

The Effects of Therapeutic Touch on Pain

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Purpose: To better understand how Therapeutic Touch can be used in today's health care arena, this integrative literature review will examine current research that will help answer the question, Does Therapeutic Touch reduce pain? **Method:** An extensive search was conducted of the online databases MEDLINE, CINAHL, Cochrane Library, EMBASE, PsychLIT, and PubMed to retrieve research articles published from 1997 to 2007. **Findings:** Seven studies that were conducted between 1997 and 2004 were found and only five of the seven were included as pertinent evidence to answer the question. All of the research that was reviewed to answer whether Therapeutic Touch could significantly reduce pain revealed a majority of statistically significant positive results for implementing this intervention. **Conclusion:** Because there are no identified risks to Therapeutic Touch as a pain relief measure, it is safe to recommend despite the limitations of current research. **Implications:** Therapeutic Touch should be considered among the many possible nursing interventions for the treatment of pain.

Keywords: *Therapeutic Touch; pain; chronic pain; bioenergy therapies; complementary therapies*

Therapeutic Touch

Therapeutic Touch is a noninvasive healing modality derived from the ancient practice of the laying-on of hands (Lin & Taylor, 1998; Macrae, 2005). The theoretical definition of Therapeutic Touch is an intentionally directed process of energy exchange during which the practitioner uses the hands as a focus for facilitating healing (Nurse Healers-Professional Associates International [NH-PAI], 2008). Therapeutic Touch was introduced as a nursing intervention by Dora Kunz and Delores Krieger in the 1970s (Krieger, Peper, & Ancoli, 1979; Macrae, 2005). Since then, the NH-PAI has become the official organization of Therapeutic Touch.

The process of Therapeutic Touch, as defined by NH-PAI (2008), consists of

1. The practitioner explaining the treatment to the patient.
2. The practitioner centering herself.

3. Making a conscious intention to therapeutically assist the individual.
4. Assessing the energy field by becoming aware of differences in sensory cues in the palmar surfaces of the hands as well as other intuitive and sensory cues in the field. The practitioner's hands are usually held about 2 to 4 inches away from the patient's body and are moved in a head to feet direction.
5. Using calm and rhythmic hand movements to clear areas of energy imbalance in the field. Repeat as necessary.
6. Reassessing the condition of the energy field.
7. Giving the patient time to rest, evaluating the response, and documenting the outcomes.

Although it is called Therapeutic Touch, the practitioner never touches the physical body of the patient. It is a modulation of the patient's energy field, which surrounds the physical body. A Therapeutic Touch practitioner's primary focus is to balance the patient's energy field rather than physically touching the body (Lin & Taylor, 1998).

It is based on the assumption that there is a universal life energy that sustains all living organisms. Although the idea of subtle vital energy is only just

beginning to be accepted in Western medicine, it has been featured in Eastern therapeutic systems for thousands of years (Macrae, 2005). According to the National Center for Complementary and Alternative Medicine (NCCAM), Therapeutic Touch falls under the domain of Energy Medicine. Under this domain it is further classified as a biofield therapy (NCCAM, 2007).

Biofield therapies are intended to affect energy fields that purportedly surround and penetrate the human body. The existence of such fields has not yet been scientifically proven. Some forms of energy therapy manipulate biofields by applying pressure and/or manipulating the body by placing the hands in, or through, these fields. (para. 12)

Although biofields have not been scientifically proven yet, the evidence of their existence is building through the use of Kirlian photography, aura imaging, and gas discharge visualization (NCCAM, 2008).

Biofields cannot be scientifically measured as an outcome of Therapeutic Touch because their existence has not been scientifically proven; therefore, to justify the use of Therapeutic Touch, research must be done on the physiological effects of the treatment (Krieger et al., 1979; NCCAM, 2008). To date, Therapeutic Touch studies have been done on a number of variables including anxiety, functional ability, wound healing, migraine headaches, and dementia (Bronfort et al., 2004; Denison, 2004; Newshan & Schuller-Civitella, 2003; Peck, 1998; Peters, 1999; Robinson, Biley, & Dolk, 2007; Winstead-Fry & Kijek, 1999). However, many of these studies have flawed research designs, small sample sizes, and do not provide solid evidence for the use of Therapeutic Touch. To help better understand how Therapeutic Touch can be used in today's health care arena, this integrative literature review will examine research that will help answer the question, Does Therapeutic Touch reduce pain?

