of the study. Therefore, any acknowledgement of change is important in comparing the effectiveness of the particular art therapy intervention presented in this study, as compared with other art therapy approaches.

Qualitative Findings

Demographic data showed that client-participants were experiencing a number of psychosocial issues, commonly comorbid to chronic pain. These findings reflect the literature citing high comorbidity rates between chronic pain and depression (e.g., Kinney et al., 1993; Polatin et al., 1993; Poole et al., 2009); anxiety (e.g., Fishbain et al., 1986;

McWilliams, Cox, & Enns, 2003; McWilliams, Goodwin, & Cox, 2004; Polatin et al., 1993); and psychological, social, or environmental stressors (e.g., Ellegaard & Pedersen, 2012; Gatchel, 2007; Turk & Flor, 1999). While the highest reported percentages of psychosocial issues were depressive disorders (52%), anxiety disorders (45%), economic problems (42%), occupational problems (45%), and relational problems (48%), these numbers may not accurately reflect the client-participants' experience, as four volunteer art therapists did not report any mental health diagnoses or issues. Though the client-participants under the care of these volunteer art therapists may have not presented with any mental health diagnoses, it is also commonplace for many art therapy providers to not practice diagnostic assessment. Furthermore, although the DASS-21 is not a standardized diagnostic tool for mental health disorders, results from pretest DASS-21 analysis indicated that the average client-participant presented with moderate depression and stress symptoms and severe anxiety symptoms. Therefore, it remains unclear as to whether this particular demographic sample is representative of other chronic pain populations.

Consistency of intervention implementation was exhibited in the volunteer art therapists' fidelity to the study-manual directives and specified materials. With few manipulation deviations, it is safe to assume that the intervention was defined in the same way across treatment sites, enhancing internal validity and reliability. While each art therapist has his or her own approach, measures of manipulation fidelity were an important aspect of the present study, which sought to identify specific methods and techniques that may benefit the chronic pain population and provide further information regarding the mechanisms underlying art therapy processes.

Analysis of the qualitative data gathered from *Client-Participant Artwork Forms* illustrates, and provides a greater understanding of, quantitative results. As exhibited above, client-participants reported a number of psychosocial stressors in addition to their chronic pain conditions. In response to the art therapy intervention, client-participants described a process of finding relaxation and calm. This was most often reflected in Sessions 4 and 5, which used visualization and imagery (i.e., creating a "healing mandala" and painting "a place away from the pain"). Client-participants' who commented on these sessions described their experiences as "relaxing;" "get[ting] lost;" and "an escape from the stress of life and what causes some of the discomfort/pain that I feel on an everyday basis." These findings, along with quantitative results showing a decrease in pain perception and interference, support the idea that the process of deep involvement and absorption in an art-making activity may allow for a shift in focus from pain sensations to the visual and tactile sensations offered by the art (Trauger-Querry & Haghighi, 1999). However, some of the same client-participants who reported relaxation and instances of pain relief also found that difficult subject matters had the capacity to increase their perceptions of pain. Additionally, physical limitations, such as sitting for an hour-long session, were reported as contributing to increased pain after art therapy. These findings reflect Vick and Sexton-Radek's (2005) findings that art making also has the potential to increase pain. The type of pain and related symptoms individuals are feeling during and after the art-making process are important factors in their overall experience. Yet physical activity and motor function may not always relate to pain or may actually improve by way of painful activities (McGraw, 1999). Findings in this area seem to be highly individualized and further research would need to focus on specific chronic pain

conditions or diagnoses that may be exacerbated by the physical tasks that art therapy presents.

The personal meaning derived from the art therapy intervention was attributed to a number of factors. A common theme among client-participants was an appreciation for the opportunity to express visually what had not yet necessarily been acknowledged to self or others. In the context of chronic pain, art therapy also allowed client-participants to share thoughts and feelings about their condition with others. This was exhibited in one woman's comments that she was not familiar with talking about her experience because she felt that no one really understood. In discussing her experience in Session 1 of the intervention, she stated, "It felt nice to be able to share and put down on paper what I'm thinking in my head and see it visually." This perspective supports Hass-Cohen and Findlay's (2009) belief in the importance of art making in the company of an art therapist who is aware and present, as this process may encourage feelings of security and attachment, thus decreasing perceptions of pain.

The theme of visual expression was most cited in response to the task of depicting the chronic pain experience using a body outline in Session 1. For example, in her response to Session 1, one client-participant expressed appreciation for the opportunity to "…put into words and picture all the places in the body the pain transfers to." Another client-participant remarked that the body outline had allowed her to "see visually where I hurt the most." These sentiments support Kozlowska and Khan's (2011) assertion that visual representations of chronic pain provide information about the location, intensity, and overall quality of the individual's pain. Using a body outline not only provides information regarding pain, but also allows for identification of comorbid psychosocial

symptoms (p. 583). Additionally, client-participant responses supported the intervention rationale that creating an image of the chronic pain experience enables the individual to express personal perceptions that are often difficult to put into words and can therefore be a useful tool for improving assessment practices and patient-healthcare provider communication (Broadbent et al., 2009; Camic, 2008; Malchiodi, 1999).

Personal meaning was also derived from the process of linking internal and external dimensions of the chronic pain experience, resulting in a theme of creating connections. This theme was most present in Sessions 2 and 3, which asked client-participants to create magazine collages of negative and positive thoughts regarding their chronic pain experiences. Responses showing client-participants' examination of thoughts, feelings, behaviors and relationships with self and others, and consequent changes in perspective, support the intervention rationale inspired by Hinz (2009). Hinz explained that, creating a collage focusing on negative thinking and asking the client to attach verbal meaning to the images requires utilization of higher-order cognitive processes such as selecting, combining, representing, and describing. The art therapist can then make use of these processes by using them to encourage clients to cogitate about important therapeutic topics such as life choices and core beliefs (Hinz, 2009, p. 128). While these findings serve as no surprise to art therapists, whose work is based on using art making as a catalyst to self-awareness and insight, in the context of chronic pain, they serve as an important reminder of the difficulty of communication when faced with an immeasurable symptom. As Bub (2004) explained, if individuals living with chronic pain can develop greater self-awareness and acknowledge different perspectives, they may be

better equipped to face a healthcare system that is often challenged in the area of communication.

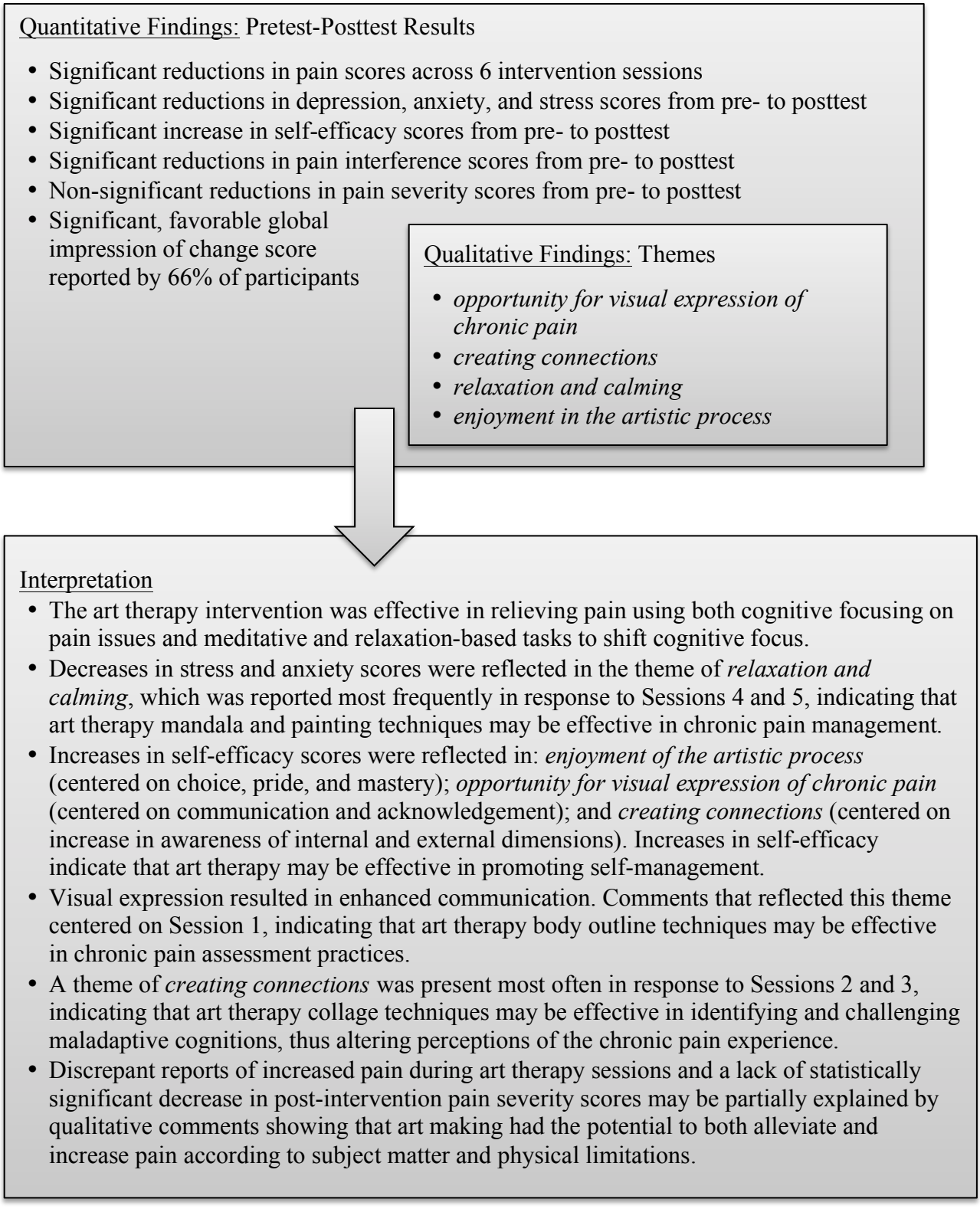
The experiences described by the client-participants also indicated an enjoyment in the artistic process. Client-participants reported enjoyment in tasks such as deciding what colors or materials to use as well as pride in self and in the artistic products that emerged. This engagement in the art therapy process seemed to provide a sense of mastery, supporting research linking a sense of self-control to reduced pain intensity (Vancleef & Peters, 2011) and linking a sense of enhanced self-efficacy to reductions in pain (Arnstein, et al., 2001) and pain tolerance (Bandura et al., 1987).

