



ANNOTATED BIBLIOGRAPHY OF PUBLISHED THERAPEUTIC TOUCH® RESEARCH

JULY 2004 TO AUGUST 2017

INTRODUCTION

These annotated articles examining outcomes of Therapeutic Touch were published in referred journals and hence are peer-reviewed. The Therapeutic Touch Network of Ontario (TTNO) is happy to make this *Annotated Bibliography of Published Therapeutic Touch® Research July 2004 to August 2017* freely available to all. On the Network's website, www.therapeutictouchontario.org, you will find titles of the articles and summaries of the results. The *Annotated Bibliography* gives more detail about the research design, participants, as well as the results. New research will be added to the website as it is published. Send questions or comments to memberships@ttno.ca. Include *Annotated Bibliography July 2004 to August 2017* in the subject line.

This updated *Annotated Bibliography* is a continuation of the *Annotated Bibliography Published Therapeutic Touch™ Research 1975 to July, 2004* compiled by Theresa Moore RN, MScN. This bibliography is also available as a download on our website, www.therapeutictouchontario.org.

The annotated bibliographies have been compiled for the TTNO by two of our members, Theresa Moore and Mei-fei Elrick. Donations to the TTNO would be greatly appreciated to support our Research Fund and the ongoing work of keeping this annotated bibliography current and available to all. Donations may be sent to The TTNO, 10 Four Seasons Place Suite 1000, Toronto, ON M9B 6H7. The articles are arranged alphabetically using the first author's last name.

ANNOTATED BIBLIOGRAPHY OF PUBLISHED THERAPEUTIC TOUCH® RESEARCH JULY 2004 TO AUGUST 2017

Aghabati, Nahid, Eesa Mohammadi and Zahra Esmail. "The Effect of Therapeutic Touch on Pain and Fatigue of Cancer Patients Undergoing Chemotherapy." 7.3 *eCAM* (2010): 375-381. Print.

Keywords: cancer patients, chemotherapy, pain and fatigue, Therapeutic Touch™

Purpose: To examine the effect of Therapeutic Touch on the pain and fatigue of the cancer patients undergoing chemotherapy.

Design: Randomized and three- groups experimental study-experimental (TT), placebo (placebo TT) and control (usual care).

Participants: Ninety patients undergoing chemotherapy exhibiting pain and fatigue of cancer were randomly assigned to the three groups.

Intervention: Thirty minutes of Therapeutic Touch were offered once a day for five days in the morning 10:00-10:30 to the experimental group, placebo Therapeutic Touch was offered for the same amount of time and usual care was usual care.

Outcome Variables: Participants completed The Visual Analogue Scale (VAS) of pain and the Rhoten Fatigue Scale (RFS) for five days before and after the treatments.

Results: Therapeutic Touch was significantly more effective in decreasing pain and fatigue of the cancer patients undergoing chemotherapy than the usual care group, while the placebo group indicated a decreasing trend in pain and fatigue scores compared with the usual care group.

Conclusions and Recommendations: Therapeutic Touch is a modality that is non-invasive, readily learned and can provide a non-pharmacological intervention for pain and fatigue of cancer patients. It can be included in a total philosophy of care which focuses on compassionate care.

Busch, M., Visser, A., Eybrechts, M., van Komen, R., Oen, I., Olf, M., Dokter, J., Boxma, H. "The implementation and evaluation of therapeutic touch in burn patients: An instructive experience of conducting a scientific study within a non-academic nursing setting" *Patient Education and Counseling* 89 (2012) 439-446.

Keywords: Burns, Therapeutic Touch, Scientific Study in Non-academic Setting

Purpose: Burns are painful. Not only the injury itself but the daily medical procedures such as wound dressing can be painful. Also burn patients are often found to be anxious and depressed. Clinical observations suggested that offering Therapeutic Touch to patients with burns reduced anxiety and increased relaxation.

Design: To examine these clinical observations more carefully a study was conducted at the Burn Centre in Rotterdam the Netherlands on outcomes of Therapeutic Touch with patients with burns.

Participants: Thirty-eight patients were involved.

Intervention: To determine whether a nurse's presence was as effective as offering Therapeutic Touch, the participants were divided into two groups; one in which patients were offered Nursing Presence (NP) and the other in which patients were offered Therapeutic Touch (TT) by nurses. Data were collected on days 2, 5, and 10 on levels of anxiety, salivary cortisol and pain medication.

Results: Situational challenges led to inconsistencies in the data collection and a high patient attrition rate. Interviews were conducted with the nurses to understand the challenges. It became apparent that many of the nurses were unaware of the way research is conducted.

Conclusions and Recommendations: " Analysis of the remaining data justifies further research on offering TT to burn patients with pain, anxiety for pain and cortisol levels as outcomes. " Nurses involved need to be experienced both in offering Therapeutic Touch and in the processes of research.

Coakley, Amanda and Mary Duffy. "The Effect of Therapeutic Touch on Postoperative Patients." *Journal of Holistic Nursing* 28.3 (2010): 193-200. Print.

Keywords: Therapeutic Touch, recovery, psychoneuroimmunology

Purpose: To test the efficacy of Therapeutic Touch on pain and biobehavioural markers in patients recovering from vascular surgery.

Design: Between-subjects intervention study.

Participants: Twenty-one postoperative surgical patients eighteen years or older who spoke English were included in the study. Twelve were in the experimental group and nine in usual care [control] group.

Intervention: The study was conducted in the afternoons on days 1-7 after vascular surgical procedure.

Outcome Variables: Measure of levels of pain and levels of cortisol and natural killer cells (NKC) were obtained before and after a Therapeutic Touch treatment. In the usual care treatment, patients' levels also were measured.

Results: Compared with those who received usual care, participants who received Therapeutic Touch had significantly lower level of pain, lower cortisol level, and higher NKC level.

Conclusions and Recommendations: Evidence supports Therapeutic Touch as a beneficial intervention with patients. Future research on Therapeutic Touch is still needed to learn more about how it functions. However, there is evidence to support incorporating Therapeutic Touch into nursing practice.

Coppa, Denise. "The Internal Process of Therapeutic Touch." *Journal of Holistic Nursing* 26.1 (2008): 17-24. Print.

