PERCEIVED BENEFITS OF GROUP MUSIC THERAPY FOR BREAST CANCER SURVIVORS: MOOD, PSYCHOSOCIAL WELL-BEING, AND QUALITY OF LIFE

By

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ABSTRACT

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FOR BREAST CANCER SURVIVORS:
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There are currently an estimated 2.6 million breast cancer survivors living in the United States, with over 90% having survived more than five years (American Cancer Society, 2012). Survival rates have been increasing since 1990 due to improved early detection and methods of treatment; however, women in the first-year of post-treatment survival continue to experience quality of life needs in physical, psychological, social, and spiritual domains. Studies demonstrate the effectiveness of music therapy during cancer treatment for pain and procedural anxiety, distraction, and increased relaxation (Bradt, Dileo, Grocke, & Magill, 2011), but there remains a need for research on the effects of music therapy during the post-treatment experience of cancer survivors. The initial purpose of this research was to investigate the effectiveness of a music therapy group intervention on mood, psychosocial well-being, and quality of life of breast cancer survivors. Study aims were (a) to examine the effect of group music therapy on the overall quality of life of breast cancer survivors in post-treatment survivorship; (b) to determine the differential effects of group music therapy on the quality of life domains of physical, psychological, social, and spiritual well-being; and (c) to examine whether the intervention effects were sustained over time. The music therapy group intervention was six weekly 90-minute sessions, incorporating both active (music making, such as singing or instrument playing, music improvisation, and improvisatory songwriting) and receptive (music listening, music-assisted relaxation, and forms of music with guided imagery) techniques. Originally, the research sought to use an experimental design with repeated measures throughout the treatment protocol

of 6 weeks and at 2-week follow-up, using inferential statistical analysis of the dependent variables between and within groups for the criterion measures: *Profile of Mood States – Short Form* (*POMS-SF)*, *Quality of Life – Cancer Survivors* (*QOL-CS)*, and *Coping Resources Inventory* (*CRI)*; however, the reality that the recruitment yielded only three participants required a shift in emphasis using qualitative data, originally gathered for more anecdotal purposes. The qualitative data acquired through the Music Therapy Questionnaire and session videotapes provided evidence of perceived treatment benefits noted by the women in the study, as well as the researcher. Major themes gleaned from these data through qualitative approaches suggested that (1) The impact of cancer affected all aspects of quality of life and extended into survivorship; (2) Participants preferred silence during cancer treatment and/or used music listening to impact mood and express emotions during cancer treatment and recovery; (3) Music therapy techniques increased self-awareness, emotional expression and insight, leading to therapeutic growth and change; and (4) Participation in music therapy group provided social support and validation, enhanced coping skills, and served as an outlet for emotional expression. These findings support the efficacy of a music therapy group intervention on mood, psychosocial well-being, and quality of life for three breast cancer survivors who were participants in the study. Positive benefits were documented for all quality of life domains, including physical, psychological, social, and spiritual well-being, and were sustained at least over a short-term period of time. These findings further suggest implications for the field of music therapy concerning service delivery in the treatment and aftercare of cancer patients. Interpretations of these findings suggest (1) the importance of aftercare and cancer survivorship services; (2) the power of music and the need for its informed therapeutic application; and (3) the impact of group support and potential effectiveness of short-term music therapy groups.

Dedicated to

My daughter,
Emma Katherine Stark,
with love and anticipation for the impact you will make on this world.

My parents,
Merle (1934-1998) and Ardis Conradi,
for your unconditional love, faith and support.

My study participants,
for opening yourselves through the power of music,
and sharing through laughter and tears.

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Most meaningful to me has been working with individuals of all ages, abilities, and stages of life in music therapy, as well as their families. I hope I have given you as much as you

have given me. I particularly thank the three incredible women who shared themselves through their participation in this study.

Finally, to my beloved family and friends, I thank you for your love and support. You mean the world to me.

PREFACE

"Hope" is the thing with feathers –

That perches in the soul –

And sings the tune without the words –

And never stops – at all –

-Emily Dickinson

Barn's burnt down –

now

I can see the moon.

-Mizuta Masahide

Music and rhythm find their way

into the secret places of the soul.

-Plato

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CHAPTER I

INTRODUCTION

A diagnosis of cancer brings fear and anxiety in addition to the physical effects of medical treatments, such as chemotherapy and radiation. Cancer patients frequently experience pain as the disease progresses, which can be exacerbated by the stress and upheaval that they are facing in their lives. In addition, cancer's impact extends further, affecting family and social relationships, and even to the existential beliefs of one's purpose and meaning in life. This impact may continue long after treatment is completed (Alfano & Rowland, 2009).

As of January 1, 2008, there are an estimated 11.7 million cancer survivors living in the United States, of which 2.6 million are breast cancer survivors (American Cancer Society, 2012a, 2012b; Centers of Disease Control and Prevention, 2011; National Cancer Institute, 2011). Breast cancer is the second most common cancer for American women. Each has a one in eight chance of developing invasive breast cancer in her lifetime. Breast cancer is also the second leading cause of cancer death in women, with the chance of death being about 1 in 42 (about 2.35%) in a woman with breast cancer (American Cancer Society, 2012a). Survival rates have been increasing since 1990 due to improved early detection and methods of treatment. Of the 230,480 women now diagnosed annually, the five-year survival rate is exceeding 90% (American Cancer Society, 2012a; U.S. Department of Health and Human Services, 2010).

Quality of life (QoL) concerns of breast cancer survivors in physical, psychological, social, and spiritual domains have been addressed through psycho-educational support, counseling, expressive therapy, and cognitive behavior therapy (Meneses et al., 2007); however, studies during the first year of post-treatment are sparse (Cimprich et al., 2005; Mishel et al., 2005; Scheier et al., 2005; Stanton et al., 2005; Meneses et al., 2009). In their study of women in

the first year of transition from breast cancer patient to survivor, Allen, Savadatti, and Levy (2009) found that emotional and physical stresses are prevalent. Although many women acknowledged positive life changes as a result of their cancer, they also identified fear of recurrence, emotional distress, loss of the 'safety net' of treatment, and difficulty returning to 'normal' life during this time (Allen et al., 2009). Due to improved breast cancer treatment and increased survivorship rates, breast cancer survivors need aftercare services to help them cope with the psychological impact of illness, including a changed self-identity, existential meaning and spiritual world-view (Allen et al., 2009; Centers of Disease Control and Prevention, 2004; National Cancer Institute, 2010).

The medical literature is increasingly addressing existential concerns of persons diagnosed with cancer, such as personal beliefs about life's purpose and meaning (Henoch & Danielson, 2008). Concurrent to this, the use of complementary and alternative medicine (CAM) interventions have become more prevalent in cancer care (Joske, Rao, & Kristjanson, 2006; Loewy, 2007; Wyatt, 2003; Wyatt, Sikorski, Wills, & An, 2010). According to the National Center for Complementary and Alternative Medicine (NCCAM, 2011), CAM is defined as "a group of diverse medical and health care systems, practices, and products that are not generally considered part of conventional medicine" (p. 1), and further identifies music therapy as a CAM mind-body intervention. Mind-body practices "focus on the interactions among the brain, mind, body, and behavior, with the intent to use the mind to affect physical functioning and promote health" (NCCAM, 2011, p. 2). The National Cancer Institute (2010) further identifies exercise, mind-body methods, creative outlets, and sharing personal stories through support groups as ways for survivors to address stress and assist with coping.

Aldridge (1996, 2004) described how positive emotions, such as hope and joy, are beneficial to the process of coping in cancer treatment. The opportunity for creative expression assists in meeting an individual's existential needs and in maintaining quality of life, while faced with a potentially life threatening illness. Aldridge maintained that music and other creative-expressive arts therapy interventions are unique, in that they can address the treatment needs of the "whole" person.

Music therapy in cancer care was defined by Miller and O'Callaghan (2010) as "the creative and professionally informed use of music in a therapeutic relationship with people identified as needing physical, psychosocial, or spiritual help" (p. 217). Music therapists use a spectrum of receptive and active experiences as interventions in medical settings. Receptive experiences may include music listening, music-assisted relaxation, and forms of music with guided imagery. Active, or expressive, experiences may include music making, such as singing or instrument playing, music improvisation, and songwriting.

The choice of receptive or active music therapy interventions is based on the individual needs of the patient. Music-assisted relaxation may be therapeutically indicated when a patient is experiencing fatigue or other side effects of medical treatments. As energy levels increase, the psychosocial needs of the patient can be addressed through music improvisation or songwriting, providing opportunities for self-expression, increased self-esteem, and improved coping abilities.

Music therapy interventions are provided both individually and in groups. Music therapy group interventions may provide more patients access to services through psycho-educational stress-management or wellness groups that are short-term (Dimiceli-Mitran, 2011; Miller & O'Callaghan, 2010). Ongoing cancer support groups are also frequently offered through hospitals, cancer centers and community organizations.

Previous studies have demonstrated the effectiveness of music therapy during cancer treatment for pain and procedural anxiety, distraction, and increased relaxation (Bradt, Dileo, Grocke, & Magill, 2011); however, there is a need for research on the effects of music therapy during the post-treatment experience of cancer survivors to meet their psycho-social-spiritual needs. This study attempted to provide evidence supporting a model for music therapy service delivery of community-based after-care services for cancer survivors.

The initial purpose of this research was to investigate the effectiveness of music therapy group interventions on mood, psychosocial well-being, and quality of life in breast cancer survivors. Study questions included the following:

(1) What was the effect of group music therapy on the overall quality of life of breast cancer survivors in post-treatment survivorship?

(2) What were the differential effects of group music therapy on the quality of life domains of physical, psychological, social, and spiritual well-being?

(3) Were the intervention effects sustained over time?

CHAPTER II

REVIEW OF LITERATURE

Medical Music Therapy

Since the early 1980s, studies involving music therapy and music medicine techniques have investigated the use of music in addressing the biological needs of medical patients, as well as their psychological and social needs (Gfeller, 2008). Music medicine interventions are defined by Dileo (1999a) as receptive experiences that involve the patient in listening to pre-recorded music. Music therapy interventions are defined as experiences implemented by a trained music therapist, involving a therapeutic process and relationship, and individually designed for the patient (Dileo, 1999a). Research has demonstrated the effectiveness of music experiences in reducing several symptoms and side effects of medical illness, such as pain (Colwell, 1997; Good et al., 2001), anxiety during medical procedures (Schiemann, Gross, Rueter, & Kellner, 2002; Skole & Krevsky, 2006; Smolon, Topp, & Singer, 2002), pre- and post-operative stress (Miluk-Kolasa, Matejek, & Stupnicki, 1996; Robb, Nichols, Rutan, & Bishop, 1995), anxiety, nausea, and discomfort related to medical treatments (Boldt, 1996; Sabo & Michael, 1996; Sahler, Hunter, & Liesveld, 2003; Standley, 1992), and distress of hospice and palliative care patients (Gallagher, Lagman, Walsh, Davis, & LeGrand, 2006; Hilliard, 2003; Krout, 2001).

Meta-analyses of medical music therapy research conducted by Standley (2000) and Dileo and Bradt (2005) have provided evidence of music's efficacy with medical populations. Systematic literature reviews in the medical literature have summarized the beneficial effects of music listening on adult patients' pre-procedural state anxiety (Gillen, Biley, & Allen, 2008) and the anxiety and pain reducing effects of music interventions in peri-operative settings (Nillson, 2008). Although these music medicine and music therapy studies and meta-analyses were not

conducted exclusively with cancer patients, they suggest potential benefits and inform music interventions in oncology settings.

Music Therapy in Oncology

In the field of cancer care, music therapy is increasingly recognized as an effective intervention to address the physical, psychological, social, and spiritual needs of patients (Dileo, 1999a, Miller & O'Callaghan, 2010). Studies have demonstrated music's effects on reduction of cancer-related pain, anxiety, and nausea, as well as addressing other side effects of both the disease and its treatment. More recently, studies have investigated the effects of music therapy and music medicine experiences on increasing mood and quality of life for cancer patients (Bradt et al., 2011; Dileo & Bradt, 2005; Kruse, 2003). In music therapy, individuals are given opportunities for healing experiences that address these interactive aspects of mind, body, and spirit.

Historically, literature in the field of music therapy relevant or specific to cancer care was relatively sparse, until a number of studies were completed in the past three decades. Published in both music therapy and medical journals, these studies investigated the effects of music on pain in cancer patients (Bailey, 1986; Beck, 1991; Maslar, 1986; Whipple & Glynn, 1992; Zimmerman, Pozehl, Duncan, & Schmitz, 1989), chronic pain patients (Godley, 1987; Schorr, 1993; Selm, 1991), and persons with terminal illness (Curtis, 1986; Gallagher, Huston, Nelson, Walsh, & Steele, 2001; Gallagher, Lagman, Walsh, Davis, & LeGrand, 2006; Hilliard, 2003; Krout, 2001; Magill-Levreault, 1993, Wylie & Blom, 1986). Notable findings include the significant reduction in pain found by Beck (1991) and the reduction of chronic pain in the late stages of cancer by Zimmerman et al. (1989). Although the results were not statistically significant, Curtis (1986) found that trends for music conditions in pain relief with the terminally

ill cancer patient were better than those in non-music conditions.

Receptive music listening experiences have resulted in decreased side effects of cancer treatments, such as reducing nausea resulting from chemotherapy (Ezzone, Baker, Rosselet, & Terepka, 1998; Frank, 1985; Ferrer, 2007; Gimeno, 2009; Sabo & Michael, 1996; Standley, 1992; Weber, Nuessler, & Wilmanns, 1997), decreasing anxiety and pain during radiation treatments and other medical procedures (Clark et al., 2006; Cook, 1982; Kwekkeboom, 2003; Smith, Casey, Johnson, Gwede, & Riggin, 2001), and increasing motivation, well-being, physical comfort, and exercise endurance of bone marrow transplant patients (Boldt, 1996; Sahler, Hunter, & Liesveld, 2003). Several studies investigating the effects of music-assisted relaxation techniques demonstrated decreased anxiety and pain (Colwell, 1997; Davis & Thaut, 1989; Hammer, 1996; Hanser, 1997, 1999; Kaempf & Amodei, 1989; Krout, 2001; Robb, 2000a; Saperston, 1999, Stordahl, 2009). Additional studies investigating music vibration (Michel & Chesky, 1994; Chesky & Michel, 1997) and music entrainment techniques (Dileo & Bradt, 1999; Rider, 1985) also demonstrated positive effects for pain reduction and muscle relaxation.

Several studies' findings support the use of active or expressive music therapy experiences in the oncology setting. In one of the earliest studies, Bailey (1983) compared the effects of live versus tape recorded music and found live music was more effective in reducing anxiety in cancer patients. Bailey (1984) also presented two case studies describing the use of songs in music therapy, reporting that they were a supportive agent for change. More recently, O'Callahan (1996a, 1996b, 2001) studied the lyrical themes in songs written by patients and emphasized the importance of creative expression as a music therapy experience. Dileo (1999b) also identified songs as a method to meet the bio-psychosocial-spiritual needs of oncology

patients, and Logis and Turry (1999) provide a case study in which singing enabled the patient to "face the cancer" (p. 97). Miller and Dimiceli-Mitran (2005) emphasized the importance of meeting not only the physical needs of cancer patients, but also their emotional, spiritual, psychosocial, and existential needs through both receptive and active music making interventions.