Merging of Quantitative and Qualitative Findings

Quantitative findings indicate positive changes in perceptions of pain, pain interference, depression, anxiety, stress, and self-efficacy in response to the art therapy intervention for chronic pain. While identification of the underlying mechanisms by which art therapy may work to alleviate chronic pain and psychosocial comorbidities requires further inquiry, qualitative findings from the present study support a number of contributing factors. The interrelated themes of: *opportunity for visual expression of chronic pain*; *creating connections*; *relaxation and calming*; and *enjoyment in the artistic process* illustrate quantitative findings and provide greater understanding as to the processes involved and the types of art therapy approaches and techniques that are effective in addressing multiple dimensions of the chronic pain experience. The interpretation of quantitative pretest/posttest results, integrated with qualitative themes, is depicted in Figure 8.

Figure 8

Interpretation of Integrated Quantitative and Qualitative Findings



Limitations

A number of limitations were evident in this study. First, a possible limitation regarding validity of findings is the absence of a control group. With no matched non-intervention art therapy participants to compare with the treatment group, it was not entirely possible to determine whether it was the particular art therapy intervention or mere participation in art therapy that contributed to the changes noted above. However, it is important to note that the majority of client-participants had in fact been receiving art therapy prior to taking part in the study and were therefore seen as their own controls. Furthermore, measures of manipulation fidelity showed a high rate of adherence to the study directives, thus enhancing the internal validity and reliability of the intervention. Yet, it is important to acknowledge that the fidelity criteria used in this study were researcher-designed so no information regarding validity exists.

The participant sample presented further limitations. A larger quantitative research sample size may have been more effective in better determining the statistical and clinical significance of symptom improvement. Additionally, generalization is compromised by the use of nonrandom sampling, which may have lead to possible over-representation of individuals who were already in art therapy, and thus were motivated to achieve change. Inclusion of individuals with no history of participation in art therapy may have allowed for a sample more representative of the chronic pain population. The inclusion of a number of different chronic pain conditions also makes generalization difficult and may have complicated qualitative conclusions drawn in reference to self-reported symptoms. A more homogenous group of participants with the same chronic pain condition may have presented issues not acknowledged in this study.

Another limitation regarding sampling was the lack of available volunteer art therapists. Although the researcher sent over 5,000 recruitment emails and received hundreds of responses, only 63 art therapists agreed to take part in the study. Among those, there was a high attrition rate, as a total of 26 art therapists completed the study.

While the final participant-sample size was smaller than predicted at the start of the study, issues with completion of outcome measures decreased this number further. Although online completion of the pretest and posttest precluded progression onto the next question before answering the content prior, this precaution did not ensure full completion. Thus, three participants completed only partial pretest or posttest data. While full completion rates for the hard-copy versions of the pretest and posttest were higher, one participant failed to fully complete the posttest. Furthermore, as online testing was often done at home, many participants failed to remember to complete the test immediately after finishing the intervention, decreasing accurate measurement of treatment effects.

A limiting aspect of the data collected in the study was the lack of information regarding social aspects of using art therapy with chronic pain sufferers. Measures of self-efficacy and analysis of client responses unearthed certain themes related to social behavior, self-perception, and social concerns. However, addressing the role of the client-therapist relationship in bringing forward interpersonal styles and exploring attachment and relationship issues (Hass-Cohen & Findlay, 2009) would have added a greater depth of understanding regarding the art therapy process as in pertains to the chronic pain experience.

Finally, the study lacked follow-up. Due to the chronicity of the participants' symptoms, the ideal would be for the participants to continue practicing what they learned in art therapy and for the researcher to determine whether or not their symptoms continue to improve.

Implications for Future Research and Practice

In reviewing the nature of chronic pain, a need was identified: Effective treatment must address multiple dimensions of the chronic pain experience. Previous researchers have demonstrated that art therapy can be used to address a multitude of issues affecting the chronic pain population (e.g., Camic, 1999; Dannecker, 1991; Landgarten, 1981; Pavlek, 2008; Russell, 1995; Trauger-Querry & Haghighi, 1999). However, there remains a lack of established art therapy interventions for use within the typical art therapy clinical context or alongside traditional chronic pain management regimens. The current art therapy literature often lacks full description regarding the specific methods and techniques used, thereby inhibiting cross-study comparison, generalization, and replication. Taking these factors into consideration, the researcher built on previous research to develop and implement an art therapy intervention for chronic pain. Evaluation of the intervention consisted of measuring domains of functioning that are relevant to chronic pain population, enhancing applicability to chronic pain assessment and treatment practices. Improvements in depression, anxiety, stress, self-efficacy, and perceptions of pain add to the current knowledge base regarding how art therapy can affect chronic pain sufferers.

The multidimensional format of the art therapy intervention for chronic pain implemented in this study makes it readily applicable to a number of chronic pain

conditions and treatment settings. Integration of mind-body and CBT techniques within an art therapy approach provide a means of creative expression and communication that could be useful in chronic pain assessment practices while promoting the problem-solving and coping skills needed to learn self-management. By identifying the specific art therapy tasks used, this study allows for replicability in both research and practice.

Although this study shows promising results, it is unclear which aspect of the art therapy intervention was most helpful to client-participants. That is, the exact mechanisms of change in the intervention remain in question. Future research could enhance understanding of art therapy processes by studying individual components in isolation. For example, inquiry regarding whether art therapy used as a distraction or relaxation aid produces the same short-term and long-term effects as art therapy used as problem-solving aid would provide further elucidation of the underlying mechanisms by which art therapy operates in altering pain perception and alleviating symptoms. Additional research in art therapy's ability to address multiple sensory modalities would provide another interesting area of study with chronic pain populations. Such information would add to the existing knowledge regarding the mind-body effects of art therapy.

It is important that future researchers in this area pursue chronic pain topics that span multiple disciplines and encompass widespread issues in order to foster a greater understanding of the profession. Future studies should endeavor to gather information from patient populations with a wide variety of cultural and socioeconomic backgrounds. At the same time, study of more homogenous groups of chronic pain populations (e.g., fibromyalgia, lower back pain, or osteoarthritis) may present issues not acknowledged in this study.

More randomized, controlled trials with longitudinal follow-ups would help to better establish patterns of success and improve generalizability (Stuckey & Nobel, 2010). Empirically supported findings regarding the efficacy of art therapy in providing patients in pain with more healthful, nonpharmacological alternatives to conventional treatments could garner the interdisciplinary attention needed to establish art therapy as a valid health care intervention (Camic, 1999).

A final recommendation for future research would be to implement art therapy in assessment practices with chronic pain populations. Greater practice and documentation of this process has the potential to improve patient-health care provider communication, enhance patient and provider understanding of the chronic pain experience, and expand the scope of art therapy practices.

In conclusion, evidence of the efficacy of art therapy in reducing physical and psychosocial symptoms across a diverse sample of chronic pain conditions provides additional support for art therapy as a useful adjunct in chronic pain management.

To conclude, it is hoped that this study will provide a framework for using art therapy as an adjunct in chronic pain treatment regimens and inspire future research that establishes art therapy as a viable tool in addressing the multidimensional nature of the chronic pain experience.

