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The Effect of Music Therapy and Songwriting in Anxiety, Depression and Quality of Life in Cancer Patients and Their Families as Measured by Self-Report

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THE EFFECT OF MUSIC THERAPY AND SONGWRITING ON ANXIETY, DEPRESSION AND QUALITY OF LIFE IN CANCER PATIENTS AND THEIR FAMILIES AS MEASURED BY SELF-REPORT

By

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ABSTRACT

The purpose of this study was to examine the quality of life and anxiety/depression level of cancer patients and their families within a hospital setting. Any patient admitted Tallahassee Memorial HealthCare that met the criteria for this study as determined by the medical personnel, was considered as a potential subject. The music therapy sessions consisted of a song written about the patient and family, live preferred music and counseling to help the patient and family. The experimental and control groups were randomly assigned. The experimental group (N=40), received two sessions of music therapy. The first music therapy session was used to gather information that the patient and family wanted to use in the song and also to assess the level of coping. The second music therapy session consisted of giving the patient a copy of the song lyrics and a tape- recorded copy of the song, and a live performance of the song. The patient and one family member then provided self-report data on the Anxiety/Depression questionnaire (see Appendix F), and the Hospice Quality of Life Index questionnaire (see Appendix G). One week later, the patient was contacted and asked to fill out the same questionnaires as before and a Songwriting Questionnaire (see Appendix 39). The control group (N=40), received one music therapy session consisting of preferred live music and counseling for the patient and family. At the end of each session, the patient and family member completed the Anxiety/Depression questionnaire and the Hospice Quality of Life Questionnaire. One week later, the patient was contacted again to complete the same questionnaires as before. The patient Hospice Quality of Life Questionnaire showed significantly higher scores for the experimental one -week post session group than the control one- week post session group. The Songwriting Questionnaire filled out only by the experimental subjects, showed a high mean score of 8.5 on a 10 point scale for coping skills.

CHAPTER ONE
REVIEW OF LITERATURE

The Physical and Emotional Toll of Cancer

During the last three centuries, deaths caused by infectious diseases such as bronchitis and influenza has declined while deaths caused by noninfectious conditions, such as heart disease and cancer has significantly risen (Baum & Ray, 1985). These data have changed the public mind from fearing past diseases like tuberculosis and scarlet fever to fearing heart disease and cancer, and today these are seen as the major threats to health.

The word cancer has a greater potential to confuse than many other conditions because there are many different meanings for this one word. Cancer, or its alternative, malignancy, is used to describe conditions with very different kinds of symptoms. It can refer to a generalized condition, such as of the blood stream in leukemia. It can refer both to cases of primary disease, where there may be few if any symptoms and little if any discomfort, and to cases of secondary or disseminated disease, where symptoms may be multiple and severe (Baum & Ray, 1985). To the medical community, the word cancer is just a summary label for many different diseases and symptoms, but to the layperson, it evokes a very negative image. In a study by Wyler, Masuda, and Homes (1968), subjects were asked to rate 126 diseases for their seriousness, and found that leukemia and cancer were ranked first and second respectively. Cancer was the illness that people most often associated with a high incidence, death and pain. Ray and Baum (1985) concluded that 1. Cancer is seen as the most alarming and serious of diseases, in spite of the fact that heart disease actually causes more deaths, and 2. Judgments of prognosis are not over-pessimistic for the population as a whole; a majority now believes that cancer is curable. Older and lower income groups are more likely than others to believe that cancer can never be cured.

The diagnosis of cancer takes an emotional and physical toll on the body of a cancer patient. A number of symptoms have been identified as impacting the physical well being as well as the quality of life of the cancer patient. These include appetite disturbance, difficulty swallowing, nausea, vomiting, constipation, diarrhea, dyspnea, fatigue, insomnia, changes in strength, and numbness (King & Hinds, 2003). The different treatments for cancer, such as chemotherapy, can also affect the patient in a negative way. In fact, nausea, vomiting, and pain are among the most universally feared problems associated with cancer and its treatment. Nausea and vomiting commonly occur with antineoplastic chemotherapy and are among its most distressing side effects. It has been suggested that up to 10% of patients refuse chemotherapy because of actual or feared nausea and vomiting. McMillian (1989) performed a study that explored the relationship between age and intensity of cancer-related nausea, vomiting and pain. The study included a sample of 99 subjects who were experiencing pain and a sample of 25 subjects at risk for chemotherapy-induced nausea and vomiting. The results showed that the younger subjects, ages 55 and below, had a significantly higher symptom intensity for pain, nausea and vomiting than did the elderly subjects.

The emotional rollercoaster that patients experience affects the body just as badly as the physical symptoms that cancer invokes. For most, a key element of the informational crisis of cancer is that they do not know what the outcome will be. They do not know whether their previous assumptions and expectations for health and longevity are valid or invalid. Thus, the patient has to come to terms not so much with death as with the unpredictability of the future and with the ambiguity of his/her current status (Ray & Baum, 1985). Even when the prognosis is good, coping with cancer is physically and emotionally draining. Unlike illnesses in which treatment provides relatively quick relief, cancer therapy itself can make patients feel their condition is getting worse rather than better (Voelker, 1999). In addition, evidence indicates that feelings of helplessness and low control are associated with the onset of cancer and with faster progression of the disease (Rodin, 1986).

Anxiety and Depression

Anxiety is defined as "an abnormal and overwhelming sense of apprehension and fear often marked by physical symptoms like tremor, sweating, palpitations and rapid pulse; an unpleasant feeling of helplessness and isolation accompanied by physiological manifestations consciously explained by a fear of death, pain or unknown catastrophe (World Book Dictionary, 1990). This is an emotion that cancer patients know all too well. In a study by Ray and Baum (1985), anxiety and depression, as well as high neuroticism, low ego strength, low well being, pessimism, poor self-esteem and a discrepancy between expectations and actual attainment in life were found in recently diagnosed cancer patients. Many issues trigger anxiety and depression such as physical concerns like uncontrolled symptoms, decreased functioning and social concerns like family and jobs (King & Hinds, 2003).

In one study, the relationship between depression and anxiety in 867 adult patients was studied. All subjects were given the 21-item Beck Depression Inventory and the 20-item Spielberger State Anxiety Scale. High correlation coefficients, .76 for depression and .81 for anxiety, suggested a concurrence of these two symptoms among cancer patients. Even though patients may manifest either depression or anxiety alone, both reactions are in need of attention. Appropriate intervention may range from supportive listening to psychopharmacologic intervention for anxiety and depression (Cassileth, Lusk, Hutter, Strouse and Brown, 1984).

Gender has a significant effect on cancer patients' quality of life. In a study by Oren and Sherer (2001), 54 patients and their spouses were given questionnaires about coping with cancer. The results showed that male cancer patients had more psychological distress, anxiety, depression and fear of illness than women. It was harder for the men to express their feelings. Female cancer patients had lower levels of anxiety and depression. In 50 melanoma patients and their spouses, women patients reported more psychological hardships than men (Baider, Perry, Holland, Sison & Kaplan, 1995).

Feelings of the unknown and death also cause high levels of depression in cancer patients. Cancer patients automatically feel isolated and death is the ultimate aloneness: removal from loved ones. Anything that makes people feel alone, removed from the flow of life increases death depression. In a study by Speigel (1995), 78 of 95 stage-two cancer patients were screened for involvement in the study and met cutoff criteria for clinically significant depression on the CES-D. Results showed that depression is frequently under diagnosed in cancer patients because of misattribution of depressive symptoms to the disease itself.

Patients' decision-making has a significant effect on health outcomes. A person who is experiencing a life-threatening illness is continuously required to make treatment decisions under conditions perceived as personally dangerous (Kutscher, 2004). Peterson (2003) tested 79 cancer patients undergoing treatment for cancer. They were given depression, anxiety and a decision-making questionnaire. The results showed that anxiety and depression does affect the cancer patient when medical decisions must be made and trusted. Peterson (2003) also found that most cancer patients delay their emotional reactions to sustain themselves. For example, cancer patients who were 1 to 5 years posttreatment reported higher anxiety and depression than the general public, while those in treatment reported lower levels of anxiety and depression.

Cancer treatments also contribute to emotional distress in cancer patients. At least 350,000 people a year receive radiation therapy. High levels of anticipatory anxiety are common prior to and during such treatment. If interventions to reduce distress are not performed, patients could experience heightened posttreatment anxiety and depression that can last for many months (Evans and Connis, 1995). Recent studies suggest that psychological interventions can reduce distress in cancer patients receiving radiotherapy. Evans and Connis (1995), conducted a study in which 78 stage II cancer patients undergoing radiation, were given group therapy for an hour a week and then administered a depression questionnaire. Results showed that depressed persons with cancer who received brief group therapy interventions exhibited greater reduction in emotional distress than members of a comparison group who did not participate in any group intervention. In another study, 100 cancer patients undergoing radiation therapy were

given questionnaires to test coping mechanisms. It was found that most of the cancer patients used denial as a defense mechanism when dealing with the meaning of their disease (Leigh, Ungerer, & Percarpio, 1980).

The Family of the Cancer Patient

A family is a basic societal unit in which members have a commitment to nurture each other emotionally and physically. The family has been described as a system, a complex network of interdependent interactions among family members which fulfills needs and achieves equilibrium (Meisel, 1990). The family's subsystems, such as a married couple and siblings, are the ways in which the family system differentiates and carries out tits functions of mutual support, nurturance, regulation, and socialization of its members (Doherty & Baird, 1983). The family of a cancer patient undergoes as much emotional stress as the patient. A healthy, functioning family leads to less emotional problems for the patient as well as members of the family.

