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Healing Touch: Enhancing Quality of Life

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HEALING TOUCH: ENHANCING QUALITY OF LIFE

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DEDICATION

To my husband, Dmitriy, who continues to encourage me to the next level. And to my parents and all my other immediate and extended family for all your support.

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ABSTRACT

Healing touch (HT) is a non-invasive energy therapy used in the management of symptoms of various health conditions. HT utilization has demonstrated enhanced comfort and relief of symptoms such as chronic pain, post-traumatic-stress, depression, and anxiety. The purpose of this evidence-based practice (EBP) project was to promote awareness and appointment compliance rate of HT amongst veterans, and also to determine effectiveness of HT intervention on symptom relief and well-being. The PICO question was: "For Veterans, what is the effect of HT education material and mail notification on appointment compliance rate, and HT delivery on symptom relief and well-being as compared prior to HT intervention?" The project took place at a VA Medical Center in Northwest IL. A convenience sample of patients with scheduled HT appointments were followed as a one-group pre-test post-test design. The intervention involved an appointment notification letter with an attached HT education flyer mailed two weeks prior to a patient's appointment, and the HT session itself delivered by a HT Provider. Outcomes measured included appointment compliance rate, and the effect of HT intervention on presenting symptoms. Appointment compliance rate was measured by frequency and reported kept appointments of 55% overall. A weak Pearson correlation resulted (r (7) = 0.544, p > 0.05). Descriptive statistics and a paired sample t-Test were performed on HTCQ scores and was determined at a level of significance (t (17) = -3.751, p < 0.001). It was concluded HT appears to benefit patients.

Keywords: healing touch, education, depression, anxiety, pain

CHAPTER 1

INTRODUCTION

Background

Healing Touch (HT) is a noninvasive, energy-based therapy where practitioners use their hands to channel the energy surrounding the body via an intentional manner to facilitate physical, emotional, mental, and spiritual health (HTP, 2016a). This modality influences the flow of the energy field surrounding the body as well as the physical body. The techniques of HT allow the practitioner to clear, energize, and balance the human energy field in a heart-centered way with the goal of restoring balance and harmony to the energy system, thus allowing for self-healing to occur (HTP, 2016a). The outcome aim of HT involves the resolution of energy congestion in the energy field (aura) which surrounds the physical body, as well as congestion within the energy centers (chakras) (HTP, 2016a).

HT was developed in 1980 by registered nurse (RN) Janet Mentgen, and became a formally established therapy and training program in the year 1989. In 1990 the American Holistic Nurses Association (AHNA) sponsored the HT program, and in 1993 AHNA certified this program. In 1996 Janet Mentgen established Healing Touch International (HTI), a non-profit organization which was renamed Healing Beyond Boarders in 2013. The process of certification and credentialing support the application of a therapy into practice. The HT movement achieved such support through development of NANDA nursing diagnosis of *Energy field disturbance* in 1984, *Standards of Practice/Scope of Practice and Code of Ethics* by HTI in 1996, and during the 1990's state boards of nursing accepted alternative therapies including HT (HTP, 2016b; Wardell et al., 2014).

This therapy modality encompasses aspects from numerous international traditions and cultures, maintaining a holistic healing perspective. HT emerged from healing principles accepted worldwide, and include the principles of an environment suited to promote healing,

acceptance of a spiritual aspect, and the healing relationship as defined as trust between patient and practitioner (Wardell et al., 2014). The emphasis of HT is on *healing*, rather than *curing*, and is achieved through altering energy levels through touch to either the physical body or the energy field surrounding the body to promote self-healing (Wardell et al., 2014). This viewpoint differs from traditional therapies which aim to cure the underlying condition, and therefore elimination of associated symptoms. Each HT session involves an assessment of patient's current condition and identification of needs and goals. This allows the practitioner to implement specific HT techniques aimed to support patient specific outcomes. This approach methodology focuses on clearing blocked energy channels to promote self-healing, and thus allow for ease/elimination of symptoms. The benefit to this outlook is HT may be applied to a variety of patients with numerous symptoms, compared to medical treatments which are specific to organic etiologies.

To become a HT practitioner, one must successfully complete the Healing Touch Certificate Program. There is a total of five levels, followed by a one-year mentorship program. The aspects of the five levels are as follows: *Level I* includes teaching to recognize energy concepts, HT process, and skills to perform HT specific techniques; *Level II* teaches methods for interviewing patients, back HT techniques, and how to perform a healing sequence; *Level III* focuses on cultivating and clarifying practitioner's energy, obtain a heightened sensory perception, and additional HT techniques; *Level VI* prepares for application of skills into the clinical setting along with additional techniques; and *Level V* completes the objectives of Level VI with increased emphasis on HT principles and practice components (Wardell et al., 2014). After completion of this program one is qualified as Healing-Touch-Practitioner (HTI-P), and may apply for additional certification as Certified Healing Touch Practitioner (CHTP).

As rates of patient awareness of available complementary and integrative therapies continue to increase, it is necessary for appropriate patient education and referral to such therapies be facilitated. This also relates to patient satisfaction and increased QOL as are

emphasized with the health reform movement. Evidence-Based-Practice (EBP) involves a systematic process of literature review, evidence appraisal, consideration of patient preferences and attention to patient rights through ethical principles to implement best practice into the clinical setting (Melnyk & Fineout-Overholt, 2015). The purpose of this EBP project is to determine best available evidence on effectiveness of HT intervention on a variety of interconnected symptoms including depression, anxiety, PTSD, and chronic pain.

Statement of the Problem

Many adults suffer from a variety of ongoing symptoms related to health conditions. The most commonly reported symptoms across a variety of conditions include anxiety, depression, chronic pain, and decreased physical functional ability. Last recorded in 2012, half of the adult population, 117 million persons, in the United States had one or more chronic health conditions and one in four adults had two or more chronic conditions (CDC, 2016). Particularity related to the symptoms of functional ability, is that Arthritis is the most common cause of disability with 22 million persons reporting loss of functional ability due to Arthritis (CDC, 2016).

One of most common problems identified among the veteran population is chronic pain, as well as other conditions including post-traumatic-stress (PTSD), traumatic brain injury (TBI), depression, and substance abuse (NCCIH, May, 2014). Opioids are a general treatment of choice for management of chronic pain. A concern with this treatment modality is risk for misuse of the medication resulting in serious complications including death. This is particularly relevant among the veteran population, as a study surveyed over 2,500 soldiers of whom 44% had chronic pain and 15% of this population used opioids on a regular basis (Toblin, Quartana, Riviere, Walper, & Hoge, 2014). This is a higher rate compared to the general population of 11% reporting regular opioid use for nonmedical reasons (NIH, 2016). Patients are aware of the adverse effects to dependence on pain medications, and are increasingly seeking alternative therapies for management of pain and other symptoms (NCCIH, May, 2014).

Data from the Literature Supporting Need for the Project

HT, as an energy therapy, has been used in the management of symptoms for a variety of health conditions, and is generally used as adjuvant therapy to conventional medical treatment (NCCIH, Feb. 2016). HT has been demonstrated to enhance general comfort and relief of symptoms among persons with psychological/psychosocial issues including depression, anxiety, trauma, insomnia, and addictions (Wardell et al., 2014). Examples of HT application includes: surgical settings with outcomes of enhanced recovery, wound healing, and decreased pain levels; acute and chronic conditions to ease or eliminate symptoms and sense of well-being; and cancer support therapy to decrease chemotherapy and radiation side effects, emotional support, and enhance quality of life (QOL) (Wardell et al., 2014).

The NCCIH (2015) group guideline summary suggests that in accordance with the Defense Health Agency (DHA), the NCCIH is focused on expanding research on complementary and integrative therapies for pain management as well as other symptoms management, with emphasis on a holistic approach to health care and use of an integrated care model to include complementary/integrative modalities. Study results among a variety of patient populations and varying symptoms also support the use of HT therapy. HT has been shown to improve symptoms of pain, fatigue, reduction in analgesic medication use, anxiety, depression, stress, QOL, and patient satisfaction among cancer patients (Gonella, Garrino, & Dimonte, 2014). Study results further support HT effect on acute and chronic pain among patients experiencing physical or neuropathic pain, injury, arthritis, persistent pain, and total knee arthroplasty procedures. HT has also been widely utilized for management of symptoms of depression and anxiety.

Data from the Clinical Agency Supporting Need for the Project

The clinical agency where this EBP project occurred at the VA Medical Center of Chicago, IL. The agency preceptor is a leader in bringing HT to this site. The mission of the facility is to Honor America's veterans by providing exceptional health care that improves their health and well-being. The agency aims to uphold the mission through offering integrative and

patient-centered care and supporting education and research while upholding its core values of integrity, commitment, advocacy, respect, and excellence. At the time of this EBP project, the agency was looking to increase availability and access to HT services for all patients. There is a need to document benefit of HT on improvement of their symptoms based on reason for referral. Examples include symptoms of anxiety, depression, pain, and overall well-being. The goal is to obtain such supporting data to enhance availability of HT training and staff, thus increasing access and availability of HT therapy for patients. Furthermore, a low appointment compliance rate was identified as well as patients were unaware of what HT was when they did attend their appointment. Therefore, the site wanted to develop a better system for notifying patients of a scheduled appointment, as well as increasing awareness on the topic of HT.

Three certified HT practitioners assisted with the process of carrying out this EBP project. The agency's mission statement and value considerations, along with Martha Roger's framework of Science of Unitary Human Beings (SUHB), and the Stetler model served as foundation for the development, implementation, and evaluation of this EBP project. The outlined goal for this project was to provide symptom relief through the intervention of HT. Furthermore, the agency had chosen to determine effects of the intervention of HT on patient symptoms utilizing the Healing Touch Comfort Questionnaire (HTCQ) tool. This is a unique tool reflects the holistic value of HT, as it is designed to account for a variety of elements related to various presenting symptoms, and has shown internal consistency (Dowd, Kolcaba, & Steiner, 2006).

Purpose of the Evidence-Based Practice Project

The purpose of this EBP project is to determine best available evidence on effectiveness of HT intervention on a variety of interconnected symptoms including depression, anxiety, PTSD, and chronic pain. In effort to ensure the HT intervention is available to all persons with a scheduled time-slot, an appointment notification letter along with an educational HT flyer will be mailed to the patient two weeks prior to the appointment date.

Currently, only three personnel at the site are qualified to provide HT therapy, thus access to HT appointment slots is limited. Therefore, a secondary objective of this EBP project is to make the most of appointment availability by ensuring all appointments are kept, and quantify the effects of HT on symptoms to support the suggestion for increased training and staffing of HT practitioners. The data from this project will also be used to support the request for increased access to HT therapy through increased staff and appointment times.

Compelling Clinical Question

The clinical question addresses the intervention for consideration. It also includes the population of interest, and outcomes within a specified time range. The clinical question for this EBP project is, "What is the effect of HT-intervention on symptom relief compared to symptom rating prior to intervention, over a two-month period?"

PICOT Question

The PICOT acronym identifies the main components of the EBP topic. The purpose of PICOT identifies the population of interest (P), the intervention for implementation (I), a comparison to equate the intervention (C), a measurable outcome (O), and a time-frame in which to carry out the project (T) (Melnyk & Fineout-Overholt, 2015). The PICOT for this EBP project was, "For Veterans, what is the effect of HT educational material on appointment compliance rate, and what is the effect of HT intervention on anxiety, depression, or pain as compared prior to HT intervention on symptom relief and well-being as compared prior to HT intervention over a period of two months?" This is broken down as follows:

P – the population of interest was veterans. The target population was aimed specifically of veterans who are patients of the VA Jesse Brown Medical Center. Current practice of the facility organization is for patients to be referred by either a primary care, or specialty provider for HT. However, much of the time patients are only told they will be referred, without receiving information on what HT entails, or a time and date for the appointment. Only after the HT division secretary schedules the appointment is the

patient called. This break in communication prevents the patient from being motivated to attend the HT session, and therefore not have an opportunity to receive symptoms relief.

I – the intervention was two-fold: mailing of appointment notification letter along with HT flyer, and HT session itself. Once the HT appointment has been scheduled for a patient based on provider referral, an appointment notification letter and HT flyer was mailed to the patient. HT intervention was provided for all patients keeping their scheduled appointment.

C – the comparison included comparing appointment compliance rate, as well as HTCQ evaluation scores before and after intervention(s).

O – the outcomes of interest were the compliance rate and the effect of HT on patient symptoms. Appointment compliance rate was measured overall and weekly based on percentage rate of kept appointments. Effects on symptoms were measured pre-and-post HT intervention via the HTCQ tool (Dowd et al., 2006).

T - The timeline for the intervention was a two-month period, and data collection was completed by the end of March, 2017. All patients with scheduled HT appointments received the HT appointment notification letter and HT flyer via mail. Patients who kept their appointment were recruited at time of check-in for the appointment and asked to complete the HTCQ pre-and-post HT session.

Significance of the EBP Project

HT is an emerging complementary integrative service. Its impact on symptoms including pain, anxiety, depression, and physical functionality are applicable across the veteran population presenting with a variety of health conditions. This EBP project aimed to determine the effect of HT on a variety of patient symptoms through use of the HTCQ tool. Other aims of this project include applying data to support the need for altering the notification process, and increased access to HT therapy via increased availability of HT training and increasing staff offering HT.

CHAPTER 2

THEORETICAL FRAMEWORK, EBP MODEL, AND REVIEW OF LITERATURE

Theoretical Framework

The development of an evidence-based practice (EBP) project are rooted in a theoretical framework. It is further essential for an established model to guide the process of developing the EBP project. The science of unitary human begins was the theoretical framework chosen for this project, and the Stetler model guided the EBP process of Healing Touch (HT) intervention. This chapter discusses science of unitary human beings theory, Stetler model, and review of literature.

Overview of Theoretical Framework

Science of Unitary Human Beings (SUHB) emphasizes a holistic approach. This theory is based on the perception a person is greater than the sum of parts. Environment and energy field is just as important to an individual's composition as the physical body, and therefore must be addressed to ensure quality patient care. SUHB unique concept of energy field makes it a direct fit for HT, and therefore served as a firm framework for this EBP project.

Description of science of unitary human beings. Nursing theorist, Martha Rogers, developed this theory in the year 1970. Since the original publication, the conceptual system has been revised numerous times. Rogers discounted the term "holism" due to its extensive use, and applied the term "unitary" instead. Rogers felt the term "unitary" better represented the idea that human beings are unified wholes, compared to view of sum of their parts (George, 2011).

Rogers presents an abstract conceptual model. She attributes its roots linked to a different paradigm. Paradigm, rooted in perspective, is defined as a particular perspective of

reality which is linked to a worldview. Paradigm shift occurs through advancement of knowledge, and hence a change in perspective and how something is perceived changes. Assumptions of this conceptual system include man being viewed as a unified whole with manifesting characteristics which are greater than a sum of his parts, man and environment continuously exchange matter and energy with one another, the live process continues to evolve unidirectional and is irreversible, man's identify is made of pattern and organization which reflect his wholeness, and man is characterized by capacity for abstraction (George, 2011).

SUHB houses five fundamental concepts: energy fields, pattern, pandimensionality, unitary persons, and environment (George, 2011). Traditionally nursing is viewed from a biomedical perspective. Therefore, a paradigm-shift of one's perspective must change to accept the concepts of SUHB.

Energy fields. Energy field is the fundamental unit of living and the non-living (George, 2011). Energy refers to the dynamics while field refers to an infinite, continuous motion. This concept is crucial to understanding SUBH conceptual system. Human beings and environment both are viewed as energy fields, as both are infinite without physical boundaries.

Pattern. Pattern is a distinguishing characteristic of an energy field which is perceived as a wave (George, 2011). This concept accentuates human beings cannot be fully understood as summing their parts, and how each human being is comprised of a unique, identifiable pattern (George, 2011). Pattern does not refer to structure or physical parts, but rather irreducible and nonmaterial aspects comprise pattern relationships. This has alluded some difficulties on method to assess human energy fields.

Pandimensionality. Pandimensionality is the space-time dimension, and refers to an infinite domain without limit (George, 2011). Pandimensionality applies to both human beings and environment, in a way that perceives reality beyond the standard three-dimensional world. This concept allows for infinite possibilities for the person.

Unitary human being. Unitary human being is defined as an irreducible, indivisible, pandimensional energy field which is identified from pattern and manifesting characteristics as part of a whole and may not be predicted from knowledge of parts (George, 2011). Unique to nursing is the equal focus on both human beings and their environments.

Environment. Environment is also known as an environmental energy field. This concept is considered integral with the human being energy field. It is defined similarly to unitary human being as an irreducible pandimensional energy field of pattern (George, 2011).

In addition to these concepts, there are also three principles essential to the understanding of SUHB. The principles include: resonancy, helicy, and integrality. These principles emphasize the inedibility of change to both human and environment fields.

Principle of resonancy. Principle of resonancy represents the continuous change among low and high frequency wave patterns among the energy fields (George, 2011). Human beings are perceived as wave patterns and rhythms. Examples of rhythms include sleep-wake cycles and hormone levels (George, 2011).

Principle of helicy. Principle of helicy is the continuous, innovative, and unpredictable diversity of energy fields (George, 2011). This principle claims the human being does not regress or is static, but rather, continuously evolves with increasing diversity and complexity. Furthermore, the human being cannot return to an exact place where he/she was in the past, as the human being only moves forward.

Principle of integrality. Principle of integrality is the continuous mutuality between the human and environmental fields' process (George, 2011). This principle refers to the continuous and equal nature of the human-environment fields. Furthermore, this is considered an ongoing process rather than an interaction in time.

Based on the continuous nature on both the human being and environment, the science of unitary human beings was chosen to determine the effects of HT intervention provided to first-time referred HT patients. This notion accepts that the person has a continuous

relationship with environmental factors surrounding the body. Therefore, HT is an appropriate modality to address both the body itself through physical touch, and also the energy fields surrounding the body through techniques to heal these areas without physically touching the body itself.

Application of Theoretical Framework to EBP Project

The science of unitary of human beings was fundamental in the roots of this EBP project. The integral concepts of SUHB are reflected in the HT. The modality of HT encompasses all five of the theory's concepts, and supports the three principles.

Energy field is the fundamental concept of HT. Regardless of the specific HT technique, the goal of treatment is to eliminate energy blockages and restore/realign the energy field, hence promoting optimum healing for the individual (Goldberg et al., 2016). This is the general goal for all patients receiving the HT intervention for this EBP project. *Pattern* emphasizes every individual has his/her own unique energy wave. This is reflected in this EBP intervention as every participant is assessed for specific problems, such as pain or anxiety. Dependent on the outcome goal, specific HT techniques are chosen for treatment. There are varying technique options, and certain techniques are designed for certain outcomes more than others (Goldberg et al., 2016). *Pandimensionality* refers to infinite and unlimited domains of the person and environment. Therefore, techniques are individually selected per participant to account for assuring all domains of the human person and environment (Peck, 2007). This is incorporated by selection of techniques that may include physical touch, field surrounding the body, or a combination of both. The final concepts of *unitary human being* and *environment* are also evident with every HT intervention. It is essential to accept that human beings are more than a sum of their parts, and viewed as a whole in conjunction with their environment, thus individuals must all be assessed for their uniqueness to ensure adequate techniques are chosen to provide highest level of healing (Wardell, Rintala, & Tan, 2008). As part of the HT intervention provided

to participants; individual needs are assessed, and techniques are chosen to support optimum healing.