APPENDIX A

DEMOGRAPHICS FORM

Client-Participant Demographics Form

(to be filled out by art therapist)

Client-Participant Name or Initials:

_____

Age: _____

Sex: _____

Race/Ethnicity:

Please select all that apply:

___ American Indian or Alaska Native
___ Asian American
___ Black or African American
___ Hispanic or Latino
___ Native Hawaiian or Other Pacific Islander
___ White
___ Multiracial
___ Other (please specify): _____

Marital Status:

___ Single
___ Married

Chronic Pain Condition/s:

_____
_____
_____
_____
_____
_____

Mental Health Diagnoses and Issues (example: Generalized Anxiety D/o & financial stress due to inability to work):

_____
_____
_____
_____
_____
_____

Other pain management treatments/programs client is currently enrolled in:

_____
_____
_____

APPENDIX B

INTERVENTION MANUAL

Art Therapy & Chronic Pain

Study:

Art Therapist Manual

www.arttherapyandchronicpainstudy.com

Art Therapy & Chronic Pain Study

Introduction

Thank you for volunteering for the Art Therapy & Chronic Pain Study!

The Art Therapy & Chronic Pain Research Study serves as my dissertation research and is based on the results of a small pilot study in which I found preliminary results of art therapy's effectiveness in addressing multiple dimensions of the chronic pain experience. Analysis of pre and post-test scores showed statistically significant decreases in stress and physical pain, as well as significant increases in self-efficacy.

Working with PeaceLove Studios (www.peacelove.com), a community-based expressive arts program which works to create an atmosphere of acceptance, understanding, and hope for people with mental illness, I am excited to continue this research on a larger scale with art therapists and art therapy clients from around the country.

As therapists, we are responsible for acknowledging, honoring, and working to better understand the "invisible illnesses," such as chronic pain, that threaten our clients' health and well-being. The objectives of the art therapy interventions in this packet are:

- to provide an opportunity to explore and examine personal responses to chronic pain in order to achieve better understanding and connection to the role it plays in daily life,
- to encourage individuals to take an active role in self-management of chronic pain,
- to teach a variety of strategies that are helpful in managing pain and other negative emotional states, and
- to enhance self-efficacy, improve mood, decrease stress and anxiety, and promote adjustment and acceptance.

The results of this study will provide clarification of the potential of arts therapies as a treatment strategy for chronic pain, will contribute to the existing body of knowledge regarding the underlying mechanisms involved in the chronic pain experience, and will be a valuable resource in the development of more effective and individualized interventions for the chronic pain population.

I greatly appreciate your time and effort. Please don't hesitate to contact me with any questions!

Thanks again!
Molly O'Neill Haaga
moneill@lesley.edu
www.arttherapyandchronicpainstudy.com

Art Therapy & Chronic Pain Study

Getting Started

Getting Started

Prior to the 1st Session

□ 1. Please ensure that you and your client meet all of the **study requirements:**

Participation Inclusion Criteria for Art Therapists:

- ATR credentials **OR** Master's degree in art therapy from an AATA accredited graduate school (or international equivalent) with completion of, or current access to, post graduate clinical supervision **OR** Master's degree in related mental health field with certificate in art therapy and completion of, or access to, post-graduate clinical supervision.
- Ability to carry out the 6 interventions from the Art Therapy & Chronic Pain Study Manual with each consenting client (consent forms included in study materials packet)
- Ability to carry out the 6 interventions from the Art Therapy & Chronic Pain Study Manual over the course of 6 consecutive sessions (either weekly or biweekly).
- If client is not able to complete the confidential pre and post-questionnaires online via the www.arttherapyandchronicpainstudy.com website, then the AT is able to organize administration of pre and post- questionnaires by another person, other than the therapist (office-mate, friend, etc.). The administrator of the pre and post-questionnaires does not require any special skills.

Participation Inclusion Criteria for Art Therapy Clients:

- 18 years of age or older
- Currently experiencing chronic pain, defined as: "An ongoing or recurrent pain, lasting beyond the usual course of acute illness or injury or more than 3 to 6 months, and which adversely affects the individual's well-being" (American Chronic Pain Association, 2012).
- Currently: a) under the care of a Primary Care Physician or Specialist or b) covered by health insurance in order to ensure client's safety and physical treatment of chronic pain.
- Ability to complete pre and post-questionnaires online via the www.arttherapyandchronicpainstudy.com website. If unable to access the Internet, then able to complete pre and post-questionnaires in paper format.

Participation Exclusion Criteria for Art Therapy Clients:

- Chronic pain related to headache, pelvic pain, or cancer
- Inability to speak or write in English
- Inability to participate in weekly or biweekly sessions
- Substance use or mental health issues of a severity requiring a higher level of care than provided through this study. Particular mental health issues not suited to this study would include current suicidal ideation and/or active trauma symptoms such as flashbacks.
- Current participation in another form of psychological treatment for chronic pain
- Current diagnosis of a terminal illness or receiving palliative care

□ 2. Fill out **Art Therapist & Client-Participation Consent Forms** and **Client-Participant Demographics Form** (included in study materials packet).

□ 3. Provide client with **Client-Participant Introductory Handout** (included in study materials packet).
□ 4. Confirm with client that he or she has completed the confidential **pre-questionnaire** via: www.arttherapyandchronicpainstudy.com

- If clients cannot obtain access to the Internet prior the first session, they can be given the paper versions of the pre-questionnaires (included in study materials packet) to be administered by anyone other than the treating AT (colleagues, office-mates, friends, etc.). No special qualifications are required for administering the pre-questionnaires.

□ 5. Contact lead researcher, Molly O'Neill Haaga via: www.arttherapyandchronicpainstudy.com or moneill@lesley.edu for any questions.

Carrying out the Sessions

□ 1. Ask the client to complete the **Numeric Pain Rating Scale (NRS)** prior to and following each session (included in each session materials section of the study materials packet).
□ 2. Use the Art Therapy and Chronic Pain Study Manual to guide you through each step of the session.
□ 3. Complete "**Session by Session Fidelity Checklist"** (included in study materials packet) by checking off each element that you addressed in providing the intervention.

Completing the Sessions

□ 1. Photograph and email any artwork that you and your client might like to share to moneill@lesley.edu before returning to client (if client has signed photo release).
□ 2. Confirm with client that he or she has completed the confidential **post-questionnaire** after the 6th session via: www.arttherapyandchronicpainstudy.com

- If clients cannot obtain access to the Internet following the last session, they can be given the enclosed paper versions of the post-questionnaires (included in study materials packet) to be administered by anyone other than the treating art therapist (colleagues, office-mates, friends, etc.). No special qualifications are required for administering the post-questionnaires.

□ 3. Return the following study materials in enclosed pre-addressed and stamped envelope (1 for each participating client): Consent Form Packet (1); Numeric Pain Rating Scales (12); Session Fidelity Checklist (1); Client-Participant Demographics Form (1); Paper Pre-questionnaire Packet (if used in place of online entry) (1); Paper Post-questionnaire Packet (if used in

place of online entry) (1); and Client-Participant Artwork Form (if used). **Please see section **"Completing the Manual,"** p. 19 for additional details.

Ensuring Client Health & Wellness

Chronic pain is a serious illness and can often bring up difficult and often traumatizing issues. Living with chronic pain is a physical challenge that needs consistent monitoring. For these reasons, the study inclusion criteria (see above) requires that clients who choose to participate in this study exhibit relative stability in dealing with their past and current mental health issues. They must also either have a primary care or specialist physician or be covered by health in insurance in order to ensure that the client can obtain physical treatment during the course of the study if needed. In the case that a client's condition warrants a higher level of care, please follow your practice's emergency protocol and refer the client to area emergency hotlines, as well as 911.

Art Therapy & Chronic Pain Study

Sessions

Session 1

Goal:

Provide the participant with a visual way of communicating his or her experience of chronic pain while building trust and therapeutic rapport. Assess current functioning and validate personal perceptions.

Materials:

- 8 ½" x 11" white sheet of paper with a body outline printed on one side (included in "session 1 materials" section of study materials packet)
- Colored pencils, markers, oil pastels

Session Outline:

- 1. Client fills out **Numeric Pain Rating Scale** (included in "session 1 materials" section of study materials packet).

- 2. AT distributes **"Handout #1: Overview of CP & AT"** (AT copy: following session outline. Client copy: included in "session 1 materials" section of study materials packet) to the client. Using the handout as a basis for discussion, the AT introduces the client to the concept of chronic pain as a multidimensional experience and explains the role of art therapy in addressing the mind-body pain cycle, as outlined on **pp. 2 & 4 of the handout**.

- 3. **Art Task: Body Outline**

  Directives:

  - "Please use the body outline to depict your chronic pain experience."

