

James Madison University
JMU Scholarly Commons

Senior Honors Projects, 2010-current

Honors College

Fall 2013

Healing touch as an integrative therapy for cancer care: A review of evidence and implications for nursing

Kelsey Irene Tirona
James Madison University

Follow this and additional works at: <https://commons.lib.jmu.edu/honors201019>

Recommended Citation

Tirona, Kelsey Irene, "Healing touch as an integrative therapy for cancer care: A review of evidence and implications for nursing" (2013). *Senior Honors Projects, 2010-current*. 488.
<https://commons.lib.jmu.edu/honors201019/488>

This Thesis is brought to you for free and open access by the Honors College at JMU Scholarly Commons. It has been accepted for inclusion in Senior Honors Projects, 2010-current by an authorized administrator of JMU Scholarly Commons. For more information, please contact dc_admin@jmu.edu.

Healing Touch as an Integrative Therapy for Cancer Care:
A Review of Evidence and Implications for Nursing

A Project Presented to
the Faculty of the Undergraduate
College of Health and Behavioral Studies
James Madison University

in Partial Fulfillment of the Requirements
for the Degree of Bachelor of Science

by Kelsey Irene Tirona

December 2013

Accepted by the faculty of the Department of Nursing, James Madison University, in partial fulfillment of the requirements for the Degree of Bachelor of Science.

FACULTY COMMITTEE:

HONORS PROGRAM APPROVAL:

Project Advisor: Merle Mast, Ph.D
Professor, Nursing

Barry Falk, Ph.D.,
Director, Honors Program

Reader: Amy Graham, MSN
Assistant Professor, Nursing

Reader: Steven Keffer, Ph.D
Associate Professor, Biology

Table of Contents

1. List of Figures	3
2. Acknowledgements	4
3. Abstract	5
4. Cancer in the U.S.	6
5. Healing Touch	13
6. Review of Literature	21
7. Survey of Practitioners	38
8. Nursing Implications	43
9. Appendix	47
10. References	51

List of Figures

Figures

1	Gender	41
2	Occupation	41
3	Years of HT Experience	41
4	Level of HT Certification	41

Tables

1	Level of Evidence	20
2	Sources of Evidence for Healing Touch	29
3	Survey Questions	42
A1	Evidence that HT Relieves Cancer Symptoms	50

Acknowledgements

I would like to extend my gratitude to all the individuals and organizations who helped to make this project possible. First, I would like to express my deepest appreciation to my project advisor, Dr. Merle Mast, whose contribution of suggestions and encouragement played a crucial role in developing this project. Secondly, I want to thank my project readers, Dr. Steven Keffer and Professor Amy Graham for their valuable feedback. I would also like to acknowledge with much appreciation Judy Holt and the Blue Ridge/Shenandoah Healing Touch Practice Group for their immense contribution and participation in my research. Furthermore, I want to thank the Pi Mu at-Large Chapter of Sigma Theta Tau International for allowing me to present my project at Pi Mu Professional Day 2013.

Abstract

Life expectancies and survival rates of adults with cancer in the United States have significantly increased in recent history, primarily due to advancements in technology and early detection. More people are living longer with cancer and it has evolved to a complex, chronic illness. Although progress is being made in the treatment of cancer, pain and other symptoms related to the disease and its treatment are poorly managed by conventional care (Chapman, 2012; Deng, 2005). The use of complementary and alternative therapies is becoming increasingly popular in this population, in addition to conventional treatment from their primary providers. Healing Touch is a part of the biofield therapies and a growing body of literature is showing that it may be beneficial in the relief of pain and other symptoms related to cancer. The aim of this project is to review and evaluate sources of evidence supporting the effectiveness of healing touch as a complementary therapy in cancer care. Implications of the evidence and recommendations for the integration of Healing Touch with standard nursing care for cancer patients will be explored.

Cancer in the United States

The term *cancer* encompasses a large group of diseases characterized by the uncontrolled growth of abnormal cells in the body, leading to serious illness and sometimes death. In the United States, cancer is the second leading cause of death and as the population ages, the number of new cancer diagnoses per year are predicted to double the current rate (1.6 million) by the year 2050 (American Cancer Society [ACS], 2012). Advances in medical technology and early detection have significantly improved survival rates within the past 30 years. As technology progresses, personal, direct patient care is increasingly replaced by high-tech machines and pharmaceuticals. There is a trend in Western medicine that focuses on eliminating disease, which can compromise care that is focused on the person (Micozzi, 2001).

Although surgery, chemotherapy and radiation remain standard in cancer treatment, patients bear significant physical, emotional and financial tolls with aggressive treatments. In 2007, the U.S. spent a total of 226.8 billion dollars on cancer treatment including direct medical costs and indirect mortality costs (ACS, 2012). Despite the immense amount of money being spent on cancer treatment, pain and other side effects related to cancer are still often inadequately managed (Lehne, 2010). Approximately one-third of those diagnosed with cancer will die within five years and too often, those that do not survive spend the final moments of their life in a state of agony due to pain related to advanced disease and side effects of treatment. It is the patient's right and the role of healthcare providers to assure care serves not only to eliminate disease but also to promote the health and well-being of the patient, including adequate pain management and control of debilitating side effects of treatment. For this reason, it is essential that more emphasis of treatment be placed on patient comfort. In order to improve quality of life in patients living with cancer and undergoing treatment, other approaches of care for symptom management

and palliative care need to be explored and integrated with standard treatment of cancer (Rueda et al, 2011; Deng, 2005).

Symptoms and Side Effects of Cancer Treatment

Standard treatment for cancer involves surgery, chemotherapy, radiation or a combination of the three and may include other adjuvant drugs. Although these have become widely accepted as the standard of care for cancer, they are essentially toxic to the body and can produce a vast number of harmful side effects. Chemotherapy describes a large group of drugs that target rapidly dividing cells, such as cancer cells. Chemotherapy can cause debilitating side effects including nausea, vomiting, fatigue, pain, loss of appetite, weight loss, cognitive impairment, decrease in immune function, infection and other illnesses. Some chemotherapy drugs may also cause peripheral neuropathy, for which there is not a reliable form of treatment (Deng, 2005). Radiation therapy may inadvertently increase a person's risk for other cancers by damaging adjacent tissues. Side effects of radiation include nausea, weakness, skin damage, pain and changes in blood count (ACS, 2012).

The combination treatment of chemotherapy, surgery and radiation can produce complex long-term side effects including post treatment neuropathic pain syndromes that can be difficult to manage (Deng, 2005). Even before treatment is started, the disease itself can manifest almost any sign or symptom in the body depending on the stage and type of cancer, and sometimes no symptoms at all. In addition to physical side effects, the stress of coping with a potentially terminal illness, fear of death, pain, disfigurement and disruptions of relationships can be devastating to a person and their family (Deng, 2005). There is a significantly higher prevalence of depression and anxiety among people diagnosed with cancer than the general population and these are often under diagnosed (Deng, 2005; Salvo, 2012).

Pain Management

Pain is an exceptionally common and difficult symptom to manage in cancer patients. In a cross-sectional national survey of 814 patients undergoing cancer treatment, 84% reported adverse effects with 48% of those experiencing pain (Henry, 2008). Patients with advanced disease are especially vulnerable with an estimated 75-80% experiencing significant pain that is poorly managed as a result of treatment or the disease itself (Aghabati, Mohammadi & Esmail, 2008; Lehne, 2010). Adequate pain control is essential to patient functionality and overall well-being. Pain that is not adequately controlled reduces quality of life, interferes with daily living and social interaction, can reduce physical and emotional functioning and may intensify other symptoms related to cancer treatment (Chapman, 2011). There is also a growing amount of literature relating increased pain with depression and anxiety (Salvo, 2012). Pain is often not well controlled in the cancer population and few options for treatment are available within the conventional health care system outside of pharmaceuticals (Lehne, 2010). Pain is subjective to each patient while variety of treatment for pain tends to be limited. Most pain, regardless of the character or location, is essentially treated the same way, with the use of pain medications. Drug therapy typically includes opioids, non-steroidal anti-inflammatory drugs, anti-depressants, anti-seizure drugs, local anesthetics and other adjuvant analgesics (Lehne, 2010).

Drug therapy can be effective in alleviating pain, although it has numerous disadvantages. Barriers to adequate pain control include poor assessment of pain, lack of knowledge of treatment options and fear of addiction or dependence (Chapman, 2012). Opioids are the standard in pain medication and can cause confusion, sedation, dizziness, nausea and constipation (Vallerand, Sanoski & Deglin, 2013). They add to other unwanted side effects of cancer, especially fatigue. Side effects make it difficult for patients to maintain daily living and

functionality while maintaining pain control. Breakthrough pain is common and extended use of opioids can result in tolerance, dependence and could cause withdrawal symptoms (Vallerand, Sanoski & Deglin, 2013). Although opioids are considered the gold standard in analgesics, growing evidence indicates that chronic pain may be resistant to opioids and neuropathic pain's response to opioids is limited (Institute for Clinical Systems Improvement [ICSI], 2011). Chronic opioid use is associated with depression and may lead to a state of hyperalgesia, or amplified pain response (Deng, 2005). Opioids are also associated with delayed recovery from chronic pain, decreased sexual and immune function and increased overall mortality rate (ICSI, 2011).

According to the November 2011 Institution for Clinical System Improvement Healthcare Guideline for the assessment and management for chronic pain, pharmacotherapy should not be the sole focus of pain management due to the potential for adverse effects. It states that medications should be used in conjunction with “psychosocial and spiritual management, rehab and functional management, non-pharmacologic and complementary medicine, and intervention management.” Other options patients may choose for alleviation of pain are nerve block procedures, surgery and palliative radiation, although these invasive procedures pose more risks to the patient. Complementary modalities for pain management should be explored in an effort to reduce the use of opioids and subsequent adverse effects.

Complementary and Alternative Therapies

Western medicine, the accepted standard of healthcare, is advanced in the technology and science of diagnosing and treating disease. These advances have contributed to a 25% increase in survival rates of cancer in the U.S. since just 1975 (World Health Organization [WHO], 2013). What conventional medicine lacks is a balance of care including not only the elimination of disease but the promotion of well-being, care for the whole person as a complex, integrated

living system and respect to each person as an individual (Micozzi, 2001). In a foreword cited in *Fundamentals of Complementary and Alternative Medicine*, former Surgeon General of the United States, C. Everett Coop stated, “In my lifetime we have achieved great successes in the fight against infectious diseases. We have more work to do in our effort to improve the quality of life and make people more comfortable as they endure chronic health problems such as cancer, heart disease and arthritis” (Micozzi, 2001). A growing body of evidence suggests complementary therapies may be a safe, low cost adjunct to conventional care (Deng, 2005).