Families must be able to adapt. The family's adaptability helps it change in the face of external and internal pressures. Family dysfunction is often a product of poor adaptability, such as a family's inability to adjust to the father's illness (Doherty & Baird, 1983). When a family views the illness as a threat to their integrity, a crisis can occur, which causes emotional distress for the patient and the family. A study by Funch and Marshall (1983) showed that cancer patients who had poor social and family relationships had higher rates of disease progression and death.

Cancer causes many emotional and physical problems within families. Cancer-induced emotional, behavioral and physical health problems have been found to cluster in a minority of families. Multiple investigators have reported that one-third of adult cancer patients, their spouses and their children have clinically significant distress and psychosocial dysfunction (Baider, Cooper and DeNour,2000). Research indicates that when a family member becomes ill, the shock to the rest of the family causes various kinds of physical and mental symptoms such as headaches, raised blood pressure, stomach pains, loss of appetite, worry, grief, anxiety, nervous distress and depression.

In a study by Eriksson (1996) on the family members of cancer patients, 19% of family members had physical symptoms, and 33% of family members had mental symptoms.

There are many stressors for families of cancer patients. King and Hinds (2003) labels two different kinds of stressors: primary and secondary. Primary stressors are physical care and loss. Physical care pertains to the care the family members are providing the ill person and loss is the loss of the ill person's former self and the caregiver's social leisure activities. Most caregivers who experience these stressors are the spouses of the cancer patient. Many research studies have shown that spouses experience the same amount of stress, if not more, than their ill family member. In a breast cancer study by Northouse (1989), spouses reported psychosomatic problems such as eating disorders, sleep disturbances, and distress levels comparable with their wives. The spouses in this study also reported that one of the most difficult experiences they encountered was to help their spouses deal with the emotional impact of cancer. In a follow-up study, couples who reported high distress or a high number of role problems at diagnosis were likely to remain highly distressed at 60 days and 1 year. In another study by Blood, Simpson, Dineen, Kauffman, and Raimondik (1994), 75 spouses of individuals with laryngectomies were tested. The results reported that caregiver strain and burden were highest in those most recently diagnosed. Significant differences were found in gender, with female caregivers reporting higher stress than male caregivers. The spouse of the cancer patient is usually the main support system. In some studies, it has been shown that the spouse was nominated by over 90% of married subjects as the most supportive family member (Neuling & Winefield, 1988). Interactions with spouses and family members improve when the patient perceives him/herself to be emotionally supported.

Another stressor of families and caregivers is the financial burden of treatment and hospital costs. Given, Given, and Stommel (1994) have found that families face out-of-pocket expenses (for transportation, clothing, and phone calls) as well as family labor costs (time spent providing care). Researchers have reported that many caregivers have difficulty maintaining their work roles, especially if it is a low-income family. In a study by Covinsky (1994), twenty percent of families of 2661 chronically ill adults reported a

family member who quit work to provide care for the patient. One-third had a loss of most or all of the family savings and/or loss of the major source of income. One-third of cancer patient-families, especially those who are younger and have lower income, face a substantial threat to their financial security from cancer in the USA (Baider, Cooper and DeNour, 2000).

All of the stressors discussed above create an enormous amount of anxiety for the family of a cancer patient. This increased anxiety can lead to more severe side effects in the family as well as the cancer patient. The stress which pushes the increase could have originated within the family of the vulnerable member or external to that family (Payne, 1990). Anxiety is managed by individuals, but more importantly, it is managed by families. The anxiety spreads through the members of the family and decreases their chances for flexibility and adaptability. This happens through spousal accommodation, projection of anxiety to a child, marital conflict and creation of emotional distance (Payne, 1990).

In a study by Rukholm (1991), the perceived needs and anxiety levels of adult family members of hospitalized patients. Data were gathered using a self-report questionnaire, the Critical Care Family Needs Inventory and Spielberger's State Trait Anxiety Inventory. Some of the major variables examined were family needs, state and trait anxiety, on-site sources of worry and spiritual needs. The results showed that the situational anxiety scale yielded a mean score of 45.24 and a mean score of 37.3 for the trait anxiety scale. The statistics revealed that family needs and situational anxiety were significantly related. Worries, trait anxiety, age and family needs contributed to 38% of the variation of situational anxiety.

In another study by Astedt-Kurki et. al. (1999), the researcher wanted to find out how families experience the hospitalization of one family member. A questionnaire containing three open-ended questions was used to gather date. The results yielded a variety of negative sentiments among family members including worry, fear, shock, anxiety and depression at the hospitalization of their family member. Nearly 80% of the families' statements dealt with emotional responses.

Music Therapy in Pain, Stress, and Relaxation

Over 20 years ago, the United States Office of the Surgeon General reported that excessive levels of stress could negatively effect physical and psychological well-being. Other experts have reported that up to 80% of all medical conditions may be stress related (Thaut & Davis, 1993). Today, many stressors last longer and can cause a variety of psychological problems and the chronic increase of many physiological processes. Extended arousal has been linked to numerous illnesses such as cancer, heart disease and ulcers and reduced efficiency of the immune system (Albrecht, 1979).

Over the years, research in music therapy has developed numerous techniques that have proven to be effective in decreasing anxiety and inducing relaxation. Some of the techniques used are progressive muscle relaxation, guided imagery, and the use of music alone or in conjunction with other relaxation strategies. Davis and Thaut (1989) found that musical stimuli, when perceived as pleasant and relaxing, could enhance the psychological processes of relaxation in wellness programs and with a variety of clinical populations.

Live music has proven to be effective in reducing anxiety and promoting a positive environment for persons in stressful situations. Bailey (1983) conducted a study that compared the effects of live music singing and guitar playing to the effects of tape-recorded music of the same material for hospitalized cancer patients. Different moods were measured in 50 patients ages 17-69. The results showed that there was significantly less tension, depression, anxiety, anger, fatigue, and confusion and more vigor post-music in the live music group than in the taped music group.

Preferred music listening also contributes to lower stress levels. In a study by Stratton & Zalanowski (1984), 36 college freshmen were asked to listen to 15 minutes of music. After listening, the researcher asked them a variety of questions dealing with relaxation and music preference. The researcher found that subjects who liked the music the most were significantly more relaxed than were the subjects than were the subjects

who liked the music the least. Also found was that 70% of all subjects in the music conditions said that the music helped them relax and none said the music made them tense. The presence of the music made it easier to clear the mind for 53%, and 43% helped produce images. In another study by Thaut & Davis (1993), 54 subjects ranging in age from 18-33 were randomly selected to participate in the study. Music used for the study consisted of subject-selected music and experimenter-chosen music. The subjects had to listen to the music for 15 minutes and then answer a questionnaire measuring anxiety and relaxation. The results found that there was a significant reduction in anxiety and increase in relaxation in both of the music groups as apposed to the no-music group. There was a slight increase in the results for the experimenter-music condition suggesting that subjects should pick their own music in order to achieve the best results. Curtis (1986) had terminally ill patients listen to 15 minutes of preferred music. While the results were not significant, the data did show a reduction in pain, discomfort and anxiety for patients that had undergone radiation treatment.

Songwriting in Music Therapy

Songwriting is a technique used by music therapists to achieve multiple goals. It can satisfy a variety of needs by promoting feelings of worth and self-respect (Bailey, 1984). It helps people to express all types of emotions, enhance social interaction and can even aid in recovering repressed material (Ficken, 1976). Schmidt (1983) suggests that songwriting is a creative act and can be used as a way of promoting many of the healing qualities inherent in creative acts such as transcendence, expressing emotion, creating joy and adapting to the environment.

Songwriting has proven to be effective in a variety of situations. It can be beneficial for populations with reading and written language difficulties, including bilingual students, the learning disabled, and the hearing impaired. Gfeller (1987) found that songwriting teaches children rhyming, from which listening, reading, and writing skills can be developed. It can also be used to introduce ideas, themes, or a discussion of forms, such as meter, rhythm, or free verse.

Music therapists have used songwriting in the psychiatric setting to enhance emotional expression and social interaction. Ficken (1976) suggests songwriting in psychiatric settings to aid in interaction and emotional expression, and encourage socially acceptable behavior in the group process. It can also validate the patient, and through this validation, the patient receives emotional support and feedback for his/her thoughts and feelings. Self-esteem can also be increased upon completion of the song. Freed (1987) found that songwriting can help facilitate self-disclosure in addition to assessing self-concept and self-esteem in the process. By writing songs with chemically-dependent patients, Freed was able to find that with each song, patients were striving to feel more positive about him/herself and therefore had motivation to change.

Songwriting has been used to promote group cohesion and increase expression in HIV-seropositive adult patients with depression. Cordobe (1997) tested eighteen subjects with a diagnosis of clinical depression in addition to being HIV positive. The experiment consisted of group songwriting, group game playing and no treatment control. The results showed that group cohesion scores were equivalent for all groups, the number of emotion words used was greater for the songwriting condition than for the game playing condition, and analysis of the lyrics and emotion words used in group songwriting revealed issues that were not present in the group game playing.