  - The client can be directed to use line, shape, and form to show how pain affects his or her body, mind, heart, and spirit.

  Follow-up Directives:

- “What is this person thinking? Can you create a thought bubble to show me?”
- “What is this person feeling? How is that depicted or can you draw it?”
- “Where is this person? Can you create an environment for him or her?”

 4. Post and process **(provide plenty of time for closing session & allowing client to leave in a safe and stable state).**

- Shared examination of the image in terms of object placement, colors, lines, pressure, and content in order to identify pain intensity, quality, duration, and psychosocial or comorbid conditions.
- Relation of client’s depiction of physical sensations, cognitions, emotions, and behaviors to mind-body connection and cycle of chronic pain.

 5. Ask client to continue to review handout #1 at home.

 6. Close with **Numeric Pain Rating Scale** (included in “session 1 materials” section of study materials packet).

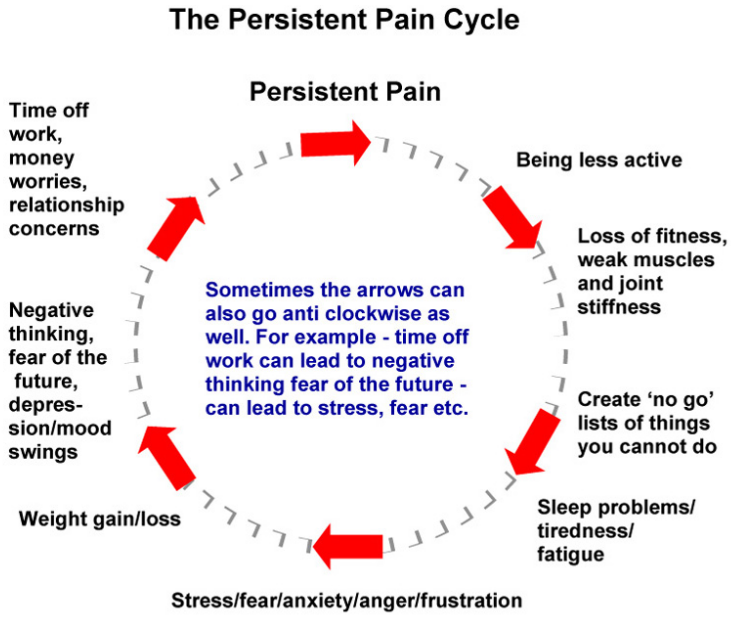
Session 1
AT & CP Study Handout #1: Overview of CP & AT

CHRONIC PAIN

Chronic Pain Cycle

Pain can be the result of an injury, illness, or disease process. It is important to distinguish between *acute* and *chronic* pain. Acute pain is usually temporary, although it may be sharp or severe. Generally, this type of pain disappears for good once the injury or illness is resolved. However, there are times when this does not occur. When the pain persists for more than three months, it is usually classified as *chronic* pain and it therefore requires a different therapeutic approach.

The pain system is interconnected with other systems in the brain that underlie emotions, cognitions (thought) and behavior. Therefore a person with a pain problem needs to be open to looking at all aspects of his/her life, emotional state and personality in combination with medical treatment of the pain in order to manage it most effectively. Factors such as stress, pain behaviors, emotions, attitudes and physical activity all contribute to the triggering and maintenance of a chronic pain condition. Sleep disturbance, fatigue, muscle tension, arousal, medication abuse, memory and learning are other factors in the pain system.



The impact of chronic pain on the patient and their family is significant. Often the patient enters into a vicious pain cycle between the mind and body where the perceptions of the pain contribute to increased stress, leading to increased tension, frustration and fear which can influence an increase in the experience of the pain, which leads to more agony and so on. The goal in part then is to interrupt this cycle and to optimize pain control and enhance psychological well-being.

Learning to Cope

Understanding that pain is a complex interaction between your physical and emotional reactions is one of the first steps toward coping. Resistance and self-sabotage can occur in the face of pain because of the tendency to blame the pain on the circumstances that caused it. To effectively cope with pain, we need to be motivated to recognize that we are responsible for what we *tell* ourselves about the pain. A significant challenge for someone with pain is to acknowledge the connection between their pain experience and their thoughts and behaviors.

Chronic pain, therefore, has many dimensions: physical, psychological and social. Treating the whole person increases the chance of improvement. Managing pain from a psychological perspective does *not* imply that the pain you experience *is all in your head.* The reality is that when you have chronic pain, your mind as well as your body is involved. In addition to drug therapy, physical therapies and alternative treatments, there are psychological techniques that you can learn from a psychologist on how to manage the emotional impact and alter the subjective experience of pain.

Learning these skills to manage stress and pain add value to the medical interventions you are engaged in.

Knowing how to understand and control your pain can empower you to return to a life of optimum functioning, with or without pain. Pain management does not guarantee being pain free; rather it teaches you to learn how to control your pain so that it no longer controls you.

Psychological Factors Influencing Chronic Pain

Pain is not just a function of the mechanics of the body, it is also an experience; that is, a function of the mind. How we perceive pain and the degree of emotional impact varies from person to person. There are additional factors that contribute to pain. Depression and anxiety for example, can significantly intensify the experience of pain and associated suffering. Individuals with pain undergo many changes in lifestyle, finances, occupational and relationship functioning. As a result the individual is grieving those associated losses that have come as a result of the chronic pain. Due to inactivity, individuals may gain weight, lose muscle conditioning and this can impact self esteem. Increased frustration can erode self-confidence in one's sense of control over their life. Individuals can feel overwhelmed with the chronicity of their pain and the associated emotional factors which they feel to some degree each day. You, your family and significant others bring a unique blend of feelings, beliefs, expectations, coping styles, support and skills to the overall management of your pain.

An obstacle to effective pain treatment can be the lack of credibility that the patient feels at times with health care professionals. Due to the huge psychological impact the pain has on their life, the patient is sometimes treated as if their pain is not real. For most individuals this is not the case; the pain is a very real and a legitimate condition even if it cannot be visibly seen. The challenge of the chronic pain sufferer is to get appropriate treatment for the pain in addition to having the psychological impact acknowledged and validated.

Treating Mind & Body in Pain Management

It is impossible to understand pain using physical concepts alone. There are multiple elements comprising the pain experience; each of them not working in isolation from the other. To effectively manage and treat pain, one must take into account all of these elements and their interaction with one another. These elements are:

Physical/Sensory: This includes the location, intensity, quality and times that factor into the physical sensations and symptoms involved in the experience of pain.

Emotional: Fear, anxiety, anger, irritability, worry, depression, panic, despair, hopelessness are examples of the emotional states that can accompany both the experience and the effects of pain on your life overall. It also involves the recognition of the multiple losses and changes to your body and lifestyle.

Mental: This includes your awareness of pain, focus of attention, memories, attitudes about pain, self, others and life, expectations, perceptions, decisions and other thought

processes as they relate to your experience of pain.

[The vicious cycle of how negative thinking affects our mood, our physical well being, and our behavior.]

Behavior: This includes activities of daily living, diet, exercise; things that you actually do in response to your pain. It also includes behaviors of isolation and withdrawal in response to the emotional consequences of pain on your life. As well, it involves things like pacing, time management, sleep, self-care, and pleasurable activities.

Developing healthier, adaptive thoughts, emotions and behaviors is facilitated by learning the tools that help identify, challenge and restructure underlying beliefs about oneself, the world and the future as it relates to pain.

Social: This includes your primary relationships, family, friends, health care professionals, coworkers, insurance representatives and anyone else involved who are affected by or can affect your pain condition.

Environmental: This includes things in your surroundings that affect how you cope with your pain like housing restrictions, weather conditions, physical objects that assist with daily living (special bed, chairs, appliances), and other practical things like transportation and functional resources.

As an individual challenged with pain, it is helpful to know that there are things within each of these areas that you have the ability to change and control. It can be empowering to know that there are ways to approach each of these key elements and learn skills that can help assist you in the overall management of your pain. The goal is to learn how to live a better quality of life, with less pain and less suffering by respecting the significance of each of the elements involved in your pain experience.

Factors Influencing Resilience and Pain Management

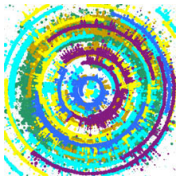
One of the biggest obstacles to pain management are the beliefs we have about the pain; that is, how we interpret the pain and the significance it will have on one's life. Individuals, who have learned to manage their ongoing pain in a way that allows them improved quality of life, tend to possess the following attitudes:

Determined versus Helpless: The ability to re-evaluate beliefs, re-assess what one can do and not do, take responsibility, and setting limits and boundaries based on an altered definition of self and situations will all contribute to an increased sense of "control" over the pain

Involved versus Alienated: Having a sense of purpose facilitates ongoing involvement and commitment to one's self and one's life in spite of the pain. It may be that the approach to life may need to be redefined, however, remaining engaged in life offers hope beyond the pain.