Complementary and alternative medicine is “a group of diverse medical and health care systems, practices, and products that are not generally considered part of conventional medicine” (National Center for Complementary and Alternative Medicine [NCCAM], 2013). These therapies have become increasingly popular and used by adults with cancer and other chronic illnesses to address concerns inadequately managed by conventional medicine. According to surveys of CAM users, the use of these therapies is a response to a healthcare system that emphasizes laboratory medicine, invasive treatments, painful side effects and high costs (Micozzi, 2001). Conventional, also called Western or allopathic, medicine represents the U.S. healthcare system and is practiced by holders of medical doctor and doctor of osteopathic (M.D. and O.D., respectively) degrees, along with allied health professionals (NCCAM, 2013). Complementary and alternative medicine differs slightly in that complementary medicine consists of healthcare practices used in addition to conventional treatment and alternative medicine is practiced as a replacement for conventional medicine.

Examples of CAM therapies include herbal medicines or dietary supplements, mind and body medicine such as meditation and acupuncture, manipulative and body-based practices like massage, and energy therapies such as Therapeutic Touch and Healing Touch (NCCAM, 2013).

In the U.S., these therapies are referred to as complementary and alternative because they are not part of mainstream healthcare. In many other countries, they are referred to as “traditional medicine” because they are theories and practices that are indigenous to many cultures and have been practiced for thousands of years (WHO, 2008). In fact, many countries in Asia and Africa depend on traditional therapies as primary health care for 80% of the population (WHO, 2008). In addition, in many developed countries not including the U.S. 70-80%, of the population uses some form of complementary and alternative therapy (WHO, 2008).

CAM is a compilation of a variety of diverse healthcare systems that share a few key characteristics. A basic concept that is found in many complementary therapies, such as energy therapies, is that the body has energy and all living things consist of complex energy systems. Health is attained by achieving balance in these energy systems and disturbances in energy flow can lead to illness (Micozzi, 2001).

A defining characteristic of CAM therapies is the emphasis of care to promote healing and wellness, as opposed to fighting illness or disease. The goal of therapy is prevention of, or healing from, disease by enhancing the body’s ability to self-heal. All healing comes from endogenous sources and external manipulations only serve to facilitate the body’s innate ability to heal. With this concept, the patient is an active participant in his own care. The individual is in control of the maintenance of health, as opposed to health being a property that can be managed solely from external sources chosen by a care provider. There is an emphasis on the individuality of each person’s unique ability to heal; so a plan of care cannot be generalized according to disease or symptoms (Micozzi, 2001).

Complementary therapists practice holistic care, meaning they consider each individual as a whole person with multiple levels of health, which are all interrelated. Western medicine can

be considered reductionistic in the sense that medications and other treatments work by reducing illness to a specific organ or function of the body at a physiological level and focusing treatment to these areas. Complementary therapy uses a holistic approach which considers the whole living being or system as interconnected with the environment and examines all levels of health including physical, psychological, social and spiritual. Consequently, while a physician may spend fifteen minutes with a given patient before deciding treatment, CAM practitioners tend to devote extensive time thoroughly assessing and interviewing the client before beginning any interventions. Using this concept, the idea of holistic care can be applied to the integration of allopathic and complementary therapies, combining the science of eliminating disease at a physiological level with the promotion of wellness of individuals as whole living systems within their environments (Micozzi, 2001).

Healing Touch

Healing Touch (HT) is part of the energy therapy group of complementary and alternative therapies. It is a biofield therapy in which the practitioner uses his/her hands for light touch and off-the-body manipulation of the energy fields to promote health and healing. Healing Touch is used in collaboration with conventional health approaches for the reduction of stress, anxiety and depression, pain, strengthening immune function, recovery from surgery, easing acute and chronic conditions, and supporting cancer care. It is considered safe and non-invasive using only the hands to restore balance in the energy system and facilitate the client's self-healing process (Schommer & Larrimore, 2010).

History and Evolution

Energy therapies are based on the theory that human beings, like all living things, are made up of a complex system of energy in addition to their physical systems. Similar concepts of a bioenergy or life force have been recognized by many different cultures including Chinese, Indian, Egyptian and Greek. The practice of healing by using the hands to direct energy has been documented in cultures all over the world as far back as 15,000 years ago in cave paintings of the Pyrenees. It is a form of healing acknowledged by the Native Americans, Roman emperors, and several historical scholars including Hippocrates (Micozzi, 2001). Interest in touch as healing escalated in the U.S. after Reiki was developed in Japan and brought to the U.S. in the 1930's. Canadian biochemist Bernard Grad conducted extensive double-blind studies showing accelerated healing in mice with laying-on of hands compared to controls in the 1960's (Micozzi, 2001). In 1971 Dolores Krieger, PhD, RN, began conducting studies on humans and showed that hemoglobin levels significantly improved following treatment with laying on of hands (Hover-Kramer, 2002). She then collaborated with Dora Kunz to develop Therapeutic Touch, a popular,

often researched practice of laying-on of hands with the intent to heal, independent of religious belief. In 1994, the North American Nursing Diagnosis Association (NANDA) classified “Energy Field Disturbance” as a nursing diagnosis (Micozzi, 2001).

In relation to all energy-based therapy, Healing Touch is rather new. It was developed in 1989 by Janet Mentgen, an RN who studied all forms of energy healing and incorporated her own energy-based techniques with those from Therapeutic Touch, Reiki, shamanic and aborigine traditions and many other well-known healers to create a new program of energy-based healing (Hover-Kramer, 2002). In 1989, the American Holistic Nurses Association (AHNA) began to offer Healing Touch as a continuing education program for nurses. Through Healing Touch International (HTI), Healing Touch has a set scope of practice, code of ethics and provides up to date information of current research. Certification as a Healing Touch practitioner can be completed by health professionals or laypersons and is obtained by completing all five levels of Healing Touch courses, which includes didactic and experiential learning and a one-year mentored practice program (Healing Touch International [HTI], n.d.). Practitioners are certified through Healing Touch International, Inc. a non-profit organization and are endorsed by AHNA (Schommer & Larrimore, 2010).

Concepts and Theories

As with most complementary therapies, Healing Touch is a holistic paradigm which incorporates many influences of healing that determine treatment outcomes. Whereas conventional medicine focuses on curing or treating disease, Healing Touch focuses on healing, the process towards body, mind, emotional and spiritual wholeness and well-being. Several core values provide the foundation of Healing Touch as identified by HTI: integrity, heart-centeredness, respect of self and others, self-care, service, community and unconditional love. In

addition, the healer does not necessarily *heal* the client. Rather, the healer supports and positively influences the client's ability to self-heal by guiding that process with the intention of promoting healing (Schommer & Larrimore, 2010).

Healing Touch is founded on the principle that a subtle flow of electromagnetic energy throughout and around the physical body impacts a person's physical, mental, emotional and spiritual well-being and can be manipulated with the hands. The human energy system consists of the biofield, which is composed of both the physical body and the energy field within and around the physical body. It also contains Chakras or energy centers that correlate to specific areas of the physical body and influence organs and endocrine glands. Less used in Healing Touch are the meridians or energy tracts that carry electromagnetic current, central to Traditional Chinese Medicine and acupuncture (Schommer & Larrimore, 2010).

Healing Touch consists of light touch and off-the-body manipulation to clear, energize and balance the energy field through either localized or full-body interventions. Typical sessions can range from fifteen to thirty minutes or longer. Basic Healing Touch technique begins with an intake interview with the client to assess his/her reasons for coming. Depending on information gathered during intake, the practitioner will determine the intervention to be performed. The practitioner then prepares by centering, or becoming focused and present, and by setting the intention to provide the most good for the client. The client is either lying or sitting with eyes closed in a relaxed position. The practitioner conducts a pre-treatment assessment by scanning the energy fields with the hands over the body before performing the predetermined intervention(s). This is followed by a post-treatment assessment to determine the effect of the intervention. The practitioner then grounds the patient to bring his/her awareness back to the present by touching the client's shoulders or saying their name. Once the client is grounded, the

practitioner discusses client feedback of the session and evaluates the experience (Schommer & Larrimore, 2010).

Healing Touch and Cancer

The benefits of Healing Touch therapy can help address many of the needs of those living with cancer. It is used as a complementary therapy for the relief of acute and chronic pain, a complex symptom associated with cancer. A holistic approach is important in managing complex cancer pain because it is often difficult to treat. Pain perception varies among patients depending on diagnosis, stage of cancer, and personal preference. Characteristics and type of pain can change frequently throughout the duration of cancer treatment (Chapman, 2012). Studies show that satisfaction with healthcare is inversely related to reports of pain and symptom distress is associated with subsequent opioid use and hospitalizations (Rose et al, 2008). HT also provides a safer, less invasive option for pain management than pharmacologic and other methods of conventional care.

Healing Touch is also used to decrease stress and anxiety and improve mood (Schommer & Larrimore, 2010). Depression and anxiety are prevalent in the cancer population due to the burden of coping with serious and potentially fatal disease (Salvo, 2012). Depression, fear and anxiety can increase sensitivity to pain. By reducing these conditions, pain management may also be improved (Chapman, 2012).

A problem cancer patients may face is lack of communication with their healthcare providers. Patients often do not fully understand, or may misinterpret, information from their physicians. It is hard for patients to keep up with medical and pharmaceutical technology and terminology (Hagihara & Tarumi, 2006). Physicians typically do not spend much time educating or communicating with their patients in the hospital (Rothberg et al, 2012). The extended amount

of time a HT practitioner spends listening to the client's concerns allows the client to receive undivided attention from their provider. By integrating HT with conventional care, HT practitioners can be a part of the healthcare team that manages medical treatment. Education related to the client's conventional treatment can be incorporated in the HT session. This improves communication between the patient and the healthcare team.

Healing Touch has been reported to improve quality of life in those receiving cancer treatment, help relieve symptoms during and after chemotherapy and improve overall well-being. It has also been reported to strengthen and support the immune system, which can be significantly impaired during cancer treatment (Schommer & Larrimore, 2010). In addition, Healing Touch is used as assistance with the dying process to promote relaxation, peace and acceptance. When chance of survival is low and conventional treatment is no longer desired, Healing Touch can promote healing and well-being when cure is no longer attainable (Schommer & Larrimore, 2010).

The Role of Nurses

Improvements in patient care, especially in relation to symptom management, begin with nursing. It is the nurse's role as a part of the five step nursing process to implement interventions to achieve outcomes related to human responses to health conditions or life processes, such as pain response to cancer (Ackley & Ladwig, 2011). Although patient-centered care consists of a collaboration of all health professions, nurses are in the ideal position to initiate change in patient care protocols when it is determined that any aspect of care is inadequate. Nurses provide the most direct care to patients and encounter the physical and emotional effects of cancer on patients first hand. They are constantly assessing, planning and evaluating care of the patient and have a profound ability to affect patient outcomes. A review by Rueda et al (2011) found

evidence that non-invasive psychotherapeutic, psychosocial and educational interventions such as counseling, coaching sensory self-monitoring, caregiver-assisted coping skills training and nutritional counseling by nurses may improve symptoms and quality of life in patients with lung cancer.

It is also important that nurses as the role of patient educators, have a well-formed knowledge of complementary therapies like Healing Touch. Many patients are exploring these therapies without communicating with their primary providers and it is clinically important that they receive guidance in using complementary therapies to avoid any questionable or unproven modalities (Deng, 2005). Nurses are the number one trusted profession in America and are expected to act as advocates for the patient at all times (Newport, 2012). They have an obligation to implement care that is safe and to eliminate unnecessary suffering.