All ages in every population can benefit from music therapy assisted song writing. Goldstein (1990) conducted a study that used songwriting with depressed adolescents. The study was used to assess helplessness in the patients. Using a fill-in-the-blank design, the researcher was able to record levels of hopelessness, but also was able to help the patient express their feeling through song. After the songs were written, the patients expressed a desire to hear their song and either smiled or made positive comments, indicating that it was an enjoyable experience for them. At the other end of the age spectrum, songwriting has been proven effective for patients diagnosed with Alzheimer's disease. In a study by Silber and Jozef (1995), 12 to 14 men and women between the ages of 62 and 84 received one hour of music therapy assisted songwriting session weekly. The results showed that songwriting helped patients with Alzheimer's disease to partially and temporarily overcome their difficulties with cognitive, memory and

language deficiencies. Creative writing utilizes an area of the brain that has not been affected by the disease. Patients who were emotionally withdrawn, songwriting provided the opportunity to express deep and repressed feelings. The study helped to promote socialization, interaction and communication.

Songwriting with Cancer Patients

Music Therapy within a cancer setting has proven very beneficial. O'Callaghan & McDermott (2004) conducted an extensive study in a cancer hospital to see how music therapy benefited patients, family and staff. Fifty-seven percent of the patients who participated had advanced or end stage cancer. The music therapist's interpretations were recorded in a reflexive clinical journal and the respondents' interpretations were written on anonymous open-ended questionnaires. The study found that preferred music elicited beneficial affective experiences and imaginings in patients, family and staff. The researcher states "The relevance of music therapy was evident through its capacity to enable, in many individuals, a renewed or heightened sense of personal historical significance and ongoing presence". In a study by Bunt & Marston-Wyld (1995), group music therapy sessions were held at a cancer center weekly over a four-month period. The researchers found that "many of the patients found themselves in contact with feelings they had previously been unable to reach or express. In some cases they gained new awareness or retrieved memories through making music, or hearing a particular sound or instruments".

Over the years, songwriting has become a very familiar tool for music therapists working with cancer patients. This technique was one of many that Bailey (1984) used in finding song choice themes with cancer patients and their families. The themes found were songs containing hope, pleasure, the world, reminiscence, relationships, needs and desires, feelings, loss and death and peace. The researcher also found that the human element inherent in song material assisted in decreasing feelings of isolation, anxiety, and fear.

Waldon (2001) conducted a study that researched the effects of group music therapy on mood states and cohesiveness in adult oncology patients. Eleven oncology

patients in two groups took part in the study over a 10-week period. One group received "music making" sessions, which included songwriting, and the other group received "music responding" sessions. Questionnaires rating mood levels were handed out after each session. The results showed that group music therapy interventions for adult oncology patients significantly improved self-reported mood state. Both music making and music responding yielded significant results, however, the data did not support the idea that one type of music condition significantly improves mood states over the other.

Slivka and Magill (1986) combined social work and music therapy to enhance lives of children whose parents were cancer patients. After the social worker would talk with the families of cancer patients, the families would then go to the hospital room of their loved one. The music therapist would come in a few minutes later with her guitar and begin playing patient/family- preferred music. The music therapist would then allow the children to insert their own lyrics. The researchers found that with this combined effort of the social worker and the music therapist, this approach could serve as a basis for enhancing the development of meaningful self-expression and communication in a non-threatening atmosphere. Social work and music therapy could also offer the families a tool to increase mood, give a sense of togetherness, provide pleasure and increase reminiscing. By allowing the children to substitute words in the songs, they are able to express themes that are important to them. The children and parents were able to compose meaningful songs to one another that included memories, wishes, stories and statements of forgiveness. The study overall improved coping skills within the families. It was also observed that the music therapist and social worker working together provided support to the patients and families, perspective and insight which resulted from experiencing and reviewing sessions together, and greater opportunity to address the needs of the patients and family members on verbal and non-verbal levels.

Songwriting in palliative care is one of the most researched areas, especially with cancer patients. O'Callaghan (1997) derived 10 therapeutic opportunities from her research. The researcher found that the six listed below displayed the general use of songwriting in the hospital's palliative care setting.

1. Songwriting can facilitate communication among family members. 12

2. Songwriting is less threatening than other forms of creative writing.
3. Songwriting offers varied opportunities to promote physical and social well-being.
4. The musical accompaniment may enhance one's learning of the lyrics.
5. Songwriting allows people to make creative choices that encompass both musical and verbal dimensions.
6. Songwriting may offer opportunities for counseling.

Hilliard (2003) evaluated the effects of music therapy on quality of life, length of life in care, physical status, and relationship of death occurrence to the final music therapy interventions of hospice patients diagnosed with terminal cancer. A total of 80 subjects were assigned to two groups: experimental-routine hospice services and clinical music therapy and control-routine hospice services only. Musical interventions included many techniques such as songwriting, lyric analysis and guided imagery. Quality of life was measure by the Hospice Quality of Life Index and the hospice nurse assessed functional status on every visit. Results showed that quality of life was higher for subjects receiving music therapy and their quality of life increased over time, even though their physical condition was decreasing. Subjects in the control group experienced a decrease in quality of life. Nguyen (2003) conducted a study in which songwriting was used to assess the palliative patient's quality of life, emotional state and family satisfaction levels. Out of the 20 subjects tested, 8 had some type of terminal cancer. The music therapist would interview the patient and gather information such as life experiences and family history. All of that information would be put into a "End-Of-Life" celebration song that was then sung at the initial session with the patient and family. The results showed a significant decline in anxiety for the experimental patients. Satisfaction levels for music therapy were higher than for medical care in general. There was also a 97% satisfaction rate for the families of the experimental patients.

The use of music therapy and songwriting in cancer care could alleviate anxiety and depression and increase quality of life. Research has shown that songwriting has shown significant results in the care of palliative patients, but the same significant results are possible with non-terminal cancer patients in a hospital setting. The purpose of this study is to determine whether songwriting technique used as a coping mechanism can benefit the cancer patients and their family.

Chapter Two

Method

Subjects

All of the subjects (N=80) were selected from the Tallahassee Memorial Healthcare Admissions. These subjects all met criteria, as determined by the medical personnel. According to the criteria, each subject had to have normal cognitive functioning, be 18 years of age or older, and have a cancer diagnosis that was not in stage 4. The subjects in both groups ranged in ages from 30 years old to 90 years old, with an average of age of 56.9 years old. The mean age of the control group was 61.9 years old while the mean age of the experimental group was 51.9 years old. In the control group there were fourteen female subjects and six males. In the experimental group there were fifteen female subjects and five males. Those patients participating in this study, upon admission were diagnosed most frequently with Breast Cancer (N=17), Colon Cancer (N=7), and other types of Cancer (N=16) including: Lung, Pancreatic, Bladder, Cervix, Leukemia, Ovarian, Vertebrae, Lymphoma and Mylenoma. Table 1 provides subject demographics including diagnosis, age, and sex, and also identifies control/experimental group status. Thirty-five of forty family members that participated were spouses. The other five were children and siblings.

Table 1 Subject Demographics

Experimental/Control	Male/Female	Age	Diagnosis
Control #1	F	74	Breast
Experimental #2	F	44	Breast
Experimental #3	F	40	Breast
Control #4	F	53	Breast
Control #5	F	72	Lung
Experimental #6	F	45	Breast
Control #7	F	37	Pancreatic
Control #8	M	76	Colon
Control #9	F	43	Lung
Experimental #10	F	53	Breast
Control #11	F	77	Breast
Experimental #12	M	54	Bladder
Control #13	F	76	Colon
Experimental #14	M	65	Bladder
Control #15	M	65	Colon
Experimental #16	F	51	Breast
Experimental #17	F	47	Colon
Control #18	M	59	Lung
Control #19	M	69	Colon
Control #20	F	30	Cervix
Experimental #21	F	54	Breast
Control #22	F	90	Colon
Experimental #23	F	49	Breast
Control #24	M	58	Leukemia
Experimental #25	F	51	Breast
Experimental #26	F	51	Ovarian
Control #27	F	59	Leukemia
Control #28	F	55	Breast
Control #29	F	61	Ovarian
Experimental #30	F	50	Vertebrae
Experimental #31	F	78	Breast
Control #32	F	50	Lymphoma
Control #33	F	81	Mylenoma
Control #34	M	54	Lung
Experimental #35	M	54	Lymphoma
Experimental #36	F	56	Breast
Experimental #37	F	48	Breast
Experimental #38	F	63	Breast
Experimental #39	F	48	Breast
Experimental #40	M	37	Colon

Design

The design included control and experimental groups with post-test data collection only. The independent variable was the music therapy intervention. The dependent variables were quality of life, emotional state, and family satisfaction.

Music Therapy Intervention

Music therapy referrals are made according to set policy and procedures at the Tallahassee Memorial HealthCare facility and come from the patient care conference, interdisciplinary staff meeting, or through individual staff. The experimenter used these existing procedures and relied on the medical staff to identify appropriate cancer patients.

The subjects were randomly assigned to either control or experimental conditions. The experimental group (N=20) received two music therapy sessions. The initial session consisted of an interview, which informed the experimenter of the patient's music preference, family history, life experiences and anecdotes to be used as lyrics for the song, and to arrange the date and time when a family member could be present to listen to the song with the patient.