Keywords: Therapeutic Touch, nursing practice, holistic health

Purpose: To describe the nature of the core process of Therapeutic Touch

Design: Qualitative data were collected from nurses offering Therapeutic Touch to full term infants and adults.

Participants: Five adults and five full term infants.

Intervention: Each of the five nurses offered Therapeutic Touch to one full term infant and one adult.

Data Collection: Data were obtained from interviews and focused participant observations.

Results: The empirical data provide evidence of an overall process divided into three phases: I. Preparation, II. Treatment: orienting, assessing, treating, III. Termination, that adheres to the standard process as described by Krieger. As well as confirming those phases, two new subcomponents, orienting and disengagement, were noted. In addition, the practitioners modified the process with the infants.

Conclusions and Recommendations: Based on the empirical data it is possible to devise an operational definition of Therapeutic Touch. When treating the full term infants rather than the adults, the nurses recommend a gentler, shorter treatment.

Doherty, Donna, Stephen Wright, Barry Aveyard and Meg Sykes. "Therapeutic Touch and dementia care: an ongoing journey." *Nursing Older People* 18.11 (2006): 27-30. Print.

Keywords: touch, nurse patient relationships, dementia

Purpose: To examine staff attitudes to Therapeutic Touch and the effectiveness of Therapeutic Touch as a therapeutic intervention for individuals with dementia.

Participants: A purposeful sample was selected of four individuals over the age of 65 with a diagnosis of dementia. All staff were involved.

Interventions: The four participants were offered Therapeutic Touch. All staff learned the modality

Outcome Variables: Focus groups with staff gathered data using interviews and questionnaires to determine attitudes toward Therapeutic Touch before and after learning the modality. Using Dementia Care Mapping and the Positive Response Schedule participants were assessed before and after the intervention.

Results: An analysis of the data indicates an increase in well-being following Therapeutic Touch. When touch is considered a core aspect of care provision and therapeutic relationships, Therapeutic Touch allows nurses to facilitate healing and forge therapeutic relationships through touch or non-touch and maintain channels of communication often lost as the dementia progresses.

Conclusions and Recommendations: This small scale study points to the usefulness of Therapeutic Touch with people with dementia. There also is evidence to support the benefits for staff who found learning and offering the modality improved staff working relationships. Also the challenge of learning the modality enabled staff to improve their self-awareness and communication skills.

France, Nancey. "Commentary on 'The Internal Process of Therapeutic Touch'." *Journal of Holistic Nursing* 26.1 (2008): 25-26. Print.

Keywords: Therapeutic Touch, internal process

Purpose To comment on the article, "The Internal Process of Therapeutic Touch" (see Coppa above)

Design: Analysis and commentary on Coppa's article.

Results: Coppa's description of Therapeutic Touch as having three components and two subcomponents is questioned and a more expansive understanding of the modality is offered.

Conclusions and Recommendations: Although Therapeutic Touch begins with a cognitive awareness of the Therapeutic Touch process, it is a relationship experienced through awareness and sensitivity to the whole. Reducing the treatment to distinct phases misrepresents the process.

Frank, Leslie, James Frank, David March, Grace Makari-Judson, Ruth Barham and Wilson Mertens. "Does Therapeutic Touch Ease the Discomfort or Distress of Patients Undergoing Stereotactic Core Breast Biopsy? A Randomized Clinical Trial." *Pain Medicine* 8.5 (2007): 419-424. Print.

Keywords: Therapeutic Touch, pain, percutaneous, breast biopsy, anxiety

Purpose: To determine whether Therapeutic Touch administered at the time of stereotactic core biopsy of suspicious breast lesions results in a reduction of patients' anxiety and pain.

Design: Randomized, patient-blinded, controlled trial of either Krieger-Kunz Therapeutic Touch administered by a trained practitioner or a sham intervention mimicking Therapeutic Touch offered during core biopsy.

Participants: Eighty-two women with mammographically detected, nonpalpable breast lesions requiring biopsy.

Intervention: Forty-two women received actual Krieger-Kunz Therapeutic Touch and 40 women received sham/mimic Therapeutic Touch during the core biopsy.

Individuals offering sham Therapeutic Touch had attended two, three hour sessions where they learned to move their hands to simulate Therapeutic Touch. They also were told to count backwards by 'serial 7s'. Both Therapeutic Touch practitioners and individuals offering sham Therapeutic Touch introduced themselves to the patients and said they would 'provide the study intervention'. They all began by counting backwards by sevens while standing beside the patient for one minute. The four practitioners offering Therapeutic Touch began similarly but intended to provide 'energy repatterning' hand movements over parts of the patient's anatomy where energy field abnormalities were detected by the practitioner. Both sham and true Therapeutic Touch treatments continued for ten minutes.

Outcome Variables: Changes in pain and anxiety were measured by visual analog scales immediately before and after stereotactic core biopsies.

Results: No significant differences were found between groups [Therapeutic Touch and sham Therapeutic Touch] on post biopsy pain, anxiety, fearfulness or physiological parameters.

Conclusions and Recommendations: The authors conclude that women undergoing stereotactic core breast biopsy received no significant benefits from Therapeutic Touch administered during the procedure.

Gregory, Sue and Julie Verdouw. "Therapeutic touch: Its application for residents in aged care." *Australian Nursing Journal* 12.7 (2005):1-3. Print.

Keywords: Therapeutic Touch, patient well-being, aged care facilities

Purpose: To explore the extent to which Therapeutic Touch may be used to facilitate well-being and quality of life for residents in institutionalized settings.

Design: A pre-test/post-test design formed the basis of the study. The design sought to be as inclusive as possible in the context of a range of behavioral and physiological conditions.

Participants: Participants were selected on a needs basis by the health carer.

Outcome Variables: In total 121 pre-test/post-test reports recorded data on physiological change, pain level change and behavioural change were completed for analysis.

Results: The results are consistent with previous studies indicating Therapeutic Touch assists in alleviating stress and anxiety in aged care residents, and increases the length and quality of their sleep. It also appears to moderately alleviate pain experienced from a range of conditions.

Conclusions and Recommendations: The outcomes of this exploratory study demonstrated that Therapeutic Touch has the potential to enhance the well-being of older residents in institutional facilities. To a large extent this occurred regardless of their specific conditions.