As advances in high-tech medical care continue to emerge, nursing care becomes progressively focused on technology as well. With the progression towards the use of electronics in hospitals, nurses find themselves interacting more closely with the computers and intravenous (IV) pumps than the actual patients. This, in addition to busier workplace environment, increasing focus in healthcare on cost and other factors have lead to direct patient interaction and touch becoming more distant in the role of nursing (Ray & Turkel, 2012). It is well known that touch is therapeutic and is part of compassionate, patient-centered care. The integration of Healing Touch with nursing care can renew the nurse-patient relationship and bring a healing presence back to the art of nursing.

Purpose

There is an increasing amount of literature that suggests Healing Touch may be an effective complementary therapy for the relief of pain and other symptoms related to cancer.

There is a need for non-pharmacologic interventions that can be implemented for symptom management to improve quality of life in the cancer population and the quality of care provided. The purpose of this project is to evaluate the evidence supporting the use of Healing Touch as an integrative therapy for symptom management related to cancer to establish recommendations for nursing practice.

Methods

The information for this project was obtained from 1) publications in scholarly journals and electronic databases; 2) lay literature on reputable websites and textbooks; and 3) expert opinion from Healing Touch practitioners gathered by survey. Lay literature was obtained from the Healing Touch International website and textbooks from the level 1 certification class. A Qualtrix survey was conducted electronically to gather expert opinion from a local group of Healing Touch Practitioners. Databases used were CINHAL, PubMed and Cochrane Library. Studies included were peer-reviewed from scholarly journals from the year 2000 and on. Publications were categorized into three groups according to the focus of the study: Healing Touch in any patient population, Healing Touch for pain in any patient population and Healing Touch for cancer-related pain and symptoms. Studies were evaluated by level of evidence, presented in table 1.

Table 1. Level of Evidence

Level I	Evidence from a systematic review or meta-analysis of all relevant randomized controlled trials (RCTs) or evidence-based clinical practice guidelines based on systematic reviews of RCTs.
Level II	Evidence obtained from at least one properly designed randomized controlled trial.
Level III	Evidence obtained from well-designed controlled trials without randomization.
Level IV	Evidence obtained from well-designed case control and cohort studies.
Level V	Evidence from systematic reviews of descriptive and qualitative studies.
Level VI	Evidence from a single descriptive or qualitative study.
Level VII	Evidence from opinion of authorities and/or reports of expert committees.

Review of Literature

Healing Touch for Various Outcomes

Through the literature search, three systematic reviews were found assessing the efficacy of Healing Touch or all biofield therapies in any patient population (Anderson & Taylor, 2011; Jain & Mills, 2009; Wardell & Weymouth, 2004). These reviews are level II evidence, each containing at least one well-designed randomized controlled trial. Details of these studies are presented in Table 2.

Each of the reviews reported evidence which showed a decrease in pain with Healing Touch. Jain and Mills (2009) found strong evidence, defined as two or more high-quality randomized controlled trials (RCTs), for biofield therapies in populations with pain to provide reductions in pain intensity and moderate evidence for reduction in cancer pain. Wardell and Weymouth (2004) found seven out of nine trials measuring pain following the administration of HT reported a decrease in pain with HT. Anderson and Taylor (2011) reviewed five RCTs of HT impact and reported that one RCT found that HT significantly decreased pain. Positive effects of HT on stress reduction were also a theme found in these reviews. Two reviews reported that several of the RCTs they reviewed reported that HT significantly reduced physiological measures including blood pressure, heart rate and respiratory rate (Anderson & Taylor, 2011; Wardell & Weymouth, 2004). Jain and Mills (2009) found conflicting evidence for biofield therapies in reducing physiologic markers in cardiovascular disease populations.

All mentioned reviews also found studies which reported an increase in quality of life, mood enhancement or overall well-being with biofield therapies or HT specifically. Outcomes which produced non-significant or conflicting results with biofield therapy or HT include long-term pain, cardiovascular disorders, cancer-related fatigue and nausea. Wardell (2004) found

significant positive results for HT studies in elderly patient populations, reporting increased functional ability and appetite, and decreased pain, restlessness and medication use.

Many limitations were reported in each of the reviews, including lack of proper control group, combining interventions such as Healing Touch and Reiki or playing music, varying durations of treatment, inadequate level of blinding and small sample sizes. Most studies did not provide a full description of the specific interventions used during therapy. There are numerous techniques within HT and it is necessary that the techniques used during therapy be reported in order for the trial to be replicated. In addition, many of the trials stated that the intervention was performed by a HT practitioner but did not describe the level of experience or expertise of the practitioner. There are five levels of HT training and level of expertise may affect outcomes. Many of the authors of these studies are Healing Touch practitioners which may contribute to bias.

Reviews of Healing Touch across patient populations have found promising evidence suggesting effects in pain and stress reduction, improvements in mood and well-being, decreased physiological stress indicators, and improvements in functionality. Due to the small number of high-quality RCTs of Healing Touch, no conclusions were made regarding the efficacy of HT in any patient population. All reviewers stated that available evidence is promising for HT and that more high quality studies are warranted.

Healing Touch and Pain

There is a limited, but growing amount of literature on the effect of Healing Touch on pain reduction. Five studies were identified that tested the effects of HT on pain or anxiety not specific to cancer, and two systematic reviews which evaluated the impact of Reiki and Therapeutic Touch on pain and anxiety (Table 2). These studies included one level II

randomized controlled trial (Decker et al, 2012), one level IV repeated measures study with a control group (Wilkinson et al, 2002), two level IV cohort studies without a control group (Hjersted-Smith & Jones, 2008; Maville et al, 2008) and one level VI qualitative study (Sutherland et al, 2009). One level I systematic review and one level II systematic review were also examined (So et al, 2012; Fazzino et al, 2010).

A number of studies reported a significant decrease in pain after HT interventions (Hjersted-Smith & Jones, 2008; Sutherland et al, 2009; Wilkinson et al, 2002). In many of the studies, pain was a secondary outcome measurement or was not the only outcome measurement.

Hjersted-Smith & Jones (2008) reported significant post-treatment decreases in pain and anxiety in 30 end-stage liver patients. Differences in this study over the one-year period were non-significant, which may indicate a short term effect. Wilkinson et al (2002) studied the effect of HT on secretory immunoglobulin A levels, stress and perceptions of health enhancement. They reported a significant reduction in stress in groups receiving HT or HT plus music and guided imagery, compared to no treatment. Qualitative data from this study revealed that six of eleven clients reported pain relief after HT.

Maville et al (2008) examined physiological stress measures and their response to HT, and reported significant decreases in heart rate, temperature, systolic blood pressure and state anxiety post-treatment. Non-significant findings in this study included decreased muscle tension, skin conductance and diastolic blood pressure. Qualitatively, 63% of participants reported feeling “relaxed” after the session (Maville et al, 2008).

In a pilot study by Decker, Wardell and Engebretson, both the HT group and the control group of presence showed non-significant decreases in pain measurements in chronically ill adults living in a long term care facility (2012).

Sutherland et al (2009) used qualitative measurements to assess the effect of HT in thirteen patients suffering from chronic headache. Twelve of the thirteen patients reported improvements in frequency, intensity or duration of pain after three treatments. Six of these also reported a decreased need for pain medication during the trial.

In a Cochrane review by So, Jiang and Qin (2008), 24 RCTs studying the impact of HT, TT or Reiki on any type of pain were examined. Pain measurement scales were standardized into a single scale, and reported an average of 0.83 units on a 0 to 10 scale, lower pain intensity in groups receiving touch therapy compared to control groups. In addition, the experience of the practitioner performing the interventions was analyzed and more experienced practitioners were associated with greater effects in pain reduction.

Fazzino et al conducted a literature review of energy therapies and their effects on pain. A total of 22 studies were discussed, including RCTs, cohort studies, descriptive studies, systematic review and meta-analyses. Of the eight studies of HT, seven reported a significant reduction in pain. Findings were consistent in studies of TT and Reiki.

Although the amount and quality of studies are limited, existing evidence suggests Healing Touch may be effective as a complementary therapy for pain relief and stress reduction. Although most studies reviewed above reported a significant decrease in pain with the use of Healing Touch, none was conclusive due to methodological limitations or insufficient data. Other results reported as an effect of Healing Touch included a reduction in stress, a decrease in physiologic stress measurements such as heart rate and blood pressure, and an increase in secretory immunoglobulin A. One study and one systematic review found a greater effect in positive outcomes related to higher experience levels of HT practitioners (So, 2008; Wilkinson et

al, 2002). In two studies, participants reported a decreased need for pain medication after HT therapy (Sutherland et al 2009; So & Jiang, 2008).

Major limitations to interpreting these findings were lack of a control group, small sample sizes, missing data, and limited quantitative data. In most of the studies, blinding was either not possible, single-blinded or not reported. Other than the studies that assessed the effect of training level, many of the studies were not specific about the level of training of the practitioner performing HT or the specific interventions performed.

Healing Touch and Cancer

The population of cancer patients has demonstrated a growing interest in using biofield therapies as an adjunct to conventional treatments. The oncology patient population is one of the fastest growing areas for HT use (Kwapien & Kulakowski, 2005). Current evidence for HT has shown a possible effect in pain relief, stress reduction, improvements in mood, quality of life and overall health, which are important needs in the cancer population. A strong base of literature is still lacking in this area but research is growing and many studies are ongoing. From the literature search, four clinical trials were found using Healing Touch for cancer symptoms including three level II RCTs (Cook et al, 2004; Post-White et al, 2003; Lutgendorf et al, 2010) and a level IV cohort study (Danahauer, Tooze, Holder, Miller & Jesse, 2008). Three level II reviews were found on biofield therapies for cancer symptoms (Anderson & Taylor, 2012; Coakley & Barron, 2012; Jackson et al, 2008). Two reviews, one level I (Bardia et al, 2006) and one level II (Sood et al, 2007) were found on various complementary and alternative therapies for cancer symptoms (Table 2).

All five clinical trials reported significant improvements in cancer-related symptoms or quality of life measurements. Cook, Guerrerio and Slater (2004) conducted a single-blind RCT in

62 women with gynecological cancer testing HT on health-related quality of life (HRQoL) compared to mock treatment. The HT group reported better outcomes in all nine measurements of HRQoL, including statistically significant differences between groups in vitality, pain and physical functioning.

Post-White et al (2003) conducted a randomized crossover intervention study comparing Healing Touch, massage therapy (MT) and presence alone on relaxation and symptom reduction in 230 cancer patients. Patients were randomly assigned to HT group, MT group or presence alone group, receiving the intervention for four weeks and receiving usual care alone for four weeks. Results showed that HT and MT were more effective in inducing relaxation, reducing pain and improving mood and fatigue compared to presence and control. HT also showed greater effects in reducing fatigue than MT. In addition, results showed that subjects in the presence group did not differ significantly from the control group in blood pressure, pain, nausea, anxiety, fatigue, or medication use, indicating that therapeutic effects were not from presence alone. This differs from results found in the previous pilot study by Decker et al, which showed no significant differences in pain between HT and presence alone.