At the second session, the experimenter returned at the agreed upon time and date with a personalized song for the patient and family. The experimenter compiled all of the information the patient had given in the first session into lyrics creating a song parody, using preferred music agreed upon by the patient. After the song was played, the experimenter was able to provide a copy of the lyrics on embellished paper and a recording of the song on a cassette.

During the session, patient preferred live music was played at the beginning. The experimenter would also talk to the patient and family, discussing ways to cope with the current situation and positive experiences from the situation. The experimenter would then play the song that was written for the patient. After the song was over, the patient and family member would answer an Anxiety and Depression Survey (see Appendix F) that measured anxiety and depression levels and the Hospice Quality of Life Index-

Revised (see Appendix G). Answers on both surveys were scored from 1 to 5, 1 being the best. One week after the second session, the experimenter would then contact the patient by phone or in person and have him/her answer the one-week post-test that included the Anxiety and Depression Survey, Hospice Quality of Life Index-Revised and a Song Writing Questionnaire (see Appendix H).

The control group (N=20) only received one session. The experimenter would meet with the patient and discuss a date and time when the patient's family could be there. The experimenter would then come back for the initial session and play patient and/or family preferred live music. The experimenter would discuss ways on coping and positive highlights from the current situation. At the end of the session, the experimenter would have the patient and one family member fill out an Anxiety and Depression Survey that measured anxiety and depression and a Hospice Quality of Life Index-Revised Survey that measured quality of life. The patient was contacted again by phone or in person one week later by the experimenter to answer the Anxiety and Depression Survey and a Hospice Quality of Life Index-Revised Survey.

Materials

Equipment used during this study included a Yamaha classical guitar, GE personal tape recorder, condenser mike and various CDs. All sessions took place in the patient's hospital room.

CHAPTER THREE

RESULTS

This study employed the use of three measurement tools; the Anxiety/Depression Likert Scale, Hospice Quality of Life Index-Revised, (HQOL-R), and a Songwriting Questionnaire were used as a post-test only for both control and experimental groups. Data on the Songwriting Questionnaire for each experimental subject's individual points and totals are in Table 8.

The experimenter implemented the Mann Whitney U two-tailed (Madsen & Moore, 1978) test to determine statistical differences in emotional states using the Anxiety/Depression Scale between the patient control and experimental groups immediately following the study procedures. A U score of 237.5 for the control group and 205.5 for the experimental group indicated that there was not a significant difference between the two groups ($n1=20$, $n2=20$, $\alpha= .05$, critical $U=127$), since the smaller U (205.5) was larger than the critical U (127).

Using the Mann Whitney U two-tailed test, the experimenter discovered no statistical differences in the quality of life between the patient control and experimental group. The U score of 175 for the control group and 224 for the experimental group indicated no significant difference between these two groups ($n1=20$, $n2=20$, $\alpha = .05$, critical $U = 127$), since the smaller U (175) was larger then the critical U (127).

Table 2 Results Anxiety/Depression Scale-Patients

Experimental Subjects	**Mean Score**	**Control Subjects**	**Mean Score**
Anxious	1.6	Anxious	1.6
Depressed	1.4	Depressed	3.5
Stressed	1.55	Stressed	2.3
Irritable	1.4	Irritable	1.5
Emotionally Drained	2.05	Emotionally Drained	1.8
Unhappy	1.2	Unhappy	1.15
Difficulty Concentrating	1.15	Difficulty Concentrating	1.9
Hopelessness	1.15	Hopelessness	1.15
Angry	1.1	Angry	1.15

(Lower mean scores are better)

Table 3 Hospice Quality of Life Index-Revised Results – Patients

Questions	**Experimental Mean Score**	**Control Mean Score**
How tired do you feel?	2.95	2.85
Each day can still hold some good	1.1	1.1
How sad are you	1.9	1.7
How worried are you	2.3	2.15
How lonely are you	1.3	1.65
How meaningful is your life	1.3	1.5
Satisfied with family/friends support	1.1	1.1
Satisfied with staff support	1.15	1.6
Surroundings help well-being	2.3	2.75

(Lower mean scores are better)

The researcher implemented the Mann Whitney U two-tailed test (Madsen & Moore, 1978) test to determine a statistical difference in emotional states of the family members using the Anxiety/Depression Scale between the experimental and control groups. A U score of 175.5 for the control group and 224.5 for the experimental group was obtained and indicated no significant difference between the two groups (n1=20, n2=20, $\alpha = .05$, critical U = 127), since the smaller U (175.5) was larger than the critical U (127).

The Mann Whitney U two tailed test (Madsen & Moore, 1978) was used once more to determine a statistical difference in the quality of life state of the family members. A U score of 224 for the control group and 191.5 for the experimental group indicated no significant difference between the two groups (n1=20, n2=20, $\alpha = .05$, critical U = 127), since the smaller U (191.5) was larger than the critical U (127).

Table 4 Results for Family Member Anxiety/Depression Scale

Experimental Subjects	**Mean Score**	**Control Subjects**	**Mean Score**
Anxious	2.9	Anxious	1.75
Depressed	1.45	Depressed	1.6
Stressed	1.65	Stressed	1.9
Irritable	1.35	Irritable	1.4
Emotionally Drained	2.15	Emotionally Drained	2.3
Unhappy	1.15	Unhappy	1.5
Difficulty Concentrating	1.7	Difficulty Concentrating	1.85
Hopelessness	1.15	Hopelessness	1.3
Angry	1.2	Angry	1.05

(Lower mean scores are better)

Table 5 Hospice Quality of Life Index-Revised Results- Family Members

Questions	**Experimental Mean Score**	**Control Mean Score**
How tired do you feel?	2.8	2.35
Each day can still hold some good	1.25	1.2
How sad are you	1.95	2.4
How worried are you	1.9	2.2
How lonely are you	1.25	1.5
How meaningful is your life	1.4	1.15
Satisfied with family/friends support	1.55	1.55
Satisfied with staff support	1.55	1.2
Surroundings help well-being	2.35	2.15

(Lower mean scores are better)

The researcher relied on the Mann Whitney U two-tailed (Madsen & Moore, 1978) test to further determine any statistical differences in emotional states of patients one-week post session using the Anxiety/Depression Scale between the control and experimental groups. A U score of 162.5 for the control group and 235.5 for the experimental group was obtained and indicated that there was not a significant difference between the two groups ($n1=20$, $n2=20$, $\alpha = .05$, critical $U = 127$), since the smaller U (162.5) was larger than the critical U (127).

Using the Mann Whitney U two-tailed (Madsen & Moore, 1978) test, the experimenter discovered a significant difference in the quality of life state one -week post-session using the Hospice Quality of Life Index-Revised Scale, between the control

and experimental patient groups. A U score of 125 for the control group and 275 for the experimental group was obtained and indicated a significant difference between the two groups (n1=20, n2=20, $\alpha = .05$, critical U = 127), since the smaller U (125) was smaller than the critical U (127). The experimental subjects had a significantly higher quality of life state.

Table 6 Results for Patient Anxiety/Depression Scale One-Week Post-Session

Experimental Subjects	**Mean Score**	**Control Subjects**	**Mean Score**
Anxious	1.45	Anxious	1.25
Depressed	1.15	Depressed	1.05
Stressed	1.1	Stressed	1.3
Irritable	1.15	Irritable	1.25
Emotionally Drained	1.7	Emotionally Drained	1.6
Unhappy	1.05	Unhappy	1.05
Difficulty Concentrating	1.5	Difficulty Concentrating	1.7
Hopelessness	1	Hopelessness	1.05
Angry	1.1	Angry	1.05

(Lower mean scores are better)

Table 7 Patient Hospice Quality of Life Index-Revised Results One-Week Post-Session

Questions	**Experimental Mean Score**	**Control Mean Score**
How tired do you feel?	2.05	2.5
Each day can still hold some good	1.1	1.05
How sad are you	1.2	1.4
How worried are you	1.75	2.15
How lonely are you	1.2	1.05
How meaningful is your life	1.15	1.2
Satisfied with family/friends support	1	1.05
Satisfied with staff support	1.1	1.35
Surroundings help well-being	1.65	2.2

(Lower mean scores are better)

Each experimental subject could have totaled a maximum score of 10 points on the Songwriting Questionnaire. The questionnaire asked subjects to rate on a scale of one to ten, to what extent the recording helped them cope. The minimum individual score from the Songwriting Questionnaire was 6 and the maximum was 10. The mean score for the questionnaire was 8.5. Table 8 provides scores for each subject and the mean for all scores.

Table 8 Songwriting Questionnaire Results

Ss	Songwriting Questionnaire Score
1	8
2	9
3	9
4	8
5	6
6	10
7	9
8	9
9	8
10	8
11	8
12	9
13	10
14	7
15	8
16	9
17	8
18	9
19	8
20	10
Mean Score	8.5

CHAPTER FOUR

DISCUSSION

Though most results were not statistically significant, trends in the date support the use of music therapy in the care of cancer patients within the medical setting. For those experimental subjects participating in this study, anxiety scores though not significant were lower post session and one week post session than the control group. The quality of life scores were significantly higher for the experimental group one week later than the control group. The experimental group also showed a very high score of 8.5 on the Songwriting Questionnaire, which revealed that the recording and lyrics given to each subject helped him/her cope with having cancer.

All subjects received a music therapy session in which at least one family member was present. The sessions for the control group consisted of some counseling using preferred live music. The experimental group had counseling as well as listening to a live performance of their song.