In addition to empirical research studies, authors have implemented surveys about the use of music in medical settings (Daykin, Bunt, & McClean, 2006; Kruse, 2003; Michel & Chesky, 1995), provided anecdotal accounts of music's benefits in oncology (Bellamy & Willard, 1993; Komara, Heiser, Shawler, & Branson, 1995), and studied music therapy's relevance through various qualitative methods (O'Callaghan, 2007; O'Callaghan & McDermott, 2004; O'Callaghan & McDermott, 2007). Recent literature concerning interdisciplinary collaboration (Bunt & Marston-Wyld, 1995; Hirsch & Meckes, 2000), patient interest, preferences, and procedures (Burns, Sledge, Fuller, Daggy, & Monahan, 2005; O'Callaghan & Colegrove, 1998), and cultural differences in music chosen for pain relief (Good, Picot, Salem, Chin, Picot, & Lane, 2000) provide information directly relevant to current clinical practice. Of particular interest are studies regarding the positive immunological effects of music on healthy subjects (Bartlett, Kaufman, & Smeltekop, 1993; Kuhn, 2002; McKinney, Antoni, Kumar, Tims, & McCabe, 1997), as these provide further substantiation of music's potential for therapeutic use.

Although earlier literature focused on anecdotal and case study reports, there has been an increase in experimental research to provide scientific and quantifiable support for music therapy's efficacy. While physiological measures, such as immunological, are an increasing trend in studies, the importance of measuring the effect of music therapy on aspects of quality of life for cancer patients remains a strong emphasis. Both quantitative and qualitative research paradigms in the music therapy literature will continue to reflect these equally important aspects

of treating the "whole" person and further evidence-based practice and research (Abrams, 2010).

As previously mentioned, several authors have examined research results through meta-analyses (Dileo & Bradt, 2005; Pelletier, 2004; Standley, 2000) and systematic literature reviews (Evans, 2002; Gillen, Biley, & Allen, 2008; Hilliard, 2005; Nillson, 2008; Pothoulaki, MacDonald, & Flowers, 2005, 2006) of music therapy and medical literature. It was consistently noted that, in many of the studies reviewed, further study and replication with larger sample sizes were recommended before attempting to generalize findings.

Most recently, a Cochrane systematic review of evidenced-based literature examined music interventions for improving psychological and physical outcomes in cancer patients (Bradt et al., 2011). Included in the review were 30 randomized controlled trials (RCTs) with interventions provided by medical staff (music medicine) and by trained music therapists (music therapy). Findings indicated that music interventions have potential beneficial effects on anxiety, pain, mood, and quality of life in persons diagnosed with cancer. Beneficial effects were also found on heart rate, respiratory rate, and blood pressure. The small number of trials prevented further conclusions, and the authors recommended that more research be conducted to investigate the effect of music interventions provided by trained music therapists. Bradt et al. (2011) further noted that there is a lack of detail reported in studies concerning music selections used and procedures for selection, and recommended more research examining the relationship between duration and frequency of interventions and treatment effects.

The body of research in music therapy and related medical fields is growing, as is the need for accurate interpretation of results and subsequent clinical applications. Studies have demonstrated positive effects of music on pain, anxiety, and other physical aspects of healing in cancer patients. Additional studies reported evidence of the importance of interactive and

expressive experiences to provide opportunities for psychological and emotional healing. A critical look at studies examining the effects of music interventions on physical, psychological, social and existential-spiritual quality of life in individuals with cancer revealed a need for further research and guided this study's purpose and goals.

Effects of Music Therapy on Pain, Nausea, and Emesis

A predominant research focus in the 1980s and 1990s was on the physical effects of cancer and/or its treatment. In several studies, the severity of nausea and emesis (vomiting), side effects from chemotherapy and radiation, was measured. Pain resulting from the cancer itself or from medical procedures also was measured frequently in studies.

Curtis (1986) investigated the effect of music on pain relief and relaxation on nine cancer patients using three conditions of no intervention, background sound, and music. A modified graphic rating scale measured pain relief, physical comfort, relaxation, and contentment. The music intervention for this study was a 15-minute tape of patient preferred calming music made by a music therapist. Each condition was provided twice per day, 1 to 3 hours following medication, for 10 days. Measures were taken after each intervention. No significant differences were found; however, contentment scores approached significance ($p < .069$) under the music condition.

Zimmerman et al. (1989) studied the effects of music on chronic cancer pain. Two groups of 20 patients ($N = 40$) were assigned randomly to either control or music conditions. Patients in the music group received their preferred type of relaxing music, along with the suggestion that the music would help them relax and reduce their pain. The music intervention was a 30-minute tape of patient preferred music chosen from 10 types of instrumental music provided by the nurse-researcher. Measures were taken 30 minutes after each intervention. Pain was significantly

reduced for the music group ($p < .001$), as measured by both the *MacGill Pain Questionnaire* (*MPQ)* and a visual analog scale (VAS).

Beck (1991) also used both the *MPQ* and VAS to measure cancer related pain in 15 patients. Randomly-assigned subjects listened to either their preferred relaxing music or sound (a low frequency 60-Hertz hum). The music intervention consisted of a 45-minute tape of patient preferred music. Relaxing music was chosen from seven music categories selected by a music therapist, including classical, jazz, folk, rock, country and western, easy listening, and new age. Measures were taken before and after listening. A significant effect on pain was found for both music and sound therapies ($p < .005$), and, although not statistically significant, the mean percentage of change in pain was twice that for music as for sound.

Studies that implemented physical measures for nausea/emesis or combined nausea and pain used a VAS, a Likert "Feel Bad Scale," and a Thermometer Scale (vertical 0-100 scale). Standley (1992) studied the effects of music on nausea and emesis (vomiting) in 15 patients receiving chemotherapy. Data collected by observation included each patient's finger temperature, facial color, body motion, verbal anxiety, assessment of nausea, and occurrences of emesis. Preferred music was selected by patients from a collection of over 80 tapes of musically diverse styles belonging to the music therapist-researcher. It was anecdotally reported that many patients preferred music without words. Observation and data collection were implemented four times during chemotherapy treatments: immediately when entering, just before the infusion, 15 minutes after chemotherapy began, and at the end. Patients in music groups reported less nausea with later onset than patients in no music groups.

Ezzone et al. (1998) investigated the use of music during chemotherapy with 33 patients undergoing bone marrow transplants. Patients randomly assigned to the music intervention group

listened to self-selected music for 45 minutes at 6, 9, and 12 hours after their infusion. Self-ratings were recorded at baseline and every 8 hours using a Thermometer Scale and a Likert "Feel Bad Scale," which included five ratings ranging from "Not Bad" to "Terrible." The experimental group (n = 16) reported significantly less nausea and vomiting than the control group (n = 17; $p < .017$).

Sahler et al. (2003) also studied the effect of music with relaxation imagery on bone marrow transplant patients, measuring both pain and nausea. The 45-minute, music-assisted relaxation interventions were provided twice per week by a board-certified music therapist. Measures included pre- and post-assessments of pain and nausea using a VAS. Significant differences were found in decreased self-reported pain ($p < .001$) and nausea ($p < .004$) in the treatment (n = 23) versus control (n = 19) groups. Time-to-engraftment, the point when donor cells begin to reproduce in the recipient, with the music group was 13.5 days compared to 15.5 days in the control group, and this difference was statistically significant ($p < .01$).

The psychological concepts in which these studies' results were grounded are sound from the viewpoint of behavioral research: biopsychosocial interactions, such as the effect of distraction to reduce the perception of physical symptoms and the use of music as a successful distraction stimulus (Sarafino, 2008). The affective component of pain is hypothesized to be higher in cancer patients than patients suffering from other physical pain (e.g., low back pain), and it was reported that the *MPQ-Affective* scale was more strongly associated with psychological distress measures than those of pain intensity (Ahles et al., 1983, cited in Jensen, 2003). Due to music's affective impact, the effects of music therapy may be measured most appropriately by both an intensity and affective pain instrument to reflect the mechanisms by which music can assist in reducing pain.

Anxiety and Mood Effects of Music Therapy

Research measuring anxiety and mood became more prevalent in studies published from 1983 to 2008, particularly those in the 2000s. The two most prevalent measures for psychological or emotional states of cancer patients in studies included the *State-Trait Anxiety Inventory (STAI;* Speilberger, 1983) and the *Profile of Mood States (POMS;* McNair, Lorr, & Droppleman, 1981). The psychological concepts in which *STAI* and *POMS* results are grounded are well documented: the impact of cancer diagnosis and treatment creates a psychosocial response of distress, anxiety, and depressed mood (Meyerowitz & Oh, 2009). Music listening can be utilized to counteract stress and anxiety, promoting relaxation and wellness (Krout, 2007). Medical music therapy is therefore therapeutically indicated as a psychosocial treatment in cancer care.

Researchers have explored the effects of music therapy interventions on anxiety in persons with cancer for nearly 30 years. Frank (1985) studied the effects of music therapy and guided visual imagery on nausea and vomiting induced by chemotherapy. Nurses provided recorded music selections to 15 subjects during and after chemotherapy in a pre-post test design. The music provided consisted of five cassette tapes created by the nurse-researcher that served as an accompaniment to five posters of environmental scenes. Each tape was 60 minutes and given to patients based on the environmental scene they chose. State anxiety was significantly reduced ($p < .001$), as measured by *STAI*, indicating music therapy may be a useful strategy to decrease anxiety.

Sabo and Michael (1996) evaluated the effects of music that including a recorded personal message from patients' physicians, on anxiety of 47 patients receiving chemotherapy. Music in this study is described as "pre-selected" electronic harp music that included a doctor's

verbal message of encouragement. A significant difference ($p < .001$) was found between pre- and post-intervention scores on *STAI*. Findings indicated that music with a physician's personal message may be a cost-effective intervention provided by nurses to decrease anxiety in patients receiving chemotherapy.

Weber et al. (1997) studied the effect of receptive music listening on reducing anxiety of 33 cancer patients undergoing chemotherapy. Patients in the study reported difficulties completing *STAI* due to the severity of their illnesses and the emotional upheaval the questions elicited. Out of 33 patients in the study, 21 died during treatment. Researchers concluded that further investigation was recommended, however, due to the positive verbal response from patients concerning music therapy.

Smith et al. (2001) investigated the effects of music on 42 patients receiving radiation therapy, comparing an experimental group receiving music listening ($n = 19$) and a control group receiving standard care ($n = 23$). Patients selected music from various categories, such as rock and roll, classical, easy listening, and others. Four to six tapes were provided in the category chosen and given to patients for listening during radiation therapy. It should be noted that 15% of subjects did not receive their first choice of music listening category due to availability issues. No significant difference was found between group pre-post-*STAI* scores. However, post-hoc analyses identified trends that may indicate possible benefits of early interventions of music listening for patients with high levels of anxiety.

Kwekkeboom (2003) compared 58 patients' pre- and post-intervention *STAI* scores in three groups receiving medical procedures related to their cancer treatment: a music group ($n = 24$) receiving preferred music to listen to, a distraction group ($n = 14$) receiving their choice of a book on tape, and a control group ($n = 20$) receiving treatment as usual. Music is described in

this study as preferred music selected from a variety of music styles provided by the nurse-researcher, such as pop, rock, religious, jazz, blues, and country. No significant differences were found between groups. The researcher reported that some patients indicated a desire to attend to their medical procedures rather than be distracted.

Burns et al. (2008) investigated the effects of music imagery on anxiety for 49 adults with acute leukemia receiving chemotherapy in isolated, protective environments. A music imagery group ($n = 25$) received education from a board-certified music therapist on music imagery and relaxation and recordings of music imagery exercises for daily use. A control group ($n = 24$) received standard care. Both groups' *STAI* scores significantly improved over time ($p < .001$). However, it was found that, in a subgroup of individuals with low negative affect at baseline, those receiving music imagery reported significantly less anxiety at discharge than those receiving standard care.

Several studies investigated the effect of music therapy on mood. Bailey (1983) studied the effects of live music (singing and guitar playing) versus tape-recorded music on 50 hospitalized cancer patients. Pre- and post-test *Profile of Mood States* (*POMS)* scores for live and taped music were compared. This study's procedure consisted of a music therapist's live playing and singing of 16 songs versus a tape of the music therapist playing and singing the same songs. The music therapist was also present during the listening of the tape. Patients chose songs they wished to hear in both situations. Significantly less Tension-Anxiety ($p < .05$) and more Vigor were reported by subjects receiving live music than those receiving taped music.

Burns (2001) investigated the effectiveness of Guided Imagery and Music (GIM) on mood and quality of life of eight cancer patients. An experimental group received 10 weekly individual sessions of GIM from a board certified music therapist. Results showed that subjects

in the experimental group (n = 4) scored higher on post-test *POMS* scores than those in the wait-list control group (n = 4). Additional measures at a six-week follow-up also showed higher scores for experimental versus control groups.

In a repeated measures/counter-balanced design, Waldon (2001) studied the effect of group music therapy on mood states and cohesiveness in adult oncology patients. Group members (N = 10) participated in eight music therapy sessions, including "music making" and "music responding." *POMS-Short Form* was used to measure changes in mood states, and findings indicated significant improvement in pre-to post-scores in all sessions of both types. Total mood disturbance mean scores significantly decreased from pre- to post-test ($p < .0001$). "Music listening" was defined as listening to a song performed by a board certified music therapist and participating in re-writing lyrics or improvising on instruments. "Music responding" was defined as listening to a song performed by a board certified music therapist and participating in discussion, relaxation, or imagery exercises.

Cassileth et al. (2003) investigated the effect of music therapy sessions on mood disturbance of 69 patients undergoing autologous stem cell transplantation, a common treatment for hemotologic malignancies. Patients randomly assigned to the treatment group (n = 36) received individualized music therapy sessions with a board certified music therapist, while the control group (n = 33) received standard care. *POMS* measures were administered every three days from Day 0 (1-3 days before the procedure) until Day 16. Compared with the control group, patients in the music therapy group scored 28% lower on the Anxiety/Depression scale (p = .065) and 37% lower on the total mood disturbance score (p = .01).

Clark et al. (2006) studied the use of listening to preferred music to reduce emotional distress and symptoms in 63 patients during radiation therapy. A board-certified music therapist

interviewed patients in the experimental group to identify styles of music they perceived as most effective for relaxation or distraction. Patients then listened to a 45-minute individualized tape of preferred music at any time during the course of radiation treatment, particularly when their anxiety, pain, fatigue, or depression increased. Symptoms were measured at baseline, mid-point, and end of radiation therapy using distress and pain NRSs, *POMS* Fatigue scale, *Hospital Anxiety and Depression Scale (HADS)*, and the Relaxation Strategies Questionnaire. Results were significant over time with the experimental group ($n = 35$) reporting lower anxiety ($p < .05$) and lower current distress ($p < .001$) than the control group ($n = 28$). The evidence in this study also suggested that higher "doses" of music, regulated by the patient, positively impacted emotional response to radiation therapy.