Face Change versus Immobilized by Fear: Making decisions and setting goals empowers one to face things a step at a time. Allowing yourself to see the positives can lead to opportunities for growth and self-examination.

Art Therapy & Chronic Pain



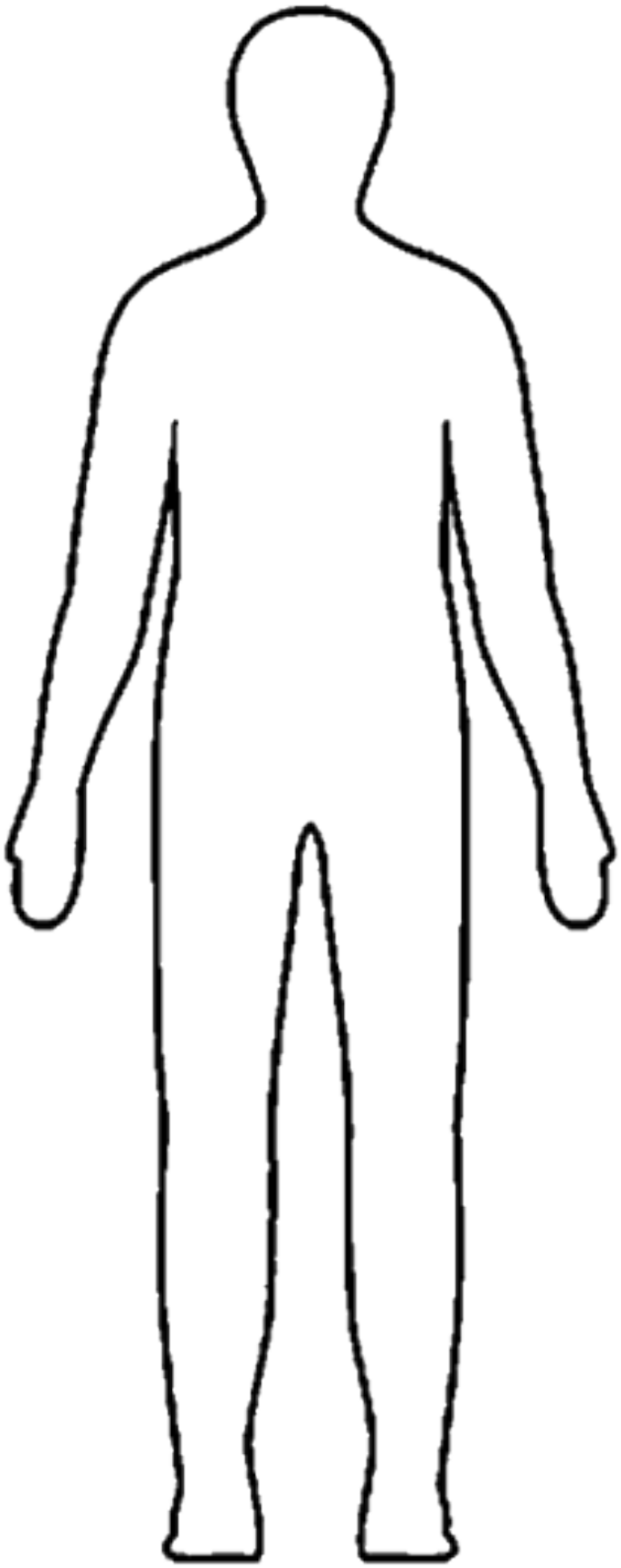
A Multidimensional Approach to a Multidimensional Experience

Art therapy is a mental health profession that uses the creative and cognitive processes of art making as a means of non-verbal communication, allowing individuals to express thoughts and emotions that are often too difficult to talk about. Art therapy is based on the belief that the process of engaging creatively within a therapeutic relationship supports changes in the individual's inner world, and helps him or her to develop a more integrated sense of self, with increased self awareness and acceptance. It assists with improving the individual's personal growth and insight, processing of traumatic experiences, and resolving of inner conflicts. Research in the field confirms that the creative process involved in artistic self-expression helps people to resolve conflicts and problems, develop interpersonal skills, manage behavior, reduce stress, increase self-esteem and self-awareness, and achieve insight.

In the context of chronic pain, art therapy can be used to addresses the pain experience through cognitive and mind-body approaches which focus on how the individual's interpretation and perception of the pain experience contributes to the subjective experience of suffering.

By focusing on the interactions between the mind, our body, and our behaviors, we are able to understand the ways in which emotional, mental, social, spiritual, and behavioral factors can have direct effects on our health. For example, when negative thoughts persist and go unchallenged, pain related emotional distress and suffering can become intensified. Therapy that aims at disputing these beliefs and negative patterns of thought has the potential to alleviate the emotional distress associated with pain syndromes. Developing healthier, adaptive thoughts, emotions and behaviors is facilitated by learning the tools that help identify, challenge and restructure underlying beliefs about oneself, the world and the future as it relates to pain.Furthermore, art therapy provides a social outlet that allows us to direct our energies toward creative and often satisfying activities in a stimultating environment.

Information adapted from: Deborah R. Lain, SoulSpring Counselling Inc.;
Haaga, M. (2012). Art therapy and the chronic pain experience: A pilot study (Unpublished pilot study). Lesley University, Cambridge, MA; and http://report.nih.gov/nihfactsheets/viewfactsheet.aspx?csid=102



Session 2

Goal:

Provide the client with continued space and time to express, communicate, connect with, and work toward understanding his or her experience of chronic pain and how it affects multiple domains of functioning (social, physical, emotional, etc.). Teach client how to use art as a tool for personal insight and communication of past and current thoughts, feelings, and experiences.

Materials:

- A sturdy sheet of white paper, around 8 ½" x 11" --- 9" x 12"
- Magazine collage materials
- Glue
- Colored pencils, markers, oil pastels

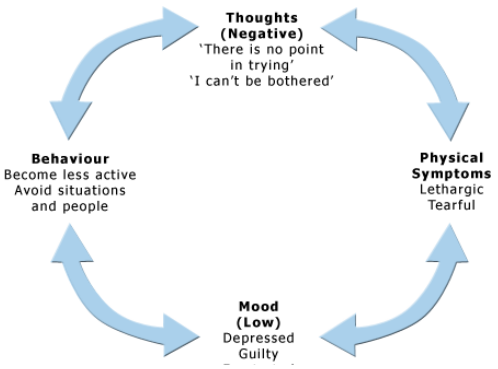
Session Outline:

1. Client fills out **Numeric Pain Rating Scale** (included in "session 2 materials" section of study materials packet).

2. Review previous session.

3. AT introduces the factors influencing resilience and self-management of chronic pain (determination, involvement, and facing change), **as presented on page 5 of handout #1** and discusses the role of acceptance and positive thinking as a gateway to self-management of chronic pain and the vicious cycle of negative thinking as a barrier to acceptance and perpetuation of maladaptive mind-body symptoms based on the following model **(p. 4 of handout #1).**

<u>The vicious cycle of how negative thinking affects our mood, our physical well being, and our behavior.</u>



 4. AT distributes **“Handout #2: Cognitive Distortions”** and **“Handout #3: Automatic Thoughts”** (AT copies: following session outline. Client copies: included in “session 2 materials” section of study materials packet). Using the handouts as a reference, the AT presents the concept of cognitive distortions in order to provide examples of negative thought patterns.

 5. **Art Task: Identifying Automatic Negative Thoughts Collage**

Directives:

 “Please list some negative thoughts you have regarding the pain experience on the back side of the paper.”

 “Please use any or all of these materials to make a collage that represents your own negative thought/s about the pain experience on the other side of the paper.”

- Client can be guided through the technique of magazine collage. If not interested in creating a collage, client can use the other materials.

 6. Post and process

 Shared examination of personal symbols, dysfunctional cognitive schemas, and evidence of real life behaviors that refute the thought/s, present in the image.

 7. Discussion of the experience of depicting cognitive thoughts through visual means.

 8. AT distributes **“Handout #4: Automatic Thoughts Visual Log,”** (AT copy: following session outline. Client copy: included in “session 2 materials” section of study materials packet) and reviews the handout’s example of identifying automatic thoughts.

□ 9. AT asks client to visually log his or her thoughts throughout the following week.

□ 10. Close with **Numeric Pain Rating Scale** (included in "session 2 materials" section of study materials packet).

Session 2
AT & CP Study Handout #2: Cognitive Distortions

Cognitive Distortions

1. **All-or-nothing thinking**: You see things in black and white categories. If your performance falls short of perfect, you see yourself as a total failure.

2. **Overgeneralization**: You see a single negative event as a never-ending pattern of defeat.