The results of songwriting for the experimental group one- week post-test for quality of life were significantly higher than the control group. Most of the experimental patients stated listening to their song few to several times over the course of one week. They also remarked that reading over the lyrics helped them get through each day. The songs seemed to act as motivational tools for the patients because they consisted of positive words or thoughts, personal memories or funny experiences. The experimental patients also stated playing the songs for their families. Some even remarked that the songs brought their family closer together.

There were a variety of appreciative responses from experimental subjects in this study. Most of the subjects would cry when their song was played for them stating that

the song was beautiful and that they couldn't wait to play the recording for their family and friends. In the very first session, the subject was publishing a book about coping with cancer. A few weeks after the session, the subject contacted the experimenter stating that the book was going to be online. The subject wanted to put a link next to the book that people could click on so they could listen to the song that was written for the subject. The subject also made a reference to the experimenter in the book stating that listening to the recording and reading over the lyrics helped her get through each and every day.

During another session, the subject was talking about how one of his kids had passed away and was now an angel that watched over him. He also read out loud some of the poems that he had written for his wife. For this song, the experimenter was able to include some of the poetry and made a reference to his son that had passed away. When the song was finished, the subject and his wife shed some tears and told the experimenter that she was their angel and had given them one of the best gifts they had ever received.

One subject invited almost the whole family to her session because she wanted them to hear her song. The experimenter made reference to the subject's children and husband in the song. When the session was finished, the subject's husband decided to make a donation to the music therapy department because the song brought the family closer together and he was amazed that the experimenter wrote a song for his wife.

Each song that was written consisted of all types of information that the subject wanted to include. At the initial session, the patient and family members were able to indicate music preference or name specific songs that were special to the family or patient holding some type of sentimental value. Many of the songs chosen were favorites between the subject and his/her spouse. Song lyrics usually consisted of personal sayings or thoughts that were motivational for the patient, favorite experiences with family and friends and statements of how the cancer had changed the patient physically, emotionally and spiritually. All of the lyrics came directly out of the interview notes the experimenter took. Direct quotes were used in most of the songs. This functioned well because the patients were able to express what they were feeling to their family members through the

song. The use of direct quotes also gave the experimenter the ability to reflect on the subject's personality and way of thinking, and to describe their emotions realistically in their individual songs.

The experimenter also observed that the interview session was very beneficial to most of the subjects. The patients would often express how good it felt to be able to discuss how he/she was feeling and going through, whether it was positive or negative experiences.

The success of this study supports music therapy with cancer patients in the hospital environment. It improves emotional states, quality of life and coping with cancer. Many subjects stated that just reading over the lyrics helped them get through each day. The future implementation of this study would be successful with support from medical staff that has some prior knowledge of the benefits of music therapy. This study required the dedication from medical personnel committed to improving quality of life and emotional state.

Future studies may look into incorporating songwriting with other diagnoses that have life-changing implications such as diabetes or AIDS. Other music therapy techniques such as guided imagery paired with live music or lyric analysis at the bedside could be compared with songwriting to test emotional state and quality of life. Exploring the idea of using original songs instead of song parodies would be another possible area of future research to be evaluated.

APPENDIX A
HUMAN SUBJECTS APPROVAL

Florida State
UNIVERSITY

Office of the Vice President For Research
Human Subjects Committee
Tallahassee, Florida 32306-2763
(850) 644-8633 · FAX (850) 644-4392

APPROVAL MEMORANDUM

Date: 5/17/2005

To:
Amy Cermak
250 Ocala Rd #A2
Tallahassee FL 32304

Dept.: **MUSIC SCHOOL**

From: **Thomas L. Jacobson, Chair**

Re: **Use of Human Subjects in Research**
The effects of music therapy and song writing on anxiety, depression, and quality of life in cancer patients and their families as measured by self-report

The forms that you submitted to this office in regard to the use of human subjects in the proposal referenced above have been reviewed by the Human Subjects Committee at its meeting on **4/13/2005**. Your project was approved by the Committee.

The Human Subjects Committee has not evaluated your proposal for scientific merit, except to weigh the risk to the human participants and the aspects of the proposal related to potential risk and benefit. This approval does not replace any departmental or other approvals which may be required.

If the project has not been completed by **4/12/2006** you must request renewed approval for continuation of the project.

You are advised that any change in protocol in this project must be approved by resubmission of the project to the Committee for approval. Also, the principal investigator must promptly report, in writing, any unexpected problems causing risks to research subjects or others.

By copy of this memorandum, the chairman of your department and/or your major professor is reminded that he/she is responsible for being informed concerning research projects involving human subjects in the department, and should review protocols of such investigations as often as needed to insure that the project is being conducted in compliance with our institution and with DHHS regulations.

This institution has an Assurance on file with the Office for Protection from Research Risks. The Assurance Number is IRB00000446.

cc: Jayne Standley
HSC No. 2004.850

APPENDIX B

TALLAHASSEE MEMORIAL HEALTHCARE

HIPPA WAIVER

IRB Protocol #_____
(if assigned)

TALLAHASSEE MEMORIAL HEALTHCARE, INC.

IRB RECORD OF APPROVAL OF REQUESTED WAIVER

APPROVAL RECORD
FOR IRB USE ONLY

IRB Protocol No: 34

Reviewed by: Convened IRB
IRB Chair or Vice Chair pursuant to expedited procedures

1. The use or disclosure of protected health information involves:
   MINIMAL RISK to individual privacy.
   MORE THAN MINIMAL RISK to individual privacy.

2. There IS
   IS NOT
   an adequate plan to protect identifiers from improper use/disclosure.

3. There IS
   IS NOT
   an adequate plan to destroy identifiers at the earliest opportunity.

4. There ARE
   ARE NOT
   adequate written assurances that information will not be reused/redisclosed.

5. The research COULD NOT
   COULD
   practicably be conducted without the waiver or alteration.

6. The research COULD NOT
   COULD
   practicably be conducted without the protected health information.

The request for waiver or alteration of authorization is:

Not Approved
✓ Approved as a Waiver (the first box must be checked for all the elements above)
Approved as an Alteration (*description of nature of alteration required*):

Signature of IRB Chair or Vice Chair

2 May 05
Date

Larry C Deeb, MD, Chair
Print Name

APPENDIX C

CONTROL PATIENT CONSENT FORM

Informed Consent

I freely and voluntarily and without element of force or coercion, consent to be a participant in the research project entitled "The effects of music therapy and song writing on anxiety, depression, and quality of life in cancer patients and their families as measured by self-report."

This research is being conducted by Amy Cermak, who is a master's – equivalency student in music therapy at the Florida State University under the direction of Jayne Standley, PhD, MT-BC. I understand the purpose of her research project is to better understand the effects that song writing has on anxiety, depression, and quality of life in cancer patients and their families. I understand that if I participate in the project I will receive live music with a family member in my hospital room.

I am aware that my name will not be on data forms, that I will be identified by subject number only. I understand my medical chart will be reviewed for information related to my current hospital stay only, to the extent allowed by law. I understand that Amy Cermak will record my age, diagnosis and telephone number from my medical chart. The information will be reviewed by the researcher and directing professor only and will be kept confidential and secured in the music therapy clinical office. I also understand I will be asked to complete questionnaires immediately after the session and one week after the session, either in person or over the telephone. My name will not appear on any of the results. No individual results will be reported; only group findings will be reported. All data will be destroyed by December 31, 2005.

I understand my participation is completely voluntary. I may choose not to participate, or I may withdraw from participation at any time without prejudice, penalty, or loss of benefits. I have been given the right to ask questions concerning this study. Questions, if any, have been answered to my satisfaction.

I understand I may contact Amy Cermak, (850) 575-5632, or Jayne Standley, (850) 644-4565, for answers to questions about this research. Further information is available by contacting the Florida State University Office of Research at (850) 644-9695. Group results will be made available to me upon my request.

I have read and understand this consent form in its entirety.

_____ _____

(Subject) (Date)

APPENDIX D

EXPERIMENTAL PATIENT CONSENT FORM

Informed Consent

I freely and voluntarily and without element of force or coercion, consent to be a participant in the research project entitled "The effect of music therapy and song writing on anxiety, depression, and quality of life in cancer patients and their families as measured by self-report."

This research is being conducted by Amy Cermak, a master's-equivalency student in music therapy at the Florida State University under the direction of Jayne Standley, PhD, MT-BC. I understand the purpose of her research is to better understand the effects that song writing has on anxiety, depression, and quality of life in cancer patients and their families. I understand that if I participate in the project I will receive live music and participate in song writing with a family member in my hospital room.

I am aware that my name will not be on data forms, that I will be identified by subject number only. I understand my medical chart will be reviewed for information related to my current hospital stay only, to the extent allowed by law. I understand Amy Cermak will record my age, diagnosis and telephone number from my medical chart. The information will be reviewed by the researcher and directing professor only and will be kept confidential and secured in the music therapy clinical office. I also understand I will be asked to complete questionnaires immediately after the session. I will also be given a recording of the song made by me and will complete questionnaires one week after the session, either in person or by telephone. My name will not appear on any of the results. No individual results will be reported, only group findings will be reported. All data will be destroyed by December 31, 2005.

I understand there are minimal risks involved in participation of this study. I understand there is a possibility for me to dislike the song containing my information during music therapy session.