Gronowicz, Gloria, Ankur Jhaveri, Libbe Clarke, Michael Aronow and Theresa Smith. "Therapeutic Touch Stimulates the Proliferation of Human Cells in Culture." *The Journal of Alternative and Complementary Medicine* 14.3 (2008): 233-239. Print.

Keywords: Therapeutic Touch, human cell proliferation, biofield therapies, mind body connection

Purpose: Assess the effect of Therapeutic Touch on the proliferation of normal human cells in culture compared to sham Therapeutic Touch and no treatment. The biofield therapy, Therapeutic Touch, was chosen for these experiments because it requires practitioners to have extensive training and discipline.

Design: Several proliferation techniques were used to confirm the results, and the effect of multiple 10-minute Therapeutic Touch treatments. For one and two weeks, varying numbers of 10-minute Therapeutic Touch treatments were administered to each cell type to determine whether there was a dose-dependent effect.

Outcome Variables: Fibroblasts, tendon cells (tenocytes) and bone cells (osteoblasts) were treated with Therapeutic Touch, sham Therapeutic Touch or untreated for two weeks and then assessed for [³H] –thymidine incorporation into the DNA and immunocytochemical staining for proliferating cell nuclear antigen(PCNA). For 1 and 2 weeks, varying numbers of 10 minute Therapeutic Touch treatments were administered to each cell type to determine whether there was a dose-dependent effect.

Results: Therapeutic Touch administered twice a week for two weeks significantly stimulated proliferation of fibroblasts, tenocytes, and osteoblasts in culture compared to the untreated control. Sham Therapeutic Touch was not significantly different from the untreated cultures and significantly less than the Therapeutic Touch treatment in fibroblast and tenocyte cultures. In the one week studies involving the administration of multiple ten minute Therapeutic Touch treatments, four and five applications significantly increased [³H] –thymidine incorporation in fibroblasts and tenocytes but not in osteoblasts. Osteoblasts also responded to four treatments per week with a significant increase in proliferation. Additional Therapeutic Touch treatments (five per week for two weeks) were not effective in eliciting increased proliferation compared to control in any cell type.

Conclusions and Recommendations: A specific pattern of Therapeutic Touch treatments produced a significant increase in proliferation of fibroblasts, osteoblasts, and tenocytes in culture. Therefore, Therapeutic Touch may affect normal cells by stimulating cell proliferation.

Gronowicz G, Secor ER, Flynn, JR, Jellison, ER, & Kuhn LT "Therapeutic Touch Has Significant Effects on Mouse Breast Cancer Metastasis and Immune Responses but Not Primary Tumor Size." *Evidence Based Complementary and Alternative Medicine* 2015 May 31. <https://www.hindawi.com/journals/ecam/2015/926565/>

Keywords: Therapeutic Touch®, breast cancer, metastasis, mice.

Purpose: To study the outcomes of Therapeutic Touch to promote well-being in patients with breast cancer.

Design: Mice were injected with metastatic 66cl4 mammary carcinoma cells. Therapeutic Touch or mock Therapeutic Touch was offered twice a week for 10 minutes by two experienced Therapeutic Touch practitioners.

Participants: To remove psychosocial factors, mice were the participants in the study. When being treated with actual or control TT, the mice were placed in flasks which were clamped two feet in the air in a ring stand at the end of an L-shaped room. Practitioners alternated treatments so that each practitioner treated mice once a week.

Outcome Variables: Measurements were taken at 26 days. Metastasis to popliteal lymph nodes was determined by clonogenic assay. Changes in immune function were measured by analysis of serum cytokines and by fluorescent activated cells sorting (FACS) of immune cells from the spleen and lymph nodes.

Results: No significant differences were found in body weight gain or tumor size in the TT treated and mock-TT treated mice. Metastasis was significantly reduced in the TT treated mice compared to mock treated mice.

Conclusions and Recommendations: Therapeutic Touch had no significant effect on the primary tumor but produced significant effects on metastasis and immune responses in mice.

Hanley, MA. "Therapeutic Touch With Preterm Infants: Composing a Treatment." *Explore 4.4* (2008):249-258. Print.

Keywords: Therapeutic Touch, preterm infants, narrative inquiry, descriptive research, energy field.

Purpose: To explore the nature of the use of Therapeutic Touch with preterm infants and describe a Therapeutic Touch treatment process with this vulnerable population.

Design: Narrative inquiry was used to explore the use of Therapeutic Touch with preterm infants. The preterm infants were described as infants 25- 37 weeks gestational age. Recognizing that neutrality is the greatest challenge in narrative inquiry, the researcher adhered to clearly defined research procedures, documentation of decision points, peer debriefings, external audits and review by participants who verified shared themes. Thus, data were examined from various perspectives.

Participants: Five registered nurses with varying levels of experience. Each nurse described the responses of between 3 and 5 preterm infants.

Outcome Variables: Twenty-two data sets were collected which consisted of recorded interviews, written self-directed descriptions of Therapeutic Touch and exemplar clinical case vignettes. Narrative data were collected and analyzed concurrently to identify terms, phrases, and statements.

Results: When the data were analyzed, a description of the Therapeutic Touch treatment process derived from the analyses was sent to the participants for review and feedback.

Conclusions and Recommendations: The descriptions emerging from the practitioners' narratives of the Therapeutic Touch treatment process for preterm infants provide preliminary data for the systematic use and evaluation of Therapeutic Touch as an adjunct to facilitating preterm infants' physiological, behavioral, energy field development, and well-being.

Hanley, Mary Anne, Denise Coppa, and Deborah Shields. "A Practice-Based Theory of Healing Through Therapeutic Touch: Advancing Holistic Nursing Practice." *Journal of Holistic Nursing 35*(7):898010117721827, August 2017

Keywords: Theory: Therapeutic Touch: healing modalities; healing; common themes; reflections; dialogue

Purpose: To explore the development of a practice-based theory of healing through Therapeutic Touch developed between 2010 and 2016.

Design: Through in-depth self-inquiry of participatory dialogue in concert with constant narrative analysis, TT practitioners revealed the meaning of healing within the context of their TT practice.

Participants: A community of expert Therapeutic Touch Practitioners

Process: Through an iterative process of small group and community dialogues with analysis and synthesis of emerging themes, Exemplars of practice illustrate the process.

Result: A model of the theory of healing evolved over time. Theory development is a dynamic process and a continuing dialogue which examines the meaning of healing to self and others will develop a deepening awareness of the relation between healing and quality of life.