A cohort pilot study conducted by Danhauer, Tooze, Holder, Miller & Jesse (2008) tested the effect of Healing Touch in twelve adult acute leukemia patients on psychological distress and symptoms related to treatment. Significant decreases were reported in fatigue and nausea between pre- and post-intervention ratings. Non-significant differences were reported from baseline to post-intervention in symptom frequency, sleep and psychological distress. Similar to the previous study by Hjersted-Smith & Jones (2008), results indicated a stronger immediate effect of HT than long term.

Lutgendorf et al (2010) tested the effect of HT in immune function, as well as mood, quality of life and treatment-associated toxicities in patients with cervical-cancer. Sixty patients participated in this study and were randomly assigned to Healing Touch, relaxation training or usual care alone for six weeks. Patients in the HT group had maintained stable immune function, measured by natural killer (NK) cell activity compared to relaxation and control groups which showed significantly greater declines in NK cell activity. HT group also showed a greater decline in depressive mood scales compared to controls. Non-significant differences were found in the direction predicted in toxicities, white and red blood cell counts, quality of life and fatigue in the treatment group compared with the control group.

Systematic reviews that examined the effect of biofield therapies on cancer related symptoms included studies using Healing Touch, Therapeutic Touch and Reiki. Anderson and Taylor (2012) assessed four studies using biofield therapies with pain as the primary outcome. Three studies found a significant decrease in pain after the intervention compared to control groups. Coakley and Barron (2012) reviewed 22 studies of biofield therapies for symptoms commonly associated with cancer. Biofield therapy outcomes supported by these reviews included decreased anxiety, relaxation, enhanced mood, decreased pain and fatigue and increased immunoglobulin. Both of these reviews reported positive results with biofield therapies but could not make definitive conclusions due to study limitations and inconclusive findings. Jackson et al (2008) reviewed twelve biofield studies to assess the effect on cancer-related pain and anxiety. Improvements were reported in relaxation, pain, stress and anxiety with biofield therapy. Despite limitations found in these studies, the authors of this review concluded that the evidence supported the use of touch therapies to reduce pain and anxiety in the cancer population.

Two systematic reviews examined all complementary therapies for symptoms related to cancer. Very few studies of biofield therapies were included in these reviews. Sood, Barton, Bauer and Loprinzi (2007) reviewed 21 trials of complementary therapies on cancer-related fatigue. Only one trial used Healing Touch and reported a decrease in fatigue, total mood disturbance and pain. For all complementary therapies examined in this review, none produced sufficient data for reviewers to recommend any treatment; however, it was suggested that the current literature warrants further testing in higher quality trials. Bardia, Barton, Prokop, Bauer and Moynihan (2006) conducted a systematic review of randomized controlled trials examining the effects of complementary therapies on pain related to cancer. Of 18 trials, only two used biofield therapies (HT and Reiki), with both studies demonstrating a decrease in pain. Reviewers reported limitations across all trials assessing complementary therapies including short duration, small sample size, high attrition rate and lack of adequate sham control but stated that some CAM therapies, including HT seemed promising.

Although the available research for Healing Touch in cancer populations is limited, existing research indicates a positive effect in pain reduction, mood improvement and quality of life. Insufficient or conflicting results were found for HT in relation to fatigue, nausea and medication use. All studies indicate a need for more high quality studies to make conclusions regarding Healing Touch. Numerous pilot studies have demonstrated the ability and the need to conduct full scale controlled trials.

Recurring limitations found in HT studies seem to be consistent with those found in most studies of complementary therapies such as small sample sizes, lack of blinding, lack of a control group or sham treatment, short duration and sampling bias. Because research on HT is so limited, most systematic reviews contain the same studies, which may exaggerate the number of studies.

Table 2. Sources of Evidence for Healing Touch

Author (Year)	Level of Evidence	Intervention	Sample	Outcomes Assessed	Results	Limitations
Wardell & Weymouth (2004)	Level II Review of studies	Healing Touch	1603 subjects, 32 quantitative studies for any patient population	Studies were evaluated by problem areas including pain, cancer, endocrine and immune system, cardiovascular, elderly, mental health and other. Outcomes were discussed to evaluate the efficacy of HT.	Studies indicated effects in reducing stress, anxiety, and pain. Some reported accelerated wound healing, and improvement in biochemical and physiological markers and a greater sense of well being. Participants reported improved quality of life physically, emotionally, relationally and spiritually. None of the findings were conclusive due to low quality of studies.	Lacked vital information, most studies were low quality due to either poor design or poor reporting.
Jain & Mills (2009)	Level II Systematic Review	Biofield therapies	66 quantitative studies of any biofield therapy; RCT or repeated measures design	Studies were grouped by patients populations and outcomes assessed. Level of evidence of the studies was assessed and outcomes were examined.	Strong evidence was found for reduction of pain. Moderate evidence was found for symptoms related to cancer. Authors concluded the evidence suggests biofield therapies are promising complementary interventions for pain, anxiety and dementia but further high quality studies are needed.	Studies were very heterogeneous in quality, modalities and interventions. Many of these trials were small scale. This review also did not include any qualitative studies.
Anderson & Taylor (2011)	Level I Systematic Review	Healing Touch	5 RCTs; 763 total subjects in any patient population	Quality of trials was assessed using the modified Jadad scale. Outcomes were examined.	Quality of studies ranged from 2-5 on the Jadad scale. Significant results included decreased physiological measures (heart rate, respiratory rate, blood pressure), decreased pain, anxiety and total mood disturbance, decrease in length of stay post-op (coronary artery bypass graft surgery), increase in overall function, mental health and health transition. One study found no significant results with HT alone compared to other relaxation therapies for adverse coronary events after PCI.	Small number of studies, lack of usual care alone group in one study, possible confounding factors used such as music, inadequate blinding, missing data such as details of HT intervention or rationale, level of training of HT practitioner.

Author (Year)	Level of Evidence	Intervention	Sample	Outcomes Assessed	Results	Limitations
Fazzino, Griffin, McNulty & Fitzpatrick (2010)	Level II Literature Review	Energy therapies (Reiki, Therapeutic Touch, Healing Touch)	8 studies and 1 systematic review in populations with pain.	Studies using energy therapies in populations with pain were examined.	Of the 8 studies using Healing Touch, 7 reported a significant decrease in pain with HT. One systematic review reported similar results. One study in post-op patients with total knee replacements found no change in pain with HT compared to control but reported increase in joint mobility. Findings were consistent in TT and Reiki.	Many of the studies lacked a control group. Neither limitations nor quality of the studies used in this review were discussed.
So, Jiang & Qin (2008)	Level I Systematic Review	Energy therapies (Reiki, Therapeutic Touch, Healing Touch)	1153 participants, 24 RCTs in populations with pain.	Pain measurement scales were standardized into a single scale and compared the results between treatment and control groups.	Five, sixteen and three studies found on HT, TT and Reiki respectively. On a 0-10 scale, treatment groups had an average of 0.83 units lower pain intensity than control groups. Results were inconclusive due to insufficient data, although the existing evidence supports touch therapies for pain.	Small number of studies, insufficient data. Lack of report on experience of practitioner.
Maville, Bowen & Benham (2008)	Level IV Quasi-experimental pilot study	Healing Touch - 50 minute session using hands moving and chakra connection.	30 healthy adults	Physiological stress measures including heart rate, blood pressure, skin conductance, muscle tension (measured by electromyography) and temperature, and state anxiety.	Heart rate, temperature and systolic blood pressure decreased significantly from pretreatment to post treatment. No significant changes were produced in muscle tension, skin conductance or diastolic blood pressure. State anxiety ratings decreased significantly post treatment. 63% reported feeling "relaxed" after the session.	Lack of a control group, small sample size.
Hjersted-Smith & Jones (2008)	Level IV Quasi-experimental pilot study	Healing Touch - three 30 minute sessions per week over one year.	30 patients with end-stage liver disease.	Pain and anxiety rating scores.	A significant decrease in pain and anxiety was reported from pre-treatment to post-treatment.	Lack of a control group, small sample size, insufficient data reported.

Author (Year)	Level of Evidence	Intervention	Sample	Outcomes Assessed	Results	Limitations
Sutherland, Ritenbaugh, Kiley, Vuckovic & Elder (2009)	Level VI Qualitative study	Healing Touch - at least three 30-40 minute sessions, once a week.	13 patients with chronic headache.	Qualitative data were obtained through open-ended, audio taped interviews before and after treatment.	12 of 13 patients reported improvement in frequency, intensity or duration of pain, 11 patients reported positive changes in their self-image, outlook on life and perception of their ability to heal. Six patients also reported a decreased need for pain medication during the trial.	Lack of a control group, small sample size, short duration and potential for response bias in influencing patient responses. It was not reported who conducted the interviews.
Wilkinson et al. (2002)	Level IV Quasi-experimental study, repeated measures design	Crossover design: Healing Touch, Healing Touch plus music and guided imagery, and no treatment.	22 participants with no prior experience with HT	Secretory immunoglobulin A (sIgA) concentrations in saliva, self-reports of stress levels, client perceptions of health enhancement, qualitative questionnaires.	Clients reported a significantly reduction of stress level after both HT conditions compared to no treatment. 13 of 22 clients reported perceived enhancement of health. 6 of 11 clients with pain reported relief with HT. Significantly higher positive effects in sIgA changes were reported in clients with practitioners with higher training experience. Qualitative responses included relaxation, connection and enhanced awareness.	Lack of blinding, small sample size, participants served as their own controls which could affect results depending on the order of interventions received, potential for response bias.
Decker, Wardell & Engebretson (2012)	Level II Randomized control trial	Healing Touch or presence alone	20 adults living in a long term care facility with persistent pain	Pain measurement scales	Both groups showed non-significant decreases in pain measurements.	Insufficient data, small sample size, lack of blinding.
Sood, Barton, Bauer & Loprinzi (2007)	Level II Literature Review	Various complementary therapies	21 clinical trials that tested the effect of CAM treatments for cancer-related fatigue, with 1 trial using Healing Touch	Cancer-related fatigue	The study using HT compared to presence alone in 230 patients receiving chemotherapy found a decrease in fatigue, total mood disturbance and pain ratings. For all complementary therapies, none produced sufficient data for reviewers to recommend any treatment, however further higher quality studies are warranted.	Insufficient data, HT study limited due to crossover effect and high attrition rate.