Physical, Psychological and Immunological Effects of Music Therapy

Additional studies used multiple measures to assess physical and psychological effects of music interventions on adult cancer patients. Other measures used included the *HADS*, Distress and Pain NRSs, and Relaxation Strategies Questionnaire, used by Clark et al. (2006) with *POMS*-Fatigue. Likewise, Burns et al. (2008) used the *Positive Affect Negative Affect Scale*, *Functional Assessment of Chronic Illness Therapy-Fatigue*, and Imagery Use Journal in conjunction with *STAI*.

Ferrer (2007) investigated the effect of live music on anxiety in 50 chemotherapy patients, randomly assigned to experimental ($n = 25$) and control ($n = 25$) groups. The experimental group patients received 20 minutes of familiar live music from a board certified music therapist during their chemotherapy. Pre- and post-test measures included blood pressure, heart rate, and a VAS measuring anxiety, fear, fatigue, relaxation, worry, and comfort. Significant results were found for the experimental group in anxiety, fear, fatigue, relaxation, and diastolic blood pressure

measures ($p < .05$).

Burns, S. J. et al. (2001) compared the effects of music listening while relaxed with active music improvisation on positive emotions and immune systems of 29 cancer patients in a music therapy group setting. Pre- and post- test measures included the *UWIST Mood Adjective List* and salivary levels of Secretory Immunoglobulin I (SIgA) and cortisol. Results indicated increased well-being and relaxation during listening experiences, increased well-being and energy during improvisation, and decreased tension during both. Increased SIgA levels were measured after listening experiences, and decreased cortisol levels resulted after both listening and improvisation, providing physiological findings that support the psychological changes reported.

Both SIgA and cortisol are considered markers of immune system functioning. The psychoneuroimmunological paradigm proposes that the immune system mediates a relationship between psychological factors and disease through endocrine processes, and that cortisol is the key hormone affecting stress-related immune system changes (Stefanek & McDonald, 2009). Prior to the use of immunological measures, mental states were assessed by observation or patient self-report, and, although tests developed to measure anxiety and mood have established reliability and objective validity, the ability to measure a hormone avoids potential problems found with test administration for observation/self-report.

Research in medical music therapy centers on the physical and mental effects of music on the human body. The mind-body connection has become more recognized in medical literature as studies have shown the impact that mental states have on the body, and conversely, physical states have on the mind (Sarafino, 2008). These interactive aspects are difficult to separate, but, for research purposes, studies with cancer patients have primarily focused on measuring

components of pain, nausea, anxiety, and mood.

There is a growing body of research providing evidence of the effectiveness of music interventions in medical settings. Due to increasing awareness of the impact of emotional states and coping skills on healing, the medical profession is finding it therapeutically indicated, as well as cost effective, to address issues faced by cancer patients with psychosocial therapies. As the biopsychosocial aspects of illness continue to develop as a focus in research, studies are needed to recommend best practices for music medicine and music therapy interventions. Increasing the body of knowledge in music therapy is essential in providing the best treatment for patients and guiding future research concerning aspects of coping and the spiritual and existential needs that music therapy may impact. One area of potential impact needing further investigation is the post-treatment needs of individuals transitioning from cancer patient to cancer survivor.

Social Support in Cancer Survivorship

Coping with a stressful life event, such as breast cancer, can be assisted greatly by social support found in support groups (American Cancer Society, 2008) and other psychosocial interventions (Kissane, et al., 2003; Meyer & Mark, 1995; Michalec, 2005), such as supportive-expressive group therapy (Spiegel, 2011; Spiegel et al., 2007). Supportive-expressive group therapy developed out of Yalom's (1995) model of existentially-based group psychotherapy. Yalom outlined existential concerns of freedom, isolation, meaninglessness and death, which are highly relevant to individuals facing cancer diagnosis, treatment, and survival. In supportive-expressive group therapy, cancer patients receive social support in a group environment in which they can face fears and express feelings freely.

Music and other creative arts therapists have adapted support group and supportive-

expressive therapeutic group approaches with cancer patients and survivors (Allen, 2010; Dvorak, 2011; Furioso, 2003; Kenny & Faunce, 2004; Lubrano di Ciccone, Floye, & Kissane, 2007; Rykov, 2008; Serlin, Classen, Frances, & Angell, 2000; Waldon, 2001), incorporating both active and receptive music therapy techniques. Most recently, Dvorak (2011) examined the effects of cancer patient and caregiver participation in music therapy support groups on their physical, psychological, and social functioning. The music therapy support group (n = 21) showed a significant improvement in mood (as measured by *POMS*) and a significant decrease in anxiety (as measured by *STAI-S*). Allen (2010) investigated the effects of group music psychotherapy compared with a cognitive behavioral support group on improving the self-concept of breast cancer survivors, finding a significant improvement on measures of identity, role performance, self-esteem, and body image. The lack of studies in this area underscores the need for further research in music therapy group approaches with cancer patients and survivors.

Music Therapy Approaches

Music therapy models provide frameworks for implementation of active and receptive interventions, such as creative song improvisations in Nordoff-Robbins Creative Music Therapy (Turry & Turry, 1999), Analytic Music Therapy (Scheiby, 1999), and The Bonny Method of Guided Imagery and Music (GIM; Bonde, 2005; Burns, 2000; Burns, 2001; Justice & Kasayka, 1999; McKinney & Clark, 2003). Active, or expressive, interventions may include music making, such as singing or instrument playing, music improvisation, and songwriting. Receptive interventions may include music listening, music-assisted relaxation, and forms of music with guided imagery.

Active Music Therapy Approaches: Improvisational Music Therapy

Bruscia (1987) wrote extensively on various models of improvisational music therapy and explained that improvising in music therapy "is inventive, spontaneous, extemporaneous, resourceful, and it involves creating and playing simultaneously" (p. 5). Nordoff-Robbins Music Therapy, or Creative Music Therapy, is a seminal improvisational music therapy approach developed by composer Paul Nordoff and special educator Clive Robbins. Nordoff and Robbins' (1977) collaboration from 1959 to 1977 served to "lead into a deeper and more extensive realization of the therapeutic possibilities that musical experience and activity hold" (p. xiii).

Creative Music Therapy involves being "in-the-moment," during which the therapist improvises music or songs responding to material taken from clients' inner concerns and/or "here-and-now" issues. The therapist responds musically, while the client moves, sings, listens, and/or plays their own musical instrument(s). Clinical goals include creating a portrait of sound of the client's inner self; providing a musical context in which the client's natural expression can be experienced as purposeful; reflecting the aesthetic quality of the client's expressions; providing expressive, cognitive, and other developmental challenges to the client; and manifesting underlying affect (Aigen, 1996, 1997; Nordoff & Robbins, 1977).

A second major model of improvisational music therapy, Analytic Music Therapy (AMT), was founded by Mary Priestley (1994), who defined AMT as "the analytically-informed symbolic use of improvised music by the music therapist and client. It is used as a creative tool with which to explore the client's inner life so as to provide the way forward for growth and greater self-knowledge" (p. 3). In Priestley's clinical work, she attempted to "combine a psychoanalytical and psychotherapeutic understanding of the transference phenomena between the client and the therapist with the understanding of meaning and form of expressions in

musical improvisations" (Wigram, Pedersen & Bonde, 2002, p. 122). The music, therefore, may elicit client emotional awareness and insight, providing material that may then be verbally processed. This advanced level of treatment modality "aims at letting the client obtain deep insight, integration and transformation of complex psychological problems" (Wigram et al., p.125).

Receptive Music Therapy Approaches: Music and Imagery

Supportive Music and Imagery is an approach derived from Guided Imagery and Music (GIM; Bonny, 1989, 1994), which incorporates techniques designed for wellness, stress reduction, and pain management for well adults (Summer, 2007). Another adapted approach is Re-educative Music and Imagery, which is insight-oriented. According to Summer (2008), "it raises single issues, and the music experience holds a client in the issue in order to gain new, deeper perspectives on it; this leads to change" (p. 6).

Music and Imagery sessions include the following components: Prelude: A verbal check-in regarding the client's current state and follow-up from previous session. Transition: Discussion and decision making with the client concerning a positive inner resource (positive coping skills and/or personal supportive resources) to include in the induction. The therapist decides which music to be used during induction. Induction: The therapist verbally facilitates the client's experience in three parts, including centering/relaxation (body, breath, inner focus), describing the image of supportive resources, and providing a connection from the image to the music. Music: The therapist plays 5 to 20 minutes of "supportive" recorded music that has been chosen to match the client's positive coping skills and/or personal supportive resources.

Characteristics of supportive music include repetitive musical themes, narrow melodic ranges and regular rhythms, and slower tempos. The client is provided art materials as an avenue

to visually represent images. These visual representations are called mandalas. According to Bonny and Kellogg (2002), the procedure of drawing a mandala consists of "having subjects use colored oil pastels to fill a pencil-outlined circular area of about ten inches in diameter… to allow the client an opportunity to make a concrete representation of certain non-verbal elements of his music experience" (p. 208). Postlude: The therapist assists the client in verbally processing the experience-to describe it, connect with feelings, find meaning, and make it useable in everyday life.

Although no previous studies of Supportive Music and Imagery have been reported, several case studies and articles have been published in the music therapy literature since the 1980s concerning the use of GIM in clinical settings (Bonny, 1989, 1994; Peach, 1984) and with various client populations, such as adults with psychiatric impairments (Goldberg, 1989; Summer, 1994), the elderly (Summer, 1981), hospice patients (Wylie & Blom, 1986), individuals with brain damage (Goldberg, Hoss, & Chesna, 1988), individuals with AIDS (Bruscia, 1991), adult survivors of child abuse (Ventre, 1994a, 1994b), healthy adults (McKinney, Antoni, Kumar, Tims, & McCabe, 1997), and more recently, cancer patients (Burns, 2001) and cancer survivors (Bonde, 2005, 2007). Group music and imagery techniques have been developed by Summer (1981, 1988, 2002), Short (1992), Blake and Bishop (1994), Goldberg (1994), and Justice (1994).

Because active and receptive music therapy experiences engage the psyche in the moment, enabling access to subconscious/unconscious conflicts, participant self-awareness is increased, allowing for processing, resolution, and healing through a transformative psychological experience. Active and receptive music therapy approaches have continued to evolve as effective methods for developing therapeutic relationships with a variety of client populations in various settings and in both individual and group sessions.

The initial purpose of this research was to investigate the effectiveness of music therapy group interventions on mood, psychosocial well-being, and quality of life in breast cancer survivors. Study questions included the following:

(1) What was the effect of group music therapy on the overall quality of life of breast cancer survivors in post-treatment survivorship?

(2) What were the differential effects of group music therapy on the quality of life domains of physical, psychological, social, and spiritual well-being?

(3) Were the intervention effects sustained over time?

CHAPTER III

METHOD

Participants

Recruitment of Participants

Participants were recruited from medical providers in the metropolitan Detroit and East Lansing, Michigan areas. The study was approved by the Michigan State University Institutional Review Board (IRB). A recruitment flyer describing the study (see Appendix A) was distributed to hospital cancer centers, cancer support organizations, and individual physicians and nurses over a 6-month time period. The recruitment process yielded three women breast cancer survivors as participants, and all were assigned to the treatment group ($N = 3$).

Eligibility Criteria

Inclusion and exclusion criteria were designed to control for confounding variables that may affect responses to treatment interventions, such as the presence of cognitive or psychiatric impairment or concurrent participation in other psychosocial therapies. These criteria were drawn from other studies investigating survivorship issues (Allen et al., 2009; Meneses et al., 2007) and provided for a potentially more homogeneous group for therapeutic purposes.

Inclusion criteria. Criteria for inclusion included the following:

1. Women, aged 21-65, previously diagnosed with Stage 0-II breast cancer[1];
2. Participation in the study within one month (to recover from immediate side effects of surgery, radiation therapy, and/or chemotherapy) to one year post-treatment;

[1] Stage 0 describes non-invasive breast cancers, Stage I describes invasive breast cancer in which the tumor measures up to 2 centimeters and no lymph nodes are involved, and Stage II describes invasive breast cancer in which the tumor measures no more than 5 centimeters and has spread to the axillary lymph nodes, or measures larger than 5 centimeters but has not spread to the axillary lymph nodes (Breastcancer.org, 2010).

3. Ability to speak, read and write in English (in order to complete self-report measures);

4. Abstinence from recreational drug and cigarette use; alcohol intake of no more than 10 drinks per week;

5. Intact mental/cognitive functioning.

Exclusion criteria. Exclusion criteria included the following:

1. Previous history of acute psychiatric illness;

2. Presence of advanced, metastatic, or recurrent disease at diagnosis or treatment;

3. Current participation in other individual or group counseling, psychotherapy, or psychosocial support groups.

Consent and Approval

To ensure the rights of participants, written and informed consent was obtained. In the original study design, a wait control group was to be used to address the ethical considerations of denying potentially helpful treatment and to assist with participant retention. Wait control group participants were to receive treatment following post treatment follow-up measures. An insufficient number of participants were recruited to implement the wait control group.

Procedures

Recruitment

Immediately upon IRB approval in August, 2010, the investigator proceeded to recruit volunteers for the study (Appendix A). The recruitment flyer and general information concerning the logistics of the Music Therapy Group for Breast Cancer Survivors was distributed via email and social media to music therapists and other medical/complementary therapy professionals (physicians, nurses, massage therapists, art and dance/movement

therapists), hospital cancer centers, hospital and community support groups and organizations (i.e., Beaumont Hospital Silver Linings Breast Cancer Survivor Group and Gilda's Club), and Michigan State University College of Music and Community Music School-Detroit. When no volunteers were recruited within 4 months, recruitment efforts were expanded to include the East Lansing, Michigan area, and length of survivorship was extended to 2 years post-treatment. An article was also published in a local metropolitan Detroit newspaper in January, 2011, announcing the study. A total of 10 volunteers were recruited in January and February, 2011.

Protocol

Upon initial contact via email or phone, volunteers received information concerning the study purpose, inclusion and exclusion criteria, and time commitment. A Volunteer Contact Letter, Volunteer Eligibility Form, and Participant Contact Form (Appendices B, C, D) were completed at this time.

Once eligibility was determined, participants received a Participant Letter (Appendix E), Informed Consent Form (Appendix F), and Demographic Questionnaire (Appendix G) to obtain demographic and self-reported medical information. All medically relevant information collected was from self-report. Volunteers did not receive payment for their participation in the study.

Attrition of the 10 volunteers yielded only three participants completing the study. Of the original 10 volunteers, six agreed to participate; however, two dropped out because they either did not want to drive downtown where the interventions occurred or could not afford gas, and one dropped out on the day of the first group because she did not want to "revisit the breast cancer experience." Two other volunteers did not reply after their initial inquiry; one

stated a schedule conflict, and one decided not to participate because she felt having breast cancer was actually a positive experience, making her a poor subject for the study. Due to the low number of enrolled participants, a wait control group could not be formed.