Hawranik, Pamela, Pat Johnston and Judith Deatrich. "Therapeutic Touch and Agitation in Individuals With Alzheimer's Disease." *Western Journal of Nursing Research 30.4* (2008): 417-434. Print.

Keywords: Therapeutic Touch, Alzheimer's disease, nonpharmacological interventions, complementary therapies

Purpose: To explore effective strategies to alleviate or treat disruptive behaviours in people with Alzheimer's disease, the most common form of dementia.

Design: A multiple time series, blinded experimental design was used to compare effectiveness of Therapeutic Touch, simulated Therapeutic Touch, and usual care on disruptive behaviour defined as physical aggression, physical nonaggression and verbal agitation.

Participants: Fifty-one residents diagnosed with Alzheimer's disease living in a long-term care facility.

Intervention: Participants were randomly assigned to the three treatments: Therapeutic Touch, sham Therapeutic Touch and usual care over a period of five days. Therapeutic Touch and sham Therapeutic Touch were offered once a day. Usual care was usual care.

Outcome Variables: Base measurements of the participants' characteristics were obtained using the Cohen-Mansfield Agitation Inventory (CMAI) (a) two hours after each treatment, (b) 24 hours after the final treatment, (c) one week after final treatment and (d) two weeks after the final treatment.

Results: This study provides preliminary evidence for the potential of Therapeutic Touch to deal with agitated behaviors of people with dementia. Physical nonaggressive behaviours decreased significantly in those patients who received Therapeutic Touch. No significant differences in physically aggressive or verbally agitated behaviours were observed

Conclusions and Recommendations: Researchers and practitioners need to consider a broad array of strategies to deal with the agitated behavior of people with Alzheimer's disease. Therapeutic Touch may be an important intervention that is not costly, can be implemented by family or staff and may prevent or delay the use of pharmacotherapy and other strategies that may decrease a resident's quality of life.

Jawaid Younus, Michael Lock, Olga Vujovic, Edward Yu, Jitka Malec, David D'Souza, Larry Stitt. A case-control, mono-center, open-label, pilot study to evaluate the feasibility of Therapeutic Touch in preventing radiation dermatitis in women with breast cancer receiving adjuvant radiation therapy." *Complementary Therapies in Medicine* (2015) Aug. 23(4) 612-616.

Keywords: Therapeutic Touch, Radiation Dermatitis, Quality of Life, Breast Cancer

Purpose: To examine the outcomes of Therapeutic Touch treatments on radiation dermatitis, a common problem in patients treated with radiation and also on their perceived quality of life.

Design: Open-label pilot study of the outcomes of a series of Therapeutic Touch treatments offered to women who had conservative breast cancer surgery and were receiving adjuvant radiation therapy. The open-label design meant participants, doctors, and TT practitioners all were aware the 17 women were receiving TT. Toxicity was assessed using NCIC CTC V3 dermatitis scale. Cosmetic rating used the EORTC Breast Cosmetic Rating. Quality of life, mood and energy, and fatigue were assessed by EORTC QLQ C30, POMS, and BFI. The parameters were assessed at baseline, and serially during treatment on the experimental cohort of 17 women. In the control cohort of 32 women, the quality of life, mood, energy and fatigue were not measured.

Participants: A convenience sample of seventeen women undergoing adjuvant radiation for Stage I/II breast cancer post conservative surgery were recruited for this study. After the 17 women received the Therapeutic Touch intervention, a cohort of 32 female patients, who also received adjuvant radiation, was recruited as a control group. Mean age of the 17 receiving TT was 63 years; it was 59 years in the control cohort.

Intervention: Therapeutic Touch was offered 3 times per week for the five weeks the women were receiving radiation. The 17 women all completed the series of treatments. They received a package of information about Therapeutic Touch including the instruction that they could stop the treatment at any time. Practitioners offering Therapeutic Touch were instructed to have minimal verbal interaction with the patients, e.g. avoid discussion of outcomes of TT, feelings.... The treatment of no more than 20 minutes was offered with no physical contact. The practitioner stayed with the patient during the rest period of approximately 20 minutes.

Outcomes: In the TT Cohort, the worst grade of radiation dermatitis was grade II in 9 patients (53%). Median time to develop the worst grade was 22 days. In the Control Cohort, the worst grade of radiation dermatitis was grade III in 1 patient. There was no difference between cohorts for the overall EORTC cosmetic score. Only the patients receiving TT completed the EORTC QLQ C30, POMS, and BFI measuring quality of life, fatigue. No change was observed.

Conclusions and Recommendations: This study is the first evaluation of TT in patients with breast cancer using objective measures. While Therapeutic Touch treatments did not influence the NCIC toxicity grade or time to develop radiation dermatitis, Therapeutic Touch is feasible for the management of radiation induced dermatitis.

Jhaveri, Ankur, Stephen Walsh, Yatzen Wang, MaryBeth McCarthy, Gloria Gronowicz. "Therapeutic Touch Affects DNA Synthesis and Mineralization of Human Osteoblasts in Culture." *Journal of Orthopaedic Research* 26 (2008): 1541-1546. Print.

Keywords: Therapeutic Touch, osteoblast, osteosarcoma, mineralization

Purpose: To determine if Therapeutic Touch has any effect on osteoblast proliferation, differentiation, and mineralization in vitro. Although there are numerous clinical studies of Therapeutic Touch, there are few in vitro studies. Therapeutic Touch was chosen for this in vitro study because the practitioners of this modality are rigorously prepared and can generate energy through their hands to promote healing.

Design: Therapeutic Touch was performed twice a week for ten minutes each on human osteoblasts (HOBs) and on an osteosarcoma-derived cell line, SaOs-2.

Intervention: Therapeutic Touch was performed twice a week for 10 minutes each on human osteoblasts (HOBs) and on an osteosarcoma-derived cell line, SaOs-2. Three Therapeutic Touch practitioners who had passed a screening test offered the treatments.

Outcome Variables: No significant differences were found in DNA synthesis assayed by [³H]-thymidine incorporation at 1 or 2 weeks for SaOs-2 or 1 week for HOBS. However, after four Therapeutic Touch treatments in two weeks, Therapeutic Touch significantly (p=0.03) increased human osteoblasts HOB DNA synthesis, compared to controls. At two weeks in differentiation medium, Therapeutic Touch significantly increased mineralization, in HOBs (p= 0.016) and decreased mineralization in SaOs-2 (p=0.0007) compared to controls.