Author (Year)	Level of Evidence	Intervention	Sample	Outcomes Assessed	Results	Limitations
Bardia, Barton, Prokop, Bauer and Moynihan (2006)	Level I Systematic Review	Various complementary therapies	18 RCTs using CAM for cancer pain, with 2 trials that assessed biofield therapies.	Cancer-related pain. Quality of studies was evaluated using Jadad scale.	One trial using Healing Touch in a randomized crossover study found a significant reduction in immediate pain with HT and with massage compared to rest. Another trial using Reiki found that Reiki plus opioid significantly reduced pain compared to standard opioid treatment. Results of this review were inconclusive however, some CAM therapies, including HT seemed promising.	Limitations found across all CAM therapy trials included short duration, small sample size, high attrition rate and lack of adequate sham control.
Anderson & Taylor (2012)	Level II Literature review	Biofield therapies (Healing Touch, Reiki or Therapeutic Touch)	2 trials using HT, 1 using TT, 1 using Reiki in patients with cancer experiencing pain.	Pain measurement scales	3 trials reported a decrease in pain after the intervention compared to control. One cohort study using HT did not have a control group but reported a non-significant reduction in pain compared to baseline. No conclusions were made due to small number of studies and limitations.	Small sample size, lack of blinding, lack of a control, possible confounds due to music played during the intervention which could have contributed to a relaxation response.
Coakley & Barron (2012)	Level II Literature Review	Biofield therapies in cancer populations.	22 studies (11 on Reiki, 6 on Therapeutic Touch, 5 on Healing Touch)	Measurement scales of symptoms related to cancer including pain, stress and quality of life. Included qualitative and quantitative data.	HT studies reported decreased anxiety, relaxation, enhanced mood, decreased pain and fatigue, improved psychological and physical functioning and enhanced quality of life and increased immunoglobulin. TT and Reiki studies also produced positive results; however, no conclusions could be made due to limited research.	Heterogeneity between studies, small number of studies. Limitations of the trials included were not discussed in this review.
Jackson et al (2008)	Level II Systematic Review	Biofield therapies in cancer populations.	11 trials using Healing Touch, Therapeutic Touch or Reiki and one systematic review.	Measurement scales of pain and anxiety. Studies were evaluated according to the level of evidence by Melynck and Fine-Overhold (2005).	Studies ranged from level I to level VI in evidence. Authors concluded that the evidence supported the use of touch therapies to reduce pain and anxiety in the cancer population.	Small number of RCTs, overall limited amount of available research.

Author (Year)	Level of Evidence	Intervention	Sample	Outcomes Assessed	Results	Limitations
Cook, Guerrero & Slater (2004)	Level II Randomized control trial	2 groups: Healing Touch (n=34) or mock therapy (28).	62 adult women with gynecological or breast cancer who had never received HT before.	Health-related quality of life was measured by SF-36 from the Medical Outcomes Study at the Rand Corporation before and after treatment. Socio-demographic and medical characteristics of the sample and attitudes about HT were also measured.	The HT group reported better outcomes in all 9 measurements of HRQoL, including statistically significant differences between groups in vitality, pain and physical functioning. No significant differences were found in demographic and medical characteristics or attitudes about HT between groups.	Small sample size, short duration, convenience sampling within one facility.
Post-White et al (2003)	Level II Randomized control trial	3 groups: massage therapy (n=63), Healing Touch (n=56) or presence alone (45). All groups also received 4 weeks of standard care alone as a control.	164 adult patients with cancer.	Heart rate, respiratory rate, blood pressure and 1-item score of pain and nausea were measured before and after each session. Outcomes assessed before and after 4 weeks of treatment included Brief Pain Index, Brief Nausea Index, fatigue, anxiety, and mood disturbance. Analgesic and antiemetic use was recorded daily.	MT and HT were more effective in inducing relaxation, reducing pain and improving mood and fatigue compared to presence and control. HT showed greater effects in reducing fatigue than MT. Subjects in the presence group did not differ significantly from the control in blood pressure, pain, nausea, anxiety, fatigue or medication use.	High dropout rate (29%), potential bias of those who consented to the study versus those who declined, lack of blinding, variability in data collection.
Lutgendorf et al (2010)	Level II Randomized control trial	3 groups: Healing Touch (n=17), relaxation training (n=17) and usual care	51 women with cervical cancer.	Immunity was measured by Natural Killer (NK) cell activity in the blood. Mood and quality of life was measured by	HT group had relatively preserved NK cell activity. RT and UC groups showed significantly greater declines in NK cell activity. HT group also showed a greater decline in depressive mood scales compared to control.	Lack of blinding, inadequate sample size, short duration.

Author (Year)	Level of Evidence	Intervention	Sample	Outcomes Assessed	Results	Limitations
		alone (n=17). Each group received 4 treatments per week for 6 weeks.		numerical scales obtained by questionnaires.	Non-significant effects were reported between groups for blood counts, quality of life and fatigue.	
Danhauer, Tooze, Holder, Miller & Jesse (2008)	Level IV Cohort study	Healing Touch: nine 30-minute sessions over 3 weeks.	12 adults with acute leukemia.	Psychological distress, treatment-related symptoms, sleep and single-item ratings of fatigue, nausea, distress and pain were measured by questionnaires before and after the intervention.	Significant decreases were found in fatigue and nausea between pre- and post-intervention ratings. Non-significant differences were reported from baseline to post-intervention ratings in symptom frequency, sleep and psychological distress.	Small sample size, lack of blinding, lack of a control group and insufficient data.

Challenges with Research

Similar to most complementary therapies, research in Healing Touch faces many challenges. Strict scientific research requires that both the practitioner giving the treatment and the subject be blinded to which treatment they are receiving. Because practitioners must perform the treatment with the intention of healing for HT to be performed correctly, blinding the practitioner is not possible. An alternative way to achieve blinding would be to have a separate investigator to measure outcomes who is blinded to group allocation. Blinding the subject can also be difficult because some HT interventions involve direct touch and some verbalization to the patient. Cook, Guerrerio and Slater (2004) achieved subject blinding by placing an opaque screen separating their head from their body so they could not see the practitioner or the intervention being performed. In addition to challenges with blinding, it is difficult to create a sham treatment for energy therapies. Even if a lay person with no HT training would mimic hand motions around the body, they may inadvertently produce a therapeutic effect. In the study previously mentioned, sham treatment was performed by an untrained person who walked around the massage table without raising their hands over the subjects' body (Cook, Guerrerio, Slater, 2004). To control for the effect of intention, the sham practitioner was instructed to do math problems in their head. More research should be conducted to assess the reliability of sham treatments.

Another challenge of complementary therapies is the holistic nature of the therapy. For strict scientific methods, one isolated variable is used to assess a specific outcome. This ensures that the effect of treatment cannot be attributed to other confounding factors and that the trial can be repeated. In HT, treatment is subjective and practitioners may use many different interventions and lengths of treatment for the same symptoms depending on how they assess the

patient's energy field. Isolating therapy to one intervention for one outcome changes the mechanism of energy therapies and may influence the effectiveness of treatment.

Another challenge in HT is that although the studies discussed in this project present data about the subject response to HT, there is no data demonstrating the mechanism behind the therapy. The core of HT lies within three basic claims: first, there are bioelectrical fields in the body; second, those fields can be detected by someone using his/her hands; third, he/she can manipulate those fields to affect healing. The first claim could be considered valid because it is known that electromagnetic fields exist in the body, such as in the heart and brain, and can be detected with medical technology. It is still not certain whether these fields circulate throughout the entire body. There is no compelling evidence in these studies which validate the second and third claims. In order to confirm the mechanism behind the effects of HT, there must be a way to demonstrate that these fields can be detected and manipulated by the hands. Until more is known about the science behind HT, it is not known whether the positive effects are attributable to HT, or the result of the subject receiving caring, one-on-one attention from the practitioner.

Although research for Healing Touch faces many challenges, these challenges do not discount its effectiveness. Even first line conventional treatments that are used every day in healthcare have not shown 100% effectiveness. In a literature review by Morgan, Ward and Barton (2004) the authors reviewed randomized clinical trials reporting a 5-year survival benefit attributable solely to cytotoxic chemotherapy in adult malignancies. To determine the contribution of chemotherapy, they compared the total number of persons with each malignancy, the proportion or subgroup(s) of that malignancy showing a benefit and the percentage increase in 5-year survival due solely to cytotoxic chemotherapy. The study found that the contribution of cytotoxic chemotherapy to 5-year survival rates across a total of 154,971 adults and 22

malignancies in the U.S. was only 2.1% (Morgan, Ward & Barton, 2004). Despite the possible low contribution of chemotherapy to survival, it is standard treatment in almost every type of cancer (ACS, 2012).

Although energy therapies and other complementary therapies do not lend themselves well to strict scientific methods, their therapeutic value appears to be promising. Effectiveness of these therapies is worth exploring. It is necessary to conduct further trials before conclusions regarding the effectiveness of these therapies can be drawn and integrated with conventional healthcare. The available research provides preliminary evidence that Healing Touch may be an effective therapy for symptoms related to cancer. HT focuses the nurse's intent to help and to heal, and communicates this with the patient. Although it is questionable whether the improvement in symptoms is attributed to the manipulation of energy fields or to the caring presence of the practitioner, there seems to be a therapeutic value in HT for those with cancer. Although the mechanism of HT has yet to be proven, the existing evidence warrants further qualitative data from anecdotal reports to well-designed qualitative studies to further understand the impact of HT.

Survey of Practitioners

A Qualtrix survey was delivered electronically to a group of 43 Healing Touch practitioners with approval from the James Madison University institutional review board (IRB) to gather qualitative information based on their experiences with Healing Touch. The survey consisted of five questions with short-answer responses related to their experience with Healing Touch (Table 3) and five multiple choice questions to gather demographic information (Figures 1-4). Answers to the survey questions were submitted electronically and anonymously by the practitioners and the data were analyzed. A total of fifteen practitioners participated in the survey, for a response rate of 35%. Four of the participants (27%) were certified in Healing Touch levels one, two or three. Ten (67%) were certified in levels four or five and one (7%) was a Certified Healing Touch Practitioner, meaning he/she had completed all five levels of HT certification and is a Certified Practitioner through HTI (Figure 4). A majority of participants (56%) had over ten years experience practicing Healing Touch. Two (13%) had five to ten years experience, three (19%) had two to five years experience and two (13%) had less than 2 years experience (Figure 3). Thirteen (87%) were female (Figure 1). Seven participants (47%) were Registered Nurses. Other occupations included massage therapist, secretary, minister, counselor and human resources (Figure 2).

Participants were asked to describe the beneficial effects reported by their clients after receiving Healing Touch (Table 3). The most frequently reported effects were relaxation and decreased pain. Fourteen participants (93%) stated that clients most frequently reported feeling “relaxed” “relaxation” or “deep relaxation.” Fourteen participants (93%) stated that clients have reported “less pain,” “decreased pain,” “pain reduction,” “no pain,” “pain relief,” or “improvement in headaches”. One also reported a “decreased need for adjunctive drug support”

in chronic pain management. Seven participants (47%) reported clients experiencing “reduced stress” or “reduced anxiety”. Three (20%) reported clients benefitted from Healing Touch to aid “recovery from surgery” or “anesthesia”.

When asked how Healing Touch affects you as a practitioner, most reported that it improves their own self-care and increases their awareness and attention to their clients. Twelve participants (80%) described experiencing positive personal effects such as “a sense of love,” “joy,” “gratitude,” “improved self-care,” and “improved well-being”. Four (27%) described feeling that they also “receive” Healing Touch when they are practicing on a client. Seven practitioners (47%) reported feeling increased “connection,” “presence,” or “awareness” with clients, increased ability to “focus on needs of the client” or improved “listening skills”. Two practitioners (13%) reported that practicing HT has improved their “nursing practice,” increased their “confidence” as a nurse and helped them to “handle stress” and “avoid burn-out”. One participant added that it “can at times be draining after a long session.”