Pain

Pain is defined as "an unpleasant sensory and emotional experience arising from actual or potential tissue damage, or described in terms of such damage" by the International Association for the Study of Pain (2007). Pain is a subjective phenomenon originating from a biologic source and modified by psychological and social factors. Pain is also a symptom of many illnesses including, but not limited to,

osteoarthritis, rheumatoid arthritis, cancer, burns, fibromyalgia, shingles, and migraine headaches. It can be acute or chronic, localized or diffuse, nociceptive or neuropathic. Pain can affect any person at any age. It does not discriminate based on race or sex (International Association for the Study of Pain, 2007).

Approximately 70 million people in the United States suffer from chronic pain and approximately 15% to 20% of persons in the United States and other industrialized nations experience acute pain (Bonica & Loeser, 2001). More than two thirds of Americans with chronic pain are using complementary and alternative therapies. These therapies can be used as alternatives to traditional therapies or integrated with and complementary to traditional therapies (American Pain Foundation, 2002).

Search Methods and Identification of Studies

Because of the limitations of current Therapeutic Touch research, this review could not focus on one specific population or one specific type of pain. The purpose of this article is to examine the current Therapeutic Touch literature to determine if Therapeutic Touch reduces pain. An extensive search was conducted, in the spring of 2007, of the online databases MEDLINE, CINAHL, Cochrane Library, EMBASE, PsychLIT, and PubMed to retrieve research articles published from 1997 to 2007. The bibliographies of the retrieved articles were searched for additional references and studies. The search terms entailed Therapeutic Touch, healing touch, chronic pain, pain, bioenergy therapies, complementary therapies, and alternative therapies. The search was limited to articles published in English. Seven studies that were conducted between 1997 and 2004 were found and only five of the seven were included as pertinent evidence to answer the question. The two studies that were excluded were meta-analysis. The first meta-analysis by Peters (1999) used multiple heterogeneous research questions, which led the meta-analytic findings to be invalid. The second was an integrative review and meta-analysis by Winstead-Fry and Kijek (1999), which did not provide inclusion or exclusion criteria or homogeneity of the interventions. Of the five studies that were included, three were randomized control trials, one was a longitudinal study, and the last was a quasi-experimental study.

All the trials obtained informed consent from the participants who met inclusion or exclusion criteria. Lin and Taylor (1998), Peck (1997), and Denison (2004) received institutional review board (IRB) approval. Turner, Clark, Gauthier, and Williams (1998) and Gordon, Merenstein, D'Amico, and Hudgens (1998) did not mention IRB approval. The clinical trials varied in sample size from a small pilot study ($n = 15$) to a large multicenter study ($n = 108$). All researchers obtained convenience samples of those volunteers who met inclusion or exclusion criteria and then randomized participants to the group they were in. The multiple types of pain being treated amongst the trials were chronic osteoarthritis pain (Gordon et al., 1998; Peck, 1997), chronic musculoskeletal pain (Denison, 2004; Lin & Taylor, 1998), and pain from burns (Turner et al., 1998).

Research Critique

Effects of Therapeutic Touch in Reducing Pain and Anxiety in an Elderly Population

The purpose of this study by Lin & Taylor (1999) was to test the efficacy of Therapeutic Touch in reducing chronic pain and anxiety in an elderly population. A pretest–posttest, single blind, randomized three-group design was used to compare the effectiveness of Therapeutic Touch to mimic touch and standard care procedures. See Table 1. The study started with 95 participants, and 90 participants completed the study. The effects of Therapeutic Touch were measured on three variables; pain, anxiety, and salivary cortisol. The results suggest that Therapeutic Touch significantly reduced the report of chronic musculoskeletal pain in an elderly population and that Therapeutic Touch was effective in reducing anxiety in an elderly population with musculoskeletal pain ($p < .01$). Therapeutic Touch did not have a significant effect in reducing salivary cortisol. One of the reasons for this could be that salivary cortisol levels were low to begin with, which may be a result of aging. In addition, results indicate that salivary cortisol was strongly correlated with anxiety ($r = .70$) but not with pain ($r = .01$). Therapeutic Touch was more effective in reducing subjective pain intensity rating than in reducing reported anxiety levels. The strengths of this study are that it is randomized, with a low