Setting

Group music therapy sessions were held at Michigan State University's Community Music School-Detroit (CMS-Detroit) Music Therapy Clinic. CMS-Detroit is located in the cultural and medical center areas of the city, approximately 0.5 miles from one of two NCI-designated comprehensive cancer centers in Michigan. The Music Therapy Clinic is equipped with musical instruments, including drums, Orff instruments, tuned and non-tuned percussion instruments, guitars, keyboard and a CD/mp3 player. Sessions were scheduled when no other music school activities were occurring in the building, resulting in no ambient sound or activity to disrupt therapeutic experiences.

Data Collection and Measures

Instruments for the original dependent measures included the *Profile of Mood States-Short Form* (*POMS-SF*; McNair, Lorr, & Droppleman, 1981), *Quality of Life Cancer Survivors Scale* (*QOL-CSS*; Ferrell, Dow, & Grant, 1995), and *Coping Resources Inventory* (*CRI*; Hammer & Marting, 1988). Outcome measures for the *POMS-SF* were taken pre-test, after every session, and at the 2-week follow-up. Measures for the *QOL-CSS* and *CRI* were taken at pre-test, post-test, and 2-week follow-up time points. A researcher-designed Music Therapy Questionnaire (see Appendix H) was administered concerning participants' experiences after the final session. Participants were also invited to provide additional comments when completing 2-week follow-up measures.

***Profile of Mood States-Short Form* (*POMS-SF*)**

The *POMS* (McNair et al., 1981) consists of 65 five point adjective rating scales that are factored into six mood scores: Tension-Anxiety, Depression-Dejection, Anger-Hostility, Vigor, Fatigue, and Confusion. A score for Total Mood Disturbance is determined by adding the scores across all six factors, with the Vigor factor weighing negatively. A shorter version, the *POMS-SF* was developed by Shacham (1983) to address test fatigue of cancer patients. Baker, Denniston, Zabora, Polland, and Dudley (2002) examined the internal consistency, validity and factor structure of the POMS-SF and reported Cronbach's alphas for each of the six subscales and for the total 37-item shortened scale ranging from 0.78-0.91.

Quality of Life Cancer Survivors Scale* (*QOL-CS)

The *QOL-CS* (Ferrell et al., 1995) uses a 10-point rating scale to measure 46 items of quality of life in domains of physical, psychological, social, and spiritual well-being. The test-retest reliability has been measured to be 0.89 and the internal consistency Cronbach's alpha was 0.93 (Ferrell et al., 1995; Ferrell, Hassey-Dow, Leigh, Ly, & Gulasekaram, 1995). Physical domain questions address the respondent's physical symptoms, such as fatigue or pain, on a scale of 0 (no problem) to 10 (extreme problem). Examples of questions in the psychological domain include "How difficult is it for you to cope today as a result of your disease?" and "Has your illness or treatment caused changes in your self concept (the way you see yourself)?" Examples in the social and spiritual domains are "Is the amount of support you receive from others sufficient to meet your needs?" and "Do you sense a purpose/mission for your life or a reason for being alive?" respectively (Ferrell et al., 1995).

Coping Resources Inventory (CRI)

The *CRI*, developed by Hammer and Marting (1988), measures ways people handle stress

in cognitive, social, emotional, spiritual/philosophical, and physical domains. It can be completed in approximately 10 minutes and is considered a valid standardized measure in coping research. Examples of statements that participants respond to on a Likert-type scale (never or rarely, sometimes, often, always or almost always) include, "I actively look for the positive side of people and situations" (cognitive domain); "I am part of a group, other than my family, that cares about me" (social domain); "I can cry when sad" (emotional domain); "I know what is important in life" (spiritual/philosophical domain); and "I have plenty of energy" (physical domain).

Music Therapy Questionnaire

The Music Therapy Questionnaire was designed by the investigator to allow participants to share information about their experiences as a music therapy group member (Appendix H). Participants were asked to provide answers to the following open-ended questions:

"Describe what this experience has been like for you."

"What was most helpful or meaningful for you?"

"What was least helpful or meaningful for you?"

"Is there anything else you would like to share about your experience?"

Music Therapy Questionnaires were completed at the end of the final session. Participants also had the opportunity to add information when completing measures at the 2-week follow-up time point.

Session Videotapes

Sessions were videotaped with participant permission. Once the treatment protocol was completed, the investigator transcribed session videotapes for participant quotations. Due to the small number of study participants, the data collected from the videotape transcriptions gained in

importance, as it was necessary to shift the focus of the study to qualitative measures.

Treatment Protocol

The group met for 90 minutes each week for 6 weeks. At the beginning of the initial session, *POMS-SF*, *QOL-CS*, and *CRI* forms were completed. These measures were repeated at the end of the final session. Additional time was added to these sessions to account for the measures. The *POMS-SF* also was completed after each session. The Music Therapy Questionnaire was completed at the final session concerning participants' experiences (Appendix H). Follow-up measures were administered two weeks after the final session by mail, at which time additional comments were invited. A Follow-up Letter to Accompany Music CD (Appendix I) was included with follow-up measures, along with a CD of the music used in the sessions for participants' personal use. This letter outlined the content of the six sessions, and was intended to assist participants in recalling sessions. See Table 1 for data collection time points.

Table 1

Data Collection Time Points

Week # Session #	***POMS-SF***	***CRI***	***QoL-CS***	**Music Therapy Question-naire**	**Videotape**
Week One Session #1	Participants 1 & 2	Participants 1 & 2	Participants 1 & 2	x	yes
Week Two Session #1	Participant 3	Participant 3	Participant 3	x	yes
Week Three Session #2	Participants 1, 2, & 3	x	x	x	yes
Week Four No Session	No session held.	No session held.	No session held.	No session held.	No session held.
Week Five Session #3	Participants 1, 2, & 3	x	x	x	yes
Week Six Session #4	Participants 2 & 3	x	x	x	yes
Week Seven Session #5	Participants 1, 2, & 3	x	x	x	yes

Table 1 (cont'd)

Week Eight Session #6	Participants 1 & 3	Participants 1 & 3	Participants 1 & 3	Participants 1 & 3	yes
Week Nine	n/a	n/a	n/a	n/a	n/a
Week Ten 2-Week Follow-up	Participants 1, 2, & 3	Participants 1, 2, & 3	Participants 1, 2, & 3	Participants 1, 2, & 3	n/a

Music Therapy Interventions

Treatment interventions included both active and receptive music therapy techniques, as deemed appropriate for the needs of the group during a particular session. Active experiences included music making, such as singing or instrument playing, music improvisation, and improvisatory songwriting (Bruscia, 1987; O'Brien, 2005; Wigram, 2004, 2005). Receptive experiences included music listening, music-assisted relaxation, and forms of music with guided imagery (Bruscia & Grocke, 2002; Grocke & Wigram, 2007). The therapist-investigator is a board-certified music therapist with advanced training in both improvisational and music imagery techniques, through workshops, graduate level courses and Association of Music and Imagery approved trainings (Level I: Supportive Music and Imagery and Level II: Re-Educative Music and Imagery).

Group Music Therapy Session Experiences

Session experiences provided a non-threatening introduction to active and receptive music therapy experiences for participants who may not have had formal music training or who may not have participated in group therapy previously. No formal music training was needed for participation in music therapy; however, it may have influenced individual music preferences due to lack of exposure to particular genres, such as classical music. The therapist-investigator pre-selected the musical selections, except for music sharing by participants, when they brought

music recordings from their personal collections. For directed imagery experiences, the therapist-investigator used adapted guided imagery scripts from a therapy related publication (Stevens, 1971).

Group "check-in." A brief verbal "check-in" with group members occurred at the beginning of each session to determine if there were any immediate needs or issues to explore. Participants were encouraged to reflect on the time period since the previous session, and if they wished, share any thoughts or feelings.

Active music therapy techniques. A variety of non-tuned and tuned percussion instruments were available in the clinic for group members to use, and an electronic piano and drum set was also in the room. Examples of active techniques included the following:

Musical expression as metaphor. Instruments were used to "introduce" group members, during which an instrument was chosen by participants to represent themselves. The group member played the instrument and explained its significance or meaning to the group.

Group music improvisation. Group members were invited to take a moment to reflect and center themselves before commencing with a group music improvisation. Improvisations lasted from 5 to 10 minutes, after which the group members were invited to process their experiences verbally along with any affective or emotional material the music-making may have elicited or revealed. Improvisations sometimes were based on a theme, such as life before and after cancer diagnosis, their "cancer journey," or were presented as free improvisation.

Songwriting. Improvisatory songwriting was incorporated using a song structured with repetitive verses, to which group members each added a new lyrical word or phrase.

Receptive music therapy techniques. Music recordings were played on a CD player in the music therapy clinic. Sessions were held during times when no ambient noise was present to

interfere with listening or music imagery experiences. Examples of receptive techniques included the following:

Music listening. Participants were asked to bring examples of recorded music that were particularly helpful or meaningful to them during their cancer treatment or journey. Music selections were explained, and then listened to by the group.

Music and imagery. Group participants were invited to get into a comfortable position in their chairs while engaging in music and imagery experiences. Music imagery experiences always included a relaxation induction led by the therapist-investigator, which was followed by either undirected or directed imagery to music. Participants always were given an opportunity to draw a mandala at the end of the music imagery. Mandalas are concrete visual representations of images or non-verbal elements of the music experiences (Bonny & Kellogg, 2002). Participants then shared their drawings and imagery experiences, including any thoughts, sensations or feelings that surfaced.

Group processing and closure. Verbal processing and group discussion continued through the end of some sessions, and other sessions ended with a closing song sung either by the therapist-investigator or the group. Participants were invited, but not required, to write about their experiences in a personal journal in between sessions. Journal writing was thought to assist in the personal processing of improvisational and imagery experiences. One participant reported the use of journaling at one point toward the end of treatment.

As previously mentioned, music therapy interventions included both active and receptive music therapy techniques, as deemed appropriate for the needs of the group. Participants were also included in the decision-making, and were invited during one session to make a group decision between active or receptive experiences. See Table 2 for a summary of group music

therapy session experiences.

Table 2

Summary of Music Therapy Group Session Experiences

Session	Active and Receptive Experiences including Type of Imagery and Music Selection
Session 1	Use of instruments to introduce ourselves Music & Imagery: Relaxation induction and free imagery Haydn: *Cello Concerto*
Session 2	Use of instruments to introduce ourselves Music & Imagery: Relaxation induction "Store and Swapshop" directed imagery Kobialka: *Lullaby* Closing Song: "*Shalom Chaverim"*
Session 3	Music Sharing: Music personally meaningful or helpful during treatment or after. Music & Imagery: Relaxation induction "Wise Woman" directed imagery Copland: *Rodeo, Corral Nocturne*
Session 4	Music & Imagery: Relaxation induction "Seashore" directed imagery Howard White: *Ocean Song* Closing Song: "*Ocean"* w/ ocean drum & rainstick
Session 5	Drumming/Music Improvisation Music & Imagery: Relaxation induction "Safe Place" semi-directed imagery Unknown Artist: *Waterfall Creek*; Lindstead: *Illusion*
Session 6	Drumming/Music Improvisation Music & Imagery: Relaxation induction and free imagery Unknown Artist: *Waterfall Creek*; Webb & Charmichael: *Drake's Drum* Closing Song: Improvisatory songwriting: *"So Glad I'm Here."*

Research Design and Data Analyses

The number of participants was insufficient for a randomized controlled trial, the use of inferential statistics, or an experimental design. Analyses of demographic information and music therapy questionnaires were completed using descriptive statistics. Although not included in the original design, session videotapes were transcribed and analyzed for salient themes that addressed study questions. The additional qualitative data acquired through the Music Therapy Questionnaire and session videotapes were utilized to provide anecdotal evidence of treatment effectiveness that was not obtainable through traditional statistical analyses.

From my stance as a qualitative investigator, I implemented a modified qualitative case study method including the following steps, derived from Smeijsters and Aasgaard (2005), and Creswell (2007):

1. I selected to study the experiences of three breast cancer survivors during six music therapy group sessions.

2. I defined the research goal to determine the effectiveness of music therapy group interventions on mood, psychosocial well-being and quality of life of three breast cancer survivors, including the differential effects on their physical, psychological, social, and spiritual well-being.

3. I selected a modified qualitative case study research method linked to the research goal.

4. I used techniques attempting to fulfill trustworthiness criteria, such as repeated analysis checks. I transcribed videotapes and reviewed transcriptions more than once to ensure accuracy.

5. I used triangulation by collecting multiple sources of data, including transcribed participant statements and observed behaviors from videotapes, and written participant statements from questionnaires.

6. I used a method of content analysis to code data (transcribed participant statements). I identified units of analysis as participant statements or observable behaviors, and developed objective descriptive phrases to categorize them. I completed a categorical aggregation of phrases into themes. I repeated the content analysis on a separate occasion for trustworthiness.

7. I attempted to draw conclusions about the benefits of group music therapy for the three breast cancer survivors by discussing how the identified themes related to their mood, psychosocial well-being and quality of life, including domains of physical, psychological, social, and spiritual well-being.

CHAPTER IV

RESULTS

The original purpose of this research was to investigate the effectiveness of music therapy group interventions on mood, psychosocial well-being, and quality of life in breast cancer survivors. These purposes are still reflected by the qualitative shift the study took. Study questions included the following:

(1) What was the effect of group music therapy on the overall quality of life of breast cancer survivors in post-treatment survivorship?

(2) What were the differential effects of group music therapy on the quality of life domains of physical, psychological, social, and spiritual well-being?

(3) Were the intervention effects sustained over time?

Analyses of demographic information and music therapy questionnaires were completed using descriptive statistics. Session videotapes were transcribed and analyzed in a modified qualitative case study research design for salient themes that addressed mood, psychosocial well-being and quality of life, including domains of physical, psychological, social, and spiritual well-being of three breast cancer survivors.

Demographic Information

An extensive recruitment process yielded only three participants. Participant characteristics varied in some aspects, most notably, their ages (50, 61, 35) and race/ethnicity (Caucasian, African-American, Hispanic). These three women included Christine (a pseudonym), a 50 year-old Caucasian woman; Martha (a pseudonym), a 61 year-old African American woman; and Beatriz (a pseudonym), a 35 year-old Hispanic woman. See Table 3 for participant demographic information.

Table 3

Participant Demographic Information (N = 3)

Characteristic	Christine	Martha	Beatriz
Age	50	61	35
Race/Ethnicity	Caucasian	African-American	Hispanic
Number of Children/Ages	Two children Ages 24, 27	Four children Ages 30, 34, 39, 42	No children
Marital Status	Married	Married	Married
Education	College Degree	Some College	College Degree
Employment Status	Part-Time	Part-Time	Unemployed
Household Income/Year	(blank)	$75,000 or more	$75,000 or more
Cancer Stage at Initial Diagnosis	II	0	III II at recurrence
Surgery	Lumpectomy	Lumpectomy	Mastectomy with Reconstruction
Radiation	Yes	Yes	Yes
Chemotherapy	No	Yes	Yes
Hormonal Therapy	No	No	Yes
Time since End of Treatment	13 months	19 months	12 months
Support Services Received	Support Group	Individual Counseling	Support Group Individual Counseling
Religious affiliation/background or Spiritual Practice	Christian	Baptist	Catholic

Christine, a 50 year-old Caucasian woman, completed breast cancer treatment 13 months prior to the music therapy group. Her cancer had gone undetected for some time and when discovered, was Stage II. Treatment included a lumpectomy and radiation.