Participants were asked to describe experiences they have had with clients seeking Healing Touch for symptoms related to cancer. Eleven (73%) had experiences with cancer patients seeking HT for pain, anxiety, relaxation, end-of-life care or recovery from surgery, chemotherapy or radiation. Four (27%) responded that they had no experiences with cancer patients. Seven (47%) reported clients experiencing “relaxation,” “reduced anxiety,” “peace,” “calmness,” or “ease of emotional turmoil” with Healing Touch. One participant described a client with breast cancer who experienced a “deep relaxed state, where cancer did not exist for a moment.” Five (33%) reported experiences with clients who used HT for “pain control,” “to help with pain and misery,” or “pain release”. Six participants (40%) described using Healing Touch with patients before, during or after medical treatments including surgery, chemotherapy or

radiation to “decrease anxiety,” “detox from chemo,” enhance “recovery from surgery” or “assist with symptoms related to treatment”. Four participants (27%) reported using HT with cancer patients during end-of-life to help bring peace during the transition and “calm both the client and family members”. One participant stated that oncology clients reported “less nausea, fatigue, improved appetite and energy, decreased skin irritation, improved wound healing and pain management.”

Participants were asked, “Which symptoms related to cancer and treatment was Healing Touch most effective in treating?” All eight of those responding to this question identified both pain and anxiety as cancer symptoms most helped by Healing Touch. One participant specified that, in his/her experience, HT helps “minimally” with pain and is most effective for “anxiety or restlessness.” Four (27%) also noted that “fatigue” or “insomnia” respond to HT. One practitioner added that HT helps the client to “feel well-tended to” and that it can “relieve a sense of isolation that disease can bring.” Another stated that clients “develop a more positive outlook.”

Participants were asked what information they believed registered nurses working with cancer patients should receive regarding Healing Touch. Most responded that nurses should know the benefits that Healing Touch can provide to their patients and family members as an integrative therapy to augment conventional medicine. Five practitioners (33%) stated that it is “easily integrated with oncology care” and “works well with conventional therapies”. Four (27%) suggested that nurses take a Healing Touch certification course or “experience a session themselves.” One participant stated that HT can be “delivered in a short session of 10-15 minutes” and is a “wonderful adjunct to nursing care for oncology patients.”

Figure 1. Gender

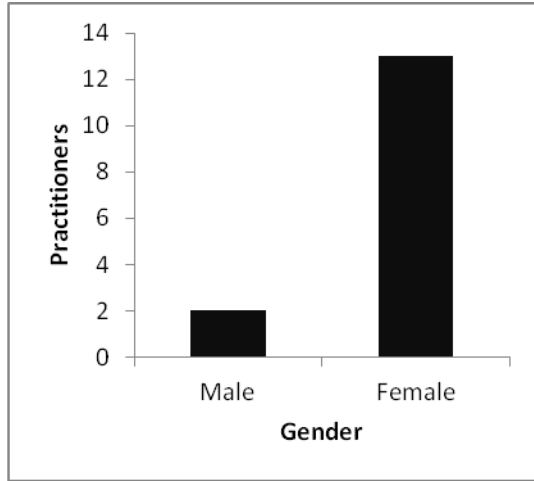


Figure 2. Occupation

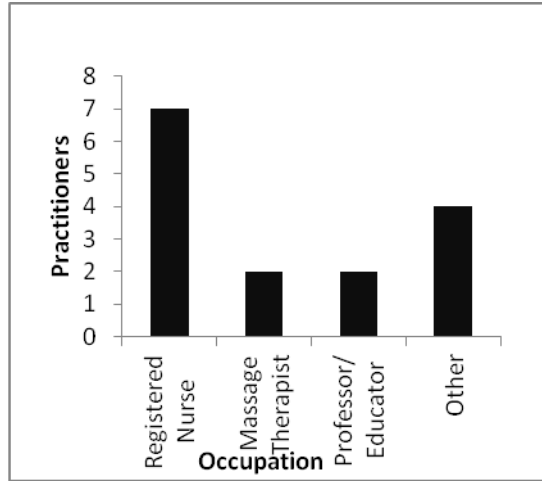


Figure 3. Years of HT Experience

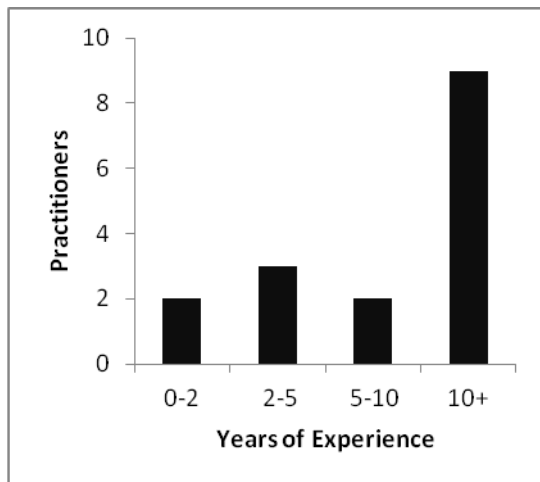


Figure 4. Level of HT Certification

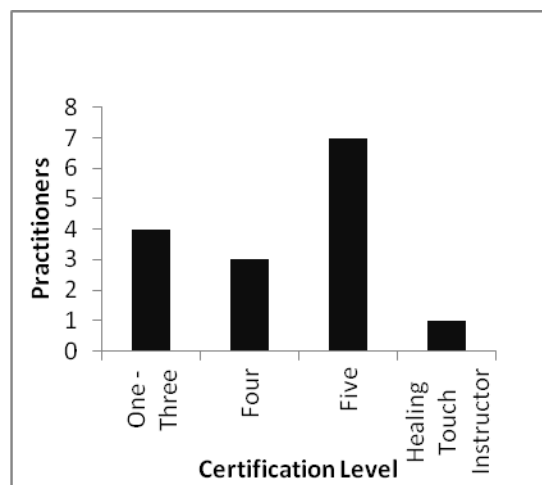


Table 3. Survey Questions

1. From your experience, what beneficial effects do clients report after receiving Healing Touch?
2. How does Healing Touch affect you as a practitioner?
3. What experiences have you had with clients/patients seeking Healing Touch for symptoms related to cancer?
4. If you have worked with cancer patients, for which symptoms related to cancer and its' treatments is HT most effective (for example, pain, nausea, fatigue, anxiety or other). How has Healing Touch affected these symptoms?
5. What information do you believe registered nurses working with cancer patients should receive regarding Healing Touch?

Nursing Implications

Recommendations for Nursing

In order to improve nursing effectiveness in the care of cancer patients, non-pharmacologic therapies can be a useful adjunct in managing the symptoms and treatment side effects associated with cancer. Pain is prevalent in the cancer population and sole treatment with opioid analgesics is associated with undesirable side effects. Research shows that Healing Touch therapy may help patients with cancer by enhancing relaxation and overall well-being by reducing pain, anxiety and other side effects of treatment including nausea and fatigue. The practice of Healing Touch therapy by nurses is worth exploring for its potential to improve symptom management with cancer treatment, improve the quality of life in this population, and reduce the use of analgesic drug therapy. By integrating Healing Touch therapy into cancer care, nurses can expand their options for pain management and improve patient care and comfort. According to the survey of practitioners, it may also benefit nurses by reducing stress, increasing their focus on patient needs and improving self-care.

Integrating Healing Touch

Healing Touch was developed as a therapy that is easily integrated with nursing care. It is a gentle, non-invasive intervention that can be performed in a short amount of time, without any instruments, in any hospital or outpatient setting. The process HT practitioners use to treat clients is very similar to the nursing process used by nurses to care for patients. Both include assessment, diagnosis, planning, intervention and evaluation. Nurses could use HT techniques as a nursing intervention for patients who may benefit from the therapy, just as a nurse would perform mouth care on a patient who is sedated. If the patient needed a longer session, a HT practitioner could perform the therapy in the patient's room, similar to patients who need

physical therapy or occupational therapy. Many hospitals in the U.S. are starting to offer Healing Touch or other energy therapies to their patients. Wake Forest Baptist Health in North Carolina includes Healing Touch in the institution's policies and procedures as "an energy based therapeutic approach to healing and stress reduction." It is offered to patients, family members and employees by certified staff nurses and physicians (Wake Forest Baptist Health, 2013).

Nurses can take continuing education units through the American Holistic Nurses Association to become certified. There are five levels of certification to complete to become a Certified Healing Touch Practitioner. Classes for each level of certification can usually be completed within two or three days. Level five includes a mentorship program where the student works with a mentor for a certain number of clinical hours before becoming a practitioner. Many of the techniques that are used frequently for pain, anxiety and stress are taught in level one certification. More advanced techniques are taught in the higher level classes.

By integrating Healing Touch with conventional medicine, patients can receive care that focuses on well-being and symptom management from the same health care professionals that provide medical treatment for their cancer. Nurses and other health professionals that perform HT can incorporate medical knowledge of the body and disease processes to provide the most beneficial and safe treatments for these patients. Bridging the gap between complementary therapies and conventional medicine is vital to the safety and outcomes of these patients.

Patient Education

It is important that patients receive information about complementary therapies. It is especially important that this information be provided by health care professionals. Information on complementary or alternative therapies obtained from the internet or non-reputable sources can be inaccurate, misleading and possibly unsafe. Nurses should be educating patients about

safe complementary therapies such as Healing Touch. Basic information that can be provided to patients includes the goal of HT, who provides it, how it is performed and what patients will experience. Nurses should inform patients that they can find Certified Healing Touch Practitioners through Healing Touch International, Inc website. It is also important that patients understand that Healing Touch and other complementary therapies are used in addition to standard medical treatment, and not as a replacement. While evidence shows that Healing Touch is beneficial for relieving many symptoms related to cancer, there is no evidence that HT is a curative treatment for disease. Nurses should identify patients who would particularly benefit from Healing Touch. These include patients with pain that is not well-managed, those experiencing side effects from chemotherapy or radiation treatment, and those with anxiety, depression, or other mood disturbance, nausea, fatigue, pre- and post-surgical patients, and those receiving end of life care.

Conclusion

The research for Healing Touch supports its use in the cancer population to reduce pain and other symptoms related to the disease and treatment including anxiety, nausea, fatigue, stress and to improve quality of life in these patients. Although there is a need for large-scale, rigorous trials to make definitive conclusions regarding the effect of HT, current studies have consistently shown an improvement in symptoms with HT compared to controls. Qualitative research and case studies have contributed valuable evidence about the effectiveness of this holistic energy therapy. Furthermore, as the survey of Healing Touch Practitioners in this study suggests, HT may also benefit practitioners by reducing stress, improving self-care and deepening the nurse-patient relationship.

Advancements in medical treatments have greatly extended the lives of those living with cancer, however there is a need for improvement in the management of pain, symptoms and side effects of cancer treatment. Nurses, physicians and other members of the healthcare team need to explore non-pharmacological therapies such as Healing Touch to improve patient-centered care. Nurses and other healthcare providers who complete certification in Healing Touch can use this therapy in hospital and outpatient settings to improve management of pain and other symptoms and improve quality of life in those living or dying with cancer.