attrition rate and large sample size; the limitations of the study include a convenience sample and homogeneity of the sample; therefore, the results are generalizable to persons 65 and older, experiencing chronic musculoskeletal pain with clear cognition and high pain intensity not currently using other relaxation techniques. Based on the findings of this study, a 20-min treatment of Therapeutic Touch administered for 3 consecutive days is effective in reducing pain intensity and anxiety ratings in a population of elderly persons with chronic pain.

The Effectiveness of Therapeutic Touch for Decreasing Pain in Elders With Degenerative Arthritis

Peck (1997) tested two hypotheses: (a) Following the administration of noncontact Therapeutic Touch, elders will have decreased pain as compared with pain reported during the baseline period and (b) following the administration of noncontact Therapeutic Touch, elders will have greater pain reduction than subjects who received progressive muscle relaxation (PMR). See Table 1. A randomized two-group longitudinal design was used in the study employing repeated treatments and measures. A sample of 108 participants entered the study and 82 participants completed all six treatments. No significant differences between those who dropped out and those who participated were found. Arthritis pain and distress were significantly decreased from the baseline period after the first administration of Therapeutic Touch ($p < .001$). Further significant decreases were seen with each subsequent treatment with Therapeutic Touch ($p < .001$). After further analysis, it was determined that PMR produces a greater reduction in pain than Therapeutic Touch ($p < .06$). The strengths of this study are that it is randomized with a large sample size; the limitations include a 75% completion rate with mentioned causes of dropout; and it used a convenience sample, which was homogenous. Therefore, the findings can be generalized to people 55 and older, community dwelling, diagnosed with degenerative arthritis, read and speak English, and cognitively competent people. Despite the threats to internal and external validity, this study's strengths outweigh its weaknesses. The findings of this study support offering Therapeutic Touch and PMR to patients with pain.

Table 1. Therapeutic Touch (TT) and Pain

Study Title and Authors	Study Objectives/ Purpose	Sample and Sampling	Design	Variables Independent/ Dependent	Instruments	Findings	Strengths/ Weaknesses
Lin and Taylor (1998)	To test the efficacy of TT in reducing chronic pain and anxiety in an elderly population	95 enrolled; 90 completed: 14 men, 76 women Intervention group: 31 Placebo group: 29 Control group: 30 Convenience sample: nursing home, retirement communities, adult day care centers, and a community senior center.	Randomized, controlled trial, pretest-posttest, single blind	Independent: TT Dependent: TT effects on • Chronic pain • Anxiety	• NRS • Form Y1 of STAI • Endocrine response (cortisol)	• TT significantly reduced the report of chronic pain ($p < .001$) • TT was effective in significantly reducing anxiety ($p < .01$) • TT did not significantly reduce salivary cortisol	Strengths: • Randomized • Low attrition • Large sample size Weaknesses: • Convenience sample • Homogeneity of sample
Peck (1997)	To determine if TT decreased pain and to determine if TT has a greater effect on pain reduction than PMR	Criteria: patient report 108 enrolled; 82 completed: 16 men, 66 women TT group: 45 PMR group: 37 Convenience sample: senior housing complexes, a senior citizen center, a seniors' meal site, and local churches. Criteria: patient report	Randomized, longitudinal, controlled trial, pretest-posttest	Independent: TT, PMR, and routine care Dependent: TT, PMR, and routine care effects on • Pain	• VAS for pain • VAS for distress	• TT significantly reduced pain and distress ($p < .001$) • PMR significantly reduced pain and distress ($p < .001$) • PMR produced a greater reduction in pain than TT ($p < .06$) • PMR had a significantly greater reduction on distress than TT ($p < .001$)	Strengths: • Randomized • Large sample size Weaknesses: • 75% completion rate with mentioned causes of dropout • Convenience sample • Homogeneity of sample
Gordon, Merenstein, D'Amico, and Hudgens (1998)	To investigate the effects of TT on pain, level of functioning, and general well-being in patients with osteoarthritis of the knee	31 identified by chart review over previous year. 25 people finished study. 9 men, 18 women TT group: 8 Placebo group: 11 Control group: 8 Criteria: MD diagnosis	Randomized, controlled trial, single blind. Included both quantitative and qualitative data	Independent: TT Dependent: TT effects on • Pain • Level of function • Well-being	• HAQ • MPI • VAS for pain • VAS for well-being	• TT significantly decreased arthritis pain and improved function ($p < .05$) • TT significantly improved energy level, coping, frustrations of arthritis, mood and general health ($p < .05$)	Strengths: • Randomized • Combination of quantitative and qualitative data collected • Intention to treat analysis did not change results Weaknesses: • Small sample • Convenience sample • Homogeneity of sample