Strengths and Limitations of Theoretical Framework for EBP Project

One strength of SUHB is the emphasis on individuality. This is present through the SUHB view of the human being as a unique, continuous, and ongoing developing system rather than parts and part-complications defining the person (George, 2011). This is reflected in the intervention of HT as each session includes an assessment period with the patient, which determines the best HT technique to implement based on the uniqueness of patient-specific needs. Another strength is the SUHB emphasis on environment, which is considered a major phenomenon to the nursing discipline. The SUHB emphasizes the importance of considering the indivisible energy fields surrounding the individual when providing care, which is a key element of HT.

An additional strength of this theory is its broad applicability, as it may be applied to any situation, at anyplace a human being is present. Rogers emphasized focus should be on the whole person, including environmental factors and surrounding energy field. This ideal supports treatment interventions to address concerns and symptoms of the person, rather than a specific disease process. The intervention of HT represents these elements as it may be applied to a broad range of patients with varying health conditions addressing a variety of symptoms such as pain, depression, anxiety, and functional ability.

Strength and support for the SUHB is also represented in the literature, as it has served as framework for numerous research studies including descriptive and phenomenological research, as well as experimental and quasi-experimental research. Furthermore, it has been tested by both quantitative and qualitative methods. SUHB is also considered widely applicable. This is seen through foundation of nursing research, and foundation for development of other nursing theories (George, 2011). SUHB has been used in numerous studies on complementary therapies (CAM), primarily with therapeutic touch (TT) (George, 2011). The intervention of HT

further emphasizes the energy field concept of the SUHB, and the majority of all articles reviewed for this paper used SUHB as framework.

Limitations to this theory also must be addressed. The greatest criticism of the SUHB is the degree of abstractness and challenges to application (George, 2011). The abstractness requires viewing the person as considering all aspects presented in the SUHB. This can be challenging in the clinical setting where much emphasis is generally focused on a disease state, or single problem. Hence, limitations are more often found within the practitioner's perception, or lack of abstract viewpoint, than with the SUHB itself (George, 2011). Another limitation is related to barrier of change in perception on part of the practitioner. Often, practitioners become rooted in one perspective and have difficulty accepting alternatives, therefore stalling a paradigm shift (George, 2011).

Evidence-based Practice Model

The Stetler Model was originally developed in the year 1976. The purpose of its commencement was to fill a void between application of nursing research findings into clinical practice. Since its inception the model has undergone three revisions, and strengthened the foundations of: use of research on knowledge utilization, integration of emerging concepts of EBP, and clarifying critical concepts (Melnyk & Fineout-Overholt, 2015). Because of its reliable framework and relevance to incorporating EBP findings into practice, the Stetler model was chosen as to guide this EBP project. The Stetler model involves a series of steps divided among five phases to guide the process of identifying a need through evaluation of implementation. This section of the chapter will further discuss how the Stetler model is applicable to clinical practice.

Overview of EBP Model

Description of the Stetler model. The Stetler model outlines a step-wise approach which aims to identify and implement relevant research into EBP practice. These steps are further divided among five phases: preparation, validation, comparative education/decision

making, translation/application, and evaluation (Melnyk & Fineout-Overholt, 2015). An advantage of this model is its practitioner-orientation, and emphasis on critical thinking. A critical component of this model is evidence, which is defined within the model as information/facts that have been systematically obtained and are considered replicable, observable, credible, verifiable, and supportable (Melnyk & Fineout-Overholt, 2015). Evidence is the key concept of this model, and is further divided among external and internal evidence. External evidence is partially based in research but also included expert opinion and support from program evaluations, while internal evidence is rooted in systematic and local facts and information /9 Melnyk & Fineout-Overholt, 2015). Examples of internal evidence include information obtained from quality evaluations, affirmed experiential information, and EBP models. This model serves as a guide for the process of identifying and utilizing research findings and transforming into safe and effective practice.

The five phases of the Stetler model. This model provides five phases to guide EBP implementation into practice. It is essential to move through these phases in order, as each phase in progressive in nature and builds on the previous phase. *Preparation* is the first phase. This initial phase involves identifying a clinical problem or need, followed by reviewing context of current practice (Melnyk & Fineout-Overholt, 2015). Things to consider during this phase include what current issues or barriers exist, what other internal or external factors may be involved, and how outcomes will be defined. Following identification, it is necessary to systematically search for current relevant evidence.

Phase II is known as the *Validation* phase. Validation involves assessing the evidence. This is established through systematically critiquing all studies and other relevant documents to determine if evidence is sufficient and credible. This model places emphasis on the critique process to maintain a utilitarian focus to guide selection of included literature as related to the need identified in Phase I (Melnyk & Fineout-Overholt, 2015). It is further recommended to include any systematic reviews or established guidelines in the critique analysis. To aid in this

process it is suggested to create a grid/table and rate each piece of evidence according to Level of Evidence and quality (Melnyk & Fineout-Overholt, 2015).

Phase III is the *Comparative evaluation/Decision making* phase. This phase involves making decisions to include or dismiss after the summarization, and further requires referring to utilization criteria for this decision making process (Melnyk & Fineout-Overholt, 2015). When making these decisions it is necessary to ponder if the data uncovered is reliable, and if all data searches have been exhausted to ensure you have unearthed all evidence. In effort to move through this phase as smoothly as possible, it is suggested label and condense the pieces of evidence, and additionally organize and provide meaning. Answers to these questions will help determine whether or not the available evidence is applicable to use to guide EBP.

Phase IV is the *Translation/application* phase. This phase involves the process of converting findings into type of change recommended, planning for formal use, developing a plan of action for implementation plan (Melnyk & Fineout-Overholt, 2015). In other words, this is the phase where the included evidence is again reviewed, and a plan of action is developed to incorporate the intervention into practice via implementation. During this phase it is necessary to consider potential barriers that may arise to implementation, and to acknowledge possible difficulties encountered with integration. Thorough consideration of all these elements will help develop the best plan of action specific to the setting in question for EBP implementation.

The final phase is *Evaluation*. This phase involves the process of assessing the degree the implementation occurred and if the goals for using evidence were met (Melnyk & Fineout-Overholt, 2015). During this phase, it is important to determine how the plan was applied and if all aspects were carried out, and if goals were met. It is also necessary to determine if any hypotheses were answered. Success may be measured through tools that assess impact on the population or intervention in question.

Application of EBP Model to EBP Project

This EBP project followed the phases outlined in the Stetler model. This EBP project formulated intervention based on evidence which offered support for providing study participants with information on an intervention ahead of time. The project further supported use of HT treatments to address symptoms among a variety of patients with varying health conditions. Each phase is described in further detail as follows.

Preparation. This phase was initiated through discussion with the site to identify a need of improved appointment compliance rate. In addition, there was a need for enhanced support of HT treatments to improve outcomes, specifically of pain and anxiety. HT has been utilized briefly, but there is a need for more consistent intervention to occur for patients in order to accurately determine benefit of the intervention. In an effort to quantify the benefit of HT, and provide information to gain increased support for more staffing of HT clinic, a literature search was completed to determine interventions for increasing intervention awareness, benefit to providing patients with educational materials, HT benefits, and quantified through utilization of the Healing Touch Comfort Questionnaire (HTCQ). The HTCQ is a comprehensive survey which assesses aspects related to a variety of patient presenting symptoms; including anxiety, depression, functional ability, quality of life, and pain (Dowd, Kolcaba, & Steiner, 2006). As the patient population for this EBP project represents a variety of these symptoms, the HTCQ tool is appropriate. Evidence was reviewed on the topic in question, and it was determined there is a need for consistent HT treatments to accurately assess level of benefit and outcomes. Currently, in the setting, HT is rarely offered. Multiple databases were searched and evidence was extracted and further reviewed.

Validation. Following selection of articles, a process of critical appraisal occurred. After accounting for inclusion and exclusion criteria, articles were selected or dismissed for appraisal. Each article was appraised using the JHNEBP appraisal tool to account for characteristics such as sufficiency and credibility. A thorough review of each article is discussed later in this chapter. A table was developed to reflect level of evidence for each appraised study.

Comparative evaluation/decision making. Following appraisal of each study, the next phase involved another review. This process involved reviewing sample populations, interventions, appraisal grade, level of evidence, ensuring all resources were exhausted prior to final article selection, and outcome information. Each article was labeled according to database retrieved from, level of evidence, quality grade, HT techniques, limiters applied, and significance of results.

Translation/application. Following review of literature and article appraisals, a plan was developed to implement HT in the selected setting. The evidence suggests benefit of HT on a variety of symptoms, regardless of the disease process or acute/chronic condition. While some studies may differentiate based on sample population, many of the same variables are found to benefit from HT. These include: pain, anxiety, depression, perception of functional ability, perceived QOL, and patient satisfaction. Another literature search revealed support of informational materials to be provided prior to intervention on improved outcomes. Based on the breadth of the evidence, this EBP intervention includes providing patients with scheduled appointments an educational HT flyer and appointment notification letter via mail, and also the HT intervention itself for all patients regardless of coexisting health condition(s).

Upon reviewing the evidence specific to HT, it became clear HT has been used to address a variety of symptoms among patients with a multitude of health conditions. Symptoms affected by HT include anxiety, depression, PTSD, functional ability, quality and satisfaction with life, and pain. It is worthy to note many of these symptoms are associated with numerous chronic health conditions. This suggests HT is truly a holistic modality which aims to promote self-healing, thus resulting in symptom relief regardless of organic health etiologies. This information led to the development of the EBP project applying HT intervention to first-time referrals at the EBP site.

Evaluation. Different instruments have been utilized for outcome measurement based on the identified outcome. For example, in a study measuring effect of HT on depression a tool

such as the BECK-depression scale would be used. There is in existence a “Healing Touch Comfort Questionnaire” (HTCQ) that was developed. This tool was designed specifically to encompass all aspects of possible outcomes in a way that reflects the unique nature of HT intervention (Dowd et al., 2006). This tool has shown preliminary internal reliability among a heterogeneous sample population, suggesting application of this tool would be appropriate to use with many different patient populations (Dowd et al., 2006). This EBP project allowed for a variety of patients with varying conditions receive the HT intervention. Therefore, a variety of outcomes were involved, allowing for appropriate application of the HTCQ to be used for evaluation of HT intervention. Appointment compliance rate was measured by frequency percentage of kept appointments.

Strengths and Limitations of EBP Model for EBP Project

There are both strengths and limitations to this model. The overall strength of this model is its structure allows for smooth facilitation to integrate EBP in the clinical setting. This model follows a series of clearly outlined steps which occur in a unidirectional order. This allows for smooth transition forward when moving through the EBP change process. Another strength of this model is its emphasis on a thorough review of available literature to form the EBP intervention. This adds strength to the quality of the information the intervention is based. Another strength is the emphasis on critical thinking, which makes the model practitioner-friendly.

A limitation of this model is its complex diagram. Upon viewing the diagram which outlines each phase in detail, it can be overwhelming. However, if broken down and reviewed by phase, then it becomes quite simple to follow. Another aspect that may be considered a limitation is the emphasis on critical thinking and integration of research findings, which makes it a useful tool for advanced practice practitioners, but may be more challenging for other members of the field.

Literature Search

Sources Examined for Relevant Evidence

A literature search was performed to determine current evidence regarding HT as intervention. This was in accordance with the *Preparation* phase of the Stetler model. The model served as a guide to move through the step-wise approach to identify the clinical question, followed by a systematic search of the literature for current evidence.

Search engines and keywords. The Christopher Center Library of Valparaiso University offers students access to numerous databases and current research. The library liaison, Professor Kim Whalen, provided support and guidance for this literature search. Databases encompassed in this literature search included Cumulative Index to Nursing and Allied Health Literature (CINAHL), Medline, ProQuest Allied Health Source, PubMed, PsycINFO, Joanna Briggs Institute (JBI), and Cochrane Library. In addition, references of appropriate studies were also reviewed. It is worthy to note, a majority of references cited within studies also appeared in search results, and therefore were screening for consideration for this report. With the assistance of Professor Whalen, it was determined current evidence for HT was available as primary research.

Prior to initiating this literature search a list of potential search terms was established. The PICOT question aided in the development of this list. The PICOT question for this project was, “For Veterans, what is the effect of HT educational material on appointment compliance rate, and what is the effect of HT intervention on anxiety, depression, or pain as compared prior to HT intervention on symptom relief and well-being as compared prior to HT intervention over a period of two months?” The population of interest was HT patients, and the intervention were educational materials and HT therapy. Keywords used included “heal* touch”; and anxiety, depression, pain, comfort, separated by the operator OR. These search terms were applied to one database initially, and after it was determined suitable it was then applied to alternate databases. Keywords for search on educational materials included MM “education;” and prior,

before, pre, separated by the operator OR, and intevent OR implement. Search results yielded as follows: CINHAL 78 results, Medline 168 results, ProQuest 365 results, PsychINFO 18 results, PubMed 61 results, JBI 8 results, and Cochrane 70 results. It is important to note that many of the same articles were produced across several databases. These results provided support all available sources were exhausted for this literature search.

Inclusion and exclusion criteria. Inclusion and exclusion criteria assisted in narrowing search results to accurately reflect topic and ensure the most current evidence. Inclusion criteria were applied in the form of limiters following the initial search. These limiters were: a) date range 2006-2016, b) scholarly (peer-reviewed) journals, and c) English language. Exclusion criteria were also involved in the assessment of produced articles to further narrow articles selected for further consideration. Exclusion criteria involved: a) any study that applied HT as part of a complex intervention including three or more modalities, b) inclusion of HT intervention combined with modalities of Therapeutic Touch (TT) or Reiki, c) sample representative of acute inpatient hospital stay, such as surgical patients, and d) sample population of children or adolescents.

Following the application of limiters results available for consideration narrowed. CINAHL yielded 49 results, and upon reviewing abstracts 13 were screened for further review, and six were selected for this report. Medline produced 103 results, 14 were screened for additional consideration, and three were chosen for appraisal. ProQuest yielded 87 results, and after determining duplicate articles 15 were further screened, and one was selected for appraisal. PubMed produced 45 results of which six were screened, and three were included in this report. PsycINFO generated 15 results, and upon screening results none were included in this report. JBI produced eight results, and due to the low number of results no limiters were applied, two articles were screened, and none were included in this report. Cochrane yielded 69 results, nine were reviewed and none selected for this report. The final number of articles included for this report was 13 articles.

Levels of Evidence

Level of evidence was established according to Melynk and Fineout-Overholt's rating system (2011). This system describes seven levels of evidence. The varying levels reflect quality of the evidence. Level I – Level IV include evidence from experimental design type studies, while Level V – Level VII includes evidence from qualitative studies and expert opinion. Level I is considered highest level of strong evidence, and Level VII is the lowest quality. Level I evidence includes meta-analyses or systematic reviews of RCT's. Level II evidence is considered results from one RCT. Level III evidence includes trial studies without sample randomization. Level IV is evidence of case-control or cohort studies. Level V is evidence obtained from systematic reviews or meta-analyses of descriptive and qualitative studies. Level VI includes results of single descriptive or qualitative studies, and Level VII is expert opinion.

Appraisal of Relevant Evidence

After rating selected articles with a certain level of evidence, each article was appraised. An appraisal of nine articles was performed. The appraisal tool utilized was the John Hopkins Nursing Evidence-Based Practice (JHNEBP) Research Evidence Appraisal tool. This section further details the findings of inclusion articles.

Table 2.1

Evidence and Quality Grades

Level of Evidence	Included	Type of Article	Grade
Level I	1	Systematic Review/ Meta-analysis of RCT's	A (1)
Level II	3	RCT	A (2), B (1)
Level III	7	Controlled Trials no Randomization	A (3), B (4)
Level IV	0	Case-control, cohort	0
Level V	0	Systematic Review/Meta-analysis of Qualitative/Descriptive studies	0
Level VI	2	Qualitative/Descriptive Studies	B (2)

Level VII	0	Expert Opinion	0

Level I evidence. Anderson and Taylor (2011) conducted a systematic review of RCT's with the aim of evaluating data to assess efficacy of HT as supportive care relevant to any medical condition. The article received a JHNEBP grade of A. The authors performed a literature search within the electronic databases of Medline, CINAHL, and ClinicalTrials.gov. Limiters included a date range began at inception of study until January 22, 2010, and peer-reviewed articles. Search term *healing touch* was applied. Inclusion criteria for article selection were as follows: HT intervention received solely or in addition to standard treatment, and comparison of HT intervention to a control group without HT. Studies were excluded if HT made up a complex intervention, continued development of HT specific interventions without any outcomes, or a healthy sample population. The initial search generated 332 articles. Upon consideration of inclusion and exclusion criteria 327 articles were dismissed, and five RCT's were selected for this review. Of the chosen RCT's, four used parallel group design and one used crossover design. Intervention among all studies included HT, and measured outcomes included attitudes about HT, mood, length of stay, and physiological outcomes of heart rate, respiratory rate, blood pressure, pain, and nausea.

Of the studies reviewed, significant decrease was found in physiological factors of respiratory rate, heart rate, blood pressure, mood disturbance, and current pain; with the greatest effect on respiratory rate and heart rate (Anderson & Taylor, 2011). Additional findings included decrease in feeling of worry, mean length of stay, and anxiety scores (Anderson & Taylor, 2011). Increase in overall physical function scores, emotional role functioning, mental health, and health transition were additional findings (Anderson &Taylor, 2011). The various studies of this review utilized different subjective assessment tools, thus, it is difficult to strictly compare all outcomes. However, among all studies reviewed, findings support utilization of HT in clinical practice across varying patient populations aimed at improving health quality of life

aspects. Based on the outcomes of this review, it serves as a base of support for this EBP project.