Conclusions and Recommendations: Therapeutic Touch appears to increase human osteoblast DNA synthesis, differentiation and mineralization, and decrease differentiation and mineralization, in a human osteosarcoma-derived cell line. The mechanism for these effects is yet to be elucidated but the results provide a basis to study further the existence of a human biofield that may have some biological effects.

Larden, Cheryl, M. Lynne Palmer and Patricia Janssen. "Efficacy of Therapeutic Touch in Treating Pregnant Inpatients Who Have a Chemical Dependency." *Journal of Holistic Nursing* 22.4 (2004): 320-332. Print.

Keywords: anxiety, drug addiction, Therapeutic Touch, withdrawal symptoms

Purpose: To examine the outcomes of Therapeutic Touch with complications from chemical dependency during pregnancy.

Participants: Fifty-four English speaking hospitalized females at various stages of pregnancy.

Design: Patients were randomly assigned to three treatments: Twenty minutes of Therapeutic Touch for seven days, twenty minutes of a shared activity with a registered nurse for seven days, and standard ward care for seven days.

Outcome Variables: Anxiety was measured using Speinberger's State-Trait Anxiety Inventory. Withdrawal symptoms were measured using a standardized Symptom Checklist.

Results: Anxiety scores were significantly less on Days 1, 2, 3 for the group receiving Therapeutic Touch. On day 7 there was a small rise in anxiety possibly in anticipation of end of contact with practitioner. There were no significant findings related to withdrawal symptoms measured on the Symptom Checklist.

Conclusions and Recommendations: Therapeutic Touch may be of value as an adjunctive measure in the treatment of chemical dependency among pregnant women. A harm-reduction approach entails nonjudgmental care that aims to reduce risks to the women and their fetuses.

Madrid, Mary and Elizabeth Barrett, and Patricia Winstead-Fry "A Study of the Feasibility of Introducing Therapeutic Touch Into the Operative Environment With Patients Undergoing Cerebral Angiography" *Journal of Holistic Nursing* 28.3 (2010) 168-174. Print.

Keywords: energy field, nursing interventions, nursing models, theoretical, Therapeutic Touch

Purpose: To determine whether Therapeutic Touch can be effectively used in the operative setting and whether it could produce positive outcomes in the period from cerebral angiography to discharge. Rogers's conceptual model of unitary human beings was employed to explore the impact of Therapeutic Touch on selected outcomes in endovascular patients.

Design Randomized single- blinded experiment.

Participants: Forty English speaking men and women aged between 18-80 with no history of prior cerebral angiograms and no psychiatric diagnosis. The participants were essentially healthy and were having the diagnostic procedure on an outpatient basis.

Intervention: The Therapeutic Touch practitioner was a psychiatric nurse skilled in assessing and intervening in anxiety. The control group did not receive Therapeutic Touch. Both groups received standard care for the angiogram.

Outcome Variables: Data were collected in the normal course of the angiogram procedure and recovery room. Blood pressure and pulse were routinely noted before, during and after the procedure. Respiration data were unavailable.

Results: The efficacy of Therapeutic Touch on the blood pressure and pulse of the experimental groups was not statistically significant.

Conclusions and Recommendations: Although the procedure is stressful, the patients were healthy. Other research has found Therapeutic Touch outcomes with healthy people are not particularly effective. The nurse offering Therapeutic Touch noted the patients seemed relaxed. A protocol for delivering Therapeutic Touch in the operative setting was successfully developed and implemented and could be used in other surgical environments.

Marta, Ilda, Sueli Baldan, Ani Berton, Michele Pavam, Maria da Silva. "The effectiveness of Therapeutic Touch on pain, depression and sleep in patients with chronic pain: clinical trial" *Revista da Escola de Enfermagem da USP* (2010) 44(4): 1094-1102.

Keywords: Therapeutic Touch, pain, depression, sleep quality

Purpose: To determine the effectiveness of Therapeutic Touch on pain intensity, depression self-assessment scores and improved sleep quality.

Participants: Thirty elderly patients with chronic non-oncologic pain.

Design: A clinical pre-post trial was conducted in a Basic Health Unit in Brazil. Participants received eight sessions of Krieger-Kunz Therapeutic Touch.

Outcome Variables: The Visual Analogue Scale for pain was used before and after each session as well as the Beck Depression Inventory and the Pittsburgh Sleep Quality Index.

Results: Analysis of the data shows a significant decrease ($p < 0.05$) in pain intensity, depression and self-assessment scores and the sleep quality index.

Conclusions: Therapeutic Touch was effective in decreasing pain intensity and depressive attitudes and symptoms, as well as improving sleep quality.

McCormack, Guy. "Using non-contact therapeutic touch to manage post –surgical pain in the elderly." *Occupational Therapy International* 16.1 (2009): 44-56. Print.

Keywords: complementary therapy, non-contact Therapeutic Touch, pain management

Purpose: To investigate the effects of non-contact Therapeutic Touch on post-surgical pain in an elderly population receiving occupational therapy in an acute care hospital unit in the United States.

Design: Randomized clinical trial with a three group experimental pre-test-post-test design.

Participants: Ninety participants were randomly assigned to three groups (experimental, control and placebo).

Intervention: The experimental group received the non-contact Therapeutic Touch intervention, the control group received routine care and the placebo group received the sound of a metronome set at a steady slow pace

Data Collection: Objective measures included the Memorial Pain Scale, the Tellegen Absorption Scale and the Health Attribution Scale and measures of pulse rate and pupil size were performed as repeated measures.

Results: In the experimental group 22 out of 30 (73%) participants demonstrated a statistically significant decrease in pain intensity scores from pre-test to post-test ($t[7]=7.24, p<0.01$) and they were better able to participate in occupations. The results did not yield a statistically significant difference in the mean values of mood, pupil size and pulse rates on the pre-test-post –test measure between the three groups. There was a negative reaction to the metronome.

Conclusions and Recommendations: The implications of the study are promising. Non-contact Therapeutic Touch can be used in conjunction with pain medications to reduce pain and improve participation in functional daily activities. Further research is recommended to replicate this study

Monroe, Carolyn. "The Effects of Therapeutic Touch on Pain." *Journal of Holistic Nursing* 27.2 (2009):85-92. Print.