(continued)

Table 1. (continued)

Study Title and Authors	Study Objectives/ Purpose	Sample and Sampling	Design	Variables Independent/ Dependent	Instruments	Findings	Strengths/ Weaknesses
Denison (2004)	To answer the question, Do people with FMS experience decreased pain and improved quality of life when TT is added to their treatment plan when compared with a group of persons with FMS who do not receive TT?	15 enrolled TT group: 10 Control group: 5 Criteria: MD diagnosis	Pilot; quasi-experimental, randomized, control group, pretest-posttest	Independent: TT Dependent: TT effects on • Pain • Quality of life	<ul style="list-style-type: none"> FHAQ SF-MPQ EIT VAS 	<ul style="list-style-type: none"> TT significantly decreased fibromyalgia pain ($p < .05$) TT significantly improved quality of life ($p < .05$) 	<p>Strengths:</p> <ul style="list-style-type: none"> Randomized Low attrition <p>Weaknesses:</p> <ul style="list-style-type: none"> Small sample Convenience sample Unequal size and pretreatment functionality of treatment and control group
Turner, Clark, Gauthier, and Williams (1998)	To determine whether TT would increase the pain relief achieved from analgesic medications, reduce anxiety, and beneficially influence immune function among persons hospitalized for burn injury and whether selected covariables would influence this relationship	99 enrolled; 81 completed; 76 men, 23 women TT group: 62 Placebo group: 37 Criteria: MD diagnosis	Randomized trial	Independent: TT with narcotic analgesic Dependent: TT with narcotic analgesic effects on • Pain • Anxiety • Immune function	<ul style="list-style-type: none"> MPQ VAS for pain VAS for anxiety CTF VASS ETF 	<ul style="list-style-type: none"> TT significantly relieved pain when used as an adjunct to analgesic medication ($p < .01$) No significant difference in analgesic medicine use with TT ($p = .06$) TT significantly reduced anxiety ($p < .05$) 	<p>Strengths:</p> <ul style="list-style-type: none"> Large sample size Low attrition Intention to treat analysis did not change results <p>Weaknesses:</p> <ul style="list-style-type: none"> Randomized No control group Homogeneity of sample Convenience sample

Note: NRS = Numeric Rating Scale; STAI = State Trait Anxiety Inventory; VAS = Visual Analogue Scale; HAQ = Stanford Health Assessment Questionnaire; MPI = West Haven-Yale Multidimensional Pain Inventory; FHAQ = Fibromyalgia Health Assessment Questionnaire; SF-MPQ = the short-form McGill Pain Questionnaire; EIT = Electronic Infrared Thermography; MPQ = McGill Pain Questionnaire; CTF = Credibility of Therapy Form; VASS = Visual Analogue Scale for Satisfaction with Therapy; ETF = Effectiveness with Therapy Form; TT = Therapeutic Touch; PMR = progressive muscle relaxation; FMS = Fibromyalgia syndrome.

The Effects of Therapeutic Touch on Patients With Osteoarthritis of the Knee

The purpose of this study was to investigate the effects of Therapeutic Touch on pain, level of functioning, and general well-being in patients with osteoarthritis of the knee (Gordon et al., 1998). See Table 1. This is a randomized control trial comparing Therapeutic Touch, sham treatment (mock Therapeutic Touch), and no treatment. The sample size was 31 participants, and 25 participants finished the study. No statistically significant differences were found between those who stayed and those who left. Although the sample is small, when the researchers analyzed the results they included an intention to treat analysis and significant findings were still found ($p < .05$). Therapeutic Touch significantly decreased arthritis pain and improved function, energy level, coping, mood, and general health ($p < .05$). The strengths of this article are that it is randomized, uses a combination of quantitative and qualitative data, and uses an intention to treat analysis. The limitations include a small sample size, a convenience sample, and homogeneity of the sample. The findings may be generalized to middle-aged, English-speaking Whites with a diagnosis of osteoarthritis. Overall this study's strengths outweigh its weaknesses. The findings of this study support the use of Therapeutic Touch with patients suffering from osteoarthritis pain.