I also understand there are benefits for participating in this research project. I may find my overall quality of life to be much higher while listening to my song with my family. I understand the information collected during the study may aid health care professionals with valuable insight into improved health for cancer patients.

I understand my participation is completely voluntary. I may choose not to participate, or I may withdraw from participation at any time without prejudice, penalty, or loss of benefits. I have been given the right to ask questions concerning this study. Questions, if any, have been answered to my satisfaction.

I understand I may contact Amy Cermak, (850) 575-5632, or Jayne Standley, (850) 644-4565, for answers to questions about this research. Further information is available by contacting the Florida State University Office of Research at (850) 644-9695. Group results will be made available to me upon my request.

I have read and understand this consent form in its entirety.

_____ _____

(Subject) **(Date)**

APPENDIX E
FAMILY CONSENT FORM

Family Consent

I freely and voluntarily and without element of force or coercion, consent to be a participant in the research project entitled "The effects of music therapy and song writing on anxiety, depression, and quality of life in cancer patients and their families as measured by self-report."

This research is being conducted by Amy Cermak, who is a master's equivalency student in music therapy at the Florida State University under the direction of Jayne Standley, PhD, MT-BC. I understand the purpose of her research project is to better understand the effects song writing has on anxiety, depression, and quality of life in cancer patients and their families. I understand that if I participate in the project I will receive live music with my family member in his/her hospital room.

I am aware that my name will not be on data forms, that I will be identified by subject number only. I also understand that I will be asked to complete questionnaires immediately after the session. My name will not appear on any of the results. No individual results will be reported; only group findings will be reported. All of the information regarding the study will be reviewed by the researcher and directing professor only and will be kept confidential and secured in the music therapy clinical office. All data will be destroyed by December 31, 2005.

I understand my participation is completely voluntary. I may choose not to participate, or I may withdraw from participation at any time without prejudice, penalty, or loss of benefits. I have been given the right to ask questions concerning this study. Questions, if any, have been answered to my satisfaction.

I understand I may contact Amy Cermak, (850) 575-5632, or Jayne Standley, (850) 644-4565, for answers to questions about this research. Further information is available by contacting the Florida State University Office of Research at (850) 644-9695. Group results will be made available to me upon my request.

I have read and understand this consent form in its entirety.

_____ _____

(Subject) **(Date)**

APPENDIX F

ANXIETY/DEPRESSION QUESTIONNAIRE

Anxiety/Depression Posttest Questionnaire

Patient/Group number_____

Circle the number that best describes how you feel at this very moment.

I feel anxious.

1	2	3	4	5
Not at all				Most definitely

I feel depressed.

1	2	3	4	5
Not at all				Most definitely

I feel stressed.

1	2	3	4	5
Not at all				Most definitely

I feel irritable

1	2	3	4	5
Not at all				Most definitely

I feel emotionally drained.

1	2	3	4	5
Not at all				Most definitely

I feel unhappy with life.

1	2	3	4	5
Not at all				Most definitely

I find it difficult to concentrate.

1	2	3	4	5
Not at all				Most definitely

I feel hopeless.

1	2	3	4	5
Not at all				Most definitely

I feel angry.

1	2	3	4	5
Not at all				Most definitely

APPENDIX G

HOSPICE QUALITY OF LIFE INDEX-REVISED

Quality of Life Index-Revised

Patient/Group number_____
Circle the number that best describes how you feel at this very moment.

How tired do you feel?

1	2	3	4	5
not at all				extremely

Do you believe that each day can still hold some good?

1	2	3	4	5
believe strongly				not at all

How sad do you feel?

1	2	3	4	5
not at all				very sad

How worried do you feel about what is happening to you?

1	2	3	4	5
not at all				very worried

How lonely do you feel?

1	2	3	4	5
not at all				very lonely

How meaningful is your life?

1	2	3	4	5
very meaningful				not at all

How satisfied are you with the support you receive from family and friends?

1	2	3	4	5
satisfied				very dissatisfied

How satisfied are you with the emotional support you get from the health care team?

1	2	3	4	5
satisfied				very dissatisfied

Do your surroundings help improve your sense of well-being?

1	2	3	4	5
believe strongly				not at all

APPENDIX H
SONGWRITING QUESTIONNAIRE

One Week Post-Test Song Writing Questionnaire

(Experimental Only)

Subject/Patient Number: _____

I listened to the recorded song:

Once _____ Several Times _____

A few times_____ Never _____

If subject listened to song:

The song has helped me cope with my sickness.

0 1 2 3 4 5 6 7 8 9 10

Definitely Not Extremely

APPENDIX I

EXPERIMENTAL GROUP SONG COMPOSITIONS

I Will Stay Strong

The past ten years has been a trying time for me

Cancer took its toll and wouldn't let me be
My family stepped in with love and support
They are my reason for pushing on
I will never give up

I will keep on keepin' on
This aggravation won't last for long
I will stay strong, I will stay strong, I will stay strong

I want to see my son get married
and watch my grandchildren grow
Maybe I'll life in the White House
Not the Hatton House this I know
I will be here a long time
I have my prayers and peace of mind
I will stay strong, I will stay strong, I will stay strong

Everyday is a rollercoaster
full of emotions that I must bear
But friend and family encourage me
and keep me in their prayers
I've got this cancer under control
There is one thing I have known
I will stay strong, I will stay strong, I will stay strong

Live Each Day As Your Last Day (I heard it through the grapevine)

I've had a fulfilling life
With my kids JoJo and Shala
Then a few years back I met Thomas
Don't you know it, yeah
He's my best friend and the one I love
They are supportive in every way
I want to thank them every day

Chorus
Live each day as your last day
Because tomorrow is never promised
Learn to be happy about everything
Live each day to the fullest

In the past, this cancer brought me down
But I know how to fight it now
This sickness took a toll on my family
But it won't ever get the best of me
I've got my friends and family by my side
As I start this new life

Good Life (the fishing song)

When I saw him
sitting across the street
I knew that with him is where I wanted to be
Now 17 years later, we John Michael, Bowden and Harry
We love the beach and snowskiing,
boating, fishing all these things
Well, I have to say

Chorus
It's been a good life
this I know
I've had my family's love and support
when the times got rough
I know I've been blessed
through answered prayers I'm satisfied
yes it's been a good life with this family of mine

Now the past few months have been kind of tough
My world turned upside down
But my faith is strong and my family's supportive
There's nothing on this earth that's going to stop me now

It’s all worth it in the end (Cecilia)

Let go and enjoy the moment
spend time with your family and friends
sometimes, life is hard
I’m telling you now it’s all worth it
in the end

Met my husband when I was young
Then I found him again years later
He proposed at Disney World
Now we have three sons
Life couldn’t be better

Now this has been a rough experience
I lost all my hair and peed everywhere
But I’m not going to dwell on bad things in my life
I don’t want to waste my energy

Some have been scared, but I am strong
With my friends and family I could never go wrong
I want to than them for their love and support
And tell them I’ll always be here

The Most Precious Thing(Just a closer walk with thee)

Chorus
This life has been good to me
I cherish and love my family
the most precious thing to me
is being with them for eternity

I've had an honest life of work
Touching the lives of children
Helping make a difference when I can
To make this world a better place to live

My wife is the love of my life
She is the joy in my sigh
God put her in my life for a purpose
Her strength and love will pull me through

I can hear the angels sing
Time is the most precious thing
I'm looking forward to this journey
when my angel Michael will walk with me

Time Is All I Need (Can I have this dance)

I've had a good life with my daughter Jessica
and my partner, Susan
When my life became scary and fear set in
They were by my side to see my through

In this life, I have been saved
through my partner and friends I will gain strength
Through my love and tears, I will be cleansed
Time is all I need with my partner and friends

When sadness and grief finally set in
My sense of humor came back again
Time will make a difference
my weaknesses will leave
I will find peace with in me

I Believe(Let it Be)

I have had a long life with my wife and four children
I love them dearly, I believe
The last twelve years have been very special
Moving to Florida and traveling
I have had a good life, I believe
Going to Cancun and the Bahamas
These are all good memories
I will take them with me, I believe

I believe, I believe, I believe, I believe
I have had a good life, I believe

The past few months have been trying times
for me and my family
this cancer is rough, I believe
Death has crossed my mind more than a few times
but I will keep on fighting
I will fight on through tomorrow, I believe

In this life, I've been very privileged
I've helped out a lot of people
I have done a good job, I believe
I have had a full life filled with many good memories
This has been my story, I believe

Gail's Song (Long Black Train)

It's been a good life because the Lord love me
He gave me a good husband and family
I have two daughters and a sister that I love
And a lot of support from the Lord up above

I've had fun in this life of mine
Sewing, making dolls and doing crafts
I spent 22 good years with the love of my life
the Lord has blessed me, this I know is right

Chorus
I couldn't make it without the Lord I know
I couldn't make it without the Lord
He and my family won't let me go through this alone
I know the Lord's going to take me home

It's been 3 years since the cancer has come
My sister is always here to keep me calm
She has made me stronger and helped me through everything
She has helped me live for each day

It's Been A Good Life (Just My Imagination)

In seventh grade, I met the love of my life
For 30 years, not a moment has passed us by
I love being with him, he has taken good care of me
We've had a good life together, he has helped me see

Chorus
It's been a good life with my family
It's been a good life with my family

A year and a half ago, my life turned upside down
That's when I learned the cancer had come around
But I am doing better I must say
I've grown stronger, God has helped me through each and every day