3. **Mental filter**: You pick out a single negative detail and dwell on it exclusively so that your vision of all reality becomes darkened, like the drop of ink that discolors the entire beaker of water.

4. **Disqualifying the positive**: You reject positive experiences by insisting they "don't count" for some reason or other. You maintain a negative belief that is contradicted by your everyday experiences.

5. **Jumping to conclusions**: You make a negative interpretation even though there are no definite facts that convincingly support your conclusion.

> **a. Mind reading**: You arbitrarily conclude that someone is reacting negatively to you and don't bother to check it out.
>
> **b. The Fortune Teller Error**: You anticipate that things will turn out badly and feel convinced that your prediction is an already-established fact.

6. **Magnification (catastrophizing) or minimization**: You exaggerate the importance of things (such as your goof-up or someone else's achievement), or you inappropriately shrink things until they appear tiny (your own desirable qualities or the other fellow's imperfections). This is also called the "binocular trick."

7. **Emotional reasoning**: You assume that your negative emotions necessarily reflect the way things really are: "I feel it, therefore it must be true."

8. **Should statements**: You try to motivate yourself with shoulds and shouldn'ts, as if you had to be whipped and punished before you could be expected to do anything. "Musts" and "oughts" are also offenders. The emotional consequence is guilt. When you direct should statements toward others, you feel anger, frustration, and resentment.

9. **Labeling and mislabeling**: This is an extreme form of overgeneralization. Instead of describing your error, you attach a negative label to yourself: "I'm a loser." When someone else's behavior rubs you the wrong way, you attach a negative label to him, "He's a damn louse." Mislabeling involves describing an event with language that is highly colored and emotionally loaded.

10. **Personalization**: You see yourself as the cause of some negative external event for which, in fact, you were not primarily responsible.

Taken from Burns, David D., MD. 1989. The Feeling Good Handbook. New York: William Morrow and Company, Inc.

Session 2
AT & CP Study Handout #3: Automatic Thoughts

Evaluating Automatic Thoughts

- Automatic thoughts, usually outside of your immediate awareness, must be recognized before they can be changed.
- *Some* thoughts in response to pain or stress are completely factual.
- *Most* thoughts in response to pain or stress are at least partly based on fact.
- *Often,* however, thoughts in response to pain or stress are somewhat distorted.
- Negative thought distortions have the most (negative) influence on your emotions, behavior, and physical functioning and are harmful to your adjustment.
- Once you've learned to recognize automatic thoughts, you can use a system to evaluate what part of them is true and what part is distorted.
- Evaluating automatic thoughts can help reduce negative distortions, which has a positive influence on your ability to cope.

Challenging Negative, Distorted Automatic Thoughts

- *Often,* however, thoughts in response to pain or stress are somewhat distorted.
- To challenge a negative automatic thought, start by identifying the part that is distorted.

- Notice whether your negative automatic thought is very specific or very global (we tend to have sweeping, generalized, automatic thoughts when in pain or stress).
- Evaluating the part that is distorted in your automatic thought can help you to formulate alternative, more realistic thoughts.
- Believing less in the original automatic thought has a positive influence on your ability to cope with pain.
- Overall, creating realistic alternative responses from negatively distorted thoughts should have a positive impact on your thoughts, your emotions, and your behavior.

Session 2

AT & CP Study Handout #4: Automatic Thoughts Visual Log

Date/ Time	Activating Event (Stressful Situation)	Emotional/Physical/ Behavioral Shift (My Reactions)	Automatic Thought or Image (How Much do You Believe it? 0-100)	Evidence That The Thought is True	Evidence That The Thought is not True	Re-rate Belief (0-100)
2/20 4:00 pm	Spending more time standing at work than usual	Back pain began increasing. Getting irritable, face feels hot and flushed. Doing tasks slowly so I don't cause more pain.	The pain is eating me up! (90!)	I'm on a lot of medicine. The medicine isn't working. I am missing a lot of work. I have had to be hospitalized five times. I've had to have three back surgeries. The MRI still shows problems with my discs.	I was able to stay at work on Thursday, and it wasn't that unbearable. I did get up and go to work on Friday. I was able to use positive self-talk to get up and go to work and stay at work. I feel better being distracted at work than sitting around feeling useless at home.	60% Less of an emotional hold on me but still a difficult way to live

Date/ Time	Activating Event (Stressful Situation)	Emotional/Physical/ Behavioral Shift (My Reactions)	Automatic Thought or Image (How Much do You Believe it? 0-100)	Evidence That The Thought is True	Evidence That The Thought is not True	Re-rate Belief (0-100)

Session 3

Goals:

Promote continued communication and understanding of the pain experience. Teach client how to implement positive coping self-statements as a way to reimagine or transform maladaptive thoughts and behaviors and improve physical, social, and emotional functioning.

Materials:

- A sturdy sheet of white paper, around 8 ½" x 11" --- 9" x 12"
- Magazine collage materials
- Glue
- Colored pencils, markers, oil pastels

Session Outline:

- 1. Client fills out **Numeric Pain Rating Scale** (included in "session 3 materials" section of study materials packet).

- 2. Review the client's visual automatic thought log and discuss the role of thought patterns in perpetuation of pain.

- 3. **Art Task: Challenging Negative Thoughts**

  Directives:

  - "Please list some positive, alternative thoughts that challenge your negative thoughts."

    - Client can be encouraged to use personal strengths, support systems, sources of fun and relaxation, etc. to develop a positive thought.

  - "Please make an image of a positive, alternative thought that challenges your negative thought."

- 4. Post and process

 Shared examination of the image with identification of personal symbols and reflection of the process of challenging and transforming negative thoughts.

 5. AT distributes **"Handout #5: Positive Coping Self-Statements"** and **"Handout #6: Personal Mantras"** (AT copy: following session outline. Client copy: included in "session 3 materials" section of study materials packet) and reviews examples of positive coping statements or mantras that client connects with as reflecting his or her alternative thought.

 6. Ask client to continue to review the handouts at home and choose from the list, or create own, self-statement/mantra that challenges negative core beliefs and assumptions regarding the chronic pain experience.

 7. Close with **Numeric Pain Rating Scale** (included in "session 3 materials" section of study materials packet).

Session 3
AT & CP Study Handout #5: Positive Coping Self-Statements

Constructing & Using Positive Coping Self-Statements to Challenge Negative Thoughts

- The more we believe in ourselves, the better able we will be to cope with the stressors associated with pain.
- One way to believe in ourselves is to construct positive coping statements that we can use throughout the day as reminders or cognitive cues. These coping self-statements like personal mantras that are used to encourage, inspire, motivate, and overcome. They are broader than alternative responses to distorted automatic thoughts, as mentioned above, and are essentially the "cheerleaders" of one's coping resources, encouraging an increase in your **locus of control** – the extent to which you believe that you can control an event of situation, & **self-efficacy** – belief that you can accomplish a particular goal.

Examples of Coping Self-Statements:

- I can't let the pain stand in the way of what I have to do.
- By thinking of other things, I can make this good feeling last longer.
- Let me imagine relaxing pleasant scene to help me reduce my feeling of pain.
- I can do some things at an appropriate pace, even though I have pain.
- The pain is there, but I don't notice it so much when I concentrate on doing something.
- I won't try to eliminate the pain totally, I just need to keep it manageable.
- Sitting and worrying about things doesn't help.
- All right, I'm feeling tense. That let's me know I can take some slow, deep breathes and start to relax.
- I won't get overwhelmed. I'll just try to take one step at a time.
- Even though it will take some effort, I know I can achieve things if I try.
- Let me focus on some good things about myself and my life.
- I can be more constructive if I keep calm instead of shouting.

Session 3

AT & CP Study Handout #6: Personal Mantras

Personal Mantras to inspire, motivate, & overcome….