Level II evidence. Three RCT articles were appraised, and are considered level II evidence. The first RCT, conducted by Der-Fa, Hart, Lutgendorf, and Perkhounkova (2013) aimed to determine effects of HT on symptoms including pain level, joint function, mobility, and depression in patients with osteoarthritis (OA); specifically, OA of the knee. The article received a JHNEBP grade of A. The design of this study was RCT with repeated measure. The intervention group was the HT group, and the comparison of friendly visits (FV) group. Participants were recruited from long-term care facilities and the community. After screening for inclusion criteria the sample consisted of 19 participants; (n=12) HT group and (n=7) FV group (Der-Fa et al., 2013). Inclusion criteria were as follows: age 65 or older, diagnosed with OA of the knee and experiencing related discomfort, able to stand and walk without assistance, pain was directly related to OA of the knee, English speaking, and cognitively intact (Der-Fa et al., 2013). Additional characteristics of the sample population were a majority of participants were female between ages of 62 – 99 years, majority resided in long term care facilities, had cardiovascular comorbidity, and used Tylenol for pain control (Der-Fa et al., 2013).

The study occurred over a period of six weeks. The intervention of HT was provided to the intervention group three times per week for six weeks, while the comparison group received a FV one time per week at their residence for six weeks. The intervention group participants all received the same four HT techniques of *Pain drain, Chakra connection, Magnetic clearing*, and *Mind clearing*.

Outcomes for this study involved assessments pre-and-post HT or FV of pain, flexibility, mobility and balance control, and depression. Three tools were used including The Iowa Pain Thermometer (IPT), Brief Pain Interview Short Form (BPI-SF), and The Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) to measure pain. Flexibility was measured with a goniometer. Mobility and balance were measured with the timed “Get up and

Go" test. Depression was measured with the Patient Health Questionnaire (PHQ-9) tool (Der-Fa et al., 2013).

Changes of pain interference and pain intensity was significant from baseline to post intervention period utilizing liner mixed models (LMM). Pain interference measured by BPI was (F (1,17) = 6.11, p = 0.02) and pain intensity was (F (1,17) = 6.10, p = 0.03) as measured by WOMAC (Der-Fa et al., 2013). Effect on pain for HT group was significantly greater compared to FV group (t = 2.47, p = 0.02) and (t = 2.47, p = 0.02); (Der-Fa et al., 2013). Effects were also significant for HT group on joint function aspects of stiffness, flexibility, and mobility. Extension and extensor lag of the better knee results were: (F (1,12) = 5.85, p = 0.03; and F (1,12) = 5.89, p = 0.03); and extensor lag of the worse knee was (F (1,17) = 3.95, p = 0.06); (Der-Fa et al., 2013). WOMAC measure of joint stiffness also loomed along significance level (F (1,16.5) = 3.61, p = 0.08); and follow up t-test revealed significant improvement of the HT group over the six-week period (t = -4.37, p < 0.001); (Der-Fa et al., 2013). Depression was also found to decrease among both groups over the study period, but results were not significant. The results of this study support the modality of HT as intervention for OA patients with complaints of pain, flexibility, mobility, and depression.

The second RCT by Jain et al (2012), aimed to determine the effectiveness of HT combined with Guided Imagery (GI) on PTSD symptoms, depression, hostility, and health quality of life among returning active duty military personnel (Jain et al., 2012). The article received a JHNEBP grade of B. Participants were recruited from Deployment Health Clinics (DHC) via flyers and health provider referral. Education for the study was presented to providers at DHC, and providers referred candidates if at least one hallmark PTSD symptoms were present: re-experiencing trauma via flashbacks, nightmares, intrusive thoughts, exaggerated physical or emotional responses to trauma triggers; exaggerated arousal via insomnia, sleep disturbance, irritability, or exaggerated startle response; and emotional numbing or avoidance of reminders of trauma (Jain et al., 2012).

Potential candidates were further screened, and accepted into the study if additional inclusion criteria were met. A total of 205 persons were screened, and 123 enrolled in the study (Jain et al., 2012). Inclusion criteria were: age 18 or older, and post-deployment from combat zone. Exclusion criteria were: individuals already using HT or GI, inability to provide informed consent, and, if female, she was currently pregnant or nursing. Participants were randomly assigned to an intervention group to receive HT+GI (n = 68) and a control group (n = 55); (Jain et al., 2012). Specific HT techniques used for this study included Chakra Connection, mind clearing, and Chakra spread. The intervention group received HT+GI twice weekly for three weeks, and each session was one hour in duration (Jain et al., 2012).

Primary outcome measured was PTSD symptoms, and was measured with the gold-standard PTSD checking (PCL). Depression was also measured via the Beck-Depression Inventory (BDI-II). Quality of life was measured with a reliable and valid tool, the SF-36. Analysis of covariance was performed with intent-to treat analyses. Results were statistically significant in reduction of PTSD symptoms ($p < 0.005$, Cohen's $d = 0.85$), depression ($p < 0.005$, Cohen's $d = 0.70$), mental quality of life ($p = 0.002$, Cohen's $d = 0.58$), and cynicism ($p = 0.001$, Cohen's $d = 0.49$); (Jain et al., 2012). These results are favorable for support for HT among the veteran population returning from deployment with PTSD. This article reflects a large portion of the population for this EBP project, and hence is relevant to the inclusion of this review.

The final RCT critiqued was a pilot study to aimed to determine effect of the HT intervention, Magnetic Clearing, among women undergoing breast biopsy in reducing anxiety (Goldberg et al., 2016). The article received a JHNEBP grade of A. Participants were recruited upon scheduling appointment for biopsy. Based on doctoral dissertation research guidelines from Holos University Graduate Seminary, it was determined an adequate sample size required minimum of 30 participants in both control and intervention groups. Inclusion criteria was as follows: between ages of 18 and 85 years, able to read and write English language, scheduled

for breast biopsy appointment, and naïve to HT (Goldberg et al., 2016). Women were excluded if she were pregnant or cancelled the biopsy appointment (Goldberg et al., 2016). In this study 200 women were approached, 95 were further evaluated for consideration, and totaled 73 participants with 31 in the control group and 42 in the intervention group (Goldberg et al., 2016).

The design of this study was quasi-experimental, non-blinded, with random assignment to intervention group (Group B) or control group (Group A); (Goldberg et al., 2016). The procedure for the intervention group involved the participant receiving Magnetic Clearing during a 15-minute session prior to biopsy. Method of assessing anxiety levels for both groups were gathered immediately pre-procedure, post-procedure, and the following day 24-hours post-procedure; the 24 hour survey was completed by the participant at home and mailed back to the researcher (Goldberg et al., 2016). Tools utilized included both the State-Trait Anxiety Inventory (STAI) and the Coping Resources Inventory (CRI). In addition, physiological factors of blood pressure, respiratory rate, and heart rate were also recorded for all participants pre-procedure and post-procedure (Goldberg et al., 2016).

Data collected was recorded on a spreadsheet and included demographic data, data from the three surveys, and physiological data. Data analysis was performed via Chi-square tests, and mixed ANOVA which also controlled for error rate (Goldberg et al., 2016). The stress data gathered from the STAI were consistent among both groups with stress higher pre-procedure, and decreased post-procedure. Further evaluation of results showed S-Anxiety among the control group of significant decrease from pre to post-procedure, but increase the following day *(p* = 0.004) compared to intervention group maintained of decreased anxiety the following day ($p < 0.001$); (Goldberg et al., 2016). T-Anxiety results specified an increase among the control group from pre to post-procedure with an insignificant slight rise within the 24-hour period ($p = 0.10$), while the HT group decreased pre to post-procedure ($p = 0.01$) without significant change the following day ($p = 0.28$); (Goldberg et al., 2016). Between groups S-Anxiety results were significant F (2, 142) = 10.94, $p < 0.001$; and T-Anxiety F (2, 142) = 5.15,

$p = 0.007$ (Goldberg et al., 2016). The CRI further enhanced the significance between the groups, at F (2, 142) = 0.57, $p = 0.57$ (Goldberg et al., 2016).

Physiological results were also different between the groups, with the most significant factor respiration rate. Respiration rate resulted of F (1, 70) = 21.05, $p < 0.001$. Heart rate declined significantly among both groups, hence the results comparing the groups were not as significant, F (1, 71) = 2.98, $p = 0.08$. Blood pressure results between groups were also significant with systolic blood pressure effect of F (1, 71) = 21.46, $p < 0.001$ and diastolic blood pressure effect of F (1, 71) = 13.81, $p < 0.001$ (Goldberg et al., 2016). The results of this study support the incorporation of HT, specifically Magnetic Clearing technique, in decreasing anxiety after breast biopsy procedure and is sustainable over a 24-hour period.

Level III evidence. Seven studies reviewed are being considered as *Level III* evidence. Chang et al. (2015) was a quasi-experimental pre-test-post-test design and aimed to determine if systematic nursing intervention, including educational materials, influences caregivers' knowledge and skills on NG tube feeding compared to routine nursing instructions. JHNEBP grade of B was assigned. Participants were a convenience sample from an inpatient hospital unit in Taiwan from May-Dec 2004. Assignment to control or intervention group was based on time sequence for NGT rather than randomization. Total of 233 participants (N = 233): Intervention group (n=106) and control group (n = 127; Chang et al., 2015). Inclusion criteria: Patient received NGT feeding during hospital stay, required NGT after discharge, geographic discharge location was within range of home visit from hospital, & the caregiver could speak English, Chinese, or Taiwanese. The control group received routine education on NGT (handout). Intervention group received systematic nursing intervention of comprehensive ed-pamphlet and videos (Chang et al., 2015).

The questionnaire was given to caregivers after the nursing intervention, and again after the caregiver performed NGT the first time. The tool assessed for demographic information, NGT care scale knowledge, and NGT skill assessment scale. Tool validity was determined by

health educators, and each question received an index score of 80% which is satisfactory. Reliability was determined by Cronbach's alpha, and score of 0.967 for knowledge and 0.926 for skill scale, indicating satisfactory reliability level (Chang et al., 2015). Statistical tests included caregiver age by mean with standard deviation. Other variables measured by percentage. Between group tests included Mann-Whitney U test and independent two samples t test. Wilcoxon single-rank test for pretest posttest knowledge.

Differences in knowledge from pre-test to post-test were significant in both groups as $p < 0.001$ (Chang et al., 2015). Univariate linear regression analysis of pretest knowledge scores ($B = 0.07$ with 95% CI of 0.01-0.12, p = 0.019) and pretest skills scores ($B = 0.07$ with 95% CI of 0.01-0.14, $p = 0.033$) both significantly correlated with post test scores (Chang et al., 2015). Caregivers in the experimental group scored significantly higher post-test scores. Age, gender, education and experience did not have a significant impact on post-test knowledge scores. Complications found included constipation (12.3% vs. 23.6%, $p = 0028$), diarrhea (9.4% vs. 22%, $p = 0.012$), and abdominal distension (1.9% vs 10.2%, $p = 0.013$; Chang et al., 2015). Findings suggest that systematic nursing interventions, including comprehensive educational pamphlets and videos are related to improved knowledge and skills for caregivers for NGT.

A second *Level III* article with a JHNEBP score of A by Chen, Chen, and Lin (2014) aimed to determine effect of health education on postoperative pain, involvement in rehab, and functional recovery among patients undergoing total knee replacements. This quasi-experimental study included a sample comprised of patients from an orthopedic ward in teaching hospital in Taipei City September 2011 to August 2012. Participants were assigned first to control group, then to experimental group by process of power analysis to determine appropriate sample size. The total included 92 participants ($N = 92$); Intervention group (n=106) and control group ($n = 127$) (Chen et al., 2014). The control group received standard of care via oral discharge instruction. The experimental group received educational pamphlets with information of pain control, post-op care, rehab exercises, and methods to safely get out of bed

and walking. They also received an educational CD reiterating content in the pamphlet. Measurements included demographic characteristics of age, gender, marital status, ed level, and occupation. Numerical pain rating scale via VNRS with rating pain from 0 – 10. Functional status assessment via a Chinese variation of the functional status subscale, and an exercise performance checklist (Chen et al., 2014).

Results found included No significant differences were found between the 2 groups on demographic characteristics from a Chi-square test ($p > 0.05$). Pain level: in 1-5 days post-op were compared between groups using *t*-tests. The first day post-op VNRS scores were lower among the experimental group ($t = 2.427$, $p = 0.017$). The 2nd post-op day scores were again lower *(*$t = 4.958$, $p = 0.000$). The 3rd day scores continued to remain lower ($t = 3.510$, $p = 0.001$; Chen et al., 2014). Functional status: overall ratings for experimental group were 12.05 + 3.682 and 12.38 + 2.806 for control group. There was no significant difference between the groups ($t = 0.491$, $p = 0.625$; Chen et al., 2014). ANOVA was performed to further assess variances from pretest to posttest between the groups which showed significant differences ($F = 220.737$, $p = 0.000$; Chen et al., 2014). Exercise performance: significant difference between the 2 groups was found on performing straight-leg raises within the first 5 post-op days ($t = -4.754$, $p = 0.000$) but no significant differences on any other exercises ($p > 0.05$; Chen et al., 2014). Conclusion: health educational intervention provided preoperatively reduced level of post-op pain, and increased the regularity of performing rehab exercises.

A pilot study, conducted by Dowd et al. (2006) also received a level III. The article received a JHNEBP grade of A. This study was performed in effort to determine reliability of the newly developed HTCQ tool. The aims of this pilot study were to establish internal consistency reliability of the HTCQ, and also to determine a correlation between number of HT sessions and comfort level (Dowd et al., 2006).

The study population involved a convenience sample of clients from ten HT practitioners. Power analysis determined sample size of 38 participants would be sufficient to establish

existence of correlation between HT and comfort (Dowd et al., 2006). Inclusion criteria consisted of: adult over the age of 18, independent living status, currently receiving HT from a selected HT practitioner, had already received at least one HT treatment, considered by HT practitioner to be cognitively alert and competent, and willing to complete the HTCQ (Dowd et al., 2006). The only exclusion criteria were persons unable to read or understand English language (Dowd et al., 2006). The final sample consisted of 56 participants, five males and 51 females with age range between 21 – 72 years. Additional demographic information of participants included: 90% were white, 6% African American, 4% other; number of HT sessions of 1-4 sessions 39%, 5-10 sessions 31%, 11-25 sessions 22%, more than 25 sessions 8%; and reasons for seeking HT included 48% pain relief, 46% stress reduction, anxiety, and panic attacks, 37.5% low energy and depression, 6% cancer, 12.5% emotional nurturance and increased focus, and 12.5% other reasons (Dowd et al., 2006).

The procedure involved HT practitioners distributing a packet which included a letter of explanation, HTCQ, and stamped envelope to their clients. Clients were asked to complete the HTCQ one to three-days post HT intervention, and mail the questionnaire in the pre-stamped envelope. Of the 100 packets distributed, 56 participants returned the HTCQ. The first aim of the study to determine internal consistency reliability of the HTCQ results were positive with Cronbach [alpha] of .94, and Cronbach [alpha] of .70 or higher is acceptable for determining reliability (Dowd et al., 2006). The second aim to assess for a correlation between number of HT sessions and comfort level was analyzed via the Wilcoxon rank sum test. This test compared total comfort between participants who received 1-4 HT sessions and five or more sessions. The results showed participants having five or more HT sessions had comfort scores of 13.7 points higher compared to those with 1-4 HT sessions ($P = 0.037$); (Dowd et al., 2006).

Overall, results of the study demonstrate effectiveness of HT intervention on a variety of symptoms. Results further establish internal consistency reliability of the HTCQ, as well as confirming a positive correlation between number of HT sessions and increased comfort level

(Dowd et al., 2006). These results are further supported based on the heterogeneous sample, suggesting applicability among a variety of sample populations.

The fourth *Level III* article with a JHNEBP grade of B by Frost and Porterfield (2012) aimed to determine effect of an educational pamphlet for parents of overweight/obese children. This quasi-experimental design study included a sample of parents of children who were enrolled at 1 of 6 identified public schools. 50 parents were recruited, and the sample included a total of 44 participants (*N* = 44) (Frost & Porterfield, 2012). Inclusion criteria: All included and exclusion criteria: Parent/guardian younger than age 18, or older than age 65 (Frost & Porterfield, 2012).

Participants initially received a letter from the PI, and provided informed consent form, demographic sheet, and questionnaire to complete. Patients were then asked to review the educational pamphlet. Two weeks afterwards participants were mailed another packet with another educational pamphlet and questionnaire to complete. Descriptive and comparative analysis was conducted after all information was collected. Demographics: 86% of respondents were mothers, and 14% fathers. 68% resided in extreme rural areas, 41% reported Caucasian race, 41% annual income was less than $12,000 annually and 59% annual income was more than $12,000 (Frost & Porterfield, 2012). Results from investigation concluded that 100% of parents found the educational pamphlet helpful.

Another *Level III* evidence article was also included in this literature review. A quantitative, quasi-experimental pilot study by Maville, Bowen and Benham (2008) aimed to determine effects of HT on state/trait anxiety, and physiological factors of heart rate (HR), blood pressure (BP), skin conductance (SCL), muscle tension (EMG), and skin temperature (TEMP). The article received a JHNEBP grade of B. Recruitment efforts included posting of flyers and occurred at a Hispanic college institution. Efforts targeted graduate and undergraduate students enrolled in a healthcare program. Additional inclusion criteria included ability to read and speak English language, while exclusion criteria included history of cardiovascular health

conditions managed by pharmacological means (Maville et al., 2008). The convenience sample consisted of 30 participants. Additional demographic information of participants included 22 women (73%), eight men (27%), age range 19-44 years, 80% Hispanic, 17% White non-Hispanic, 3% Asian, 10 junior year students (33%), 13 senior year students (43%), 7 graduate students (23%), and five (17%) participants had prior experience with CAM modalities other than HT (Mavillle et al., 2008).

The study followed a single group repeated measures design. The procedure involved each participant receiving a scheduled HT appointment session, and upon arrival for the appointment the participant completed forms for informed consent, demographic information, and STAI (Maville et al., 2008). Physiological factors were also obtained prior to HT session via electrodes for EMG and HR and SCL, temperature sensor to the left ring finger for temperature, and blood pressure measurement. The HT intervention involved techniques of *hands moving* for five minutes, followed by *chakra connection* for 25 minutes, and a 10-minute period of rest time (Maville et al., 2008).

Data collection was obtained via physiological data measures and STAI tool. Physiological data was recorded at four intervals including prior to HT session as baseline, after each of the two HT technique time intervals, and post-session. STAI was completed by the participant pre and post session. *Hands moving* intervention was analyzed for factors of HR, SCL, and EMG via independent *t* tests, and TEMP via Wilcoxon signed rank test. HR and TEMP results decreased significantly (t [25] = 5.19, $P < .001$ and $Z = 3.08$, $P = .002$), and no significant change of SCL or EMG (Maville et al., 2008).

The *Chakra connection* intervention was analyzed after the change between intervention techniques, and also post-session. There was no significant change between techniques for HR or EMG, but significant decrease of SCL (t [13] = 2.21, $P = .046$, 2-tailed) and TEMP ($Z = 3.29$, $P = .001$, Wilcoxon signed rank test); (Maville et al., 2008). Post-session results were significant for continued decrease in TEMP with increase in SCL; TEMP was ($Z = 3.54$, $P = <$

.001), and the result of (*t* [13] = 2.60, *P* = .002) for SCL (Maville et al., 2008). There was no change in diastolic blood pressure, but post-session systolic blood pressure significantly lowered as seen with (M = 116.7, SD = 13.9; *t* [29] = 4.02, *P* < .001) levels (Maville et al., 2008).