The Effects of Therapeutic Touch on Fibromyalgia Syndrome (FMS) and Quality of Life

Denison (2004) proposed the research question, Do people with FMS experience decreased pain and improved quality of life when Therapeutic Touch is added to their treatment plan when compared with a group of persons with FMS who do not receive Therapeutic Touch? This question was used to guide an exploratory study. See Table 1. A convenience sample of people with FMS was randomly assigned to one of two groups, a Therapeutic Touch group or control group. The sample size was small, $n = 15$. A prospective pretest–posttest, quasi-experimental, two-group design was used to test the effectiveness of a series of six Therapeutic Touch treatments on the experience of pain and quality of life for persons

with FMS. The findings of this study support that Therapeutic Touch significantly decreased the experience of pain from before to after individual Therapeutic Touch treatments with the treatment group ($p < .05$). No decrease in pain was noted in the control group. In addition, within the Therapeutic Touch group, findings also supported improved quality of life from Week 1 to Week 6 ($p < .05$). The strengths of this study are that it is randomized, with a low attrition rate. The limitations include a small sample size, a convenience sample, and unequal size and pretreatment functionality of the treatment and control group. Due to the limitations of this study, there is enough evidence only to support further research using Therapeutic Touch as a method to decrease pain and improve quality of life in persons with FMS. Based on this article, a recommendation for the use of Therapeutic Touch to treat FMS cannot be made.

The Effect of Therapeutic Touch on Pain and Anxiety in Burn Patients

The purpose of this study was to determine whether Therapeutic Touch would increase the pain relief achieved from analgesic medications, reduce anxiety, and beneficially influence immune function among persons hospitalized for burn injury and whether selected covariables would influence this relationship (Turner et al., 1998). See Table 1. This was a randomized single blind study. Participants were randomized to the Therapeutic Touch group or sham Therapeutic Touch group by coin toss. Each group received 5 days of treatment followed by the measurement of outcome on Day 6. This lasted from 3 to 12 days depending on the participant. The sample comprised 99 participants from a burn unit at a university medical center in the southeast United States; 81% of the sample completed all assessments on Day 6 and 100% of the sample completed to Day 3. The difference (19%) was discharged between Days 3 and 6 and this was the reason participants did not complete all 6 days of the study. There was no significant difference between those discharged and those who remained in the study. The strengths of this study include a large sample size, randomization, low attrition rate, and intention to treat analysis. The limitations of this study include no control group used,

homogeneity of sample, and convenience sample. The population the findings can be generalized to are 15-68 years old, White, and males hospitalized for burns. Based on the results of this study, Therapeutic Touch appears to be effective in increasing pain relief as an adjunct to analgesic medication ($p < .01$) and in reducing anxiety for burn patients ($p < .05$).

Conclusion

Therapeutic Touch does reduce pain. This is supported by four of the five studies previously mentioned. The fifth study, Denison's (2004) study of FMS, has too many limitations to support the use of Therapeutic Touch but does support the need for further research. Common limitations of the Therapeutic Touch studies reviewed are convenience sampling and homogeneity of samples. There are no identified risks to Therapeutic Touch, so it is safe to recommend the use of Therapeutic Touch as a pain relief measure despite the limitations of the research. Recommendations for future research are to use probability sampling, to include persons from different racial backgrounds, to duplicate studies to confirm effect, to examine the amount of time and quantity of treatments needed to achieve a therapeutic benefit for different types of pain, to examine how long the effects of Therapeutic Touch last, and to explore Therapeutic Touch's mechanisms and modes of action. Overall, Therapeutic Touch should be considered in the treatment of pain, especially osteoarthritis, musculoskeletal, or burn pain.

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