1. "Some periods of our growth are so confusing that we don't even recognize that growth is happening…Those long periods when something inside ourselves seems to be waiting, holding its breath, unsure about what the next step should be, eventually become the periods we wait for, for it is in those periods that we realize that we are being prepared for the next phase of our life and that, in all probability, a new level of the personality is about to be revealed." - Alice Walker
2. "What the caterpillar calls the end of the world the master calls a butterfly."
3. "I choose to LIVE."
4. "I am flexible and flowing, open to the new and changing, at peace, and I trust in the process of life. Every moment is a new opportunity to become who I am. I move, with life."
5. "It's time for you to move, realizing that the thing you are seeking is also seeking you." – Iyanla Vanzant
6. "My time is limited and I will not allow the noise of others' opinions drown out my own inner voice. I will have the courage to follow my heart and intuition."
7. "Action conquers fear" — Peter Nivio Zarlenga
8. "I am willing to forgive. Forgiveness of myself and others releases me from the past. Forgiveness is my gift TO me, FOR me. I forgive, and I am free."
9. "Action is the antidote to despair." – Joan Baez
10. "The size of your success is measured by the strength of your desire; the size of your dream; and how you handle disappointment along the way." – Robert Kiyosaki
11. "I am not who I'm going to be. I am always becoming."- Ruby Dee
12. "I am enough."
13. "If you give your fear legs, it will run away with your dreams."
14. "Ask for what you want and be prepared to get it." – Maya Angelou
15. "Life isn't about finding yourself. Life is about creating yourself." – George Bernard Shaw
16. "Nothing great was ever achieved by being realistic!" – Tom Venuto
17. "Excellence does not require perfection." – Henry James
18. "I follow the way of love."
19. "Happiness is the consequence of personal effort." – Eat, Pray, Love
20. "Nobody will Love me, the way I love me. So, the way I treat myself sets the standards for others."
21. "The positive thinker, sees the invisible, feels the intangible, and achieves the impossible."
22. "When things don't go your way, when things go "wrong", and especially if you do not seem to currently have enough money, do not attach a story or sense of self worth to your circumstances." – (Mastin Kipp
23. "To accomplish something you have never done before, you have to push beyond your comfort zone, trust your instincts, practice and believe in yourself."
24. "The most common way people give up their power is thinking they don't have any." -Alice Walker
25. "If you don't start somewhere…then I assure you, you're going nowhere."
26. "Trust in the process of life."
27. "I allow and I trust."
28. "Change your thoughts and you change your world." – Norman Vincent Peale
29. "Never complain; never explain." by Benjamin Disraeli (via Rob Prince)
30. "Everybody ends up somewhere, but few people end up somewhere on purpose."- Craig Groeschel (via Sly)
31. "Sail away from the safe harbor."
32. "Stop looking without and start looking within."
33. "My life is special. I live my truth. I nurture my spirit. I celebrate me." (via ReFlectionary)
34. "Changing your life is hard. Changing your perception in which you see your world is easy."

Adapted from: http://happyblackwoman.com/inspiring-personal-mantras/

Session 4
AT & CP Study Handout #7: Pain Management Visualization Techniques

Pain Management Techniques

1) **Controlled Deep Breathing -** To prepare for any chronic pain coping technique, it is important to learn how to use focus and deep breathing to relax the body. Learning to relax takes practice, especially when you are in pain, but it is definitely worth it to be able to release muscle tension throughout the body and start to remove attention from the pain. **Add some art –** Paint with wide brush strokes to practice breathing in and out and set a rhythm.

Coping techniques for chronic pain begin with controlled deep breathing, as follows:

- Try putting yourself in a relaxed, reclining position in a dark room. Either shut your eyes or focus on a point.
- Then begin to slow down your breathing. Studies have shown that breathing out for longer than you breathe in can actually stop or prevent panic breathing. Use a count of 6 on your breath in and a count of 7 on your breath out. Breathe deeply, using your chest. If you find your mind wandering or you are distracted, then think of a word, such as the word "Relax", and think it in time with your breathing...the syllable "re" as you breathe in and "lax" as you breathe out.
- Continue with about 2 to 3 minutes of controlled breathing.
- Once you feel yourself slowing down, you can begin to use imagery techniques.

2) **Altered focus -** This is a favorite technique for demonstrating how powerfully the mind can alter sensations in the body. Focus your attention on any specific non-painful part of the body (hand, foot, etc.) and alter sensation in that part of the body. For example, imagine your hand warming up. This will take the mind away from focusing on the source of your pain, such as your back pain. **Add some art –** Practice drawing the human figure with a focus on body parts that are not in pain.
3) **Dissociation** - As the name implies, this chronic pain technique involves mentally separating the painful body part from the rest of the body, or imagining the body and mind as separate, with the chronic pain distant from one's mind. For example, imagine your painful lower back sitting on a chair across the room and tell it to stay sitting there, far away from your mind.
4) **Sensory splitting** - This technique involves dividing the sensation (pain, burning, pins and needles) into separate parts. For example, if the leg pain or back pain feels hot to you, focus just on the sensation of the heat and not on the hurting.
5) **Mental anesthesia** - This involves imagining an injection of numbing anesthetic (like Novocain) into the painful area, such as imagining a numbing solution being injected into your low back. Similarly, you may then wish to imagine a soothing and cooling ice pack being placed onto the area of pain. **Add some art –** Look through magazines and cut out pictures that show sensations such as numbing or soothing. Create a collage of your anesthesia sensations.
6) **Mental analgesia** - Building on the mental anesthesia concept, this technique involves imagining an injection of a strong painkiller, such as morphine, into the

painful area. Alternatively, you can imagine your brain producing massive amount of endorphins, the natural pain relieving substance of the body, and having them flow to the painful parts of your body. **Add some art –** Use line, color, and shape to create an image of the flow of analgesia to the painful area.

7) **Transfer** - Use your mind to produce altered sensations, such as heat, cold, anesthetic, in a non-painful hand, and then place the hand on the painful area. Envision transferring this pleasant, altered sensation into the painful area.
8) **Age progression/regression** - Use your mind's eye to project yourself forward or backward in time to when you are pain-free or experiencing much less pain. Then instruct yourself to act "as if" this image were true. **Add some art –** Photocopy pictures from before you experienced pain and create a collage, making sure to note positive memories and sensations from that age.
9) **Symbolic imagery** - Envision a symbol that represents your chronic pain, such as a loud, irritating noise or a painfully bright light bulb. Gradually reduce the irritating qualities of this symbol, for example dim the light or reduce the volume of the noise, thereby reducing the pain. **Add some art –** Draw the symbol and then crumple and/or rip it up. Create a positive symbol to take its place.
10) **Positive imagery** - Focus your attention on a pleasant place that you could imagine going - the beach, mountains, etc. - where you feel carefree, safe and relaxed. Take this one step further and draw or paint a pleasant place. The process will be relaxing and will help solidify the healing image in your mind. **Add some art –** Use your favorite picture, painting, or place as inspiration and create a drawing or painting of a safe place. Use this image to focus your mind away from the pain.
11) **Counting** - Silent counting is a good way to deal with painful episodes. You might count breaths, count holes in an acoustic ceiling, count floor tiles, or simply conjure up mental images and count them.
12) **Pain movement** - Move chronic back pain from one area of your body to another, where the pain is easier to cope with. For example, mentally move your chronic back pain slowly into your hand, or even out of your hand into the air.

Some of these techniques are probably best learned with the help of a professional, and it usually takes practice for these techniques to become effective in helping alleviate chronic pain. It is often advisable to work on pain coping strategies for about 30 minutes 3 times a week. With practice, you will find that the relaxation and chronic pain control become stronger and last longer after you are done.

Sometimes, after you are good at using the techniques, you can produce chronic pain relief and relaxation with just a few deep breaths. You can then start to use these techniques while you are engaged in any activity, working, talking, etc. With enough experience you will begin to feel a greater sense of control over the chronic pain and its effects on your life.

And don't forget the power of your imagination! Write your feelings, draw your pain, hum a favorite song, look at paintings or pictures you enjoy. Art can serve as an outlet for self-expression as well as a source of distraction, relaxation, and pain relief.

Adapted from: http://www.spine-health.com/conditions/chronic-pain/11-chronic-pain-control-techniques

Session 4

Goals:

Introduce coping strategies for self-management of chronic pain. Use visualization and imagery techniques to achieve balance and reorient focus toward positive and healing images.

Materials:

- A sturdy sheet of black paper, around 8 ½" x 11" --- 9" x 12"
- A paper plate or round object to trace a circle
- Colored pencils

Session Outline:

1. Client fills out **Numeric Pain Rating Scale** (included in "session 4 materials" section of study materials packet).

2. Review the client's process of developing or choosing self-statements/positive mantras.

3. AT distributes **"Handout #7: Pain Management Visualization Techniques,"** (AT copy: following session outline. Client copy: included in "session 4 materials" section of study materials packet), and uses the handout examples to discuss how re-focusing and visualization techniques can aid in self-management of chronic pain.

4. AT distributes **"Handout #8: Mandala Examples"** and **"Handout #9: Healing Mandala Exercise"** (AT copy: following session outline. Client copy: included in "session 4 materials" section of study materials packet), and presents the concept of "healing mandalas" as a tool in using re-focusing and visualization techniques.

5. **Art Task: Healing Mandalas**

Directives:

- Refer to Handout #8: Healing Mandala Exercise.

- 6. Post and process.
  - Shared examination of the image that emerged with identification of personal meanings and symbols and reflection of the process of re-focusing attention.
- 7. Ask client to continue to review the handout at home.
- 8. Close with **Numeric Pain Rating Scale** (included in "session 4 materials" section of study materials packet).