Martha, a 61 year-old African-American woman, completed treatment for 0 Stage breast cancer 19 months prior to the music therapy group. She underwent a lumpectomy, and received both radiation and chemotherapy treatments.

Beatriz, a 35 year-old Hispanic woman, had a recurrence of her breast cancer, most recently completing treatment 12 months prior to the music therapy group. Her initial breast cancer presented at Stage III, and Stage II at recurrence. She experienced a mastectomy with breast reconstruction, radiation, chemotherapy, and hormone therapy.

Qualitative Analysis of Findings

Units of analysis were participant statements or observable behaviors that directly related to the effectiveness of music therapy group interventions on mood, psychosocial well-being and quality of life of three breast cancer survivors, including the differential effects on their physical, psychological, social, and spiritual well-being. The final study question, whether the intervention effects were sustained over time, was addressed through the follow-up questionnaire.

I used a method of content analysis to code data (transcribed participant statements or observable behaviors), and developed objective descriptive phrases to categorize them. I aggregated the phrases into categories that were developed into themes (see Table 4). I repeated the content analysis on a separate occasion for trustworthiness. I then drew tentative conclusions about the benefits of group music therapy for the three participants by discussing how the identified themes related to their mood, psychosocial well-being, and quality of life, including domains of physical, psychological, social, and spiritual well-being.

Table 4

Identified Themes and Objective Descriptive Phrases to Categorize Participant Statements

Themes	**Objective Descriptive Phrases**
Impact of Cancer/ Survivorship Experiences	hidden/buried/repressed feelings or emotions lack of sense of control aloneness/limitations of social support sense of loss physical depletion slow healing and recovery (ongoing) loss of breasts/loss of femininity depression repressed anger/sadness/fear loss of identity/self-concept/self-worth inadequacy of social support loss of medical support at the completion of treatment ongoing slow recovery mixed emotions protecting loved ones from true experience communication challenges with family and friends unexpressed feelings unhappy with physical appearance psychological stress fear of recurrence uncertainty concerning the future
Effects of Music	need for silence at height of cancer treatment use of music to cope or change mood playing instrument provided gauge of physical endurance music to cope and for emotional expression motivation for survival (goal to attend concert of favorite artist) use of music for spiritual support use of music to evoke motivation to overcome
Effects of MT Techniques: Active	musical instruments/sounds served as metaphors for experience instruments/sounds elicited associations, memories and emotions music improvisation provided a metaphor for new behaviors music improvisation elicited associations with experiences playing new instruments provided metaphor for trying new things
Effects of MT Techniques: Receptive	music elicited imagery that served as a metaphor for experiences music listening evoked associations and emotions

Table 4 (cont'd)

Benefits of MT Group	being in the group provided support feeling better because of group participation helping to cope with anxiety, stress and sadness providing an outlet for self-expression provided feelings of being understood and not judged provided an opportunity for self-care provided an opportunity to work/focus on self provided an opportunity to see others' problems provided an opportunity to not feel alone opened up buried feelings, and expressed them or let them go facilitated moving beyond a survivor identity reflecting on experiences in group furthered recovery felt good to be in a group and not alone
Observable Participant Behaviors	use of humor was present in all sessions emotional expression (crying) was present in at least 3 sessions verbal expression of anger, frustration, uncertainty and fear

Major Themes

The Impact of Cancer on Quality of Life: Physical, Psychological, Social, and Spiritual

A major identified theme was that cancer affected all aspects of quality of life and extended into survivorship. Participants described the immense impact their cancer diagnosis and treatment had on their lives. This theme was prominent particularly during early sessions, when participants were sharing their cancer experiences. When asked about the experience of taking the pre-test study measures, which contained questions related to mood, coping, and aspects of breast cancer survivorship, Martha shared it was difficult because she had "buried" her cancer experience. Christine shared feelings of not being in control. She stated that she didn't feel in control, but admitted she had reported differently on her pre-test measures.

Regarding the physical impact of cancer treatment, participants emphasized the inability to describe the depth of their fatigue. Christine shared, "I felt like I had an instrument, but… I couldn't make any noise because I had to heal." Adverse side effects of chemotherapy and

radiation took all available energy for participants. Christine reported that radiation "took everything out of me" and that she is still recuperating over a year later. When asked to bring music that was personally meaningful during cancer treatment, a common theme was of the need for silence during the height of treatment. All energy was needed for healing, and she shared "you can't take any more in."

In terms of psychological and social impact, cancer diagnosis and treatment brought significant emotional stress, including worry, sadness, fear and depression. Socially, participants reported feeling alone, with Beatriz disclosing that she simply had no energy to reach out to others during treatment. Once treatment ended, participants experienced challenges with the loss of regular medical attention and support. Beatriz shared, "I remember missing all the nurses and doctors…where is everyone?" and with expectations from family and friends: "They want us to have our life like before…I wasn't ready." In fact, one common theme was protecting loved ones from their true cancer experience.

Experiencing cancer impacted spiritual and existential meaning for group members, with Christine sharing that "having cancer has made me more assertive on what I want and don't want to do…" Although some of this impact was viewed as positive, extreme physical changes, including their breast surgeries or loss of their breasts, left participants with feelings of reduced femininity and self-worth: "I want my life to be worth something but I don't know what that is," and "What does my family think of me now…What exactly is my worth?" Christine also shared music with religious lyrics that she found spiritually supportive during cancer treatment.

All participants reported burying or repressing their feelings and having difficulty expressing them, sharing statements like Martha's: "What I really want to get out of this is to

open up," and Christine's: "I haven't had a chance to be angry about it." Beatriz said she wanted "…to see if I can bring everything out cause it still hurts."

The Use of Music to Influence Mood and Express Emotions

The second major identified theme was that participants preferred silence during cancer treatment and/or used music listening to influence mood and express emotions during cancer treatment and recovery. Participants shared personal experiences regarding their cancer recovery and relationship to music and described using music listening at times to reflect or express their mood. Group members discussed the impact of music on mood and use of music for emotional expression. Music recordings that participants reported using frequently had religious, spiritual, or motivational aspects reflected in lyrics.

Christine reported that soothing music was better at the beginning of her recovery. She did not want to hear words. "I just couldn't focus." When feeling depressed, she listened to Christian music that helped her mood, but she did not want to go to church "if I couldn't sing." During treatment, she reported, "I didn't want to listen to anything."

Martha reported that she listened to music before cancer but not after. "I just wasn't feeling it…" She also did not listen to music during treatment. "At that time, nothing made me feel better." If she listened at all, it was to gospel music. She also reported her granddaughter "draws her into music" and decided to participate in Early Childhood Music classes with her at the community music school where this study was conducted.

Beatriz reported that she listens to music "if I feel sad, or if I want to feel sad." She also shared music recordings with themes of overcoming challenges ("I have to get up and continue fighting this…"), perseverance, and freedom ("I'm praying and waiting to be free of all the stress and worries…sickness brings.") that she found motivational during recovery.

Music Therapy Techniques Increased Self-Awareness, Emotional Expression, and Insight

The third major identified theme was that music therapy techniques provided opportunities for increased self-awareness, emotional expression, and insight. Both active and receptive techniques facilitated these opportunities that frequently led to therapeutic change.

Active techniques. Participants used instruments to express or represent feelings during music therapy experiences. Christine hit the gathering drum while shouting, "Wham!" to express how she felt when she was diagnosed with breast cancer. She also chose an ocean drum to describe how she felt during her cancer experience because it could be "gentle" or "crazy" and because you "don't see all that's inside." The ocean drum has one clear head revealing numerous small metal beads that sound like ocean waves when the drum is played. Another time she used it to represent "finding balance" and gently tilted it to guide the beads symmetrically around its perimeter.

Martha chose the tambourine because it would "move or stop when I want it to." She explained feeling out of control throughout her cancer experience and shared, "I have to bring whatever it is inside of me out."

Certain instruments evoked particular cultural associations, as Beatriz, who chose a cabasa, agogo bell, and tambourine explained, "This is Mexico…going to parties." The instruments reminded her of family and friends, and she picked up each instrument and played as she spoke and tearfully reminisced.

Musical expression frequently served as a metaphor for personal experiences and provided insight. During a music improvisation, participants were grouped around seven large floor drums and three cymbals. The therapist-investigator "conducted" the improvisation to reflect a "journey" as an example for the group. Following the improvisation, Beatriz shared "…I

wanted to be in a group and I realized that I want someone to be leading… It's easier to follow and be in the group, than to be alone."

Martha said, "I think…I was doing my own thing!" (laughing) "When I was doing this [playing ocean drum] I was just thinking about my whole life…it just was a wave…it made me think about everything… some of it good, some of it not so good…Things are opening up to me I never dreamt possible…I guess I just locked them up, put them away. It [the drumming] was good."

Comments shared by Beatriz revealed that she identified and associated aspects of musical interactions with her life. "It sounds nice being a group. Whatever new sounds come along…I wasn't expecting; sometimes in my life new things come along." "Something new is going to happen in my life, but it's okay; I can deal with that." "When I changed drums, I felt like I can…discover new things and feel good about it…"

Receptive techniques. Music and imagery experiences also provided participants with increased self-awareness and personal insight. A variety of experiences were used, including both directed and free imagery. Musical selections also varied from classical selections to instrumental selections, including one with ocean sounds. Beatriz responded to a classical music selection with associations with "old-fashioned history and My Grand Uncle." "I can sense the smell of old things in the house."

Directed imagery was used to facilitate the experience for participants. One guided story was of walking at night in the rain, seeing an abandoned object in an old store, then choosing an item in another shop and having to give something in return. A non-classical music instrumental selection was played during this imagery experience.

Beatriz chose a cameo locket with a female profile. “Maybe I want to be like that-calm and pretty and elegant.” As she shared her imagery experience, she stated “I kind of lost something of myself …so I want that…I want to be pretty.” She later concluded, “I am a jewel…take care of me.”

Another guided story was of climbing a mountain trail to a cave in which a woman is sitting in front of a fire. The participant realizes it is her future self. She then asks her future self an important question.

Participants all experienced difficulty imagining their future. “My life’s a path and I feel like it’s kinda uphill right now…” Martha asked her future self, “When is all this gonna get better?” and her answer was “Kneel down and pray with me.” Beatriz could not imagine herself as the wise woman because “she’s too old!” (laughing). She asked her future self, “If I will live long enough…I don’t think I will…she didn’t say yes directly to me.” She tearfully shared, “I don’t know how to handle dying young and leaving everyone else.”

After they shared imagery experiences, participants were asked to imagine themselves in five years. Discussion included fears of cancer recurrence, establishing a new post-cancer identity, ongoing recovery, and difficulty imagining the future.

Yet another guided story was of walking at the seashore and looking out to see something moving toward the shore. Participants’ images served as metaphors for themselves or their experiences, and led to personal insights. Both emotional expression (tearfulness) and humor occurred during discussions.

Martha laughed, saying “Seashore? What am I doing here? I don’t even like water! “Oh, okay, I can see a boat…I see all these clouds around the boat; everywhere else is clear and sunny…I said well…is it that my life is [pause] nothing’s clear to me. It’s just all so uncertain

and I just couldn't get past that…" "I guess it means I have a lot of things I need to get clear, clarify, clean out, whatever." When asked what she might use as a title for her drawing, she said "I saw this uncertainty coming, I mean, clouds coming out. Maybe I'll call it uncertainty [laughing]… hmmm, I sorta like this imagery stuff!"

Beatriz' object that came to shore was a piece of wood. "I thought about all of the struggles that this piece of wood had, just to come to this shore…I thought about this piece being alone in the sea…with storms and waves…" She saw beauty in it and decided to give it a home. "I want to be free, feeling peace…I'm talking about home inside of me." "It's incredible…It was a complete tree, but now it's just a piece of wood and it's still a survivor…I lost some part of me and I'm still here. I lost many things, my body…but I can still be pretty to some eyes…" The journey of the tree was a poignant metaphor for this participant's cancer journey.

Another imagery experience implemented non-classical instrumental music for relaxation induction and guided imagery directing participants to "imagine a place you feel safe." More time was allowed for free imagery during the music without being directed. Two participants had difficulty imagining a safe place, which was upsetting to them.

Beatriz reported she "could not find a safe place. I was kind of upset about it…. I thought about a trip." "I think I'm confused now with what safe is, because I haven't felt like that in a long time." She reported disappointment and sadness that her home was not seen as her "safe" place. Martha said "I couldn't think of a safe place, either…. I just didn't find a safe place anywhere." She stated she was looking forward to the imagery, but "no, I didn't find" a safe place.

Christine had a more positive experience, but felt she was only "observing" herself (not fully in the image). She described her image of colors "spiraling together, and then… I just felt

all that energy and the music. I just really liked that." The colors became silks and she observed herself outside dancing with them in a gazebo. Although the image generated a positive feeling, she was frustrated that she "was just watching" herself.

The images elicited by receptive experiences reflected physical, psychological, social and spiritual quality of life domains, and often provided participants an alternate view or metaphor for their experience. Upon discussion and further reflection of images, including their mandala drawings and titles, participants frequently described therapeutic insights.

For the final session's music and imagery experience, participants were directed to "allow yourself to experience the music" and "let the music take you where you need to go." Comments included "I just liked the music…it kind of flowed…" "I was just thinking of that peaceful serene feeling… just listen to the music." "Thinking of cousin's wedding… I saw myself smiling and enjoying the time." "The music was nice, and you let us free!" (laughing) This final experience provided for enjoyment and closure.

Group Music Therapy Provided Social Support and Validation

The fourth major identified theme was that participation in the music therapy group provided social support and validation, enhanced coping skills, and served as an outlet for emotional expression. Participants spoke frequently about what they were experiencing in the music therapy sessions. "We can express ourselves in a different way" with music. "It's something about the music that makes me feel better." Beatriz felt the group was important to be understood and "freely talk about how I feel." "I feel more free to talk… about the things that bother me." "This therapy is helping me to feel better with the anxiety, stress and the sadness…" "…I feel I have a place where I can talk freely, not being judged by anyone and people who really understand the problem…" The music therapy group "helps to see someone else's

problems so you can see that you're not alone….we all feel the same in most ways, and it doesn't matter the age or where you are from."

Martha became more talkative and open as sessions progressed, and shared that "it feels good" to be doing something for herself. "In fact, since I've been coming here, I could feel myself letting go of some of the issues that've been with me…" "I have to admit since coming here I feel I've improved a lot. Thank you!"

Christine shared, "It's brought out some things that I've buried." "All through my treatment…I tried to keep up a good attitude and fight…. I never let myself feel the pit and the bottom, so part of that I still need to work on."