Keywords: Therapeutic Touch, pain, chronic pain, bioenergy therapies, complementary therapies

Purpose: To conduct an integrative literature review to examine current research to better understand how Therapeutic Touch can be used in today's health care arena.

Design: Search online databases to retrieve research articles published between 1997-2007.

Outcome Variables: MEDLINE, CINAHL, Cochrane Library, EMBASE, Psych LIT and PubMed were searched to retrieve research examining outcomes of Therapeutic Touch on pain published between 1997-2007. Seven studies conducted between 1997 and 2004 were found. Five of the seven were included as pertinent evidence to answer whether Therapeutic Touch could significantly reduce pain. The two studies not included were meta-analyses which did not focus on pain, but addressed numerous research questions.

Results: The research review revealed a majority of statistically significant positive results for implementing this intervention.

Conclusion and Recommendations: 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. Therapeutic Touch should be considered among the many possible nursing interventions for the treatment of pain

Moore, Theresa, Brigid Ting, Maria Rossiter-Thornton. "A Pilot Study of the Experience of Participating in a Therapeutic Touch Practice Group." *Journal of Holistic Nursing* 26.3 (2008):161-168. Print.

Keywords: Therapeutic Touch, practice group, experience

Purpose: To explore the experience of participants in a Therapeutic Touch practice group.

Participants: Ten women and two men who were members of practice groups in British Columbia or Ontario.

Design: A qualitative descriptive-exploratory method was used. Participants were interviewed using a set of open-ended questions, and, if needed, follow-up phone interviews were used to elicit further depth and clarity.

Outcome Variables: Data were analyzed using an extraction-synthesis process.

Results: Four themes emerged: 1) the value of learning with others, 2) connecting with others to sustain self and practice of Therapeutic Touch, 3) comfort-discomfort arising with self, others, ideas, 4) meaningful changes emerge while experiencing group energy and Therapeutic Touch.

Conclusions and Recommendations: The findings expand on the positive aspects of participating in a practice group and provide a beginning to understand member discomfort not previously reported. Understanding the comfort/discomfort dichotomy is useful to Therapeutic Touch organizations, practice group leaders and group members.

Monzillo, Eloise and Gloria Gronowicz. "New Insights on Therapeutic Touch: A Discussion of Experimental Methodology and Design That Resulted in Significant Effects on Normal Human Cells and Osteosarcoma." *Explore* 7.1 (2011): 44-51. Print.

Keywords: Therapeutic Touch, human biofield, osteoblasts, cell proliferation, osteosarcoma

Purpose: To examine the research design and approaches which led to the significant outcomes of Therapeutic Touch on cells.

Discussion: The three Therapeutic Touch practitioners involved in the study passed a test to determine their abilities to offer the modality. During the research, the practitioners each kept a journal. Only early passage cells were used to maintain a stable cell phenotype. Standard protocols in each experiment were used when offering Therapeutic Touch, placebo controls and untreated controls.

Conclusions and Recommendations: Well designed evidence based studies on the human biofield and the therapeutic potential of the human biofield are encouraged.

Movaffaghi, Zahra, Morteza Hasanpoor, Mohammad Farsi, Poory Hooshmand and Fatemeh Abrishami. "Effects of Therapeutic Touch on Blood Hemoglobin and Hematocrit Level." *Journal of Holistic Nursing* 24.1 (2006): 41-48. Print.

Keywords: Therapeutic Touch, hemoglobin, hematocrit

Purpose: To investigate the effects of Therapeutic Touch on hemoglobin and hematocrit levels in basically healthy students who have anemia.

Design: Double-blind randomized clinical trial using three interventions Therapeutic Touch, sham/mimic Therapeutic Touch and control.

Participants: Volunteers with a hemoglobin level less than 12 grams per deciliter were randomly assigned to the three groups. Only anemic female students participated in the study.

Intervention: Participants in the Therapeutic Touch group or the sham/mimic Therapeutic Touch group received the intervention three times. Each treatment lasted 15-20 minutes at 3-day intervals. The control group received no treatments. The two practitioners offering Therapeutic Touch had practiced for two years. Those offering mimic/sham Therapeutic Touch had no training in Therapeutic Touch and focused their attention on mentally counting backward from 1,000 by 7s and imitating Therapeutic Touch hand movements.

Outcome Variables: Blood samples from all participants were collected before the first treatment and again a week after the last one and measurements were taken.

Results: The results suggest Therapeutic Touch increases Hb level in students who are anemic. There were significant changes of both variables in the Therapeutic Touch and mimic/sham Therapeutic Touch. Therapeutic Touch increased the level of hemoglobin (.99±.13g/d) and hematocrit (2.82±.43%) significantly. Mimic Therapeutic Touch also increased the level of hemoglobin (.55±.11g/dl) and hematocrit (2.75± .44%) significantly. There were no significant changes in the control group.

Conclusions and Recommendations: The significant changes in both groups (Therapeutic Touch and mimic/sham Therapeutic Touch) suggest that more precision might be needed while selecting individuals as mimic/sham therapists. Two people offering mimic/sham Therapeutic Touch admitted that their thoughts had strayed from counting backwards and one said she felt sinful doing something to mimic Therapeutic Touch and wanted to give a real treatment. When asking people to offer mimic/sham treatments, it is important to consider their concern for participants' welfare. The researchers question if it is possible to offer a true sham treatment.

Newbold, David and Julia Roberts. "An analysis of the demarcation problem in sciences and its application to therapeutic touch theory."

International Journal of Nursing Practice 13 (2007): 324-330. Print.

Keywords: demarcation problem, health professional, philosophy of science, Therapeutic Touch

Purpose: To examine the demarcation problem i.e., the boundary between science and non-science from the perspective of four philosophers: Popper, Kuhn, Lakatos and Feyerabend. Their positions are used to examine the scientific basis of Therapeutic Touch theory. Research into Therapeutic Touch will be discussed as an example of how the demarcation problem might be applied to health care practice.

Analysis: Popper believed the scientific rationality of theory was independent of the facts. He replaced the verification principle with the criterion of falsifiability and inductive with deductive logic. The hallmark of Popperian scientific method is bold conjecture and severe testing. Lakatos suggests history shows that science occurs in research programs according to how progressive they are. The leading idea of a program could evolve driven by its heuristic to make predictions that can be supported by evidence.