Results of anxiety symptoms decreased significantly from pre-to-post-treatment session. State anxiety results of (*t* [29] = 7.85, *P* < .001) with the average score decreasing from 40.2 – 29.0; and trait anxiety decreased with results of (*t* [29] = 3.15, *P* = .004) were significant (Maville et al., 2008). The results of this study indicate HT is effective in decreasing both physiological symptoms as well as anxiety symptoms, and therefore, resulting with a positive impact on the client.

A study by Rose et al. (2016) aimed to determine if an educational pamphlet on opioid disposal would increase rate of proper handling among post-op patients. This prospective quasi-experimental study received a JHNEBP grade of B. The sample was comprised of patients scheduled for procedure from August to December 2014 were assigned to control group, and patients with scheduled procedure from January to April 2015 were assigned to the intervention group. This yielded a total of 226 participants (*N* = 226); control group (*n* = 106) and intervention group (*n* = 120; Rose et al., 2016). Inclusion criteria: Age 18 years or older, scheduled for surgery during timeframe. Exclusion criteria: Inability to communicate by telephone, contraindication to opioid medications, currently consuming > 30mg oral morphine daily, history of opioid addiction (Rose et al., 2016). An educational pamphlet was developed, and was distributed to patients in the intervention group, and patients were encouraged to read this information in the post-op period. Participants received a telephone follow-up 4 weeks postoperatively for a phone survey (Rose et al., 2016).

Demographic data was summarized using percentage means and standard deviation. Chi-square tests were used to analyze categorical data. Kolmogorov-Smirnov, and if significant used Mann-Whitney U test. Demographics: follow-up survey rates were 86/106 (81%) in control group, and 86/120 (72%) in intervention group (Rose et al., 2016). Four-week f/u call: Control

group 42/86 (49%) and in intervention group 45/86 (52%) ceased opioid use, and 2/42 (5%) control group and 12/45 (27%) intervention group disposed of the remaining opioids safely. (Difference in proportions, 22%; 95%CI, 5 to 38, *P* = 0.735) (Rose et al., 2016). Proportion patients weaned from opioids was unchanged, and not significant between groups (before, 42/86 vs after 45/86, *P* = 0.735; Rose et al., 2016). The educational pamphlet significantly improved self-report of proper opioid disposal.

The final *Level III* study was conducted by Wardell, Rintala, and Tan (2006) is actually a mixed methods design, incorporating both quantitative and qualitative aspects. However, this is considered Level III evidence because there is an intervention group, but participants were not randomly assigned to the intervention group, but rather it was assignment based on convenience.

Wardell et al. (2006) purpose of study was to determine feasibility of healing modality of HT or guided progressive relaxation (GPR) to manage pain and coping in a home environment setting among veterans with spinal cord injury (SCI). The article received a JHNEBP grade of A. Subjects were recruited from a SCI unit of the Veteran's Affairs Medical Center. Inclusion criteria was as follows: English speaking, age 18 or older, more than six-months post SCI, experiencing neurogenic pain or chronic pain as defined as greater than one-month duration, maintained a stable medication regime for pain for longer than one-month, and rated pain on the VAS as greater than five (Wardell et al., 2006). A total of 29 male patients were approached, and 12 agreed to participate in the study. Participants were assigned based on geographical proximity to HT intervention group (n=7) and GPR group (n=5).

The procedure of this study involved six sessions in the participant's home, of either HT or GPR. HT was delivered by certified healing touch practitioners (CHTPs), while GPR was provided by the research assistant (RA). The HT technique used was individualized for each participant. To measure quantitative data five questionnaires were utilized including: The Brief Pain Inventory (BPI), Profile of Moods Scale (POMS), Satisfaction with Life Scale, and Center

for Epidemiological Studies-Depression Scale short form (CESD-10), and Visual Analog Scale (VAS). All questionnaires were completed prior to the first session, and after the second and sixth sessions with the exception of the VAS which was completed before and after all six sessions. Descriptive and comparative data were analyzed by obtaining descriptive statistics of participants, as well as chi-square and t-test performed on differences between HT and GPR groups.

To measure qualitative data, methods included: structured interview questions before and after each session which were audio-recorded, the Healing Touch Charting Form which assesses the participant's perspective of HT was completed by the CHTP, and a review of random sessions by CHTPs were completed. Data analysis occurred systematically via listening to each recording of the interviews, transcribing interviews verbatim, followed by rereading transcripts. CHTP recommendations were also reviewed from charts and notes.

Qualitative results exposed significant variation of experience among both groups, with greater variation among HT group participants. These results suggest HT is most beneficial when techniques are individualized. Quantitative results showed benefit from the HT intervention, but did not reach a level of significance. This lack of significance was likely related to the small sample size, and suggest a need for repeating the study among a larger population. The specific results of each measurement tool are described below.

Overall change was not present for the composite score of the *BPI (F* = 1.59, *df* = 2, 13, *p* = 0.24); (Wardell et al., 2006). The subcategories of the *BPI* produced some results of significance and others of non-significance. Significant difference was revealed between HT and GPR groups, with HT group experiencing less interference, on the Composite of Interference scale (*t* = -2.71, *p* = 0.035). There was also difference between the groups, even though not considered significant, with HT group reported less pain on the scale, Interference of Pain Over the Last 24 Hours Scale (*F* = 2.82, *df* = 1, 7, *p* = 0.14). There was also difference between the groups, although non-significant, on question of "average pain over 24 hours" with

HT group pretest mean of 6.79 and posttest mean of 5.35, and GPR group pretest mean of 4.56 and posttest mean of 6.20 (Wardell et al., 2006).

No difference of *POMS* scores were found between the HT and GPR groups ($F = 0.69$, $df = 2, 19$, $p = 0.51$); (Wardell et al., 2006). The HT group showed increased satisfaction, although non-significant, compared to the GPR group on the *Diener Satisfaction with Life Scale* ($F = 1.41$, $df = 2, 20$, $p = 0.27$); (Wardell et al., 2006). No significant change of depression was found between the groups with the *CESD-10* ($t = -1.12$, $p = 0.29$) (Wardell et al., 2006). Results from the *VAS* revealed significant decrease of severe pain after each treatment, but returned to high level prior to the next treatment session, while current pain and coping with pain were decreased among both groups, however, not significantly.

The findings of this study suggest HT has benefit on coping, pain management, life satisfaction, and depression. However, results did not reach a level of significance attributed to the small sample size. Therefore, it was suggested to repeat the study with a larger sample size.

Level VI evidence. Articles were critiqued at this level of evidence. Peck (2007), conducted a qualitative study exploring patients' experiences upon abrupt, unplanned discontinuation of HT treatments. The article received a JHNEBP grade of B. Participants were recruited from a previous study initiating the HT intervention aimed to improve pain and functionality, and of the original sample a total of 12 participants took part in this study. All participants lived at home, but required high levels of care and ranged from age 35 to 96 years with a variety of chronic health conditions (Peck, 2007).

Interview method was used to determine participants' subjective perception of the experience of losing the HT treatment. Interviews occurred within two months of HT termination, were tape-recorded live, were transcribed at a later time, and were proofread by two teams (Peck, 2007). Content analysis was used to assess cost-efficacy data. Additional techniques used included audit trail, coding method, and decision-making rules. Other methods

used to maintain credibility included prolonged engagement, persistent observation, triangulation of information, peer debriefing, negative case analysis, and member checking. In effort to further show credibility of interview findings a retrospective chart audit was completed for each participant, and this data revealed participants reporting only positive experiences related to HT, and no negative effects were reported (Peck, 2007).

Results of the interviews support the utilization of HT to treat chronic pain and improve functionality. Interview results were as follows: Six of the 12 participants experienced maintenance of positive changes after receiving HT; six participants stated worsening of illnesses upon termination of HT specifically reporting unmet physical, emotional, and spiritual needs and requesting continuation of HT treatment (Peck, 2007). More specifically, among the participants who reported increased deterioration, complaints included emotional distress, increased pain, impaired functional ability, poor sleep, unwanted physiological changes, and negative impact of missing relationship with HT provider (Peck, 2007).

Peck (2007) further discusses cost implications associated with termination of HT treatments, focused on interview results of participants reporting deterioration effects. Peck (2007) argues deterioration increases risk for other health problems and complications, and increased likeliness of requiring additional pain medications all of which add expense. During the time period of HT treatments participants used less analgesic medications, performed more ADLs and IADLs, and less frequent visits to health providers and increased number of copays. Overall findings of this study support HT treatments at improving outcomes for patients while also keeping cost down.

The second article ranked at *Level VI* evidence by Wardell et al. (2008) aimed to explore the experience impact of HT among veterans with neuropathic pain, as described by HT practitioners. The article received a JHNEBP grade of B. This study utilized a qualitative case study design to examine the experience of HT influence on the participant's energy field. The sample was comprised of seven participants. Participants were current patients of a SCI unit of

a VA Medical Center in the southwest United States. Two of the seven cases were further selected for secondary analysis. Additional characteristics of participants included English language speaking persons, age 18 or older, more than six-months post-SCI, medication regimes having been stable for greater than one month, reporting current pain as greater than five on VAS range 0-10, and experiencing chronic neuropathic pain as defined as greater than one-month duration (Wardell et al., 2008).

Case study method was utilized, and of the seven cases, two were selected for secondary analysis. Seven cases were initially considered as this accounted for epistemological function of understanding the phenomenon. Participants received six HT sessions set one week apart. Questionnaires of pain, depression, and quality of life were given as well as structured interviews conducted following sessions to gain insight into aspects of how participant felt, description of changes, or other open ended comments (Wardell et al., 2008).

The two analyzed cases were categorized as beneficial and equivocal. The beneficial case represented a positive impact from HT experience on pain, while the equivocal case did have impact on pain over time, but might be attributable to cofounding variables in addition to HT. Data were collected from a variety of sources including CHTP chart of energy field pre-and-post-session, participant interviews, and pre-and-post-session participant pain ratings (Wardell et al., 2008). Both cases represent positive impact on decrease of pain level over time.

Construction of Evidence-based Practice

Construction of EBP involved following the guidance of Stetler model, Phases I, II, and III. A thorough search of literature was performed across multiple databases to ensure all resources were exhausted prior to selection of articles for this review. Critical appraisal of each selected piece of evidence was also completed. The JHNEBP tool was utilized for this process. Determinants considered for the grading process included clear purpose, heterogeneity and size of sample, degree of generalizability of results, randomization, intervention and control groups, reliability of instruments utilized, results and conclusions, and discussion of study

limitations. Details influencing each grade was included in the detailed description of each reviewed article.

Synthesis of Critically Appraised Literature

The synthesis of the appraised literature unearthed common components of benefit to educational material provided and of best practices intervention of HT modalities as adjuvant to standard care. Educational materials have shown to have improvement of outcomes across different sample populations and variety of interventions. HT interventions have supported results improving numerous outcomes. HT demonstrated positive impact on outcomes including anxiety, pain, depression and PTSD symptoms, functional ability, overall patient satisfaction, quality of life, and physiological factors of respiratory rate, heart rate, and blood pressure. These results suggest HT may be appropriate for management of a variety of symptoms. The HTCQ is a holistic tool that encompasses aspects of symptoms presented in the literature. This tool has established preliminary internal reliability for measurement of the effect of HT on outcomes of interest for this EBP Project.

Physiological factors. Two of the studies reviewed focused on outcomes of physiological factors (Anderson & Taylor, 2011; Goldberg et al., 2016). The common physiological factors of both studies include respiratory rate, heart rate, and blood pressure. The results from this literature found HT to decrease all three of these factors, with the greatest effect on respiratory rate. The data for this outcome was gathered as numerical data. HT was determined to affect these outcomes as numbers decreased after the HT intervention. The study by Maville et al. (2008) also supports HT impact on physiological factors. Furthermore, this study reflects effects of specific HT techniques. The technique of *hands moving* showed significant decrease in HR and TEMP, while *Chakra connection* showed significant decrease of SCL and TEMP; and systolic blood pressure was significantly decreased from pre-to-post HT intervention including both techniques (Maville et al., 2008).

Functional ability. Functional ability, and patient perception of functional ability was also addressed in the literature. Anderson and Taylor (2011), found that recipients of HT intervention had increased physical and emotional role function scores. Peck (2007) qualitative study found upon abrupt discontinuation of HT intervention, participants reported noticeable impaired or decreased functional ability. Der-Fa et al. (2013) addressed functional aspects of flexibility, mobility and balance among participants with OA complains. Results of this study support the application of HT for improving these symptoms, especially when HT occurs over time.

Depression and PTSD. Depression is a common outcome studied in the literature. PTSD is also related to this outcome, and has been studied along with depression. This review includes four articles where depression was specifically identified as an outcome (Anderson & Taylor, 2011; Jain et al., 2012; Peck, 2007; Wardell et al., 2006). The systematic review by Anderson and Taylor (2011) included assessment of mood after the intervention of HT. This results found a significant decrease in total mood disturbance following the HT intervention, and was measured utilizing the Profile-of-mood-states tool (Anderson & Taylor, 2011). Jain et al. (2012) studied the outcomes of both PTSD and depression. Effect of HT on PTSD was measured via the gold-standard PCL tool, and depression was measured via the Beck-depression-inventory. Based on the measurements using these tools it was determined HT had a beneficial effect on decreasing symptoms of both PTSD and depression. The qualitative study by Peck (2007) found participants who had been receiving HT, and then had the intervention abruptly discontinued, reported during interviews an increase of depressive symptoms in the form of worsening or unmet emotional and mental needs. Wardell et al. (2006) measured the effect of HT on depressive symptoms using the Epidemiological-studies-depression-scale-short-version, which also demonstrated a decrease in depressive symptoms following the HT intervention.

Anxiety. Anxiety was another element evaluated in several of the studies reviewed. Anderson and Taylor (2011) included several studied in their review which covered the assessment of HT on anxiety. Measurement tools utilized included: the STAI, SF-6, and 8 VAS-mood-scales. The STAI and VAS showed significant level of decrease in anxiety scores and level of worry, and the SF-6 showed significant increase in mental health and emotional functioning (Anderson & Taylor, 2011). The CRI and STAI, separately assessing both S-anxiety and T-anxiety, also showed decrease in anxiety levels sustained over a 24-hour period following HT intervention (Goldberg et al., 2016). Unmet emotional needs and increased emotional distress were reported as well from patients who experienced abrupt discontinuation of HT treatments (Peck, 2007). Significant level of decrease of both state and trait anxiety symptoms are also supported in the literature via STAI tool as a direct result from pre-to-post HT session (Maville et al., 2008).

Pain. Pain is a major characteristic found among persons with varying chronic illnesses. HT intervention has demonstrated enhanced pain relief and management in the literature. Anderson and Taylor (2011) included studies assessing pain using the Brief-pain-index, and found a significant decrease in current pain following the intervention of HT. Wardell et al. (2006) measured pain via the VAS and Brief-pain-inventory, and determined significant decrease of pain immediately following HT, and a decrease still, though not significant, 24-hours after the intervention. Pain perception by the individual was also represented in the literature. Wardell et al. (2008) utilized a qualitative case study approach to examine participant's perception on pain, and this perception following HT intervention over a six-week period. While only two cases were analyzed, results suggest HT benefit is perceived by the individual through description of decrease of pain levels over time (Wardell et al., 2008). HT has also been found to decrease patient perception of pain as well as decrease in analgesic medication use to manage pain, when performed over time (Der-Fa et al., 2013).

Best Practice Model Recommendation

The literature supports utilizing HT intervention to address a variety of symptoms. These symptoms are common across numerous acute and chronic health conditions. Studies continue to occur measuring these symptoms, and varying measurement tools continue to be utilized; all supporting the same results of HT effectiveness of decrease of severity of symptoms. Therefore, the review of literature provided the foundation for the EBP project to implement HT intervention among persons with varying conditions, with the goal of decreasing any of the identified symptoms in the literature including pain, anxiety, depression, PTSD, functional ability, and physiological factors. Furthermore, educational materials have shown to have improvement of outcomes across different sample populations and variety of interventions

How the Best Practice Model will Answer the Clinical Question

The EBP project will further aim to utilize the HTCQ to measure these outcomes. The HTCQ was developed specifically to address aspect of all the above symptoms as the HT intervention is rooted in a holistic philosophy, which supports the view of HT being equally effective on any of the aforementioned symptoms. This tool will be completed by the participant immediately before HT intervention, and also following the intervention to determine the impact of HT. Furthermore, educational material on HT will be provided to patients in effort to increase awareness on HT. The EBP project aims to determine effectiveness of HT educational flyer and appointment notification letter, and also HT intervention on patient presenting symptoms of anxiety, depression, and/or pain among the veteran population, and allow for sustainability for use of HTCQ tool to synthesize HT outcomes in this setting.

CHAPTER 3

IMPLEMENTATION OF PRACTICE CHANGE

Implementation of the HT intervention is the next phase of the EBP project. This phase is reflective of *Phase VI: Translation/Application* of the Stetler Model. This phase involves taking information from the review of literature and appraisal of evidence, and developing a plan for implementation of best practice recommendations into the setting of the EBP project. This chapter discusses the processes of planning, recruitment and participation, intervention, data collection, outcome measurement, and protection of human subjects.

Method

The intervention of HT followed a one group pre-test-post-test design. A convenience sample of all patients with scheduled HT appointments were included in the sample population for this EBP project. All patients received the intervention of being mailed an appointment notification letter along with an HT educational flyer two weeks before their scheduled HT appointment. Compliance rate was compared for the previous year from January to December of 2016, and for the two-month period of the implementation phase. Informed consent was not required, as the project was determined quality improvement (QI), and no patient identifying information was obtained. However, demographics, without requiring any patient specific information, were still obtained via the demographic form from all patients upon arrival for HT appointment. Participants were then asked to complete the HTCQ form prior to, and immediately following the HT session. Scores of HTCQ pre-and-post HT intervention were compared.

Participants and Setting

The setting of the EBP project was the VA Medical Center of Chicago, IL. The evidence shows HT is beneficial on a wide range of symptoms including pain, fatigue, anxiety, depression, trauma, insomnia and addiction (Wardell et al., 2014). It is also noteworthy to

mention the beneficial outcomes of HT on PTSD symptoms (Jain et al., 2012). Therefore, this setting was an appropriate choice for the HT intervention. An adjuvant HT educational flyer was also developed for this EBP project. The evidence supported providing patients with educational materials prior to an intervention as being associated with more beneficial outcomes. Therefore, the initial intervention consisted of a HT educational flyer along with an appointment notification letter were mailed to all patients two weeks prior to their HT appointment. This intervention aimed to increase appointment compliance rate as well as general HT awareness.