Session 4
AT & CP Study Handout #8: Mandala Examples

Session 4
AT & CP Study Handout #9: Healing Mandala Exercise

Mandala Exercise to Practice Visualization/Imagery Replacement as a Coping Strategy for Chronic Pain

Circular forms in art are often referred to as ***mandalas***, the Sanskrit word for "sacred circle." For thousands of years the creation of circular, often geometric designs has been part of spiritual practices around the world and almost every culture has revered the power of the circle. Circular forms are found at the prehistoric Stonehenge monument in England and the 13th century labyrinth at the base of Chartres Cathedral in France. Creating mandalas may be employed for encouraging transcendence, mindfulness, wellness, focusing of attention, and achievement of balance.

Using mandala art as visualization/imagery replacement:

Supplies:
-A sheet of black paper (around 8 ½" x 11"), colored pencils, and a healing mantra/ positive coping statement

· First, identify a healing intention or positive coping self-statement or personal mantra and write on back of paper.
· Trace a circle (whatever size feels right to you) on the other side of the paper, using a plate or cup.
· As you contemplate your mantra, allow for an image to emerge. When you have an image (can be anything from an abstract design to a realistic object), use a white colored pencil to begin drawing your image in the circle. Imagine the color you chose as a healing light. Focus on the process as a form of meditation, relaxation, and centering.
· As you draw, imagine the image radiating from your body and drawing out the pain. Visualize the color you chose as a pure, healing light.
· When finished, imagine bringing the image into your body, letting its healing light wash over the source/s of your pain and then absorbing into your body.

Practice this process regularly by using your imagination to first visualize the image and its healing light working to release the pain. Then visualize bringing the image back into your body and imagine its healing light washing over you, bringing calmness and alleviating pain and tension.

Adapted from: The Mandala Healing Kit by Judith Cornell, Ph.D.

Session 5

Goals:

Continue the process of identifying art and chronic pain self-management techniques.

Materials:

- Watercolor or sturdy sheet of paper, appropriate for painting around 9” x 12” --- 12” x 18”
- Watercolor or acrylic paint
- Oil pastels
- Images/example of calming environments (the beach, forest, mountains, etc.). The client can also be informed in advance to bring in a picture of a calming place.

Session Outline:

- 1. Client fills out **Numeric Pain Rating Scale** (included in “session 5 materials” section of study materials packet).

- 2. Review previous session and introduce the art therapy concept of creating a “safe place.” In this context, the “safe place” will be defined as a calming or healing place, away from the pain. Imagining and creating a safe/calming/healing place in one’s mind can help to re-focus attention and relieve tension. Painting or drawing this place can promote further relaxation and provides a tangible form that one can view again and again to evoke feelings of calm and healing when experiencing pain or discomfort.

- 3. **Art Task: A Place Away From the Pain**

  Directives:

  - “Please create a safe/calming/healing place for yourself. It can be real or imagined.”

- If having trouble, client can be shown how to create a more abstract image that focuses on the placement and quality of colors.

 4. Post and process

  Shared examination of the image that emerged with identification of personal meanings and symbols that enhance sense of safety, calmness, and healing.

 5. Close with **Numeric Pain Rating Scale** (included in "session 5 materials" section of study materials packet).

Session 6

Goals:

Providing the client with an opportunity to review his or her work over the past 6 weeks. Using art to express and honor the client's personal experience.

Materials:

- 2" x 3.5" cardstock card (included in "session 6 materials" section of study packet)
- Collage materials including: found objects, magazine images, craft papers, etc.
- Glue
- Colored pencil, thin markers, pen, or pencil

Session Outline:

- 1. Client fills out **Numeric Pain Rating Scale** (included in "session 6 materials" section of study materials packet).
- 2. Review the client's process and progress over the last 6 weeks. What did he or she learn about him or herself? How was the process of creating art each week? Examine each of the art pieces if they are present. If not, discuss the process of creating them.
- 3. **Art Task: Pocket Inspiration**

  Directives:

  - "What would you give yourself as a gift in moving forward?"
  - "Create a pocket inspiration card that will serve as a reminder to use the gift in continuing to work toward self-management of chronic pain."

- 4. Post and process
  - Discuss how the process of creating a gift for self felt and identify client's goals for the future.

□ 5. Administer **Numeric Pain Rating Scale** (included in "session 6 materials" section of study materials packet).

□ 6. Close with reminder to client to complete confidential **post-questionnaire** via: www.arttherapyandchronicpainstudy.com

- If client-participants cannot obtain access to the Internet following the last session, they can be given the enclosed paper versions of the post-questionnaires to be administered by anyone other than the treating AT (colleagues, office-mates, friends, etc.). No special qualifications are required for administering the post-questionnaire.

Art Therapy & Chronic Pain Study

Completing the Manual

Completing the Manual

Thank you for all of your time and effort in completing the manual!

The manual is yours to keep. The following steps will guide you through the process of returning the data to the researcher.

Returning Data

1. **Please make sure that your client completes the post-questionnaire immediately following the last session!!**

2. Please locate the pre-addressed, pre-stamped envelope included in each study materials packet (1 for each client-participant).

3. Please complete the following checklist for forms that need to be returned:
   a. ☐ Consent Form Packet (1)
      i. AT Consent Form
      ii. Client-Participant Consent Form
      iii. Photo Release Form (if used – photos can be emailed)
   b. ☐ Numeric Pain Rating Scales (12)
   c. ☐ Session Fidelity Checklist (1)
   d. ☐ Client-Participant Demographics Form (1)
   e. ☐ Pre-questionnaire Packet (if used in place of online entry) (1)
   f. ☐ Post-questionnaire Packet (if used in place of online entry)(1)
   g. ☐ Client-participant Artwork Form (if completed by client) (1)

4. Please send back forms to researcher in the pre-addressed, pre-stamped envelope provided for each client. **NOTE:** please send back the forms listed above only with no additional materials, as each envelope is only stamped for the above forms.

5. Please contact me with any follow-up comments, question, or concerns at moneill@lesley.edu or www.arttherapyandchronicpainstudy.com

Thank You!!!

APPENDIX C

FIDELITY CHECKLIST

Session-by-Session Fidelity Checklist (To be filled out by the art therapist)

Please use this list to confirm adherence to the session outlines. This will assist the researcher in ensuring that similar treatment is provided to all client-participants and enhance validity and reliability. THANK YOU!

Client name or initials:_____

Session 1

Please check box for "yes" or leave blank for "no:"	Comments:
□ I used the specified materials	
I completed the following directives as they were stated in the manual:	
□ 1.	
□ 2.	
□ 3. □ 3a. □ 3b. □ 3c. □ 3d.	
□ 4. □ 4a. □ 4b.	
□ 5.	
□ 6.	

Session 2

Please check box for "yes" or leave blank for "no:"	Comments:
□ I used the specified materials	
I completed the following directives as they were stated in the manual:	
□ 1.	
□ 2.	
□ 3.	
□ 4.	
□ 5. □ 5a. □ 5b.	
□ 6. □ 6a.	
□ 7.	
□ 8.	
□ 9.	
□ 10.	

Session 3

Please check box for "yes" or leave blank for "no:"	Comments:
□ I used the specified materials	
I completed the following directives as they were stated in the manual:	
□ 1.	
□ 2.	
□ 3. □ 3a. □ 3b.	
□ 4. □ 4a.	

□ 5.	
□ 6.	
□ 7.	

Session 4

Please check box for "yes" or leave blank for "no:"	Comments:
□ I used the specified materials	
I completed the following directives as they were stated in the manual:	
□ 1.	
□ 2.	
□ 3.	
□ 4.	
□ 5. □ 5a.	
□ 6. □ 6a.	
□ 7.	
□ 8.	

Session 5

Please check box for "yes" or leave blank for "no:"	Comments:
□ I used the specified materials	
I completed the following directives as they were stated in the manual:	
□ 1.	
□ 2.	
□ 3. □ 3a.	
□ 4. □ 4a.	
□ 5.	

Session 6

Please check box for "yes" or leave blank for "no:"	Comments:
□ I used the specified materials	
I completed the following directives as they were stated in the manual:	
□ 1.	
□ 2.	
□ 3. □ 3a. □ 3b.	
□ 4. □ 4a.	
□ 5.	
□ 6.	

APPENDIX D

CLIENT-PARTICIPANT ARTWORK FORM

Client-Participant Artwork:
Titles/Comments/Feedback on art tasks

Client Participant Name or Initials:_____
AT Name: _____

This form is designed to gather information related to your experience with the Art Therapy & Chronic Pain Study art tasks but is not required for participation. Any feedback is much appreciated. Thank you so much!

Session 1:
Title:_____
Comments:_____
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_____

Session 2:
Title:_____
Comments:_____
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Session 3:
Title:_____
Comments:_____
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Session 4:
Title:_____
Comments:_____
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Session 5:
Title:_____
Comments:_____
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Session 6:
Title:_____
Comments:_____
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