Scientific progress is linear and cumulative and positively approaches truth. Kuhn saw science as puzzle-solving within a paradigm. Feyerabend found that the history of science shows there is no universal rule of scientific method and imposing one impedes progress. Lakatos, Popper's student, believed the scientific community should be free from ideological interference.

Results: All four solutions of the demarcation problem have strengths and weaknesses. Therapeutic Touch is either pseudoscientific [Popper], provisionally pseudoscientific but capable of future development [Lakatos], prescientific [Kuhn], and scientific [Feyerabend].

Conclusions and Recommendations: In the face of multiple epistemologies, imposing a single rule of method can impede progress. In the face of multiple epistemologies, the choice of scientific approach should be a pragmatic one based on the aims of the programme.

Smith, A. Ann, Sanford Kimmel and Sheryl Milz. "Effects of Therapeutic Touch on Pain, Function and Well Being in Persons with Osteo-Arthritis of the Knee: A Pilot Study." *The Internet Journal of Advanced Nursing Practice* 10.2 ((2009): 1-25.

Keywords: osteoarthritis (AO), knee, Therapeutic Touch, pain, quality of life, function, complementary care

Purpose: To determine the effects of Therapeutic Touch treatment on pain, level of function, and quality of life in people with osteoarthritis of the knee.

Design: Single-blinded study in which persons with osteoarthritis of the knee were randomly assigned to usual treatment or two Therapeutic Touch treatments a week for eight weeks.

Participants: Sixty people with osteoarthritis of the knee. Of the initial sixty, forty-eight completed the study.

Intervention: Participants either received usual treatment or two Therapeutic Touch treatments a week for eight weeks.

Outcome Variables: Participants were evaluated at baseline, eight weeks and twelve weeks for pain, function and quality of life using the Medical Outcomes Study (MOS), The Western Ontario and McMaster Universities Index (WOMAC) and the Knee Society Score (KSS).

Results: Therapeutic Touch applied twice a week for eight weeks decreases pain and stiffness of osteoarthritis in the knee. Therapeutic Touch does not appear to affect range of motion or stability of the knee as indicated by the examination results of the KSS [Knee Society Score].

Conclusions and Recommendations: Therapeutic Touch is a non-pharmacologic intervention that may be easy to offer in the home or community, is cost effective and may lessen symptoms and improve function. Health care providers should consider Therapeutic Touch as an adjunct or complementary therapy that can help their OA patients manage pain and improve function.

Smith, Dorothy and John Broida. "Pandimensional Field Pattern Changes in Healers and Healees." *Journal of Holistic Nursing* 25.4 (2007): 217-225. Print.

Keywords: power, Rogers, spirituality, Therapeutic Touch

Purpose: Rogers's Science of Unitary Human Beings framed this study of pandimensional pattern changes in healers and heepees paired for 8-weeks of Therapeutic Touch sessions.

Participants: Participants were recruited by poster asking for people willing to receive a series of weekly Therapeutic Touch treatments from a registered nurse. The four nurses offering treatments all had a license to practice nursing in Maine, and had studied Therapeutic Touch with Krieger and/ or Kunz or with someone trained by them and, currently, and for the past three years had been offering Therapeutic Touch.

Intervention: Participants were offered Therapeutic Touch. The duration of the sessions were not preset but determined by healers according to energy cues.

Outcome Variables: Data were collected by four student research assistants (RA) from both practitioners [healers] and clients [heelees]. Each RA worked with one practitioner and her client. Power, spirituality and diversity were measured in heelees and healers before and after the series of treatments using a revised Power as Knowing Participation Change Tool (PKPCT), the Spirituality Orientation Inventory (SOI) and the Diversity in Human Field Patterning Scale [DHFPS]. Pain and stress were self-defined and self-reported by heelees before and after each session using the visual analog scales (VAS). Pulse and blood pressure were measured in heelees before and after each session by research assistants. Each heelee was scheduled for 30 minutes with the same practitioner although the actual treatment ranged. Taped music played softly in the background. Clients rested for five minutes after the treatment prior to posttreatment data collection.

Results: Comparison of heelee patterns before and after the Therapeutic Touch sessions supported the hypotheses that heelees and healers would show parallel changes after the Therapeutic Touch series. Length of time of the 141 Therapeutic Touch treatments was unrelated to pattern changes. Although increases in three of the four dimensions of power were significant ($p < .05$) changes in power measures as a whole were not. Contrary to expectations, manifestations of diversity were decreased in healers and heelees.

Conclusions and Recommendations: The study provides further validation of Rogers's Science of Unitary Human Beings, and for Therapeutic Touch as a clinically effective treatment modality that promotes changes toward health, power and spirituality in healers and heelees. Findings of parallel changes in healers and heelees strengthen support for Therapeutic Touch as a pandimensional mutual process in which human energy fields are open, continually engaging in mutual process with the environmental field.

Stephen, Joanna, Gina Mackenzie, Sarah Sample and Jennifer Macdonald. "Twenty years of therapeutic touch in a Canadian cancer agency: lessons learned from a case study of integrative oncology practice." *Support Care Cancer* 2007; 15: 993-998. Print.

Keywords: Therapeutic Touch, supportive care, integrative practice, oncology

Purpose: To describe the practice of Therapeutic Touch within a conventional cancer agency and to identify the important issues and success factors of this agency's approach to the issues of incorporating Therapeutic Touch into the agency.

Design: Treatments began to be offered to cancer patients in 1985. Data were collected twice [1995 and 1997-1998] to determine the issues and reasons for having Therapeutic Touch in the cancer clinic.

Participants: In 1995 fifty-five patients were asked the primary reason for their use of Therapeutic Touch. In 1997-1998 105 patients again were surveyed. Most patients in this group were female (83%).

Intervention: Patients were offered Therapeutic Touch initially by two salaried counselors who had learned Therapeutic Touch as developed by Krieger and Kunz. High patient demand encouraged the cancer centres to change the delivery of the treatments. In 2000 a group format was funded by the multidisciplinary Patient Care Committee of the cancer agency. Volunteers, who had received Therapeutic Touch when they were patients attained levels I and II certification of Therapeutic Touch as developed by Krieger and Kunz and then offered the treatments. The counselors then were able to supervise rather than treat. This volunteer weekly clinic makes it possible to conduct the treatments in a peer-based group format.