During the final session, Beatriz said, "I wish we could extend it. It's working…I'm starting to remember a lot of things I put aside…I'm starting to release some of the feelings that I had deep. They're coming out. I'm glad I did all I'm doing. I think you're great!" Group members shared themes of working through buried emotions, and also readiness to move past cancer patient and survivor identities.

The music therapy group also provided for camaraderie. At one session, group members participated in a free music improvisation with floor drums and variety of non-tuned percussion instruments that lasted eight minutes. This shared interactive group music experience provided a sense of enjoyment and cohesion. "That was fun!" Humor was interjected with Christine stating, "I feel more in tune with each other. Last week we didn't know what to expect. Just think what would happen if we met next week...cut a CD!" In fact, in addition to emotional expression of sadness (tearfulness), laughter and the use of humor were present in every session. One example of an interchange between participants occurred during a discussion about breast reconstruction

appearance: “They’re supposed to be sisters, not twins”… “But I’d like some family resemblance!”

Shared music experiences also occurred when participants were given instruments to play during a song the therapist sang with guitar accompaniment at the end of a session. Songs were chosen to provide closure for particular sessions, and to reflect and reinforce the session content. Comments included, “That was wonderful” and “That was nice,” reflecting the affirmation of music-making with others.

Participant Verbal Feedback

After the final session post-tests were completed, participants spontaneously provided unsolicited positive comments about their experiences in music therapy group, including Christine, saying, “It was good to just see things in a different light; just look at the same things, but in a different way. It was good.”

Beatriz shared, “I really enjoyed it; it was really nice!...It was really helpful, like you [referring to other participant] said, see things in a different way and a lot of things I didn’t think about. I really, really liked it; I enjoyed it a lot. So it’s sad it’s only six sessions!”

Analysis of Music Therapy Questionnaire

Additional participant statements acquired through the Music Therapy Questionnaire provided anecdotal evidence of treatment effectiveness that was not obtained through traditional statistical analyses. The two-week follow-up questionnaire also addressed the study question of whether treatment effects were sustained over time (see Tables 4 through 7).

Question 1 asked participants to describe their experience in the music therapy group. Post-test and follow-up responses reflected enhanced physical, psychological, and social domains of quality of life, including relaxation and reflection, not feeling alone, and insight

about feelings and experiences (see Table 5).

Table 5

Participant Responses to Music Therapy Questionnaire at Post-Test and Follow-Up

Question 1: Describe what this experience has been like for you.	
Participant 1: Christine	
Post-Test:	"Helpful to relax and reflect- to be more in the moment. Enjoyed the music."
Follow-Up:	No response
Participant 2: Martha	
Post-Test:	Absent
Follow-Up:	"This experience taught me that there are others that feel the way I do about being a breast cancer survivor. I was a little anxious to attend because I never attended group therapy before and I didn't know what to expect. I appreciated the sessions and I would attend again."
Participant 3: Beatriz	
Post-Test:	"It was a great experience. I loved the way that Jody guided us by the guided imagery. I really could see myself at different places and discovered many feelings."
Follow-Up:	"I enjoyed this therapy a lot. During the sessions I was able to see and understand things I did not know I had experienced during treatment."

Question 2 asked participants to describe what was most helpful or meaningful for them about their experience. Responses included the imagery, talking about shared experiences with other group members, self-expression of feelings, feeling respected, and discovering feelings (see Table 6).

Table 6

Participant Responses to Music Therapy Questionnaire at Post-Test and Follow-Up

Question 2: What was most helpful or meaningful for you?	
Participant 1: Christine	
Post-Test:	"Imagery."
Follow-Up:	No response
Participant 2: Martha	
Post-Test:	Absent
Follow-Up:	"Talking about the experiences we shared. Helped me to open up a lot and talk about my feeling(s) and how I was handling or coping with my life after breast cancer."
Participant 3: Beatriz	
Post-Test:	"I enjoyed everything. I loved that I felt respected and that I could express many feelings."
Follow-Up:	"The most meaningful was to see other patients with my same feelings and frustrations. I discovered many feelings at the sessions like feeling lonely, unworthy or positive ones like lovely or valuable."

Question 3 asked participants what was least helpful or meaningful about their experience. All responses described the experience as positive, except for one group member who said she might have been more comfortable without the presence of the video camera (see Table 7).

Table 7

Participant Responses to Music Therapy Questionnaire at Post-Test and Follow-Up

Question 3: What was least helpful or meaningful for you?	
Participant 1: Christine	
Post-Test:	"Even though the camera was very unobtrusive I think I might have been more comfortable without it."
Follow-Up:	No response
Participant 2: Martha	
Post-Test:	Absent
Follow-Up:	"I didn't find anything that was least helpful. Everything I experienced was on a positive note."
Participant 3: Beatriz	
Post-Test:	"I enjoyed everything. Every activity had a meaning."
Follow-Up:	"The therapy was great."

The final Question 4 was open-ended and invited participants to share anything else they wanted to about their experience. Responses included being able to reflect on emotions and feelings, see things in a different way, unlocked something inside, and overall appreciation and enjoyment of the experience (see Table 8).

Table 8

Participant Responses to Music Therapy Questionnaire at Post-Test and Follow-Up

Question 4: Is there anything else you would like to share about your experience?	
Participant 1: Christine	
Post-Test:	"Would have liked more time on different instruments – but I am also the one who wanted more imagery! The sessions helped me to reflect on my emotions and consider feelings."
Follow-Up:	"Thanks Jody! I am very interested in the results of the study when you are finished."
Participant 2: Martha	
Post-Test:	Absent
Follow-Up:	"I enjoyed the imagery and I will work on them sometimes. Thank you Jody for helping me to see things in a different way."
Participant 3: Beatriz	
Post-Test:	"I am really happy that I participated. It helped me a lot."
Follow-Up:	"I miss this experience. I think I was able to unlock something inside of me."

Participant responses for all questions, when available, were consistent between post-test and two-week follow-up, providing anecdotal support for the lasting effects of treatment, at least short-term. Comments reporting the positive effects of music therapy group were also consistent between participants' transcribed videotape statements and their written statements. These positive effects may be regarded as even more impactful when considering the short treatment period, time between sessions, and sessions with an absent group member (see Table 9).

Table 9

Group Attendance

Week # Session #	**Participant 1: Christine**	**Participant 2: Martha**	**Participant 3: Beatriz**
Week One Session #1	x	x	Not recruited yet.
Week Two Session #1	Waiting for 3rd participant.	Waiting for 3rd participant.	x
Week Three Session #2	x	x	x
Week Four No Session	No session held.	No session held.	No session held.
Week Five Session #3	x	x	x
Week Six Session #4	Absent due to illness.	x	x
Week Seven Session #5	x	x	x
Week Eight Session #6	x	Absent due to illness.	x
Week Nine			
Week Ten	Two-week follow-up measures.	Two-week follow-up measures.	Two-week follow-up measures.

Although the results for quantitative measures were not statistically significant, the qualitative data, including transcribed statements and written responses to the Music Therapy Questionnaire, consistently indicated the effectiveness of group music therapy for study participants. Findings included the following themes:

1. The impact of cancer affected all aspects of quality of life and extended into survivorship.

2. Participants preferred silence during cancer treatment and/or used music listening to impact mood and express emotions during cancer treatment and recovery.

3. Music therapy techniques increased self-awareness, emotional expression and

insight, leading to therapeutic change.

4. Participation in music therapy group provided social support and validation, enhanced coping skills, and served as an outlet for emotional expression.

These findings support the effectiveness of a music therapy group intervention on mood, psychosocial well-being and quality of life of three breast cancer survivors who were participants in the study. Positive effects were documented for all quality of life domains, including physical, psychological, social, and spiritual well-being, and were sustained over at least over a short-term period of time.

CHAPTER V

DISCUSSION

The initial purpose of this research was to look at the perceived benefits of a music therapy group intervention on mood, psychosocial well-being, and quality of life of breast cancer survivors. Study aims were (a) to examine the effect of group music therapy on the overall quality of life of breast cancer survivors in post-treatment survivorship; (b) to determine the differential effects of group music therapy on the quality of life domains of physical, psychological, social, and spiritual well-being; and (c) to examine whether the intervention effects were sustained over time.

Clinical Themes: Interpretation and Implications

The varying demographic aspects of the group provided concerns about internal validity of this particular study; however, those same aspects did not prevent the development of a clinically cohesive and therapeutic group. As previously mentioned, one participant stated, "We all feel the same in most ways, and it doesn't matter the age or where you are from." This cohesiveness developed quickly during the period of six sessions, considering there were only three sessions in which all participants were present.

Both transcribed participant statements and written responses to the Music Therapy Questionnaire consistently indicated the potential benefits of group music therapy, even with logistical and internal validity challenges. Major themes gleaned from these data suggested that:

1. The impact of cancer affected all aspects of quality of life and extended into survivorship;

2. Participants preferred silence during cancer treatment and/or used music listening to impact mood and express emotions during cancer treatment and recovery;

3. Music therapy techniques increased self-awareness, emotional expression and insight, leading to therapeutic growth and change; and

4. Participation in music therapy group provided social support and validation, enhanced coping skills, and served as an outlet for emotional expression.

These findings support the efficacy of a music therapy group intervention on mood, psychosocial well-being and quality of life for three breast cancer survivors who were participants in the study. Positive benefits were documented for all quality of life domains, including physical, psychological, social, and spiritual well-being, and were sustained at least over a short-term period of time.

These findings further suggest implications for the field of music therapy concerning service delivery in the treatment and aftercare of cancer patients. Interpretations of these findings suggest (1) the importance of aftercare and cancer survivorship services; (2) the power of music and the need for its informed therapeutic application; and (3) the impact of group support and potential effectiveness of short-term music therapy groups.

Importance of Aftercare and Cancer Survivorship Services

One finding in this study was the extended recovery needs for these breast cancer survivors in quality of life domains, up to 12-19 months post-treatment. This finding is supported in the medical literature, as researchers have increasingly examined the traumatic experience of cancer diagnosis and treatment, recognizing it as post-traumatic stress disorder (PTSD; Butler, Koopman, Classen, & Spiegel, 1999; Smith, Redd, Peyser, & Vogl, 1999). In fact, the American Psychiatric Association DSM-IV (2000) identifies the diagnosis of life-threatening illness as an event that may precipitate PTSD. Elkit and Blum (2011) found PTSD diagnosis to be highly relevant in oncology settings, with an even higher incidence of delayed onset PTSD one year

after breast cancer diagnosis.

After the physical aspects of cancer treatment are addressed, the psychosocial aspects remain and may even increase in survivorship. Music therapy may provide an effective psychosocial treatment for survivorship needs.

Power of Music and the Need for its Informed Therapeutic Application

While music interventions have been documented as beneficial during cancer treatment (Bradt et al., 2011), two of the participants in this study reported that music was not tolerated at the height of treatment. This information reinforces the importance of patient preference in music selection, and that music interventions could be contraindicated for some individuals. This has implications, not only for trained music therapists, but also for medical staff providing listening experiences for patients using pre-recorded music. This is supported in the Bradt et al. (2011) meta-analysis of 30 RCTs of music interventions for improving psychological and physical outcomes in patients with cancer, in which further research is recommended to compare the effects of music therapy versus music medicine interventions.

In this study, music therapy experiences, both active and receptive, provided opportunities for group participants to gain self-awareness of their internal conflicts, perceive and understand them "in a different way," and finally, express and work through them. See Figure 1 for a visual representation of this process. It should be noted that the "music intervention" in Figure 1 encompasses a broad spectrum of experiences. It could be self-administered, as when participants reported they played particular music to change or express their mood ("If I feel sad, I just play music… and sometimes if I want to feel sad, I play music, too!"). It could also be a music medicine intervention (music listening experiences provided by medical staff) or a music therapy intervention, such as group music psychotherapy or the Bonny

Method of Guided Imagery in Music. It is crucial that these interventions are applied in an informed manner, at the appropriate dosage and point of time in cancer treatment and recovery, to be optimally effective for the patient.

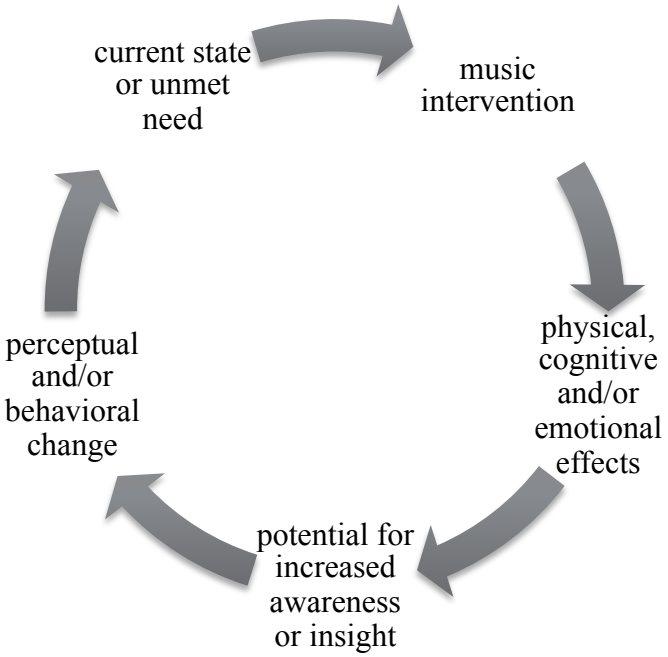

Figure 1. Therapeutic process resulting from music therapy interventions.

Impact of Group Support and Effectiveness of Short-Term Music Therapy Groups

Participants in this study commented on the benefits of being with other breast cancer survivors in the music therapy group, that it "helps to see someone else's problems so you can see that you're not alone…" Cancer support groups are commonly offered by hospitals, cancer treatment centers, and cancer organizations (American Cancer Society, 2008). These groups vary in structure, and can be facilitated by professionals or survivors themselves. They may be structured by type of cancer, meet weekly or monthly, be "open" for anyone to attend, and be on-going or time-limited. Research studies have shown participants in support groups have improved quality of life (American Cancer Society, 2008).

The structure of a short-term psychotherapy group differs in that it is focused on more in-depth personal growth, led by a trained therapist, and attendance is limited to the group members (Yalom, 1995). A traditional "support group" may provide important social support and validation, but the direction/structure provided by a professional therapist/group leader provides a therapeutic "container" permitting group members to work through issues and problems.

The combination of various music experiences or interventions, active and receptive music therapy techniques, and individual or group work provide opportunities for enhanced personal coping and psychosocial well being for patients from diagnosis through survivorship. Individuals may "cycle" through different needs at various points throughout their cancer treatment and survivorship journeys, but what is crucial is that the music intervention is individually designed and applied in an informed manner. Music therapists are uniquely situated to provide this expertise because they have mastered competencies in their education, training, and research.

Limitations

Results of this study revealed perceived benefits of group music therapy on mood, psychosocial well-being, and quality of life for three breast cancer survivors. Although participant response was uniformly positive, it is important to consider the following study limitations, including insufficient sample size, recruitment difficulties, study design limitations, and investigator as therapist.