General inclusion and exclusion criteria were also established. Inclusion criteria were as follows: over the age of 18 years, ability to read English language, and willingness to complete HTCQ before and after HT session. Exclusion criteria included inability to read or understand English language, impaired cognition, or unwillingness to participate in the pre-post HTCQ evaluation.

Recruitment of participants occurred at two different times. The project coordinator worked with HT staff to obtain a schedule of appointments during time period of February – March 2017. Recruitment for the initial intervention of appointment notification letter and HT flyer occurred based on HT schedule. Every patient with an appointment received the appointment notification letter and HT flyer via U.S. Postal Service two weeks prior to appointment date. Included with the letter was a statement requesting patients to arrive 15 minutes ahead of the scheduled time. Recruitment occurred for participation in the pre-post evaluation when patients arrived for their HT appointment. At the time of arrival patients were asked to participate in the HT evaluation. If agreeable, they completed the demographic form, and the HTCQ before and after HT session.

Outcomes

Outcomes for measurement were two-fold: appointment compliance rate, and the effect of HT intervention on presenting symptoms. Symptoms include anxiety, depression, pain, and

general well-being. Symptom improvement was measured utilizing the HTCQ tool (Dowd et al., 2006). Demographic information was also collected prior to HT session to determine characteristics of the sample population. Demographic data includes age, sex, marital status, highest grade of education, years of active military duty, military status, ethnicity, annual household income, and reason for referral.

Intervention

The implementation phase followed the Stetler model in *Phase IV: Translation/application*. The intervention was two-fold: the mailing of appointment notification letter along with HT flyer, and the HT session itself. The evidence suggested better outcomes when participants received information on an intervention ahead of time. Therefore, the educational HT flyer was developed, and sent to patients prior to their HT session to increase awareness. The site also had a high no-show rate. This was addressed via an appointment notification letter to be sent along with the HT flyer to patients two weeks prior to their scheduled appointment.

The evidence further showed HT has been effective in decreasing symptoms of depression, anxiety, pain, PTSD, and increased functional ability and quality of life. All patient referrals to the HT clinic fall into one of these categories for referral. Therefore, all patients scheduled with the HT clinic were considered appropriate to include in the sample population for the EBP project. Upon arriving for their appointment, patients were asked to participate in the HT pre-and-post session evaluation. Patients who agreed to participate were screened for meeting inclusion and exclusion criteria, and accordingly accepted for participation. After eligibility was established, participants completed the demographic form and HTCQ prior to the HT session. Participants then attended the HT session where HT techniques were delivered by a trained HT Provider. Following the session participants once again completed the HTCQ form. The project coordinator was present during the active time of the HT clinic, and delivered the HTCQ to the participants. The HTCQ forms were then scored and data was recorded.

HTCQ forms and demographic forms were completed anonymously; therefore; no patient specific information was at risk for breach of confidentiality.

Planning

The Stetler model served as a foundation guide for the development of the EBP project. The topic for the EBP project was initiated through discussion with facility preceptor regarding the problem of a high no-show rate was identified, as well as a lack of awareness about HT among patients when they did attend their appointment. Additionally, a need for enhanced support of HT treatments to improve patient symptoms; specifically, of pain, anxiety, depression, and overall well-being was recognized. Current literature supports the use of HT to address these symptoms and more. The topic of interest, clinical problem, and current evidence led to the PICOT question of: “For Veterans, what is the effect of HT education material on appointment compliance rate, and what is the effect of HT intervention on symptom relief and well-being as compared prior to HT intervention?”

A literature search *(Phase I: Preparation)* was completed to determine best practice of HT on the aforementioned symptoms. With the assistance of a librarian, Professor Kim Whalen, a set of keywords were determined as search terms, limiters applied, and a thorough search of databases were performed. Products of the literature review were scanned and considered for further consideration based on inclusion and exclusion criteria. Another search was performed to determine evidence regarding educational materials provided to patients prior to an intervention. Following selection of articles, critical appraisal was completed on each piece of evidence (*Phase II: Validation*). Articles were appraised using the JHNEBP appraisal tool to account for characteristics of sufficiency and credibility. The process then included creation of two tables to aid in visualizing literature and appraisal results (*Phase III: Comparative evaluation/Decision making*). The evidence reflected support for application of HT to improve symptoms of anxiety, depression, PTSD, pain, quality of life, functional ability, and patient satisfaction. The evidence also reinforced utilization of educational materials to be distributed to

patients prior to intervention, as being associated with enhanced outcomes from an intervention. The specific tool, HTCQ, was shown to reflect the holistic aim of the modality of HT on a variety of patient presenting symptoms, therefore was selected as the measurement tool for this project.

Results of the literature review along with guidance from site preceptor led to development of implementation plan (*Phase IV: Translation/application*). The literature verified improved outcomes when participants were provided background, educational information prior to receiving the said intervention. The evidence also demonstrated HT success of improving a variety of symptoms including anxiety, depression, PTSD, and pain. This information led to the development of the EBP project of sending all patients an appointment notification letter along with an HT flyer, and applying HT intervention to patients with the goal of improving symptoms at the EBP site. The evidence also aided in determining an appropriate tool to determine the effect of HT intervention (*Phase V: Evaluation*). HT has been shown to benefit a variety of aforementioned symptoms. The HTCQ tool was validated in the literature, and was emphasized as a truly holistic tool which reflects the holistic realm of the HT modality. As the patient population for this EBP project represents a variety of these symptoms, the HTCQ tool was appropriate.

Data

All patients scheduled for HT appointment during the timeframe of implementation were mailed the appointment notification letter and HT flyer two weeks before their HT session. Appointment compliance rate during the implementation period was compared to the compliance rate for a two-month period preceding implementation. Prior to agreeing to participate in the HT evaluation portion of the project, participants were asked to complete a demographic form. This information determined the descriptive characteristics of the sample population. Participants then completed the HTCQ form prior to HT session, and again

following the HT session. Results of HTCQ were scored, and scores were compared pre-and-post HT session to determine effect of HT on symptom improvement and overall well-being.

Measures

The literature review supports good internal reliability when utilizing the HTCQ through use of Cronbach alpha. A Cronbach alpha score of 0.70 or higher is acceptable for determining reliability, and in the literature HTCQ received Cronbach alpha score of 0.94 (Dowd et al., 2006). An equal number of positive and negative items are presented on this tool, which was designed to prevent response bias. Reverse coding on negative items was performed during the development of the tool as well. The outcome of this tool is consistent with higher scores being associated with higher level of comfort, with a possible range of 35 to 210 (Dowd et al., 2006).

The HTCQ is a 35-item questionnaire that assesses aspects related to overall comfort. Specifically, aimed at addressing overall sense of ease and contentment, physical, and psychological effects. Regardless of patient-presenting symptoms, all symptoms were assessed for all patients through utilization of this tool. This represents the holistic and interconnectedness of HT modality, and reflects SUHB theory concepts.

Collection

Data collection involves appointment compliance rate, demographic characteristics, and comparison of HTCQ scores before and after HT intervention. Compliance rate during the timeframe of implementation was compared to compliance rate for a two-month period prior to implementation. This assessed effectiveness of the appointment notification letter and HT flyer. Demographic data was obtained prior to HT session via the demographic form. HTCQ scores were also compared pre-and-post HT session. All three forms were collected by the project coordinator from each participant, and data recorded. Data then is transferred into SPSS database for analysis. The project coordinator was present on site weekly during the

implementation phase to collect data. All forms were completed anonymously; therefore; risk for breach of confidentiality was very low.

Management and Analysis

Descriptive characteristics of participants were obtained via demographic forms. The HTCQ was be completed by participants pre-and-post HT session. The HTCQ 35-item form assesses patient's perception of symptoms attributed to anxiety, depression, pain, functional ability, quality of life, and satisfaction. Data analysis was performed on compliance rate, and scores of the pre-and-post HTCQ forms. Data then was transferred into SPSS database for further analysis. This occurred on an ongoing basis during the two-month time period of the implementation phase.

Protection of Human Subjects

Several steps were taken to ensure protection of human subjects of the EBP project. The first step of this process occurred prior to EBP project site or topic selection. This occurred through successful completion of *Protection of Human Subjects* training certification from National Institute of Health (NIH). The NIH certification emphasized methods to control for variables threatening rights of human subjects. Furthermore, the importance of upholding human subjects' rights and discussion of potential harmful effects if not upheld were addressed in the certification course.

Approval for the methods of the EBP project were also obtained through the Institutional Review Board (IRB). IRB application and approval was required from both Valparaiso University and the VA Medical Center. IRB Exempt status was awarded for this EBP project from the Valparaiso University IRB. This expectation was determined from review of IRB Decision Questionnaire Form items including already established appointments, and no more than minimal risk to human subjects (Melnyk & Fineout-Overholt, 2015). The VA IRB determined this project was appropriate as an QI. Therefore, IRB approval was not required by the VA Medical Center, and permission was granted to move forward as a QI project.

Protection of human subjects was further ensured through controlling for confidentiality and anonymity. Several safeguards were put in place to control for these aspects. The only time patient specific information was viewed was when viewing the HT appointment schedule. This was only done when viewing the schedule and addressing the mailing envelopes. Upon completion, the envelopes were placed directly into the secure VA mailing department for delivery, and no information left the site.

Based on the VA Medical Center decision to appoint a QI title to this project, informed consent was not required. The demographic form and HTCQ form did not require patient specific information, but rather will be coded with a number. The number reflects the numerical order of distribution of forms, and therefore kept track of number of participants for the sample population. Thus, no patient identifying information was obtained or as risk during this project.

CHAPTER 4

FINDINGS

The purpose of this EBP project was to promote awareness of HT among patients, improve appointment compliance rate, as well as determining effectiveness of HT intervention on symptom relief and well-being of patients. These variables were evaluated by answering the PICOT question of: “For Veterans, what is the effect of HT education material on appointment compliance rate, and what is the effect of HT intervention on symptom relief and well-being as compared prior to HT intervention?” This was achieved through implementation into the practice setting. It was anticipated the primary outcome of appointment compliance rate would increase because of the appointment notification letter and HT flyer. It was further anticipated the HTCQ distributed to participants pre-and-post HT session would reflect an improvement of overall symptoms. Appointment compliance rate was be measured by percentage of appointments kept compared to missed appointments against the total number of appointments scheduled during the timeframe of the EBP project; seven weeks. Symptom severity and overall well-being were measured via the HTCQ tool. Demographic characteristics were also obtained prior to HT session at the time of appointment check-in via the demographic form.

Participants

The sample for this EBP project was comprised of Veteran persons who were established patients with the medical center where this project occurred. This convince sample included all Veteran patients who were scheduled for a HT appointment during the timeframe of project implementation. Scheduled appointments were double checked every week to ensure all patients would receive the intervention of appointment notification letter and HT flyer prior to attending the HT appointment.

Size

The HT clinic is held on Thursdays, and every 3rd Friday of the month. Each Thursday allows for three to four appointment time slots, while the Friday clinic consists of six appointment slots. For the time period of the EBP project, most appointment slots were filled. Due to system issues and set-backs, the final implementation occurred from February 2, 2017 through March 23, 2017. The total number of appointments scheduled during these seven weeks were 33 appointments. Therefore, a total of 33 appointment notification letters along with HT flyers were mailed to patients with the scheduled appointments two weeks prior to their appointment date. It was hoped that at least a 50% response rate (*n* = 16) of patients would keep their appointment, and also participate in the HTCQ pre-and-post HT session. The final number of participants was 54.5%.

Characteristics

Demographic information was collected from all patients willing to participate in the HTCQ evaluation upon arrival for HT appointment. These characteristics included reason for referral, age, education level, marital status, military status, military discharge status, and ethnicity. Measures of central tendency were run, including mean with standard deviations. This data was inputted into SPSS and run to help identify characteristics or any confounding variables that may affect results (Table 4.1).

Age of participants ranged from 38 to 78 years with a Mean age 60.3 years (*sd* = 10.9). Years of duty ranged of 2 to 24 years with a Mean of 9.8 years (*sd* = 7.2). All participants held a high school diploma or equivalent at a minimum, and majority (77.8%) had at least some college education with several participants having advanced degrees including 16.7% masters' degree and 5.6% doctorate degree (see Figure 4.1). One participant had active duty status while all other participants had been honorably discharged (see Figure 4.2). The total sample was primarily represented as an African American male: 88% of participants were African American, with one Caucasian (6%) and one Latina participant (6%; see Figure 4.3). The majority of participants were male, which represented 78% of the sample (see Figure 4.4). Possible

reason for referral included Pain (44%), Pain & Stress (22%), General Wellness (16%), Unknown (11%), Stress (5%; see Figure 4.5).

Figure 4.1

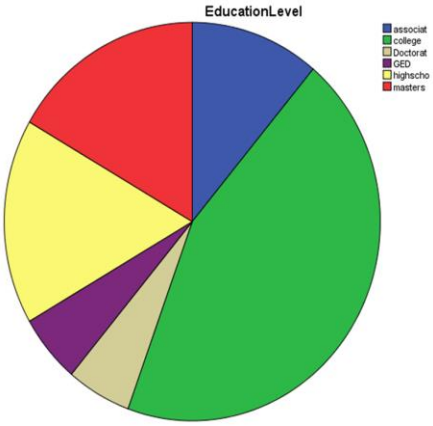


Figure 4.2

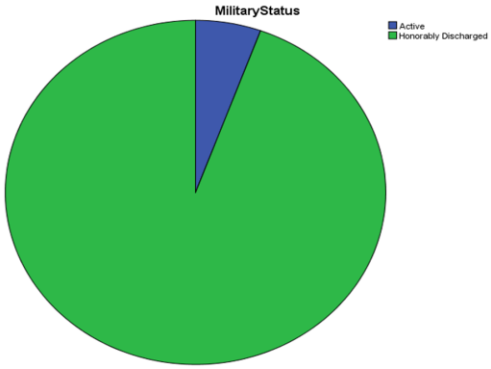


Figure 4.3

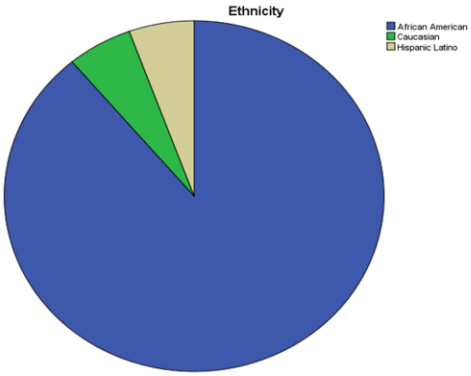


Figure 4.4

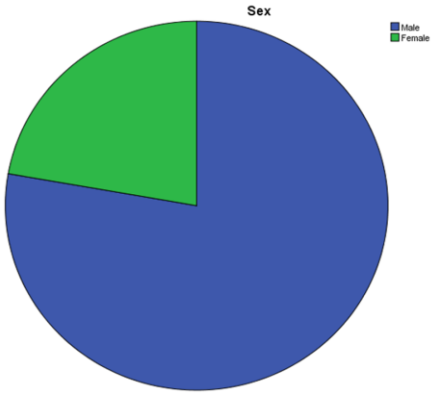
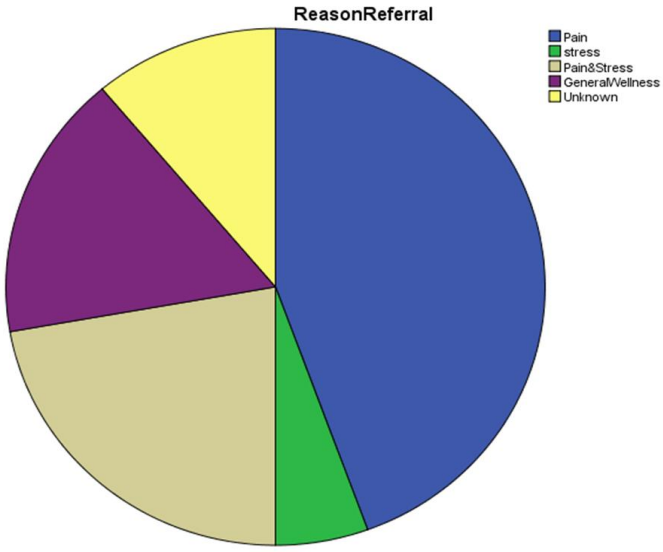


Figure 4.5



Changes in Outcomes

Outcomes measured included appointment compliance rate and also symptom severity compared before and after HT session. Appointment compliance rate was measured by percentage of appointments kept compared to missed appointments (see Figure 4.6). The total number of scheduled appointments was 33, and total kept appointments was 18. Thus, the overall compliance rate during this project's timeframe was 55%. However, looking further at the week-to-week variation of compliance there was an increase from 0% appointments kept the first week of implementation, to 100% appointments kept the final week of implementation.

Symptom severity was compared before and after HT session as an overall score (see Figures 4.7 and 4.8). The total possible score range on the HTCQ is from 35 to 210. The pre-test scores ranged from a minimum of 104, maximum of 150, with a Mean of 130.6 (*sd* = 11.5). The post-test scores ranged from a minimum of 106, maximum of 153, with a Mean of 135.6 (*sd* = 11.4).