Chorus

Everyday I want to tell them
What I think, I'm glad
They're my family I want to thank them for all of their support
and that I love them, I wish I could see them
I think about them all the time, I am definitely blessed

Chorus

I Am Strong (I will be your hero)

I met my husband thirty years ago
When I first saw him, I fell in love
He is my best friend; he is the love of my life
He's my gift from God

So time went on, this life's been good
Even through the rough times, we did the best we could
I've watched my children grow and have kids of their own
I love them more than they know

Chorus
I know that I am strong
The little things don't bother me
I will make it through this
With my friends and family

In the past few weeks, my life turned upside down
I've learned to treat my body better now
I need my friends and family to catch me when I fall
I want to thank them for being supportive

Chorus

No Fear (Angel)

I have been healthy all of my life
Nothing could ever stop me
Then over a year ago, my life turned upside down
It's not the way I had planned it to be
Now after the surgery, the problems have come and gone
The depression has left me, I am strong I know that I will carry on

Chorus
I will have no fear, this sickness won't consume me
I will prove them wrong, they all will see
I will keep on fighting, Lord knows I've tried
I will have no fear in this life

I told my family when I first found out
They came right to my side
Now we are closer than we have ever been
I love them and need them in my life
I just watched my daughter have a child
that I want to love and watch grow
I want to thank them for always being there
this I want them to know

I Am Blessed (It Is Well With My Soul)

I've had a good life filled with joy and pain
But my family has been there to help me
I am very thankful and I am here to say
I am blessed, I am blessed with my family

Refrain
I am blessed with my family
I am blessed, I am blessed with my family

Melanie has been such a great support
and Cheryl has stood by my side
Michael and Lisa are always there for me
I know I am blessed with my family

Refrain

I have been married to Rudy now seven years
He has been wonderful to me
I want to wish him a special happy birthday
and I am blessed, I am blessed with my family

Refrain

I pray everyday that my family never goes through this
There has been pain, but my prayers get me through
Everyone has been great, especially Amy too
I am blessed and I love my family

Refrain

I Am Stronger Now (I still believe in you)

Thirty-five years ago, I met the love of my life
At first she was my nurse, now she is my wife
She is the reason I'm still here today
I need her to know and hear me say
I want to thank her for staying by my side
And being such a wonderful wife

Chorus
I am stronger now
I wouldn't have my life any other way
Good will always come from bad
I am stronger now today

My life turned upside down over the past six years
The cancer has come and gone and made it hard to live
But my wife and I are closer as we look forward to each day
I've acquired new friends all along the way
I want to thank everyone
for their support and love

Cynthia's Song (Amazing Grace)

In this life, I've been blessed
With a caring family and friends
Through ups and downs, I've made it through
I'll thank them again and again

Now it's been thirty-four years
Since I met the love of my life
He has been there through the joy and tears
He will never leave my side

I have traveled the world and have seen many things
From Alaska to New Zealand
I also love to teach, It's very important to me
I enjoy it when they make me laugh

Over the past year now, my life turned upside down
But through love and support, I will be ok
I get stronger day by day

I Am A Survivor (Tonight I Celebrate My Love)

Twenty years ago I met Richard
We've had a good life together
Now we have two children between us
Richard and Deidra
I love them so much

Richard has been so supportive of me
He is gentle as he can be
My kids are trying their hardest
To help me get through this
I want to say thank you
for everything

Now my life has turned upside down
But I am strong
and I am a survivor
I know my family will get me through
And come what may I will cherish every day
This I know

I will get through this I know
I want to see my children off as they go
I can't wait to retire
And spend time with Richard
I don't know where I would be without my family
This I know

APPENDIX J

RAW DATA

Anxiety/Depression Scale Raw Scores-Patient Posttest

Control	Anxious	Depressed	Stress	Irritable	Emotional	Unhappy	Concentration	Hopeless	Anger	Total
#1	1	1	1	1	2	1	1	1	1	10
#4	1	1	1	1	1	1	1	1	1	9
#5	2	1	2	1	2	1	1	1	1	12
#7	1	1	1	1	2	1	2	1	1	11
#8	1	1	2	1	2	1	1	1	1	11
#9	5	1	1	1	1	1	1	1	1	13
#11	1	1	1	1	2	1	3	1	1	12
#13	1	1	1	3	2	1	1	1	2	13
#15	1	1	1	1	1	1	1	1	1	9
#18	1	1	1	1	4	1	2	1	1	13
#19	4	3	1	5	3	1	3	2	3	25
#20	1	1	1	1	2	1	1	1	1	10
#22	1	1	2	2	1	1	1	1	1	11
#24	2	1	1	1	1	1	4	1	1	13
#27	2	2	1	1	2	1	3	1	1	14
#28	1	2	2	2	1	2	3	2	1	16
#29	1	1	1	1	2	1	2	1	1	11
#32	1	1	2	2	1	1	2	1	1	12
#33	2	2	2	1	2	1	3	1	1	15
#34	2	2	3	2	3	2	2	2	1	19
Experimental										
#2	1	1	1	1	1	1	1	1	1	9
#3	1	2	1	1	3	1	1	1	1	12
#6	2	1	2	2	3	1	2	1	1	15
#10	2	1	1	1	1	1	2	1	1	11
#12	2	2	1	1	3	3	2	2	1	17
#14	1	1	1	1	2	1	1	1	1	10
#16	4	3	5	1	5	1	2	1	1	23
#17	4	1	5	5	4	1	5	1	1	27
#21	1	2	1	1	1	2	2	2	2	14
#23	2	2	1	1	2	2	1	1	1	13
#25	1	1	1	1	1	1	2	1	1	10
#26	1	2	2	1	2	1	3	1	1	14
#30	2	1	1	1	1	1	1	2	2	12
#31	1	1	2	1	3	1	2	1	1	13
#35	1	1	1	1	1	1	2	1	1	10
#36	1	1	1	1	2	1	1	1	1	10
#37	1	1	1	1	1	1	2	1	1	10
#38	1	1	1	1	2	1	2	1	1	11
#39	2	2	1	3	2	1	2	1	1	15
#40	1	1	1	2	1	1	2	1	1	11

Quality of Life Scale Raw Scores-Patient Posttest

Control	How tired do you feel	Each day can hold some good	How sad are you	How worried are you	How lonely are you	Does your life have meaning	Support from family and friends	Support From staff	Surroundings help well-being	Total
#1	3	1	1	1	5	5	1	4	1	22
#4	4	1	3	3	1	2	2	2	4	22
#5	4	1	5	3	1	1	1	2	2	20
#7	5	1	1	1	2	1	1	1	1	14
#8	1	1	5	5	5	1	1	2	3	24
#9	1	1	1	2	1	1	1	1	1	10
#11	2	2	4	5	4	3	1	1	2	24
#13	3	1	1	3	1	2	1	2	3	17
#15	2	1	1	1	1	1	1	1	4	13
#18	2	1	1	1	1	1	1	1	1	10
#19	4	1	2	2	1	1	1	3	4	19
#20	2	1	1	1	1	1	1	1	1	10
#22	2	1	1	1	1	1	2	2	3	14
#24	2	1	1	1	1	1	1	1	4	13
#27	3	2	1	2	1	1	1	1	4	16
#28	3	1	1	3	1	1	1	2	3	16
#29	3	1	1	2	2	1	1	1	2	14
#32	3	1	1	1	1	1	1	1	4	14
#33	4	1	1	2	1	2	1	2	4	18
#34	4	1	1	3	1	2	1	1	4	18
Experimental										
#2	2	1	2	4	1	1	1	2	3	17
#3	3	1	1	2	1	1	1	2	1	13
#6	3	1	2	3	1	2	1	1	1	15
#10	5	1	2	2	1	5	3	1	2	18
#12	4	3	4	3	1	2	1	1	3	22
#14	1	1	1	1	1	1	1	1	3	11
#16	5	1	3	5	1	2	1	1	5	24
#17	5	1	2	3	1	1	1	1	1	16
#21	5	1	1	2	1	1	1	1	1	14
#23	4	1	2	2	1	1	1	1	4	17
#25	3	1	1	1	1	1	1	1	3	13
#26	3	1	2	1	3	3	1	1	1	16
#30	3	1	3	5	4	1	1	2	4	24
#31	2	1	4	2	1	1	1	1	2	15
#35	2	1	1	1	1	1	1	1	2	11
#36	1	1	2	1	1	1	1	1	1	10
#37	1	1	1	3	1	1	1	1	1	11
#38	2	1	2	1	1	1	1	1	1	11
#39	1	1	1	2	2	2	1	1	3	14
#40	3	1	1	2	1	1	1	1	4	15