Insufficient Sample Size

A major consideration is the study sample size ($N = 3$). The sample size was not sufficient for the use of inferential statistics and a randomized controlled trial. Sample size has been a challenge for the field of medical music therapy in the establishment of a database

providing evidence of effectiveness. Sufficient sample sizes are necessary to achieve adequate statistical power. Even significant results are not generalizable with a small sample and lack of a control group.

Recruitment Difficulties

Recruitment for this study was challenging, and possible reasons for this can only be surmised. As previously mentioned, some individuals who initially indicated interest in participating declined or withdrew due to transportation issues. These issues included cost of gas, travel distance, and driving "downtown" to an urban area of a large city. Although it was communicated that participants were able to park in a secured garage with on-site guards, some women may have felt unsafe.

Other logistical challenges making recruitment difficult included schedule availability and time commitment. Women may be interested in participating in a group, but have limited availability due to the time previously devoted to breast cancer treatment and recovery. It is possible their work and family responsibilities preclude participation in after-care services focusing on non-medical needs. Perhaps they feel pressure from family and friends, or even themselves, to "get back to normal" and put the cancer experience behind them. As mentioned earlier, one potential participant for this study declined because she did not want to "revisit the cancer experience" and one had experienced her cancer as positive and felt she would "not be a good study subject."

In addition, breast cancer survivors may have ongoing physical challenges related to post-treatment, such a fatigue or side effects of prescription medications or hormones. They may simply not have the physical and emotional energy to reach out and commit to participation in group therapy. Participants in this study commented on the lasting post-cancer treatment effects,

such as fatigue, and the extended recovery time from these factors.

The location of this study's music therapy group could be considered unconventional, in that it was at a university-affiliated community music school. Although the group was held during an afternoon when no other music ensemble rehearsals, classes, or lessons were scheduled, participants may have felt uneasy in a non-medical setting. On the other hand, the benefit to this setting may also be that it is non-medical, providing a more normalizing environment. Returning to a cancer center may bring back memories of treatment of which survivors may not want to be reminded.

As cancer survival rates increase, so does the need for after-care and survivorship services in the community. Universities are concurrently increasing their outreach and engagement in communities, including in areas of research (Fitzgerald, Burack, & Seifer, 2010a, 2010b). Community Music Schools with board-certified music therapists on staff may be an appropriate venue for these services in the future. As a university-affiliated site, located less than 0.5 miles from the Medical Center area of the city, this study's location seemed favorable. The fact that the music therapist was not working directly with medical professionals in an oncology setting may have made recruitment more difficult; however, recruitment difficulties for cancer clinical trials are found in recent literature (Pasket, Katz, Tatum, & Tatum, 2009), so it may not have been beneficial.

This study's recruitment difficulties are consistent with the literature (Alfano & Rowland, 2009), in which barriers to support group participation are identified as both practical (transportation or distance from home) and psychological (lack of support or encouragement from significant others, lack of perceived usefulness, and fear of stigma). In fact, Hewitt and Rowland (2002) found only 7.2% of cancer survivors took advantage of mental health services,

such as support groups.

Study Design Limitations

In addition to the small sample size, there were internal validity concerns related to this study that were unavoidable. Due to the difficulty in recruitment of subjects, the inclusion and exclusion factors were adjusted to include women within 1 to 2 years post-treatment. The recovery experience of a survivor at 3 months post-treatment compared to a survivor at 24 months could be drastically different and threaten the internal validity of a study. Participants in this study were within 12 to 19 months post-treatment, however, so this was not a concern.

Participants in this study differed in other aspects, including race/ethnicity (Caucasian, African American, and Hispanic), employment status, cancer stage at initial diagnosis (Stages 0, II, and III), surgery (lumpectomy, and mastectomy with reconstruction, plus recurrence of breast cancer) and treatment methods (use of radiation, chemotherapy, and hormonal therapy). Participants also reported use of other support services, including previous participation in individual counseling and other support groups. One subject disclosed in the fourth session that she had resumed individual counseling, which was initially unknown to this investigator. Although she reported that her experience in the music therapy group was helpful in her progress in individual counseling, results could not be attributed solely to the music therapy intervention.

Another aspect to consider is that all demographic and medical history information was obtained by self-report, and participants may have withheld information due to privacy concerns or tried to please the music therapist. Participants reported use of hormonal therapy as a breast cancer treatment, but it was unknown whether other prescription drugs were being used and not disclosed. Side effects of both hormones and prescription drugs could be a confounding factor in measuring physical and psycho-social-spiritual domains of quality of life.

Participants may also not have been forthcoming on their pre- and post-test measures, as one woman reported on her pre-test that she felt "in control," but admitted she actually did not. This participant may have thought she "should" feel in control, and answering the pre-test question negatively would have been admitting her inability to cope. The difficulties in accurate reporting on tests, whether pre-test, post-test, or follow-up, threaten the validity of measuring statistically significant change. Furthermore, simply taking these quantitative measures may have played a role in participants' increased self-awareness and insight concerning issues of breast cancer survivorship in areas of mood, coping skills and quality of life.

Research volunteers typically are self-selected, and may be pre-disposed to respond positively to treatment interventions. Due to the small number of subjects, there may have been additional pressure to respond or, at least, to withhold any negative reactions. In this study, one woman agreed to participate due to her physician's encouragement, and reported that she rarely listened to music at all since treatment.

Other unavoidable circumstances included absences of participants at group sessions, the need to skip one week due to absences, and the absence of one participant at the final group, requiring her to complete the combined post-test and follow-up measures at home. The length of treatment (6 weeks) and session time (90 minutes) may also have been insufficient for measureable change, particularly in light of participant absences. Clark et al. (2006) found that higher "doses" of music positively impacted emotional response, as regulated by patients. In this study, one participant expressed that she did not want it to end, and another stated she would attend again.

Finally, the need to shift to adapted qualitative techniques late in the study prevented the researcher from implementing additional criteria to ensure trustworthiness, such as member

checking and peer debriefing (Abrams, 2005). The participants' written responses to the Music Therapy Questionnaire and transcribed participant statements from the videotapes provided some triangulation of the data; however, additional sources of data (such as participant interviews) would have strengthened the findings.

Investigator as Therapist

Although the study design provided for confidentiality of individual responses on measurement instruments, participants may have been aware of the small group size and potential identification of personal answers, particularly on the Music Therapy Questionnaire. The fact that the investigator was also the therapist may have influenced answers provided, whether subconsciously or consciously.

Recommendations for Further Research

Results from this study suggest the need for future research in a few key areas. More research is recommended to identify the post-treatment psychosocial needs of breast and other cancer survivors and to investigate barriers preventing them from accessing services to meet those needs.

More research is needed concerning the physical and psychological effects of music and to increase understanding of personal music preferences and how they interact with those effects. The importance of patient preferred music and the music therapist's flexibility to meet patient (or group) needs in the moment with active or receptive techniques can not be overemphasized. This has direct implications for practice, as well as the education and training of music therapists and other medical professionals or practitioners that utilize music listening for patients.

Further research is needed to determine the effectiveness of various music therapy techniques to meet needs of survivors with varied demographic characteristics, including

race/ethnicity, culture, age, and socio-economic status. The delivery of music therapy services, in individual or group sessions, and in medical or community settings, needs further study to understand their respective efficacy. Finally, both quantitative and qualitative research studies are recommended to provide a more complete view of the experiences of cancer survivors and how music therapy may guide them from their cancer treatment journey to a recovery journey of healing body, mind, and spirit.

This study pointed to ways in which music therapy may aid in the healing process, encompassing physical, psychological, social, and spiritual healing. The participants' poignant stories may best describe this, as Beatriz, who shared her image of driftwood on the beach explained,

"It's incredible…It was a complete tree, but now it's just a piece of wood and it's still a survivor…I lost some part of me and I'm still here."

At the following session, she shared further insight she gained with this reflection:

"I held that piece of wood – thinking… I'm a survivor – but I can also be something else." Just as a tree alone out at sea, in storms and waves, arrives on shore as a beautiful piece of driftwood, women who have experienced breast cancer can arrive at a new identity beyond cancer patient – and even, cancer survivor.

APPENDICES

APPENDIX A

RECRUITMENT FLYER AND LETTER

Music Therapy Groups for Breast Cancer Survivors

January, 2011

Participants are needed for a research study on music therapy for women who have finished treatment for breast cancer within the last year. Music therapy group sessions lasting 90 minutes will be held for six weeks, and will incorporate music creating and listening. No prior music experience is required. Groups will take place at MSU's Community Music School – Detroit Music Therapy Clinic, 3408 Woodward [south of Mack], Detroit 48201.

For more information, call Jody Stark, M.A., MT-BC at (313) 578-9719 or email starkjo2@msu.edu

MICHIGAN STATE UNIVERSITY

COMMUNITY MUSIC SCHOOL DETROIT

http://www.cms.msu.edu/detroit/index.php?detroit

For interpretation of the references to color in this and all other figures, the reader is referred to the electronic version of this dissertation.

January, 2011

Thank you for helping me get the word out about this opportunity for women who are breast cancer survivors!

Attached is a flyer for my dissertation study entitled “The Effects of Group Music Therapy on Mood, Psychosocial Well-Being, and Quality of Life of Breast Cancer Survivors.” I am looking for women who have finished treatment for breast cancer within the last year. No prior music experience is required.

Music therapy group sessions lasting 60-90 minutes will be held for six weeks, and will incorporate music creating and/or listening. Groups will take place at MSU’s Community Music School-Detroit Music Therapy Clinic, 3408 Woodward Ave. in midtown Detroit, or another metro Detroit location convenient for participants. Individual therapy sessions may also be offered, if more convenient for participants.

Jody Conradi Stark, M.A., MT-BC is the Site Director of Music Therapy Clinical Services, MSU Community Music School- Detroit, and President of Creative Arts Therapies, Inc., a company she started in 1991 which provides contractual music, dance-movement, and art therapy services to agencies throughout Southeastern Michigan. She has over 25 years experience with various populations, including medical, hospice, psychiatric, cognitively impaired, autism spectrum disorder, pre-primary impaired, and at-risk children and youth. Jody is currently completing her Ph.D. in Music Education/Music Therapy at Michigan State University, and has completed Level II training in Guided Imagery and Music.

313-492-3045 cell
starkjo2@msu.edu

APPENDIX B

VOLUNTEER CONTACT LETTER

February 1, 2011

Jody Conradi Stark, M.A., MT-BC
Site Director of Music Therapy Clinical Services
Michigan State University
Community Music School-Detroit
3408 Woodward Avenue
Detroit, MI 48201

Dear Volunteer,

Thank you for your interest in participating in a music therapy research study at Michigan State University, Community Music School-Detroit. This study will attempt to determine the effects of group music therapy on mood, psychosocial well-being, and quality of life of breast cancer survivors.

Attached are two forms: 1) **Volunteer Eligibility Form**, to determine if you are eligible to participate in the study, and 2) **Participant Contact Form**, for contact information and schedule availability. Eligible participants will participate in a group that will start sessions in February, 2011. Before the first group session, you will be asked to speak with me, either by phone or in person, to receive information about the study. You will also receive an Informed Consent Form to review and sign.

Music therapy group sessions will be facilitated by myself, a board-certified music therapist with over 27 years of experience. Components of the sessions will include a variety of music therapy techniques, such as music and imagery, music therapy improvisation, singing, song-writing and/or song lyric analysis. *No musical experience is required to participate*, and you may participate at whatever level you are comfortable.

The group will consist of six weekly 90-minute sessions. At the first session, you will be asked to complete forms concerning your mood, coping resources, and quality of life, which will take approximately 30 minutes. At the final session you will be asked to complete the forms again. Additional time will be added to the first and final session to complete the forms. During

the final session, you will also be given a questionnaire concerning your experiences. Two weeks following the final session, you will be asked to complete the forms again. They will be sent to you in the mail, and will include an addressed stamped envelope for you to return them.

Thank you again for your interest in participating in this study. Please complete the enclosed forms, and return as soon as possible via email or in the enclosed return envelope. Please also let me know if I can provide additional information or answer any questions.

Sincerely,

Jody Conradi Stark, M.A., MT-BC
(313) 578-9719 work
(313) 492-3045 cell
starkjo2@msu.edu

APPENDIX C

VOLUNTEER ELIGIBILITY FORM

MSU Community Music School – Detroit
Music Therapy Clinical Services

Music Therapy Groups for Breast Cancer Survivors
Volunteer Eligibility Form

This information is confidential. Please do not put your name on this form.
ID#_____ (for researcher use)

1. What is your age? _____

2. When was your treatment for breast cancer completed? _____

3. What Stage was your breast cancer upon initial diagnosis? (circle one)

   0 I II III

4. Are you able to speak, read, and write in English? _____

5. Do you smoke cigarettes or partake in recreational drug use? _____

6. On average, how many alcoholic drinks do you have per week? _____

7. Have you ever been hospitalized for a psychiatric illness? _____

8. Have you been diagnosed with another disease or condition in the past year?

   _____

9. Are you currently participating in individual or group counseling, psychotherapy, or a psychosocial support group? _____

APPENDIX D

PARTICIPANT CONTACT FORM

MSU Community Music School – Detroit
Music Therapy Clinical Services

Music Therapy Groups for Breast Cancer Survivors
Participant Contact Form

This information is for scheduling purposes only, and will be kept separate from study data. Upon completion of the study, it will be destroyed.

Name:_____

Address:_____

_____

Phone(home/work/cell):_____

E-mail:_____

Preferred time/way to contact you:_____

Availability for Sessions: Place an "x" in the time slots you are available, and circle the "x"(s) for any preferred times. Please also include the time frame you are available for the 90-minute session (i.e. 10-11:30 a.m. or 9-Noon).

Day of Week	Morning	Afternoon	Evening
Monday What time frame?	(Not available) n/a	(Not available) n/a	
Tuesday What time frame?			
Wednesday What time frame?			
Thursday What time frame?			
Friday What time frame?			(Not available) n/a
Saturday What time frame?	(Not available) n/a		(Not available) n/a
Sunday What time frame?	(Not available) n/a		(Not available) n/a

Additional information concerning your availability:

APPENDIX E

PARTICIPANT LETTER

March 1, 2011

Jody Conradi Stark, M.A., MT-BC
Site Director of Music Therapy Clinical Services
Michigan State University
Community Music School-Detroit
3408 Woodward Avenue
Detroit, MI 48201

Dear (Participant Name),

Thank you for participating in a music therapy research study at Michigan State University, Community Music School-Detroit. This study will attempt to determine the effects of group music therapy on mood, psychosocial well-being, and quality of life of breast cancer survivors.

You are assigned to the Friday group, which is 1:00-2:30 p.m. at Community Music School Detroit. Dates include March 4, 11, 18, 25, April 1, 8, (and 15th, if necessary). A map is enclosed, and secure parking is available in the parking garage on the ground level of our building. From Woodward, turn East onto Erskine and drive up to the garage door closest to Woodward. Either the guard or I will let you in. My cell phone number is (313) 492-3045, if you need to contact me.