Figure 4.6

Appointment Compliance Rate: Week-to-Week Variation View

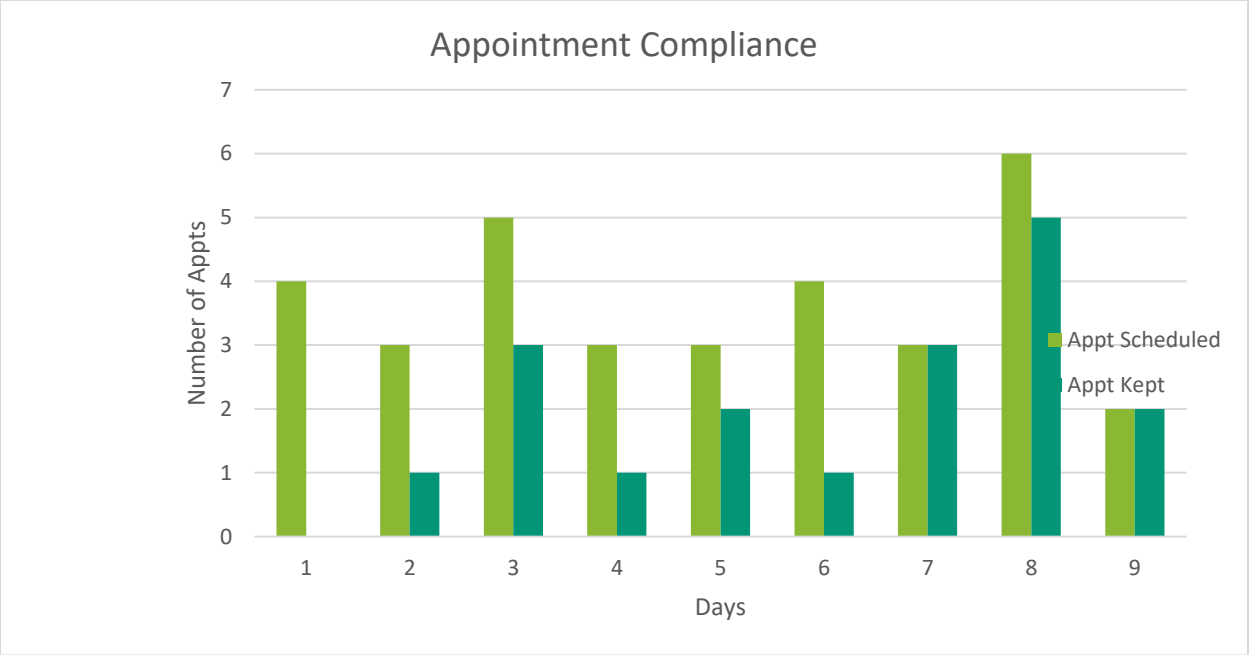


Figure 4.7

Mean of Pre-Test HTCQ scores

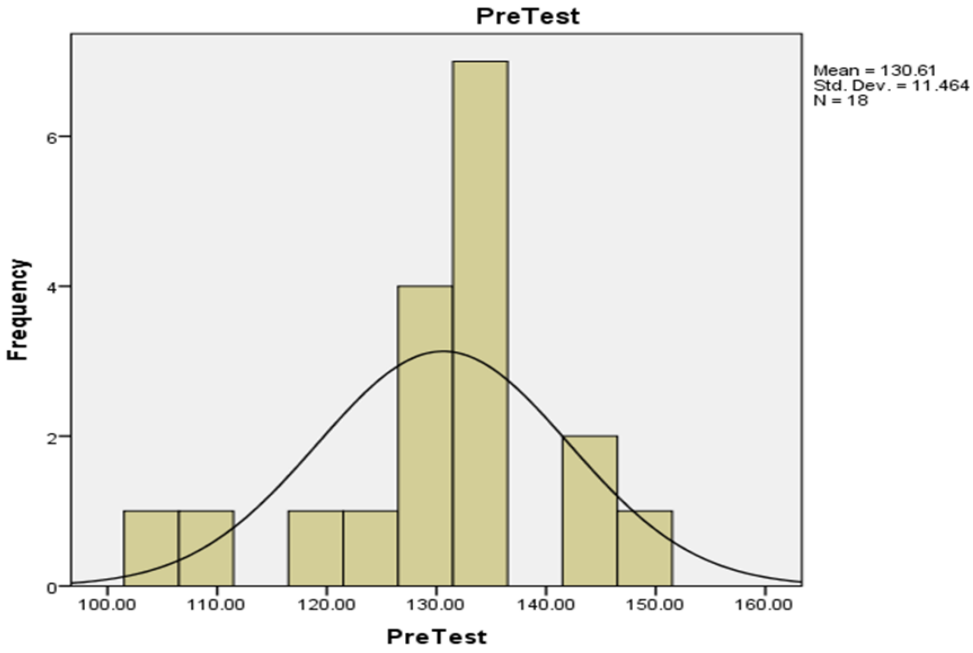
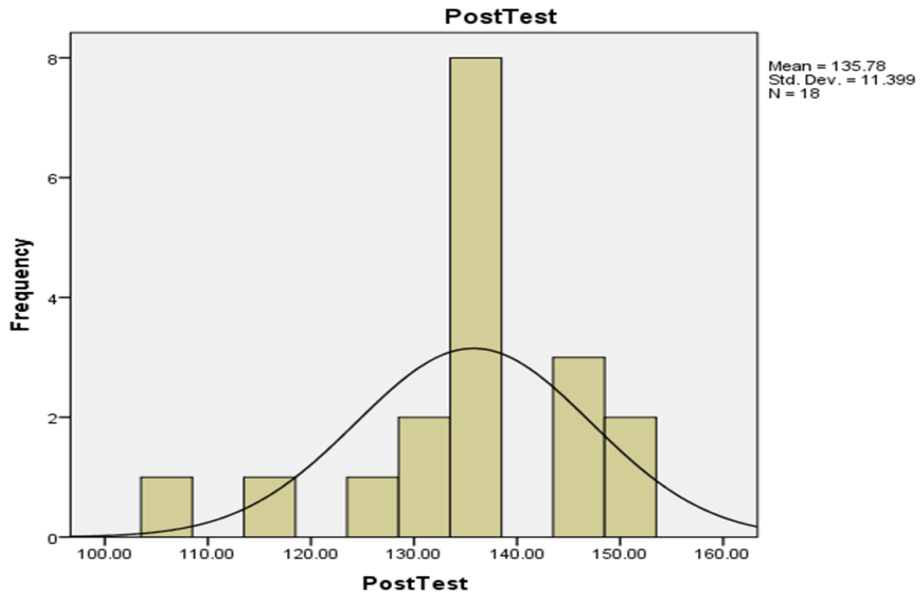


Figure 4.8

Mean of Post-Test HTCQ scores



Statistical Testing

Statistical testing was performed in the SPSS 23 data analysis system, which is available for this EBP project through the university. Descriptive analyses were performed for each of the demographic characteristics which represented the sample. Mean and standard deviation were reported for age range and years of military duty. Frequency percentages were reported for education level, current military status, ethnicity, sex, and reason for referral.

Appointment compliance rate was measured by number of kept appointments. Frequency tests were performed and reported via percentage rate. Additionally, Pearson Correlation was performed on appointment compliance to evaluate if scheduled appointments were associated with keeping the appointment. Descriptive statistics were performed on HTCQ scores both pre-and-post HT intervention including minimum and maximum scores, as well as Mean and standard deviation. The statistical test of paired-sample *t*-Test was also performed. Finally, reliability of the HTCQ tool itself was measured via a Cronbach's alpha test.

Significance

A Pearson Correlation was performed for total appointments scheduled, and total appointments kept. The results revealed a correlation coefficient equaled to 0.544 with a significance level of 0.130. Therefore, A weak correlation that was not significant was found (r (7) = 0.544, $p > 0.05$). These results suggest that having an appointment scheduled was not related to likelihood of keeping the appointment.

The paired-sample *t*-Test was utilized for data regarding symptom severity from the HTCQ tool. This test compares the mean of two scores, the pre-test score and the post-test score of this single group design (Cronk, 2016). This represents an inferential statistical test, and the paired *t*-Test was used rather than the independent *t*-Test since there was only one group. This *t*-Test uses the mean values and determined if the means pre-and-post-test are statistically significant as determined by a value of $p < 0.01$ (Schmidt & Brown, 2012). The final requirement for this type of test is the data must be considered interval or ratio level, and data must be measured on the same scale (Cronk, 2016). The HTCQ items can be considered as *interval* level data in the SPSS program. Therefore, the assumptions are met, and this is considered an appropriate test. The results of this test revealed a p value of $p = 0.002$. A significant increase from pretest to posttest was found (t (17) = -3.751, $p < 0.001$). This test produced statistically significant results, as the mean post-test scores were higher than mean pre-test scores.

The outputs for this paired-sample t Test produced results under three categories including descriptive statistics of pre-and-post-test, Pearson coefficient for variables, and significance level (Cronk, 2016). These results can be viewed in the following tables (see Tables 4.1, 4.2, and 4.3).

Table 4.1

Paired Samples Statistics

	Mean	N	Std. Deviation	Std. Error Mean
Pre-Test	130.6111	18	11.4621	2.70214
Post-Test	135.7778	18	11.39946	2.68688

Table 4.2

Paired Samples Correlations

	N	Correlation	Sig.
Pre-Test & Post-Test	18	.869	.000

Table 4.3

Paired Samples Test

	Mean	Std. Deviation	Std. Error Mean	95% CI of the Difference: Lower	95% CI of the Difference: Upper	t	df	Sig. (2-tailed)
Pre-Test – Post-Test	-5.16667	5.84355	1.37734	-8.07259	-2.26074	-3.751	17	.002

Internal consistency and reliability of the HTCQ tool was performed via Cronbach's alpha test. A coefficient of 0.70 and above result will serve as an acceptable number for the HTCQ as it has not been widely used or established (Schmidt & Brown, 2012). At the time of development, the HTCQ received a Cronbach alpha of 0.94, which supports the reliability of this tool (Dowd et al., 2006). The Cronbach alpha performed for this EBP project yielded a result of 0.931. This further supports the high reliability of this particular tool to measure benefit of HT.

CHAPTER 5

DISCUSSION

The purpose of this EBP project was to examine the effect of HT on patient symptoms and overall well-being, assess the awareness of HT among patients, and evaluate HT appointment compliance rate. The aim of the project was to answer the PICOT question, "For Veterans, what is the effect of HT education material and mail notification on appointment compliance rate, and HT delivery on symptom relief and well-being as compared prior to HT intervention?" A total of 33 patients were scheduled for HT appointments during the timeframe of implementation. All of the patients who attended their appointment consented to complete the HTCQ before and after the HT session (n = 18). Data collection included tracking of appointments scheduled and appointments that were kept, demographic information and HTCQ scores for all patients who attended their appointment. Results for appointment compliance rate were not significant; however, by the end of the implementation period it is worthy to note that 100% appointments were kept. Data on pre-and-post HTCQ scores did produce significant results. Results are further discussed throughout this chapter.

Explanation of Findings

The convenience sample totaled 18 participants. All participants had at least a high school diploma or GED equivalent, and majority had at least some college education and some participants had advanced degrees. Most participants' ethnicity was African American, with outliers of one Latina and one Caucasian participant. The mean age of the sample was 60 years, with the minimum age of 38 years and maximum age of 78 years. It should be reported that lack of variance in ethnicity can skew generalizability of results. Years of active military duty ranged from a minimum of two years to a maximum of 24 years, with the mean of nine years. One participant's military status was active, and the remaining participants' statuses

were honorably discharged. The overall homogeneity of the sample may account for the narrow range in HTCQ scores.

The timeframe consisted of a total of seven weeks. The week prior to the first week appointment notification letters were drafted, printed, and filed away for mailing. Included with these letters was a HT informational flyer. Initially, letters were mailed to patients scheduled for HT for the next two weeks. Thereafter, letters were mailed each week for appointments that were scheduled two weeks out. Due to timing of the first set of letters mailed, it is possible the first week of the project timeframe patients did not receive their letter in enough time.

Appointment compliance rate, for appointments kept, increased over the course of the implementation period. Kept appointments gradually increased over the course of this project, and were particularly evident when looking at the week-to-week variation. The first week 0% (0 out of 4 appointments) of appointments were kept, and the final week 100% (2 out of 2 appointments) of appointments were kept. The overall percentage of kept appointments during the timeframe of implementation was 55% compliance. When compared to compliance rate for January to December 2016, with a rate of 52%, compliance increased by 3% overall.

Following the conclusion of the seven weeks, patients who missed their appointments were called to inquire as to reason for missing their appointment. Of 33 total appointments (N = 33), 15 appointments were missed, and 18 were kept. Of the patients who missed appointments, half were unreachable by phone to inquire as to the reason for missing their appointment. Twenty-five percent of the unreachable patients also have history of mental health disorders, and a history of non-compliance with keeping mental health and other appointments as well. One patient who missed an appointment the first week stated he did not receive the notification letter until the day of the appointment, so did not attend due to lack of time. Other patients reached stated they had other appointments scheduled for the same day, so did not attend HT. This information is relevant when addressing implications for practice, as discussed at the conclusion of this chapter.

All patients who kept their HT appointment participated in the HTCQ evaluation pre-and-post HT questionnaire. This 35-item questionnaire comprised of equal numbers of positive and negative items may yield a score range of 35 to 210. When determining results, the creators of the HTCQ had performed reverse coding for negative items, and determined that higher scores were associated with higher levels of comfort (Dowd et al., 2006). The actual range of pre-test HTCQ scores was 104 to 150, with a mean of 130.6471 (*sd* = 11.5). The range of post-test scores was 106 to 153, with mean of 135.6471 (*sd* = 11.4). A paired-samples *t*-Test was calculated to compare the mean pre-test score to the mean post-test score. A significant increase was found from pre-test to post-test (t (17) = -3.751, $p < 0.001$). Cronbach's alpha was performed to determine internal consistency reliability of the HTCQ tool. Cronbach's alpha was found to be 0.931, suggesting strong internal consistency of this tool. This result was close to the Cronbach's alpha score of 0.94, which was the result at the time of initial use of the tool (Dowd et al., 2006).

It is noteworthy to mention 88% of participants' scores increased from pre-test to post-test, one participant scored the same (134) on both pre and post-test, and one participant's post-test score decreased by four points. These results warrant further discussion. While scores may only have increased a few points from pre-test to post-test, it still suggests enhanced comfort following HT intervention. Additional discussion for future implications for post-test scoring is discussed at the conclusion of this chapter.

Evaluation of Applicability of Theoretical and EBP Frameworks

The SUHB theory and Stetler model served as foundation for the development of this EBP project. The SUHB theory was selected as the theoretical framework due to its emphasis on the interconnectedness of energy fields that are part of each person including the physical, emotional, mental, and spiritual fields. These energy fields are reflected in the HT discipline. The Stetler model allowed for clear definition and development of all phases of this project from identification of the problem through evaluation of the intervention.

Theoretical Framework. SUHB theory emphasizes a holistic approach. This theory is based on the perception a person is greater than the sum of parts. Environment and energy field is just as important to an individual's composition as the physical body, and therefore must be addressed to ensure quality patient care. Martha Rogers, creator of SUHB, presents an abstract conceptual model. She attributes its roots linked to a different paradigm. Paradigm, rooted in perspective, is defined as a particular perspective of reality which is linked to a worldview. Paradigm shift occurs through advancement of knowledge, and hence a change in perspective and how something is perceived changes.

Assumptions of this conceptual system include man being viewed as a unified whole with manifesting characteristics which are greater than a sum of his parts, man and environment continuously exchange matter and energy with one another, the life process continues to evolve unidirectionally and is irreversible, man's identity is made of pattern and organization which reflect his wholeness, and man is characterized by capacity for abstraction (George, 2011). SUHB houses five fundamental concepts: energy fields, pattern, pandimensionality, unitary persons, and environment (George, 2011).

SUHB unique concept of energy field makes it a direct fit for HT, and the theory addressed all five concepts and was successfully applied to this EBP project. *Energy field* is the fundamental concept of HT. The goal of HT is to eliminate energy blockages and restore/realign the energy field, hence promoting optimum healing for the individual (Goldberg et al., 2016). This was the goal for all patients receiving the HT intervention for this EBP project. *Pattern* emphasizes every individual has his/her own unique energy wave. This is reflected in this EBP intervention as every participant received a brief assessment from the HT provider at the beginning of HT session, and HT delivery was individualized to the patient. *Pandimensionality* refers to infinite and unlimited domains of the person and environment. Therefore, techniques are individually selected per participant to account for assuring all domains of the human person and environment (Peck, 2007). This was incorporated by

choosing a variety of HT techniques, which included physical touch, moving the energy field surrounding the body, or a combination of both. The final concepts of *unitary human being* and *environment* are also evident with every HT intervention. It is essential to accept that human beings are more than a sum of their parts, and viewed as a whole in conjunction with their environment; thus, individuals must all be assessed for their uniqueness to ensure adequate techniques are chosen to provide highest level of healing (Wardell, Rintala, & Tan, 2008). As part of the HT intervention provided to participants; individual needs were assessed at the beginning of each session, and techniques were chosen to support optimum healing.

EBP Framework. The Stetler model was chosen as to guide this EBP project. The Stetler model involves a series of steps divided among five phases to guide the process of identifying a need through evaluation of implementation. The Stetler model outlines a step-wise approach which aims to identify and implement relevant research into EBP practice. These steps are further divided among five phases: preparation, validation, comparative education/decision making, translation/application, and evaluation (Melnyk & Fineout-Overholt, 2015). An advantage of this model is it is practitioner-orientation and emphasizes critical thinking. A critical component of this model is evidence, which is defined within the model as information/facts that have been systematically obtained and are considered replicable, observable, credible, verifiable, and supportable (Melnyk & Fineout-Overholt, 2015). This model provides five phases to guide EBP implementation into practice. It is essential to move through these phases in order, as each phase is progressive in nature and builds on the previous phase. This EBP project followed the phases outlined in the Stetler model. The project supported use of HT treatments to address conditions including pain, anxiety, depression, and overall well-being among a variety of patients with varying health conditions. All five phases of the Stetler model were followed.

The preparation phase was initiated through discussion with the site, and determining a need for enhanced support of HT, and also a need to increase appointment compliance due to a

high no-show rate. It was determined the goals for this project were to increase appointment compliance and also to demonstrate benefit of HT therapy. A literature search was completed to determine effects of educational materials prior to intervention, identify HT benefits, and quantified through utilization of the Healing Touch Comfort Questionnaire (HTCQ). The evidence supports utilization of educational materials in effort to enhance benefits on outcomes, to be distributed prior to intervention (Chen, Chen, & Lin, 2014; Frost & Porterfield, 2012). The evidence further supports application of HT intervention to improve outcomes related to anxiety, pain, depression, PTSD, functional ability, and overall patient satisfaction.

The *validation* phase occurred following selection of articles, through a process of critical appraisal. After accounting for inclusion and exclusion criteria, articles were selected or dismissed for appraisal. Each article was appraised using the JHNEBP appraisal tool to account for characteristics such as sufficiency and credibility. *Comparative evaluation/decision making* occurred afterwards and included another review. This process involved reviewing sample populations, interventions, appraisal grade, level of evidence, ensuring all resources were exhausted prior to final article selection, and outcome information. Each article was labeled according to database retrieved from, level of evidence, quality grade, HT techniques, limiters applied, and significance of results.

Translation/application occurred through development of the intervention. The intervention involved mailing an appointment notification letter along with HT educational flyer to patients with scheduled appointments two weeks prior to their appointment. In addition, HT benefit was measured utilizing the HTCQ and obtaining pre-and-post session scores. *Evaluation* occurred through data collection and analysis. HTCQ scores were compared through paired sample *t*-Test. Appointment compliance rate was determined by percentage of kept appointments. Furthermore, patients who missed their appointments were contacted to attempt to obtain rationale for the no-show.

Strengths and Limitations of the EBP Project

Upon evaluation of this EBP project overall, various strengths and limitations are apparent. Strengths were primarily seen in the measured results. Limitations were largely related to uncontrollable factors.