Appendix A

Oncology Nursing: Evidence-Based Guidelines for Healing Touch Therapy

Description

Healing Touch (HT) is a holistic energy therapy which involves therapeutic light touch and off-the-body techniques to influence the human energy system and promote healing and relaxation. HT is a complementary therapy intended to augment conventional cancer treatments.

Purpose

- To reduce stress, promote relaxation and enhance overall well-being.
- To reduce pain, improve symptom management and promote healing by gentle, non-pharmacological interventions.
- To deepen the nurse-patient relationship and promote patient-centered care.

Educational Requirements

- Healing Touch International has a standardized curriculum and an established Code of Ethics/Standards of Practice and Scope of Practice.
- Nurses must complete HT certification by a Certified HT Instructor; at a minimum in a level one class (18 nursing continuing education hours), up to a level five class. Certified Healing Touch Practitioners must complete all five levels. (Healing Touch International, Inc., www.healingtouchinternational.org, n. d.)

Nursing Considerations

Treatment: Consider HT treatments for clients (Table A1):

- With pain. HT has been found to reduce pain in cancer populations compared to standard treatment alone.
- With stress or anxiety. HT has been found to induce relaxation and reduce anxiety in cancer populations.
- To improve quality of life, overall well-being or mood. Studies have shown an effect of HT to improve quality of life and enhance mood in cancer populations.
- With fatigue. HT may help reduce cancer-related fatigue.
- With nausea. HT may help reduce nausea in cancer populations.
- In end-of-life care. Patients and families may benefit from HT during end-of-life care to promote peace and calmness and ease emotional distress.

Education: Provide education about HT to clients and families:

- Explain what techniques will be performed, on or off the body touch, and what to expect from a session. The client can be in a lying or seated position, fully-clothed and optionally covered with a blanket.
- Teach client slow, deep breathing techniques to use during HT therapy.
- Family members and those who are not licensed health care professionals, may become certified in HT and practice at home or with family or friends.
- There are no reported adverse effects of HT therapy.
- Teach clients that HT therapy is used to manage symptoms and promote relaxation. It is an adjunct, not an alternative to standard medical treatment.

- Advise clients to consult with a health care provider before using HT or other complementary therapies.

Nurse Self-Care: HT may benefit nurses (Table A1):

- Reduce stress. There is evidence that HT training reduces stress in nurse leaders.
- Depression and anxiety. Nurse leaders have reported significant improvements in depression and anxiety with HT training.
- Prevent burn-out. Practitioners report that HT increased their confidence as a nurse, helped them to handle stress and avoid burn-out.
- Well-being. Practitioners report improved self-care, improved well-being and a sense of joy.
- Sleep. There is evidence HT training improves sleep in nurse leaders.

Table A1. Evidence that HT Relieves Cancer Symptoms

Symptom	Research Evidence
Pain	Anderson & Taylor, 2012 Bardia, Barton, Prokop, Bauer & Moynihan, 2006 Coakley & Barron, 2012 Cook, Guerrero & Slater, 2004 Jackson et al, 2008 Jain & Mills, 2009 Post-White et al, 2003 So, Jiang & Qin, 2008 Wardell & Weymouth, 2004
Stress/anxiety	Anderson & Taylor, 2011 Coakley & Barron, 2012 Jackson et al, 2008 Jain & Mills, 2009 Post-White et al, 2009 Wardell & Weymouth, 2004
Quality of life, overall well-being or mood	Coakley & Barron, 2012 Cook, Guerrero & Slater, 2004 Danhauer, Tooze, Holder, Miller & Jesse, 2008 Lutgendorf et al, 2010 Post-White et al, 2003 Sood, Barton, Bauer & Loprinzi, 2007
Fatigue	Coakley & Barron, 2012 Danhauer et al, 2007 Post-White et al, 2003 Sood, Barton, Bauer & Loprinzi, 2007
Nausea	Danhauer, Tooze, Holder, Miller & Jesse, 2008 Post-White et al, 2003
End-of-Life care	Survey of Practitioners, 2013
Nurse's self-care	Survey of Practitioners, 2013 Tang, Tegeler, Larrimore, Cowgill, & Kemper, 2010

References

- Ackley, B. & Ladwig, G. (2011). *Nursing diagnosis handbook: An evidence-based guide to planning care* (9th ed.). St. Louis, Missouri: Elsevier, Inc.
- Aghabati, N., Mohammadi, E. & Esmail, Z. (2010). The effect of therapeutic touch on pain and fatigue of cancer patients undergoing chemotherapy. *Evidence-Based Complementary & Alternative Medicine (eCAM)*, 7(3), 375-381. doi: 10.1093/ecam/nen006
- American Cancer Society. (2012) Cancer facts and figures 2012. *American Cancer Society, Inc.*
Retrieved from <http://www.cancer.org/research/cancerfactsstatistics/index>
- Anderson, J. & Taylor, A. (2012). Biofield therapies and cancer pain. *Clinical Journal of Oncology Nursing*, 16(1), 43-48. Retrieved from
<http://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,cookie,url,cpid,uid&custid=s8863137&db=a9h&AN=70989265&site=eds-live&scope=site>
- Anderson, J. & Taylor, A. (2011). Effects of healing touch in clinical practice: A systematic review of randomized clinical trials. *Journal of Holistic Nursing*, 29(3), 221-228. doi:
10.1177/0898010110393353
- Bardia, A., Barton, D. L., Prokop, L. J., Bauer, B. A., & Moynihan, T. J. (2006). Efficacy of complementary and alternative medicine therapies in relieving cancer pain: A systematic review. *Journal of Clinical Oncology*, 24(34), 5457-5464. Retrieved from
<http://search.ebscohost.com/login.aspx?direct=true&db=rzh&AN=2009371132&site=ehost-live&scope=site>

Chapman, S. (2012). Cancer pain part 2: Assessment and management. *Nursing Standard*, 26(48), 44-49.

Retrieved from

<http://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,cookie,url,cpid,uid&custid=s8863137&db=rzh&AN=2011640527&site=eds-live&scope=site>

Chou, P., & Lin, C. (2011). A pain education programme to improve patient satisfaction with cancer pain management: A randomised control trial. *Journal of Clinical Nursing*, 20(13), 1858-1869. doi: <http://dx.doi.org/10.1111/j.1365-2702.2011.03740.x>

Coakley, A. & Barron, A. (2012). Energy therapies in oncology nursing. *Seminars in Oncology Nursing*, 28, 55-63. doi: 10.1016/j.soncn.2011.11.006

Cook, C., Guerrero, J. F., & Slater, V. E. (2004). Healing touch and quality of life in women receiving radiation treatment for cancer: A randomized controlled trial. *Alternative Therapies in Health & Medicine*, 10(3), 34-41. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=rzh&AN=2005038595&site=ehost-live&scope=site>

Danhauer, S., Tooze, J., Holder, P., Miller, C. & Jesse, M. (2008) Healing Touch as a supportive intervention for adult acute leukemia patients: A pilot investigation of effects on distress and symptoms. *Journal of the Society for Integrative Oncology*, 89-97. doi: 10.2310/7200.2008.0012

Decker, S., Wardell, D. & Engebretson, J. (2012). Using a healing touch intervention in older adults with persistent pain: A feasibility study. *Journal of Holistic Nursing*, 30(3), 205-213. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,cookie,url,cpid,uid&custid=s8863137&db=rzh&AN=2011680435&site=eds-live&scope=site>

Deng G, Cassileth BR. (2005) Integrative oncology: complementary therapies for pain, anxiety, and mood disturbance. *CA Cancer J Clin* 2005;55:109–16.

DiNucci, E. M. (2005). Energy healing: A complementary treatment for orthopaedic and other conditions. *Orthopaedic Nursing*, 24(4), 259-269. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=rzh&AN=2009013193&site=ehost-live&scope=site>

Donnelly, G. F. (2004). The placebo effect and holistic interventions. *Holistic Nursing Practice*, 18(5), 238-241. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=rzh&AN=2004170586&site=ehost-live&scope=site>

Eschiti, V. S. (2007). Healing touch: A low-tech intervention in high-tech settings. *Dimensions of Critical Care Nursing*, 26(1), 9-14.

Fazzino, D. L., Griffin, M., McNulty, R., & Fitzpatrick, J. J. (2010). Energy healing and pain: A review of the literature. *Holistic Nursing Practice*, 24(2), 79-88. doi: 10.1097/HNP.0b013e3181d39718

Fouladbakhsh, J. M., & Stommel, M. (2010). Gender, symptom experience, and use of complementary and alternative medicine practices among cancer survivors in the U.S. cancer population. *Oncology Nursing Forum*, 37(1), E7-E15. doi: 10.1188/10.ONF.E7-E15

- Hagihara, A., & Tarumi, K. (2006). Doctor and patient perceptions of the level of doctor explanation and quality of patient-doctor communication. *Scandinavian Journal of Caring Sciences*, 20(2), 143-150. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,cookie,url,cpid,uid&custid=s8863137&db=rzh&AN=2009335279&site=eds-live&scope=site>
- Hardwick, M., E., Pulido, P., A., & Adelson, W., S. (2012). Nursing intervention using healing touch in bilateral total knee arthroplasty. *Orthopaedic Nursing*, 31(1), 5-11. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=rzh&AN=2011470714&site=ehost-live&scope=site>
- Hart, J. (2012). Healing touch, therapeutic touch, and reiki: Energy medicine advances in the medical community. *Alternative & Complementary Therapies*, 18(6), 309-313. doi: 10.1089/act.2012.18609
- Hart, L. K., Freel, M. I., Haylock, P. J., & Lutgendorf, S. K. (2011). The use of healing touch in integrative oncology. *Clinical Journal of Oncology Nursing*, 15(5), 519-525. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,cookie,url,cpid,uid&custid=s8863137&db=a9h&AN=65927739&site=eds-live&scope=site>
- Healing Touch International [HTI], Inc. (n.d.). Retrieved from <http://www.healingtouchinternational.org/>
- Henkelman, W. J., & Wardell, D. W. (2004). Healing touch is pseudoscience... second quarter 2004 by wardell and weymouth. *Journal of Nursing Scholarship*, 36(4), 288-289. doi: 10.1111/j.1547-5069.2004.04052 2.x