I have enclosed a Demographic Questionnaire for you to complete. Please remember not to put your name on this form, as it is for data collection purposes only. Also enclosed is an Informed Consent Form to review and sign. You are assigned to the music therapy group, and can disregard information about the "wait control group." We will go over these forms during our first session this week, so if you wish, you can wait to complete them at that time.

Music therapy group sessions will be facilitated by myself, a board-certified music therapist with over 27 years of experience. Components of the sessions will include a variety of music therapy techniques, such as music and imagery, music therapy improvisation, singing,

song-writing and/or song lyric analysis. *No musical experience is required to participate*, and you may participate at whatever level you are comfortable.

The group will consist of six weekly 90-minute sessions. At the first session, you will be asked to complete forms concerning your mood, coping resources, and quality of life, which will take approximately 30 minutes. At the final session you will be asked to complete the forms again. Additional time will be added to the first and final session to complete the forms. During the final session, you will also be given a questionnaire concerning your experiences. Two weeks following the final session, you will be asked to complete the forms again. They will be sent to you in the mail, and will include an addressed stamped envelope for you to return them.

Thank you again for participating in this study. Please also let me know if I can provide additional information or answer any questions. See you soon!

Sincerely,

Jody Conradi Stark, M.A., MT-BC
(313) 578-9719 work
(313) 492-3045 cell
starkjo2@msu.edu

APPENDIX F

INFORMED CONSENT FORM

Michigan State University

Research Participant Information and Consent Form

You are being asked to participate in a research project. Researchers are required to provide a consent form to inform you about the study, to convey that participation is voluntary, to explain risks and benefits of participation, and to empower you to make an informed decision. You should feel free to ask the researchers any questions you may have.

Study Title:
The Effects of Group Music Therapy on Mood, Psychosocial Well-Being, and Quality of Life of Breast Cancer Survivors

Primary Researcher and Title: Frederick Tims, Ph.D., Professor of Music Therapy
Department and Institution: College of Music, Michigan State University
Address and Contact Information: 201 Music Practice Building, College of Music, E. Lansing, MI 48823-1043
E-mail: tims@msu.edu Phone: 517-353-9856

Secondary Researcher and Title: Jody Conradi Stark, M.A., MT-BC, Ph.D. Candidate, Michigan State University
Department and Institution: College of Music, Michigan State University
Address and Contact Information: MSU Community Music School-Detroit, 3408 Woodward Ave., Detroit, MI 48201
E-mail: starkjo2@msu.edu Phone: 313-578-9719

1. PURPOSE OF RESEARCH:

- You are being asked to participate in a research study to determine the effects of group music therapy on mood and quality of life of breast cancer survivors in areas of physical, psychological, social, and spiritual well-being.
- You have been selected as a possible participant in this study because you responded to a recruitment flyer.
- From this study, the researchers hope to learn about your experiences while engaging in Group Music Therapy sessions.
- In the entire study, 40 people are being asked to participate. A maximum of 8-10 people will be in each group.
- If you are assigned to a music therapy treatment group, your participation in this study will take about eight weeks, including an initial informational meeting, six weekly 90-minute sessions, and follow-up contact by mail two weeks later. You will be asked to complete forms taking approximately 30 minutes during weeks one, six, and eight.
- If you are assigned to the "wait" group, your participation will include completion of forms sent to you by mail on three occasions over an eight week time period. These forms will take approximately 30 minutes to complete, and will include a self-addressed stamped envelope for you to return them.

2. WHAT YOU WILL DO:

If you volunteer to participate, you will be asked to attend an individual or group meeting where information about the study will be provided. You will receive an Informed Consent Form to review and sign. You will be randomly assigned to a music therapy group or a wait control group. Members of the wait control group will have the opportunity to participate in music therapy sessions once the data for the study are collected.

If you are assigned to the music therapy group, you will participate in six weekly 90-minute sessions. At the first session, you will be asked to complete forms concerning your mood, coping resources, and quality of life, which will take approximately 30 minutes. At the final session you will be asked to complete the forms again. Additional time will be added to the first and final session to complete the forms. During the final session, you will also be given a questionnaire concerning your experiences. Two weeks following the final session, you will be asked to complete the forms again. They will be sent to you in the mail, and will include a self-addressed stamped envelope for you to return them.

If you are assigned to the wait control group, you will be asked to complete forms concerning your mood, coping resources, and quality of life, which will take approximately 30 minutes. You will be asked to complete them again five and seven weeks later. All forms will be sent to you in the mail, and will include a self-addressed stamped envelope for you to return them. You will have the opportunity to participate in music therapy sessions once the data for the study are collected, and will be contacted at that time.

Music Therapy Group sessions will be held at Michigan State University Community Music School Detroit. Sessions will be facilitated by a board-certified music therapist with over 27 years of experience, and will last approximately 90-minutes. Components of the session may include a variety of music therapy techniques, such as music and imagery, music therapy improvisation, singing, song-writing and/or song lyric analysis. The needs of the group members will be determined during an initial verbal "check-in" and will guide the content of the session. No musical experience is required to participate, and you may participate at whatever level you are comfortable.

Music and Imagery experiences will include the following:

1. Prelude: A verbal check-in regarding each group member's current state and follow-up from previous session.
2. Transition: Discussion and decision making with group members concerning a positive inner resource (positive coping skills and/or personal supportive resources) to include in the induction. The therapist will then decide which music to be used during induction.
3. Induction: The therapist will verbally facilitate the experience in three parts, including centering/relaxation (body, breath, inner focus), describing the image of supportive resources, and providing a connection from the image to the music.
4. Music: The therapist will play 5-20 minutes of "supportive" recorded music that has been chosen to match positive coping skills and/or personal supportive resources. Group members will be provided art materials as an avenue to visually represent any images they experienced during the music listening.

5. Postlude: The therapist will assist group members in verbally processing the experience--to describe it, connect with feelings, find meaning, and make it useable in everyday life. The therapist will provide suggestions for you to implement during the week for addressing stress and/or increasing wellness.

Music Therapy Improvisation experiences will include the following:

1. A variety of non-tuned and tuned percussion instruments will be available in the session, such as rhythm instruments, xylophones, drums, bells and chimes. A drum set, electric keyboard, piano and other instruments will also be available.
2. A brief verbal "check-in" with group members will occur at the beginning of the session to determine if there are any immediate needs or issues to explore.
3. Group members will be invited to take a moment to reflect and center themselves before commencing with a group music free improvisation. Group improvisations may last from 10-15 minutes, after which the group members will have the opportunity to verbally process their experiences and any affective or emotional material the music-making may have elicited or revealed. Depending on the time remaining, additional group improvisation will be done, or at times, improvisation between two or more members.
4. Verbal processing and/or chants/songs will end the sessions, as appropriate.

The significance of this study is that it will provide information concerning the effectiveness of group music therapy on mood, psychosocial well-being, and quality of life of breast cancer survivors who have recently completed treatment. For the field of music therapy, this research will potentially provide evidence supporting a model for music therapy service delivery of community-based after-care services for cancer survivors. This study is being conducted for a dissertation, and you will be provided with all findings at the study's conclusion.

3. POTENTIAL BENEFITS:

The potential benefits to you for taking part in this study include increased personal awareness of coping skills, such as relaxation to music or emotional self-expression through music, for addressing stress and increasing wellness. The sessions may increase your awareness of feelings, thoughts, memories, and relationship with music.

4. POTENTIAL RISKS:

- There are no foreseeable risks associated with participation in this study.
- The sessions will include verbal discussion about your life, musical preferences, and expression of feelings.
- There is no expected discomfort associated with music therapy techniques; however, you are free to end the session(s) at any time.
- The therapist is ethically bound to report, to the appropriate party, any criminal intent or potential harm to self.

5. PRIVACY AND CONFIDENTIALITY:

- The data for this project will be kept confidential, with no identifying information included. The researcher is personally conducting the sessions, and analyzing the data

collected. Any identifying information will be removed from the data, which will be coded by number.

- Information about you will be kept confidential to the maximum extent allowable by law, and will not be released unless there is a danger to yourself or others.
- Data will be stored on a password-protected computer with no identifying information. Regulations require that all data be kept for five years, after which all raw data will be destroyed.
- The Institutional Review Board (IRB), principal investigator, and secondary investigator (researcher), will have access to the research data.
- The results of this study may be published or presented at professional meetings, but the identities of all research participants will remain anonymous.
- Photographs of artwork will be taken for educational purposes, but your name will remain anonymous and any identifying information removed.
    - I agree to allow photographs of artwork for educational purposes.
      ☐ Yes ☐ No Initials_____
- The session will be audio or videotaped for educational purposes, but your name will remain anonymous in any transcriptions, and any identifying information removed.
    - I agree to allow audio-taping/videotaping of the sessions for educational purposes.
      ☐ Yes ☐ No Initials_____
    - The tapes will be stored in a locked file cabinet in the researcher's office.

6. YOUR RIGHTS TO PARTICIPATE, SAY NO, OR WITHDRAW

- Participation in this research project is completely voluntary. You have the right to say no.
- You may change your mind at any time and withdraw, with no consequences.
- You may choose not to answer specific questions or to stop participating at any time.
- Choosing not to participate or withdrawing from this study will not make any difference in the quality of any services you may receive.
- You will be told of any significant findings that develop during the course of the study that may influence your willingness to continue to participate in the research.
- You may choose not to participate in this study, and receive music therapy services from the therapist, or be referred to other counseling resources in Southeast Michigan. These services would be fee-based.

7. COSTS AND COMPENSATION FOR BEING IN THE STUDY:

- Procedures being performed for research purposes only will be provided free of charge by the researcher/therapist.
- You will not receive money or any other form of compensation for participating in this study.

8. ALTERNATIVE OPTIONS

- You may choose not to participate in this study, and receive music therapy services from the therapist, or be referred to other counseling resources in Southeast Michigan. These services would be fee-based. You might also choose to participate in another support group, free of charge.

9. CONTACT INFORMATION FOR QUESTIONS AND CONCERNS

If you have concerns or questions about this study, such as scientific issues, how to do any part of it, or to report an injury, please contact the researcher: Jody Conradi Stark, MSU Community Music School Detroit, 3408 Woodward Ave., Detroit, MI 48201; 313-578-9719; starkjo2@msu.edu.

If you have questions or concerns about your role and rights as a research participant, would like to obtain information or offer input, or would like to register a complaint about this study, you may contact, anonymously if you wish, the Michigan State University's Human Research Protection Program at 517-355-2180, Fax 517-432-4503, or e-mail irb@msu.edu or regular mail at 207 Olds Hall, MSU, East Lansing, MI 48824.

10. DOCUMENTATION OF INFORMED CONSENT.

Your signature below means that you voluntarily agree to participate in this research study.

_____ _____

Signature Date

You will be given a copy of this form to keep.

A signature is a required element of consent – if not included, a waiver of documentation must be applied for.

APPENDIX G

PARTICIPANT DEMOGRAPHIC QUESTIONNAIRE

Demographic Questionnaire **I.D.#**_____

1. Age _____

2. Gender _____

3. Race/Ethnicity _____

4. Number of children/ages _____

5. Marital Status
   - _____ Never Married
   - _____ Married
   - _____ Divorced
   - _____ Widowed
   - _____ Living with Partner
   - _____ Separated

6. Education
   - _____ Did not complete high school
   - _____ High School Diploma
   - _____ Some college
   - _____ College Degree
   - _____ Graduate/professional degree

7. Employment Status
   - _____ Employed full time
   - _____ Employed part time
   - _____ Retired
   - _____ Unemployed
   - _____ Unemployed/Disability
   - _____ Homemaker/Stay-home Mom

8. Household Income
   - _____ Less than $20,000/year
   - _____ $20,000 -$49,999/year
   - _____ $50,000-$74,900/year
   - _____ $75,000 or more/year

9. Cancer Stage at initial diagnosis
   - _____ Stage 0
   - _____ Stage I
   - _____ Stage II
   - _____ Stage III

10. Surgery
    - _____ Lumpectomy
    - _____ Mastectomy with Reconstruction
    - _____ Mastectomy

11. Radiation
    - _____ Yes
    - _____ No

12. Chemotherapy
    - _____ Yes
    - _____ No

13. Hormonal Therapy
    - _____ Yes
    - _____ No

Demographic Questionnaire pg. 2 **I.D.#_____**

14. Number of months since end of treatment _____

15. Support Services Received
    - _____ Individual Counseling
    - _____ Support Groups
    - _____ Other:_____
    - _____ None

16. Religious affiliation/background or spiritual practice

    _____

APPENDIX H

MUSIC THERAPY QUESTIONNAIRE

Dear Group Member,

Thank you for your participation in the Music Therapy Group for Breast Cancer Survivors. Please take a few minutes to describe, in your own words, your experience as a music therapy group member. Your answers are anonymous, so please do not put your name on the form.

Describe what this experience has been like for you.

What was most helpful or meaningful for you?

What was least helpful or meaningful for you?

Is there anything else you would like to share about your experience?

APPENDIX I

FOLLOW-UP LETTER TO ACCOMPANY MUSIC CD

May 5, 2011

Thank you again for your participation in our group! Enclosed is the final set of forms to fill out, as the "follow-up" for the study. I realize these forms take time, and may also bring up unpleasant feelings and memories. Please don't hesitate to contact me at 313-492-3045, if you feel you need to talk. You can also email me at starkjo2@msu.edu. I will be in touch after the study is written, and if you wish, will give you information concerning the results.

Here is a summary of the six sessions, for your information:

Music Therapy Group for Breast Cancer Survivors

Session 1 — Use of instruments to introduce ourselves
Music & Imagery: Relaxation induction and free imagery
Haydn: *Cello Concerto*

Session 2 — Use of instruments to introduce ourselves
Music & Imagery: Relaxation induction
"Store and Swapshop" directed imagery
Kobialka: *Lullaby*
Closing Song: "*Shalom Chaverim"*

Session 3 — Music Sharing: Music personally meaningful or helpful during treatment or after.
Music & Imagery: Relaxation induction
"Wise Woman" directed imagery
Copland: *Rodeo, Corral Nocturne*

Session 4
Music & Imagery: Relaxation induction
"Seashore" directed imagery
Howard White: *Ocean Song*
Closing Song: "*Ocean"* w/ ocean drum & rainstick

Session 5 — Drumming/Music Improvisation
Music & Imagery: Relaxation induction
"Safe Place" semi-directed imagery
Unknown Artist: *Waterfall Creek*; Lindstead: *Illusion*

Session 6 — Drumming/Music Improvisation
Music & Imagery: Relaxation induction and free imagery
Unknown Artist: *Waterfall Creek*; Webb & Charmichael: *Drake's Drum*
Closing Song: Improvisatory songwriting: *"So Glad I'm Here."*

I have enclosed the final questionnaire again, just in case there are any more thoughts you'd like to share since you last filled it out. Otherwise, you can disregard it.

Please fill these out as soon as possible, and mail in the stamped return envelope.
Thank you again!

Sincerely,

Jody Conradi Stark, M.A., MT-BC
(313) 578-9719 work
(313) 492-3045 cell
starkjo2@msu.edu

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