Strengths. There are strengths to this EBP project. One strength of this project was the high level of reliability of the HTCQ tool (0.931). This result indicated the tool was appropriate to use when determining overall well-being and comfort before and after receiving HT. Another strength of this project was the significance level when comparing HTCQ scores pre-to-post-session ($p < 0.001$). Even though scores may not have increased by much, it is significant that most all scores did increase at least 2 points, while one score remained equal pre-and-post-HT session, and only one score decreased on the post-test. The intervention of HT by the HT provider also followed evidence from the literature to provide individualized techniques based on patient need. Each patient was assessed at the beginning of his/her HT session, and HT was individualized for all patients with the goal of promoting maximum healing.

Another strength of this EBP project in the increase of kept appointments by the end of the implementation period. While the overall compliance rate was only 55%, it is noteworthy to discuss the change from 0% to 100% compliance from the first week until the final week of implementation respectively. Furthermore, the project team attempted to contact patients who missed their appointments to inquire as to reasons why they did not keep their appointment. Information obtained during these phone calls is discussed in the final portion of this chapter for future implications.

Limitations. There were several limitations that were encountered during this EBP project. These limitations included: a) small sample size, b) time-constraints, c) insignificant results. The small sample size resulted from lack of kept appointments and from limited number of appointment slots during the timeframe. HT is only offered half day once a week, due to lack of HT providers to offer HT more often. One of the largest obstacles encountered was the complex IRB process at the agency, and therefore resulted in significant time restraint

remaining for implementation period. The increase in kept appointments from the first week to last week might be due to the notification intervention, but a longer time period would have allowed for more data to better determine results.

Implications for the Future

Results from the EBP project support previous research. HT does appear consistent with providing increased comfort and well-being for patients with pain, anxiety, and depression. The increase in appointment compliance rate is suggestive of a positive response to the appointment notification intervention. To further strengthen these findings, there are implications for future considerations in practice, theory, research, and education.

Practice. Appointment compliance rate was identified as a problem at the initiation of this EBP project. The year prior to this project the no-show rate for HT was 47%, and a compliance rate of 52%. The current method of practice is for patients to be referred to HT, then they are scheduled for an appointment, and after the appointment is scheduled the patient receives an automated phone call with the information. This leaves room for error as many patients may not answer the phone, and therefore remain unaware of the appointment.

After implementing the intervention of mailing an appointment notification reminder letter along with educational HT flyer to patients, the kept appointment rate gradually increased over the timeframe of this project. Furthermore, patients who did miss their appointments were contacted to gather information on why. From reachable patients, it was found that missed HT appointments were due to patients having other appointments the same day, patients not reading the letter, or patients not wanting the service.

The results of this EBP project suggest that patients should continue to receive the additional notification letter and information on HT and providers should continue to monitor appointment compliance rate. In addition, the results indicated that it would behoove the clinic to create an alert in the computer system when scheduling patients so HT appointments do not conflict with other scheduled appointments within the organization.

One of the goals of this EBP project was to obtain information to support that HT decreases symptoms including pain, anxiety, depression, and improves comfort and overall well-being. HTCQ scores were used to measure these variables. Increase was found on HTCQ post-test scores, suggesting HT does provide benefit to patients. This information can be used to request additional HT training for VA staff with the goal of increasing HT providers and resultant accessibility of HT for patients.

Theory. The SUHB is an appropriate theory to continue to apply to future studies involving HT. Future studies should incorporate all five fundamental concepts: energy fields, pattern, pandimensionality, unitary persons, and environment. This theory can serve as a guide for offering HT from increasing awareness through providing patients with information on HT, offering individualized HT techniques, and evaluation of effect from HT.

Research. Future studies may be conducted to mirror this EBP project but ideally for a longer period of time. It is hypothesized a longer timeframe would reveal a steady rate of kept appointments after the notification intervention was provided. Additional time would also allow for researchers to contact patients who missed their appointments until they were reached allowing the research team to gather additional information.

There is also opportunity for enhanced monitoring of effect from HT. This EBP project consisted of pre-post-test evaluation with the HTCQ. Further research should continue this method, but also include the addition of HTCQ post-test scores obtained a third time, 24-72 hours after intervention. This may be obtained via phone call or by providing the patient a blank HTCQ document with a pre-addressed envelope to mail results. Rationale for this additional post-test was derived from the literature, which suggests the most benefit from HT occurs 24-72 hours after receiving HT. Due to the lack of compliance with and the time constraint of the EBP project, this additional post-test was not included in this study.

Education. Education about HT is necessary. Increasing knowledge of HT was a sub-goal of this project and was addressed through the mailing of an HT educational flyer. When

speaking with patients it became evident further education about HT was necessary, as many patients did not know the purpose of their appointment. Furthermore, the literature suggested education should be provided about HT to other providers in addition to patients.

Conclusion

Healing Touch (HT) is a noninvasive, energy-based therapy where practitioners use their hands to channel the energy surrounding the body in an intentional manner to facilitate physical, emotional, mental, and spiritual health (HTP, 2016a). The techniques of HT allow the practitioner to clear, energize, and balance the human energy field in a heart-centered way with the goal of restoring balance and harmony to the energy system, thus allowing for self-healing to occur. The outcome aim of HT involves the resolution of energy congestion in the energy field (aura), which surrounds the physical body as well as congestion within the energy centers (chakras; HTP, 2016a). HT has been demonstrated to enhance general comfort and relief of symptoms among persons with psychological/psychosocial issues including depression, anxiety, trauma, insomnia, and addictions (Wardell et al., 2014). Results from the literature review support use of HT in addressing physical and emotional problems.

The primary goal of this EBP project was to address appointment compliance rate and determine benefits from receiving HT. The SUHB theory and Stetler model served as frameworks for development of the intervention and evaluation methods. The intervention consisted of development of a mailed appointment notification letter with educational HT flyer. This information was mailed to patients with scheduled appointments. Success of the interventions was measured by percentage of kept appointments and HTCQ scores pre-and-post-HT session. Results suggested the increase in appointment compliance rate (0% to 100%) from beginning to end of project timeframe respectfully may be related to intervention. Results comparing HTCQ pre-to-post-test indicated that HT was beneficial to patients. Therefore, HT appears to have benefits including a decrease in symptoms such as pain, anxiety, and depression and an increase in overall well-being. Furthermore, it can be implied that the

appointment notification letter along with HT educational flyer also had a positive impact on increasing appointment compliance rate though further investigation is necessary.

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BIOGRAPHICAL MATERIAL

Julia McCann-Khludenev

Ms. McCann holds two undergraduate degrees including a Bachelor of Arts in Human Services from Villanova University, as well as a Bachelor of Science in Nursing from Valparaiso University. Julia's professional background is primarily as a Family Social Worker under Foster-Care & Adoption in Philadelphia, PA. She also tried her hand in the legal field before returning to Valparaiso University as a full-time student, as part of the Accelerated Nursing Program in 2013. After graduating with her BSN degree, she enrolled with Valparaiso University in the DNP program. She is a student member of AANP, and Sigma Theta Tau International. Her special interests include an emphasis on health promotion and disease prevention. Julia enjoys working with at-risk/vulnerable client populations, and serving the advocate role. She also has interest in alternative therapies, particularly when used in addition to traditional western medicine. Her EBP project combined her interests and focused on increasing awareness of, and determining effects of Healing Touch therapy on the Veteran population. Julia hopes to increase awareness and acceptance of alternative therapies across the healthcare field.

ACRONYM LIST

ANA: American Nurses Association

CDC: Centers for Disease Control

EBP: Evidence Based Practice

HT: Healing Touch

HTCQ: Healing Touch Comfort Questionnaire

HTP: Healing Touch Program

NIH: National Institute of Health

NCCIH: National Council on Complementary and Integrative Health

PICOT: Population, Intervention, Comparison, Outcome, Time

PTSD: Post Traumatic Stress Disorder

QI: Quality Improvement

QOL: Quality of Life

SUBH: Science of Unitary Human Beings

Appendix A
Database Search Results

Database	Search Terms	Limiters	Initial Search Results	Results with Limiters	Number of Articles Reviewed	Number of Articles Selected
CINAHL	"heal* touch" OR "healing touch" AND anxiety OR pain OR depression OR comfort Education: MM "Education*" AND prior* OR before* OR pre* AND intervent* OR implement*	- 10 years (2006 – 2016) - English language - Peer-reviewed journals	78	49	13	6
MEDLINE	"heal* touch" OR "healing touch" AND anxiety OR pain OR depression OR comfort Education: MM "Education*" AND prior* OR before* OR pre* AND intervent* OR implement*	- 10 years (2006 – 2016) - English language	168	103	14	3
ProQuest	"heal* touch" OR "healing touch" AND anxiety OR pain OR depression OR comfort	- 10 years (2006 – 2016) - English language - Peer-reviewed journals	365	87	15	1
PubMed	"heal* touch" OR "healing touch" AND anxiety OR pain OR depression OR comfort	- 10 years (2006 – 2016) - English language -	61	45	6	3
PsycINFO	"heal* touch" OR "healing touch" AND anxiety OR pain OR depression OR comfort	- 10 years (2006 – 2016) - English language - Peer-reviewed journals	18	15	0	0
JBI	"heal* touch" OR "healing touch"	- None	8	-	2	0
Cochrane	"heal* touch" OR "healing touch" "ed* pamphlet"	- None	70	69	9	0

Appendix B
Review of Literature: Evidence Table

Citation (APA)	Purpose	Sample	Design	Measurement	Results/Findings	LOE/ JHNEBP Grade
Anderson, J.G., & Taylor, A.G. (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	To evaluate data to assess efficacy of HT as supportive care relevant to any medical condition.	Articles included were from databases of: Medline, CINAHL, and ClinicalTrials.gov. 5 RCTs included. Limiters included a date range began at inception of study until January 22, 2010, and peer-reviewed articles. Search term healing touch. Inclusion Criteria: HT intervention received solely or in addition to standard treatment, and comparison of HT intervention to a control group without HT. Exclusion Criteria: HT made up a complex intervention, continued development of HT specific interventions without any outcomes, or a healthy sample population. Initial search produced 332 articles; 327 dismissed, and 5 included.	Systematic Review 5 reviews were RCT. 4 used parallel group design, and 1 used crossover design.	1st RCT: (Krucoff et al.) DUREL, STAI, risk stratification, MACE, ACE, ECG 2nd RCT: (Post-White et al.) Physiological factors, current pain, BPI, BNI, POMS 3rd RCT: (Cook et al.) attitudes on HT, beliefs about group assignment, SF-36 4th RCT: (Seskevich et al.) Mood VAS using 8 scales: happy, hopeful, calm, satisfied, worried, sad, upset, SOB 5th RCT: (MacIntyre et al.) Post-op length of stay, incidence post-op A-Fib, use of antiemetic medication, amount of narcotic pain medication, functional status, anxiety (STAI)	1st RCT: (Krucoff et al.) 25-35% reduction in ACE from intervention, no other significant level results 2nd RCT: (Post-White et al.) Significant decrease of physiological factors (greatest effect of RR & HR), current pain, total mood disturbance, and fatigue. 3rd RCT: (Cook et al.) Significant increase in functional score, emotional role functioning, mental health, & health transition 4th RCT: (Seskevich et al.) Significant decrease in worry, and significant increase in satisfaction 5th RCT: (MacIntyre et al.) Significant decrease in length of stay post-op, and in anxiety scores Among all studies reviewed, findings support utilization of HT in clinical practice across varying patient populations aimed at improving health quality of life aspects	LOE: I JHNEBP Grade: A

Citation (APA)	Purpose	Sample	Design	Measurement	Results/Findings	LOE/ JHNEBI
Chang, S., Huang, C., Lin, C., Tu, S., Chao, M., & Chen, M. (2015). The effects of systematic educational interventions about nasogastric tube feeding on caregivers' knowledge and skills and the incidence of feeding complications. *Journal of Clinical Nursing, 24(*11/12), 1567-1575. doi:10.1111/jocn.12748	To determine if systematic nursing intervention, including educational materials, influences caregivers' knowledge and skills on NG tube feeding compared to routine nursing instructions.	Participants were a convenience sample from an inpatient hospital unit in Taiwan from May-Dec 2004. Assignment to control or intervention group was based on time sequence for NGT rather than randomization. Total of 233 participants (N = 233) Intervention group (n=106) Control group (n = 127) Inclusion criteria: Patient received NGT feeding during hospital stay, required NGT after discharge, geographic discharge location was within range of home visit from hospital, & the caregiver was able to speak English, Chinese, or Taiwanese	Quasi-experimental with pre-test-post-test evaluation The control group received routine education on NGT (handout). Intervention group received systematic nursing intervention of comprehensive ed-pamphlet and videos.	Questionnaire was given to caregivers after the nursing intervention, and again after the caregiver performed NGT the first time The tool assessed for demographic information, NGT care scale knowledge, and NGT skill assessment scale. Scoring involved 1 point for every question answered correctly, and 0 points for a question answered incorrectly. Tool validity was determined by health educators, and each question received an index score of 80% which is satisfactory. Reliability was determined by Cronbach's alpha, and score of 0.967 for knowledge and 0.926 for skill scale, indicating satisfactory reliability level. Statistical tests: caregiver age by mean + SD. Other variables measured by percentage. Between group tests included Mann-Whitney U test and independent two samples t test. Wilcoxon single-rank test for pretest posttest knowledge.	Differences in knowledge from pre-test to post-test were significant in both groups as $p < 0.001$ Univariate linear regression analysis of pretest knowledge scores (B = 0.07 with 95% CI of 0.01-0.12, p = 0.019) and pretest skills scores (B = 0.07 with 95% CI of 0.01-0.14, p = 0.033) both significantly correlated with post test scores Caregivers in the experimental group scored significantly higher post-test scores Age, gender, education and experience did not have a significant impact on post-test knowledge scores Complications found included constipation (12.3% vs. 23.6%, p = 0028), diarrhea (9.4% vs. 22%, p = 0.012), and abdominal distension (1.9% vs 10.2%, p = 0.013) Findings suggest that systematic nursing interventions, including comprehensive educational pamphlets and videos are related to improved knowledge and skills for caregivers for NGT	LOE: III JHNEBP Grade: B

Citation (APA)	Purpose	Sample	Design	Measurement	Results/Findings	LOE/ JHNEBI
Chen, S., Chen, C., & Lin, P. (2014). The effect of educational intervention on the pain and rehabilitation performance of patients who undergo a total knee replacement. *Journal of Clinical Nursing, 23(*1/2), 279-287. doi:10.1111/jocn.12466	To determine effect of health education on postoperative pain, involvement in rehab, and functional recovery among patients undergoing total knee replacements.	Sample was comprised of patients from an orthopedic ward in teaching hospital in Taipei City Sep 2011 – Aug 2012. Participants were assigned first to control group, then to experimental group by process of power analysis to determine appropriate sample size. Total of 92 participants (N = 92) Intervention group (n=106) Control group (n = 127) Inclusion criteria: First time TKR, age 18 or older, ability to perform ambulation and out-of-bed activities preoperatively, and free of operation complications. Exclusion criteria: Non-ambulatory prior to surgery, post-op symptoms of delirium, activity restriction, and unstable vital signs or ICU setting post-op	Quasi-experimental The control group received standard of care via oral discharge instruction. The experimental group received educational pamphlets with information of pain control, post-op care, rehab exercises, and methods to safely get out of bed and walking. They also received an educational CD reiterating content in the pamphlet.	Tools used involved patient: Demographic characteristics including age, gender, marital status, ed level, and occupation Numerical pain rating scale via VNRS. Rating pain from 0 – 10. Functional status assessment via a Chinese variation of the functional status subscale Exercise performance checklist.	No significant differences were found between the 2 groups on demographic characteristics from a Chi-square test (p > 0.05) Pain level: in 1-5 days post-op were compared between groups using t-tests. The first day post-op VNRS scores were lower among the experimental group (t = 2.427, p = 0.017). The 2nd post-op day scores were again lower (t = 4.958, p = 0.000). The 3rd day scores continued to remain lower (t = 3.510, p = 0.001). Functional status: overall ratings for experimental group were 12.05 $\pm$ 3.682 and 12.38 $\pm$ 2.806 for control group. There was no significant difference between the groups (t = 0.491, p = 0.625) ANOVA was performed to further assess variances from pretest to posttest between the groups which showed significant differences (F = 220.737, p = 0.000) Exercise performance: significant difference between the 2 groups was found on performing straight-leg raises within the first 5 post-op days (t = -4.754, p = 0.000) but no significant differences on any other exercises (p > 0.05) Conclusion: health educational intervention provided preoperatively reduced level of post-op pain, and increased the regularity of performing rehab exercises.	LOE: III JHNEBP Grade: A

Citation (APA)	Purpose	Sample	Design	Measurement	Results/Findings	LOE/ JHNEBP
Der-Fa, L., Hart, L. K., Lutgendorf, S. K., & Perkhounkova, Y. (2013). The effect of healing touch on the pain and mobility of persons with osteoarthritis: A feasibility study. *Geriatric Nursing, 34*(4), 314-322. doi:10.1016/j.gerinurse.2013.05.003	To determine effects of HT on symptoms including pain level, joint function, mobility, and depression in patients with osteoarthritis (OA); specifically, OA of the knee.	Participants were recruited from long-term care facilities and the community. Total of 19 participants HT Intervention group (n=12) FV Comparison group (n=7) Inclusion criteria: Age 65 or older, diagnosed with OA of the knee and experiencing related discomfort, able to stand and walk without assistance, pain was directly related to OA of the knee, English speaking, and cognitively intact. Additional demographic characteristics: majority of participants were female between ages of 62 – 99 years, majority resided in long term care facilities, had cardiovascular comorbidity, and used Tylenol for pain control.	RCT with repeated measure. The study occurred over a period of six weeks. The intervention of HT was provided to the intervention group three times per week for six weeks, while the comparison group received a FV one time per week at their residence for six weeks. The intervention group participants all received the same four HT techniques of Pain drain, Chakra connection, Magnetic clearing, and Mind clearing.	This study involved assessments pre-and-post HT or FV of pain, flexibility, mobility and balance control, and depression. Pain tools: IPT, BPI-SF, & WOMAC Flexibility: Goniometer Balance & mobility: Timed get-up-and-go test Depression: PHQ-9 Changes from baseline to post intervention period utilizing liner mixed models (LMM), and between groups using *t*-tests	Pain Interference: BPI: ($F(1,17) = 6.11$, $p = 0.02$) Pain Intensity: WOMAC: ($F(1,17) = 6.10$, $p = 0.03$) Effect on pain for HT group was significantly greater compared to FV group ($t = 2.47$, $p = 0.02$) and ($t = 2.47$, $p = 0.02$). Effects were also significant for HT group on joint function aspects of stiffness, flexibility, and mobility. Extension and extensor lag of the better knee results were: ($F(1,12) = 5.85$, $p = 0.03$; and $F(1,12) = 5.89$, $p = 0.03$); and extensor lag of the worse knee was ($F(1,17) = 3.95$, $p = 0.06$). WOMAC measure of joint stiffness also loomed along significance level ($F(1,16.5) = 3.61$, $p = 0.08$); and follow up t-test revealed significant improvement of the HT group over the six-week period ($t = -4.37$, $p < 0.001$). Depression was also found to decrease among both groups over the study period, but results were not significant. Results of this study support the modality of HT as intervention for OA patients with complaints of pain, flexibility, mobility, and depression	LOE: II JHNEBP Grade: A