- Henry, D. H. (2008). Symptoms and treatment burden associated with cancer treatment: Results from a cross-sectional national survey in the U.S. *Supportive Care in Cancer, 16*(7), 791-801.
- Hentz, F., Mulliez, A., Belgacem, B., Noirfalise, C., Barrier, H., Gorrand, J., . . . Gerbaud, L. (2009). Assessment strategies of the impact of healing touch in nursing care. A prospective, multicentre, randomised study [french]. *Recherche En Soins Infirmiers, (97)*, 85-91. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,cookie,url,cpid,uid&custid=s8863137&db=rzh&AN=2010358815&site=eds-live&scope=site>
- Hjersted-Smith, C., & Jones, S. (2008). The effects of healing touch on pain and anxiety in patients with end-stage liver disease. *International Journal for Human Caring, 12*(3), 105-105. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,cookie,url,cpid,uid&custid=s8863137&db=rzh&AN=2010119876&site=eds-live&scope=site>
- Hover-Kramer, D. (2002). *Healing Touch: A guidebook for practitioners* (2nd ed.) Albany, NY. Delmar Thomson Learning Inc.
- Institute for Clinical Systems Improvement (ICSI). (2011). Assessment and management of chronic pain. Bloomington (MN): Institute for Clinical Systems Improvement. Retrieved from: <http://www.guideline.gov/content.aspx?id=36064&search=healing+touch+#Section396>
- Jackson, E., Kelley, M., McNeil, P., Meyer, E., Schlegel, L., & Eaton, M. (2008). Does therapeutic touch help reduce pain and anxiety in patients with cancer? *Clinical Journal of Oncology Nursing, 12*(1), 113-120. doi: 10.1188/08.CJON.113-120

- Jain, S. & Mills, P. J. (2009). Biofield therapies: Helpful or full of hype? A best evidence synthesis. *International Journal of Behavioral Medicine*, 17(1), 1-16. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,cookie,url,cpid,uid&custid=s8863137&db=s3h&AN=47853953&site=eds-live&scope=site>
- Judson, P. L., Dickson, E. L., Argenta, P. A., Xiong, Y., Geller, M. A., Carson, L. F., . . . Downs, L. S. (2011). A prospective, randomized trial of integrative medicine for women with ovarian cancer. *Gynecologic Oncology*, 123(2), 346-350. doi: 10.1016/j.ygyno.2011.07.099
- Kelley, M. (2002). Strategies for innovative energy-based nursing practice: The healing touch program. *SCI Nursing*, 19(3), 117-124. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=rzh&AN=2003054291&site=ehost-live&scope=site>
- Kwapien, C. A., & Kulakowski, K. P. (2005). The complementary modalities of Healing Touch and reiki for the oncology population. *Oncology Nutrition Connection*, 13(1), 11-13. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=rzh&AN=2005104005&site=ehost-live&scope=site>
- Leder, D., & Krucoff, M. W. (2008). The touch that heals: The uses and meanings of touch in the clinical encounter. *Journal of Alternative & Complementary Medicine*, 14(3), 321-327. doi: 10.1089/acm.2007.0717
- Lehne, R. (2010). *Pharmacology for nursing care* (7th ed.). St. Louis, Missouri: Elsevier Inc.

- Levin, J., & Mead, L. (2008). Bioenergy healing: A theoretical model and case series. *Explore: The Journal of Science & Healing*, 4(3), 201-209. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=rzh&AN=2009917634&site=ehost-live&scope=site>
- Lutgendorf, S., Mullen-Houser, E., Russell, D., Degeest, K., Jacobson, G., Hart, L., . . . Lubaroff, D. (2010). Preservation of immune function in cervical cancer patients during chemoradiation using a novel integrative approach. *Brain, Behavior and Immunity*, 24(8), 1231-1240. doi: 10.1016/j.bbi.2010.06.014
- MacIntyre, B., Hamilton, J., Fricke, T., Ma, W., Mehle, S., & Michel, M. (2008). The efficacy of healing touch in coronary artery bypass surgery recovery: A randomized clinical trial. *Alternative Therapies in Health & Medicine*, 14(4), 24-32. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=rzh&AN=2009966850&site=ehost-live&scope=site>
- Maville, J. A., Bowen, J. E., & Benham, G. (2008). Effect of healing touch on stress perception and biological correlates. *Holistic Nursing Practice*, 22(2), 103-110. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=rzh&AN=2009862780&site=ehost-live&scope=site>
- Mentgen, J. L. (2001). Healing touch. *Nursing Clinics of North America*, 36(1), 143-157. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=rzh&AN=2001062107&site=ehost-live&scope=site>

Micozzi, M. (2001). *Fundamentals of complementary and alternative medicine* (2nd ed.)
Philadelphia, PA. Churchill Livingstone.

Miles, P., & True, G. (2003). Reiki -- review of a biofield therapy history, theory, practice, and research. *Alternative Therapies in Health & Medicine*, 9(2), 62-72. Retrieved from
<http://search.ebscohost.com/login.aspx?direct=true&db=rzh&AN=2004049700&site=ehost-live&scope=site>

Morgan, G., Ward, R., & Barton, M. (2004). The contribution of cytotoxic chemotherapy to 5-year survival in adult malignancies. *Clinical Oncology*, 16(8), 549-560. doi: 10.1016/j.clon.2004.06.007

National Center for Complementary and Alternative Medicine [NCCAM] (2013). Complementary, alternative, or integrative health: What's in a name? Retrieved from
<http://nccam.nih.gov/health/whatiscam>

Newport, F. (2012). Congress retains low honesty rating: Nurses have highest honesty rating; car salespeople lowest. *Gallop, Inc.* Retrieved from:
<http://www.gallup.com/poll/159035/congress-retains-low-honesty-rating.aspx>

O'Mathúna, D. (2004). Some preliminary support that healing touch can improve quality of life for women receiving radiation treatment for cancer. *Focus on Alternative & Complementary Therapies*, 9(4), 313-314. Retrieved from
<http://search.ebscohost.com/login.aspx?direct=true&db=rzh&AN=2005043872&site=ehost-live&scope=site>

Pierce, B. (2007). The use of biofield therapies in cancer care. *Clinical Journal of Oncology Nursing*, 11(2), 253-258. doi: 10.1188/07.CJON.253-258

Pierce, B. (2009). A nonpharmacologic adjunct for pain management. *Nurse Practitioner*, 34(2), 10-13.

Retrieved from

<http://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,cookie,url,cpid,uid&custid=s8863137&db=a9h&AN=36493546&site=eds-live&scope=site>

Post-White, J., Kinney, M. E., Savik, K., Joanna, B. G., Wilcox, C., & Lerner, I. (2003). Therapeutic massage and healing touch improve symptoms in cancer. *Integrative Cancer Therapies*, 2(4), 332.

Retrieved from

<http://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,cookie,url,cpid,uid&custid=s8863137&db=edb&AN=11638143&site=eds-live&scope=site>

Ray, M., & Turkel, M. (2012). A Transtheoretical Evolution of Caring Science within Complex Systems. *International Journal For Human Caring*, 16(2), 28-49.

Rose, J., O'Toole, E., Einstadter, D., Love, T., Shenko, C., & Dawson, N. V. (2008). Patient age, well-being, perspectives, and care practices in the early treatment phase for late-stage cancer. *Journals of Gerontology: Series A: Biological Sciences and Medical Sciences*, 63A(9), 960-968. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,cookie,url,cpid,uid&custid=s8863137&db=gnh&AN=125761&site=eds-live&scope=site>

Rothberg, M., Steele, J., Wheeler, J., Arora, A., Priya, A., & Lindenauer, P. (2012). The relationship between time spent communicating and communication outcomes on a hospital medicine service. *Journal of General Internal Medicine*, 27(2), 185-189. doi: 10.1007/s11606-011-1857-8

Rueda, J., Solà, I., Pascual, A., & Subirana Casacuberta, M. (2011). Non-invasive interventions for improving well-being and quality of life in patients with lung cancer. *Cochrane Database of Systematic Reviews*, (9) Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,cookie,url,cpid,uid&custid=s8863137&db=rzh&AN=2009824282&site=eds-live&scope=site>

Running, A., & Turnbeaugh, E. (2011). Oncology pain and complementary therapy. *Clinical Journal of Oncology Nursing*, 15(4), 374-379. doi: 10.1188/11.CJON.374-379

Salvo, N., Zeng, L., Zhang, L., Leung, M., Khan, L., Presutti, R., . . . Chow, E. (2012). Frequency of reporting and predictive factors for anxiety and depression in patients with advanced cancer. *Clinical Oncology*, 24(2), 139-148. doi: 10.1016/j.clon.2011.05.003

Schommer, B. & Larrimore, D. (2010) *Healing Touch Certificate Program: Level 1 Student Workbook*. Lakewood, CO. Healing Touch International Inc.

So, P. S., Jiang, J. Y., & Qin, Y. (2008). Touch therapies for pain relief in adults. *Cochrane Database of Systematic Reviews*, (4) Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=rzh&AN=2010231093&site=ehost-live&scope=site>

- Sood, A., Barton, D., Bauer, B., & Loprinzi, C. (2007). A critical review of complementary therapies for cancer-related fatigue. *Integrative Cancer Therapies*, 6(1), 8-13. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,cookie,url,cpid,uid&custid=s8863137&db=rzh&AN=2009533430&site=eds-live&scope=site>
- Sutherland, E., Ritenbaugh, C., Kiley, S., Vuckovic, N. & Elder, C. (2009). An HMO-based prospective pilot study of energy medicine for chronic headaches: Whole-person outcomes point to the need for new instrumentation. *Journal of Alternative & Complementary Medicine*, 15(8), 819-826. doi: 10.1089/acm.2008.0592
- Tang, R., Tegeler, C., Larrimore, D., Cowgill, S., & Kemper, K., J. (2010). Improving the well-being of nursing leaders through healing touch training. *Journal of Alternative & Complementary Medicine*, 16(8), 837-841. doi: 10.1089/acm.2009.0558
- Taylor, M. A. (2009). *The use of healing touch in adults with hepatitis C virus receiving interferon and ribiviran: A pilot study*. University of San Diego). , 93 p. (UMI Order AAI3377723.) Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,cookie,url,cpid,uid&custid=s8863137&db=rzh&AN=2010736884&site=eds-live&scope=site>. (2010736884).
- Vallerand, A., Sanoski, C. & Deglin, J. (2013). *Davis's drug guide for nurses* (13th ed.). Philadelphia, PA: F. A. Davis Company.
- Wake Forest Baptist Health (2013). *Center for Integrative Medicine: Healing Touch*. Retrieved from: <http://www.wakehealth.edu/Center-for-Integrative-Medicine/Specialty-Services/Healing-Touch.htm>

- Wardell, D. W., & Weymouth, K. F. (2004). Review of studies of healing touch. *Journal of Nursing Scholarship*, 36(2), 147-154. doi: 10.1111/j.1547-5069.2004.04012.x
- Wardell, D., Wind, Decker, S., A., & Engebretson, J., C. (2012). Healing touch for older adults with persistent pain. *Holistic Nursing Practice*, 26(4), 194-202. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=rzh&AN=2011618516&site=ehost-live&scope=site>
- Wilkinson, D. S., Knox, P. L., Chatman, J. E., Johnson, T. L., Barbour, N., Myles, Y., & Reel, A. (2002). The clinical effectiveness of healing touch. *Journal of Alternative & Complementary Medicine*, 8(1), 33-47. doi: 10.1089/107555302753507168
- World Health Organization (2008). Traditional medicine fact sheet. Retrieved from: <http://www.who.int/mediacentre/factsheets/fs134/en/>
- World Health Organization (2013). U.S. Health Statistics. Retrieved from: <http://www.who.int/gho/countries/usa.pdf>