Anxiety/Depression Scale Raw Scores-Family Posttest

Control	Anxious	Depressed	Stress	Irritable	Emotional	Unhappy	Concentration	Hopeless	Anger	Total
#1	1	1	1	1	2	1	2	1	1	11
#4	3	3	3	2	3	1	2	3	1	21
#5	4	4	3	2	5	2	4	2	2	28
#7	2	2	3	1	2	2	1	1	1	15
#8	2	1	2	1	2	1	1	1	1	12
#9	1	1	2	1	2	4	3	2	1	17
#11	1	2	5	2	4	1	2	1	1	19
#13	2	2	2	2	2	1	1	1	1	14
#15	1	1	2	1	2	1	2	1	1	12
#18	1	1	2	2	3	1	3	1	1	14
#19	3	2	2	2	1	1	1	1	1	14
#20	3	4	2	1	4	2	2	2	1	21
#22	2	3	2	1	2	2	1	1	1	15
#24	1	1	1	1	1	1	1	1	1	9
#27	2	1	1	2	2	1	3	1	1	14
#28	1	1	1	2	1	2	2	1	1	12
#29	2	2	2	1	2	2	2	1	1	15
#32	1	1	1	1	2	1	1	2	1	11
#33	1	1	1	1	1	1	1	1	1	9
#34	1	1	2	1	3	2	2	1	1	14
Experimental										
#2	2	1	1	1	2	1	1	1	2	12
#3	3	2	2	2	3	1	2	2	2	19
#6	2	1	2	3	1	1	1	1	1	13
#10	1	1	1	1	2	1	1	1	1	10
#12	2	3	2	1	2	2	2	1	1	16
#14	1	1	1	1	2	1	1	1	1	10
#16	4	3	3	1	4	1	2	1	1	20
#17	4	3	2	4	4	3	3	2	3	28
#21	4	1	4	1	3	1	2	1	1	18
#23	3	2	2	1	2	1	2	2	1	16
#25	1	1	1	1	2	1	2	1	1	11
#26	2	2	3	1	2	1	2	1	1	15
#30	1	1	1	1	2	1	1	1	1	10
#31	1	1	1	1	2	1	2	2	1	12
#35	1	1	1	1	1	1	1	1	1	9
#36	2	1	2	2	2	1	2	2	1	15
#37	1	1	1	1	1	1	2	1	1	10
#38	2	1	1	1	2	1	1	1	1	11
#39	2	1	1	1	2	1	2	1	1	12
#40	1	1	1	1	2	1	2	2	1	12

Quality of Life Scale Raw Scores-Family Posttest

Control	How tired do you feel	Each day can hold some good	How sad are you	How worried are you	How lonely are you	Does your life have meaning	Support from family and friends	Support From staff	Surroundings help well-being	Total
#1	3	2	2	3	2	2	1	1	2	18
#4	3	1	5	2	1	2	3	2	4	23
#5	3	2	5	2	2	1	2	3	4	24
#7	3	1	2	3	2	2	5	2	2	22
#8	3	1	2	3	2	1	1	2	3	18
#9	2	1	3	2	1	1	1	1	1	13
#11	3	1	2	3	1	1	1	1	1	14
#13	3	2	3	3	1	1	1	1	2	17
#15	2	1	1	1	3	1	1	1	1	12
#18	4	2	5	5	3	2	2	1	1	25
#19	4	2	2	4	4	1	1	1	2	21
#20	2	1	4	2	1	1	1	1	1	14
#22	3	1	2	1	1	1	1	1	2	13
#24	1	1	1	1	1	1	1	1	1	13
#27	2	2	1	3	1	1	1	1	4	14
#28	2	1	2	1	1	1	1	1	3	13
#29	2	1	2	2	1	1	1	1	2	13
#32	1	1	2	2	1	1	1	1	4	14
#33	1	1	1	2	1	1	1	1	3	12
#34	2	1	2	2	1	1	1	1	4	15
Experimental										
#2	3	1	1	2	1	1	1	1	1	12
#3	3	4	4	3	4	1	5	4	4	32
#6	2	1	1	1	1	1	1	1	1	10
#10	3	1	1	1	1	1	1	2	3	14
#12	4	1	3	2	1	1	1	2	3	18
#14	2	1	1	4	1	1	5	1	2	18
#16	4	1	2	2	1	2	1	1	4	18
#17	3	3	4	1	2	3	1	1	1	19
#21	4	1	3	4	1	1	1	2	1	18
#23	4	1	3	3	1	1	1	1	3	18
#25	3	1	1	1	1	1	1	1	2	12
#26	3	1	2	2	1	1	1	2	3	16
#30	4	1	2	1	2	2	4	2	2	20
#31	2	1	2	1	1	1	1	1	2	12
#35	2	1	1	1	1	1	1	2	4	14
#36	4	1	1	2	1	2	1	3	2	17
#37	1	1	1	1	1	1	1	1	1	9
#38	1	1	2	2	1	2	1	1	3	14
#39	2	1	2	2	1	2	1	1	2	14
#40	2	1	2	2	1	2	1	1	3	15

Anxiety/Depression Scale Raw Scores-1-Week Pt. Posttest

Control	Anxious	Depressed	Stress	Irritable	Emotional	Unhappy	Concentration	Hopeless	Anger	Total
#1	1	1	1	1	2	1	1	1	1	10
#4	1	1	1	1	1	1	1	1	1	9
#5	1	1	2	1	1	1	1	1	1	10
#7	1	1	2	1	3	1	2	1	1	13
#8	1	1	1	1	2	1	1	1	1	10
#9	3	1	1	1	1	1	1	1	1	11
#11	1	1	1	1	2	1	2	1	1	11
#13	1	1	1	2	1	1	1	1	1	10
#15	1	1	1	1	1	1	1	1	1	9
#18	1	1	1	1	2	1	2	1	1	11
#19	1	2	2	2	1	2	2	1	2	15
#20	1	1	2	1	1	1	1	1	1	10
#22	1	1	1	2	2	1	2	1	1	12
#24	1	1	1	1	1	1	2	1	1	10
#27	2	1	1	2	2	1	3	1	1	14
#28	2	1	1	1	2	1	2	1	1	12
#29	2	1	1	2	2	1	3	2	1	15
#32	1	1	2	1	1	1	2	1	1	11
#33	1	1	2	1	2	1	2	1	1	12
#34	1	1	1	1	2	1	2	1	1	11
Experimental										
#2	1	1	1	1	1	1	1	1	1	9
#3	1	1	1	1	1	1	1	1	1	9
#6	5	1	1	2	5	1	1	1	2	19
#10	1	1	1	1	1	1	1	1	1	9
#12	3	3	2	2	2	2	1	1	2	18
#14	1	1	1	1	2	1	2	1	1	11
#16	2	1	1	1	1	1	2	1	1	11
#17	2	1	2	2	2	1	3	1	1	15
#21	1	1	1	1	1	1	2	1	1	10
#23	1	1	1	1	2	1	1	1	1	10
#25	1	1	1	1	1	1	1	1	1	9
#26	1	2	1	1	2	1	1	1	1	11
#30	2	1	1	1	2	1	2	1	1	12
#31	1	1	1	1	2	1	3	1	1	12
#35	1	1	1	1	1	1	1	1	1	9
#36	1	1	1	1	2	1	2	1	1	11
#37	1	1	1	1	2	1	2	1	1	11
#38	1	1	1	1	1	1	1	1	1	9
#39	1	1	1	1	2	1	1	1	1	10
#40	1	1	1	1	1	1	1	1	1	9

Quality of Life Scale Raw Scores-1-Week Pt Posttest

Control	How tired do you feel	Each day can hold some good	How sad are you	How worried are you	How lonely are you	Does your life have meaning	Support from family and friends	Support From staff	Surroundings help well-being	Total3
#1	4	1	1	1	1	1	1	1	1	12
#4	4	1	3	4	1	2	2	2	3	22
#5	3	1	4	5	1	1	1	2	3	21
#7	3	1	1	2	1	1	1	1	1	12
#8	2	1	2	2	1	1	1	1	2	13
#9	1	1	1	3	2	1	1	1	2	13
#11	2	1	2	2	1	1	1	1	1	12
#13	2	1	1	2	1	1	1	1	1	11
#15	2	1	1	2	1	2	1	2	1	13
#18	2	1	1	1	1	1	1	1	1	10
#19	5	1	1	2	1	2	1	2	2	17
#20	2	1	1	2	1	1	1	1	1	11
#22	3	1	1	1	1	1	1	2	4	15
#24	1	1	1	2	1	1	1	1	4	13
#27	2	2	1	3	1	1	1	1	4	16
#28	2	1	1	2	1	1	1	1	2	12
#29	4	1	2	2	1	1	1	2	3	17
#32	3	1	1	1	1	1	1	2	4	15
#33	2	1	1	2	1	2	1	1	2	13
#34	2	1	1	2	1	1	1	1	2	12
Experimental										
#2	1	2	1	1	2	2	1	1	2	13
#3	2	1	1	1	1	1	1	2	1	11
#6	5	1	1	1	2	1	1	1	4	17
#10	4	1	1	2	1	1	1	1	1	13
#12	3	2	3	3	3	2	1	1	3	21
#14	2	1	1	2	1	1	1	1	1	11
#16	2	1	1	1	1	1	1	1	1	10
#17	2	1	2	2	1	1	1	1	1	12
#21	2	1	1	2	1	1	1	1	1	11
#23	2	1	1	2	1	1	1	1	2	12
#25	2	1	1	1	1	1	1	1	3	12
#26	2	1	1	2	1	1	1	2	1	12
#30	2	1	1	3	1	1	1	1	3	14
#31	3	1	1	2	1	1	1	1	2	13
#35	1	1	1	1	1	1	1	1	1	9
#36	1	1	1	2	1	2	1	1	2	12
#37	2	1	2	3	1	1	1	1	1	13
#38	1	1	1	1	1	1	1	1	1	9
#39	1	1	1	1	1	1	1	1	1	9
#40	1	1	1	2	1	1	1	1	1	10

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