Citation (APA)	Purpose	Sample	Design	Measurement	Results/Findings	LOE/ JHNEBI
Dowd, T., Kolcaba, K., & Steiner, R. (2006). Development of the healing touch comfort questionnaire. *Holistic Nursing Practice, 20*(3), 122-129. Retrieved from: http://journals.lww.com/hnpjournal/pages/default.aspx	To establish internal consistency reliability of the HTCQ, and also to determine a correlation between number of HT sessions and comfort level.	Convenience sample of 56 participants. Demographic information: 5 males & 51 females; 90% white, 6% African American, 4% other; number of HT sessions of 1-4 sessions 39%, 5-10 sessions 31%, 11-25 sessions 22%, more than 25 sessions 8%; seeking HT included 48% pain relief, 46% stress reduction, anxiety, and panic attacks, 37.5% low energy and depression, 6% cancer, 12.5% emotional nurturance and increased focus, and 12.5% other reasons Inclusion criteria: over the age of 18, independent living status, currently receiving HT from a selected HT practitioner, had already received at least one HT treatment, considered by HT practitioner to be cognitively alert and competent, and willing to complete the HTCQ. Exclusion criteria: Inability to read or understand English	Pilot Study Procedure: HT practitioners distributing a packet which included a letter of explanation, HTCQ, and stamped envelope to their clients. Clients completed HTCQ 1-3 days post HT session.	Measurement of internal consistency reliability of HTCQ was Cronbach [alpha] Measurement of correlation between number of HT sessions and comfort level with Wilcoxon rank sum test.	Internal consistency reliability of HTCQ tool was Cronbach [alpha] of .94 (Cronbach [alpha] of .70 or higher is acceptable for determining reliability) Measurement of correlation between number of HT sessions and comfort level showed participants having five or more HT sessions had comfort scores of 13.7 points higher compared to those with 1-4 HT sessions (P = 0.037). Results demonstrate effectiveness of HT intervention on a variety of symptoms, further establish internal consistency reliability of the HTCQ, and confirm a positive correlation between number of HT sessions and increased comfort level. Results are further supported based on the heterogeneous sample, suggesting applicability among a variety of sample populations	LOE: III JHNEBP Grade: A

Citation (APA)	Purpose	Sample	Design	Measurement	Results/Findings	LOE/ JHNEBI
Frost, D., & Porterfield, S. (2012). Health Promotion Guidance for a Rural Community. *Journal for Nurse Practitioners, 8*(9), 712-716. doi:10.1016/j.nurpra.2012.04.011	To determine effect of an educational pamphlet for parents of overweight/obese children	Sample was comprised of parents of children who were enrolled at 1 of 6 identified public schools. 50 parents were recruited Total of 44 participants (N = 44) Inclusion criteria: All included. Exclusion criteria: Parent/guardian younger than age 18, or older than age 65	Quasi-experimental Participants initially received a letter from the PI, and provided informed consent form, demographic sheet, and questionnaire to complete. Patients were then asked to review the educational pamphlet. 2 weeks afterwards participants were mailed another packet with another educational pamphlet and questionnaire to complete.	Descriptive and comparative analysis was conducted after all information was collected.	Demographics: 86% of respondents were mothers, and 14% fathers. 68% resided in extreme rural areas, 41% reported Caucasian race, 41% annual income was less than $12,000 annually and 59% annual income was more than $12,000. Results from investigation concluded that 100% of parents found the educational pamphlet helpful.	LOE: III JHNEBP Grade: B

Citation (APA)	Purpose	Sample	Design	Measurement	Results/Findings	LOE/ JHNEBI
Goldberg, D. R., Wardell, D. W., Kilgarriff, N., Williams, B., Eichler, D., & Thomlinson, P. (2016). An initial study using healing touch for women undergoing a breast biopsy. *Journal of Holistic Nursing*, *34*(2), 123-134. doi:10.1177/0898010115585414	To determine effect of the HT intervention, Magnetic Clearing, among women undergoing breast biopsy in reducing anxiety.	73 participants with 31 in the control group (Group B), and 42 in the intervention group (Group A). Inclusion criteria: between ages of 18 and 85 years, able to read and write English language, scheduled for breast biopsy appointment, and naïve to HT. Exclusion criteria: currently pregnant, or individual cancelled the HT appointment.	Quasi-experimental, non-blinded, with random assignment to group. Procedure: Intervention group received HT Technique of Magnetic Clearing during a 15-minute session prior to biopsy.	Assessment of anxiety levels for both groups were gathered immediately pre-procedure, post-procedure, and the following day 24-hours post-procedure; the 24-hour survey was completed by the participant at home and mailed back to the researcher. Physiological factors were measured immediately pre & post-procedure: BP, RR, & HR Tools used: STAI, CRI Data analysis: Chi-square & ANOVA	STAI scores were higher pre-procedure, and decreased post-procedure among both groups. S-Anxiety among the control group of significant decrease from pre to post-procedure, but increase the following day ($p = 0.004$) compared to intervention group maintained of decreased anxiety the following day ($p < 0.001$). T-Anxiety increase among the control group from pre to post-procedure with an insignificant slight rise within the 24-hour period ($p = 0.10$), while the HT group decreased pre to post-procedure ($p = 0.01$) without significant change the following day ($p = 0.28$). Between groups S-Anxiety results were significant $F (2, 142) = 10.94$, $p < 0.001$; and T-Anxiety $F (2, 142) = 5.15$, $p = 0.007$ Physiological Results between groups: Respiration rate: $F (1, 70) = 21.05$, $p < 0.001$ Heart rate: $F (1, 71) = 2.98$, $p = 0.08$ Blood pressure: systolic blood pressure effect of $F (1, 71) = 21.46$, $p < 0.001$ and diastolic blood pressure effect of $F (1, 71) = 13.81$, $p < 0.001$ Results of this study support the incorporation of HT, specifically Magnetic Clearing technique, in decreasing anxiety after breast biopsy procedure and is sustainable over a 24-hour period.	LOE: II JHNEBP Grade: A

Citation (APA)	Purpose	Sample	Design	Measurement	Results/Findings	LOE/ JHNEBI
Jain, S., McMahon, G., Hasen, P., Kozub, M., Porter, V., King, R., & Guarneri, E. (2012). Healing touch with guided imagery for PTSD in returning active duty military: a randomized controlled trial. *Military Medicine*, *177*(9), 1015-1021. Retrieved from: http://www.amsus.org/	To determine the effectiveness of HT combined with Guided Imagery (GI) on PTSD symptoms, depression, hostility, and health quality of life among returning active duty military personnel.	123 Participants Referred by provider if at least one hallmark PTSD symptoms were present: re-experiencing trauma via flashbacks, nightmares, intrusive thoughts, exaggerated physical or emotional responses to trauma triggers; exaggerated arousal via insomnia, sleep disturbance, irritability, or exaggerated startle response; and emotional numbing or avoidance of reminders of trauma. Inclusion criteria: age 18 or older, and post-deployment from combat zone. Exclusion criteria: already using HT or GI, inability to provide informed consent, and, if female, she was currently pregnant or nursing.	Phase 2, two-armed RCT. 1 arm: randomized to Intervention group (n=68). 2nd arm: randomized to control group (n=55) "TAU" (treatment as usual). Intervention group received HT+GI twice weekly for three weeks, and each session was one hour in duration. HT techniques included Chakra Connection, mind clearing, and Chakra spread.	PTSD Symptoms: Gold-standard PTSD checking (PCL) Depression: Beck-Depression Inventory (BDI-II) Quality of Life: a reliable and valid tool, the SF-36	Results were statistically significant. Results are favorable for support for HT among the veteran population returning from deployment with PTSD. PTSD Symptoms: ($p < 0.005$, Cohen's $d = 0.85$) Depression: ($p < 0.005$, Cohen's $d = 0.70$) Mental quality of life: ($p = 0.002$, Cohen's $d = 0.58$) Cynicism: ($p = 0.001$, Cohen's $d = 0.49$)	LOE: II JHNEBP Grade: B

Citation (APA)	Purpose	Sample	Design	Measurement	Results/Findings	LOE/ JHNEBI
Maville, J., Bowen, J., & Benham, G. (2008). Effect of healing touch on stress perception and biological correlates. *Holistic Nursing Practice*, *22*(2), 103-110. Retrieved from: http://journals.lww.com/hnpjournal/pages/default.aspx	To determine effects of HT on state/trait anxiety, and physiological factors of heart rate (HR), blood pressure (BP), skin conductance (SCL), muscle tension (EMG), and skin temperature (TEMP).	A convenience sample of 30 participants. Recruitment efforts included posting of flyers and occurred at a Hispanic college institution, targeting graduate and undergraduate students enrolled in a healthcare program. Additional inclusion criteria included ability to read and speak English language, while exclusion criteria included history of cardiovascular health conditions managed by pharmacological means. Demographic characteristics: 22 women (73%), eight men (27%), age range 19-44 years, 80% Hispanic, 17% White non-Hispanic, 3% Asian, 10 junior year students (33%), 13 senior year students (43%), 7 graduate students (23%), and five (17%) participants had prior experience with CAM modalities other than HT.	Quantitative, quasi-experimental pilot study. The study followed a single group repeated measures design. Each participant receiving a scheduled HT appointment session, and upon arrival for the appointment the participant completed forms for informed consent, demographic information, and STAI. Physiological factors were also obtained prior to HT session via electrodes for EMG and HR and SCL, temperature sensor to the left ring finger for temperature, and blood pressure measurement. The HT intervention involved techniques of hands moving for five minutes, followed by chakra connection for 25 minutes, and a 10-minute period of rest time.	Data collection was obtained via physiological data measures and STAI tool. Physiological data was recorded at four intervals including prior to HT session as baseline, after each of the two HT technique time intervals, and post-session. STAI was completed by the participant pre and post session.	Hands moving intervention was analyzed for factors of HR, SCL, and EMG via independent t tests, and TEMP via Wilcoxon signed rank test. HR and TEMP results decreased significantly ($t [25] = 5.19$, $P < .001$ and $Z = 3.08$, $P = .002$), and no significant change of SCL or EMG. Chakra connection intervention was analyzed after the change between intervention techniques, and also post-session. There was no significant change between techniques for HR or EMG, but significant decrease of SCL ($t [13] = 2.21$, $P = .046$, 2-tailed) and TEMP ($Z = 3.29$, $P = .001$, Wilcoxon signed rank test). Post-session results were significant for continued decrease in TEMP with increase in SCL; TEMP was ($Z= 3.54$, $P = < .001$), and the result of ($t [13] = 2.60$, $P = .002$) for SCL. No change in diastolic blood pressure, but post-session systolic blood pressure significantly lowered as seen with ($M = 116.7$, $SD = 13.9$; $t [29] = 4.02$, $P < .001$) Results of anxiety symptoms decreased significantly from pre-to-post-treatment session. State anxiety results of ($t [29] = 7.85$, $P < .001$) with the average score decreasing from 40.2 – 29.0; and trait anxiety decreased with results of ($t [29] = 3.15$, $P = .004$) were significant.	LOE: III JHNEBP Grade: B

Citation (APA)	Purpose	Sample	Design	Measurement	Results/Findings	LOE/ JHNEBI
Peck, S. (2007). Aftermath of the unexpected, unexplained, and abrupt termination of healing touch and extrapolation of related costs. *Complementary Health Practice Review, 12*(2), 144-160. Retrieved from: http://chp.sagepub.com/	To explore patients' experiences upon abrupt, unplanned discontinuation of HT treatments.	12 Participants. All participants lived at home, but required high levels of care and ranged from age 35 to 96 years with a variety of chronic health conditions.	Qualitative study	Interview method was used to determine participants' subjective perception of the experience of losing the HT treatment. Interviews occurred within two months of HT termination, were tape-recorded live, were transcribed at a later time, and were proofread by two teams. Content analysis was used to assess cost-efficacy data. Additional techniques used included audit trail, coding method, and decision-making rules. Other methods used to maintain credibility included prolonged engagement, persistent observation, triangulation of information, peer debriefing, negative case analysis, and member checking.	6 of the 12 participants experienced maintenance of positive changes after receiving HT; 6 participants stated worsening of illnesses upon termination of HT specifically reporting unmet physical, emotional, and spiritual needs and requesting continuation of HT treatment. Among the participants who reported increased deterioration, complaints included emotional distress, increased pain, impaired functional ability, poor sleep, unwanted physiological changes, and negative impact of missing relationship with HT provider.	LOE: VI JHNEBP Grade: B

Citation (APA)	Purpose	Sample	Design	Measurement	Results/Findings	LOE/ JHNEBI
Rose, P., Sakai, J., Argue, R., Froehlich, K., & Tang, R. (2016). Opioid information pamphlet increases postoperative opioid disposal rates: a before versus after quality improvement study. *Canadian Journal of Anesthesia = Journal Canadien D'anesthésie*, *63*(1), 31-37. doi:10.1007/s12630-015-0502-0	To determine if an educational pamphlet on opioid disposal would increase rate of proper handling among post-op patients.	Sample was comprised of patients scheduled for procedure from Aug – Dec 2014 were assigned to control group, and patients with scheduled procedure from Jan – Apr 2015 were assigned to the intervention group. Total of 226 participants (*N* = 226) Control group (*n* = 106) Intervention group (*n* = 120) Inclusion criteria: Age 18 years or older, scheduled for surgery during timeframe. Exclusion criteria: Inability to communicate by telephone, contraindication to opioid medications, currently consuming > 30mg oral morphine daily, history of opioid addiction	Prospective Quasi-experimental Educational pamphlet was developed, and was distributed to patients in the intervention group, and patients were encouraged to read this information in the post-op period. Participants received a telephone follow-up 4 weeks postoperatively for a phone survey.	Demographic data was summarized using percentage means and SD. Chi-square tests were used to analyze categorical data Kolmogorov-Smirnov, and if significant used Mann-Whitney U test.	Demographics: follow-up survey rates were 86/106 (81%) in control group, and 86/120 (72%) in intervention group. 4 week f/u call: Control group 42/86 (49%) and in intervention group 45/86 (52%) ceased opioid use, and 2/42 (5%) control group and 12/45 (27%) intervention group disposed of the remaining opioids safely. (Difference in proportions, 22%; 95%CI, 5 to 38, *P* = 0.735) Proportion patients weaned from opioids was unchanged, and not significant between groups (before, 42/86 vs after 45/86, *P* = 0.735) The educational pamphlet significantly improved self-report of proper opioid disposal.	LOE: III JHNEBP Grade: B

Citation (APA)	Purpose	Sample	Design	Measurement	Results/Findings	LOE/ JHNEBI
Wardell, D., Rintala, D., & Tan, G. (2008). Study descriptions of healing touch with veterans experiencing chronic neuropathic pain from spinal cord injury. *Journal of Science and Healing, 4*(3), 187-195. doi:10.1016/j.explore.2008.02.003	To explore the experience impact of HT among veterans with neuropathic pain, as described by HT practitioners.	Sample of 7 cases; 2 selected for secondary analysis. Participants were current patients of a SCI unit of a VA Medical Center in the southwest United States. Additional characteristics: English language speaking persons, age 18 or older, more than six-months post-SCI, medication regimes having been stable for greater than one month, reporting current pain as greater than five on VAS range 0-10, and experiencing chronic neuropathic pain as defined as greater than one-month duration.	Qualitative case study design. Case study method. 2 cases selected for secondary analysis. Participants received six HT sessions set one week apart.	Questionnaires of pain, depression, and quality of life were given as well as structured interviews conducted following sessions to gain insight into aspects of how participant felt, description of changes, or other open ended comments. The 2 analyzed cases were categorized as beneficial and equivocal. Data were collected from a variety of sources including CHTP chart of energy field pre-and-post-session, participant interviews, and pre-and-post-session participant pain ratings.	Beneficial case: Represented a positive impact from HT experience on pain. Equivocal case: Did represent an impact on pain over time, but might be attributable to cofounding variables in addition to HT. Both cases represent positive impact on decrease of pain level over time.	LOE: VI JHNEBP Grade: B

Citation (APA)	Purpose	Sample	Design	Measurement	Results/Findings	LOE/ JHNEBI
Wardell, D., Rintala, D., Duan, Z., & Tan, G. (2006). A pilot study of healing touch and progressive relaxation for chronic neuropathic pain in persons with spinal cord injury. *Journal of Science and Healing, 24*(4), 231-240. doi:10.1177/0898010106289840	To determine feasibility of healing modality of HT or guided progressive relaxation (GPR) to manage pain and coping in a home environment setting among veterans with spinal cord injury (SCI).	12 participants. Recruited from a SCI unit of the Veteran's Affairs Medical Center. Additional criteria: English speaking, age 18 or older, more than six-months post SCI, experiencing neurogenic pain or chronic pain as defined as greater than one-month duration, maintained a stable medication regime for pain for longer than one-month, and rated pain on the VAS as greater than five. Participants were assigned based on geographical proximity to HT intervention group (n=7) and GPR group (n=5).	Mixed methods Quantitative/ Qualitative The procedure of this study involved six sessions in the participant's home, of either HT or GPR.	To measure quantitative data five questionnaires were utilized including: The Brief Pain Inventory (BPI), Profile of Moods Scale (POMS), Satisfaction with Life Scale, and Center for Epidemiological Studies-Depression Scale short form (CESD-10), and Visual Analog Scale (VAS). To measure qualitative data, methods included: structured interview questions before and after each session which were audio-recorded, the Healing Touch Charting Form which assesses the participant's perspective of HT was completed by the CHTP, and a review of random sessions by CHTPs were completed. Descriptive and comparative data were analyzed by obtaining descriptive statistics of participants, as well as chi-square and t-test performed on differences between HT and GPR groups.	Qualitative results exposed significant variation of experience among both groups, with greater variation among HT group participants. Quantitative results showed benefit from the HT intervention, but did not reach a level of significance. This lack of significance was likely related to the small sample size. Score of the BPI ($F = 1.59$, $df = 2, 13$, $p = 0.24$) POMS score: ($F = 0.69$, $df = 2, 19$, $p = 0.51$) Diener Satisfaction with Life Scale ($F = 1.41$, $df = 2, 20$, $p = 0.27$). CESD-10 ($t = -1.12$, $p = 0.29$) Results from the VAS revealed significant decrease of severe pain after each treatment, but returned to high level prior to the next treatment session	LOE: III JHNEBP Grade: A