Results: Most patients indicated they found Therapeutic Touch helpful for treatment-related anxiety (78%) while the remainder used Therapeutic Touch to cope with physiological symptoms including pain, insomnia and needle phobia. Therapeutic Touch has been offered in this cancer agency for twenty years.

Conclusions and Recommendations: Therapeutic Touch is a safe and beneficial intervention for cancer patients that can be integrated within a conventional setting. Evidence-based medicine includes patient values and context as best evidence. Conducting simple descriptive and evaluative research within the clinic setting ensures quality and allows critical checking of assumptions. Such studies provide valuable information about patients' experience and treatment delivery and can be communicated within the organization. High patient demand fueled the growth of the Therapeutic Touch program. Lessons learned when integrating a complementary modality such as Therapeutic Touch into a conventional setting are 1) position Therapeutic Touch within the context of research and evidence-based practice 2) develop and adhere to standards of practice and professionalism 3) maintain a nonpartisan attitude and communicate a plausible rationale.

Strickland, Mallory and Helen Boylan. "Using Enzyme Folding to Explore the Mechanism of Therapeutic Touch: A Feasibility Study." *The Journal of Alternative and Complementary Medicine* 16.7(2010): 715-721. Print.

Keywords: enzyme folding, Therapeutic Touch, energy exchange

Purpose: To design a novel model using protein folding to study Therapeutic Touch, a noncontact form of energy manipulation healing.

Design: The folding of ribonuclease A serves as a controlled energy-requiring system in which energy manipulation can be measured by the degree of folding achieved. A kinetic assay and fluorescence spectroscopy are used to assess the enzyme-folding state. By utilizing an enzyme model that responds to changes in physically defined energy states, this work assumes that Therapeutic Touch affects conventional energy that obeys physical laws of science.

Intervention: Therapeutic Touch, offered by one practitioner, was performed on dialysis bags in 100mL of buffer for seven minutes and the dialysis bags were then transferred to 300mL of buffer and dialyzed as for spontaneous renaturation. The practitioner neither touched the beaker holding the dialysis bags nor the bags themselves. Therapeutic Touch was performed with hands 2-4 inches away from the vessel. To serve as a control intervention, partially renatured solutions were allowed to slowly, spontaneously renature after removal of the urea through dialysis in buffer.

Outcome Variables: Measures of structure and function, a kinetic assay and fluorescence spectra, respectively were performed to indirectly test the energy state at each step.

Results: Data suggest that the kinetic assay is a useful means of assessing the degree of refolding, and specifically, the enzyme function. Fluorescence spectroscopy was not shown to be an effective measurement of enzyme structure for the purposes of this work.

Conclusions and Recommendations More research is needed to assess the underlying mechanism of Therapeutic Touch to complement the existing studies. An enzyme-folding model may provide a useful means of studying the energy exchange in Therapeutic Touch.

Whitley, Julie Anne and Bonnie Rich. "A Double-Blind Randomized Controlled Pilot Trial Examining the Safety and Efficacy of Therapeutic Touch in Premature Infants." *Advances in Neonatal Care* 8. 6 (2008): 2-19. Print.

Keywords: heart period variability, infant, neonate, premature, stress reduction, Therapeutic Touch

Purpose: To explore the hypothesis that nontouch therapy such as Therapeutic Touch reduces stress to a clinically important degree and is safe to use with preterm infants. Prior research indicated that touch, as a comfort strategy, does not hold the same pleasure for infants less than 32 weeks gestation as for more mature infants. Negative behavioral response to touch and handling may range from a startle reflex and agitation to blood pressure, heart rate, oxygen desaturation respiratory and endocrinal changes. A complementary therapy, such as Therapeutic Touch, which does not require physical touch, presents a potential approach to the dilemma of comfort and stress reduction in the extremely premature infant.

Participants: Two groups of 10 infants with a gestational age of less than 29 weeks. Demographic variables were statistically similar.

Design: A pilot randomized double-blind controlled trial in which each infant received either Therapeutic Touch or no Therapeutic Touch for five minutes on three consecutive days at the same time of day.

Outcome Variables: Variables measured were heart period variability [HPV], oxygen saturation and episodes of apnea.

Results: In this pilot trial, Heart Period Variability [HPV] showed an increase for the Therapeutic Touch group compared with the Non-Therapeutic Touch group. The study reveals no adverse effects of Therapeutic Touch in preterm infants. There was a greater parasympathetic activity in the infants receiving Therapeutic Touch.

Conclusions and Recommendations: The study reveals no adverse effects of Therapeutic Touch in preterm infants

Woods, Diana, Ruth Craven and Joie Whitney. "The Effect of Therapeutic Touch on Behavioral Symptoms of Persons With Dementia." *Alternative Therapies in Health and Medicine* 11.1 (2005): 66-74. Print.

Keywords: Therapeutic Touch, dementia, behaviour, manual manipulation, vocalization

Purpose: To examine the effect of Therapeutic Touch on the frequency and intensity of behavioral symptoms of dementia.

Design: Randomized double-blind three group experimental study using Therapeutic Touch, placebo/sham Therapeutic Touch and usual care.

Participants: Fifty-seven residents living in a nursing home exhibiting behavioural symptoms of dementia.

Intervention: The participants were randomly assigned to one of the three treatment groups. Those receiving Therapeutic Touch or placebo/sham Therapeutic Touch were observed for 20 minutes for three days prior to the interventions and three days post-intervention by trained observers blinded to group assignment. The intervention was offered twice daily for 5-7 minutes in the middle morning and middle afternoon.

Outcome Variables: Analysis of variance indicated a significant difference in overall behavioral symptoms of dementia, manual manipulation and vocalization when the experimental group was compared to the placebo and control group. The placebo group indicated a decreasing trend in behavioral symptoms of dementia compared to usual care.

Conclusions and Recommendations: Therapeutic Touch offers a nonpharmacological, clinically relevant modality that could be used to decrease behavioral symptoms of dementia.

Woods, Diana, Cornelia Beck, Karabi Sinha. "The Effect of Therapeutic Touch on Behavioral Symptoms and Cortisol in Persons with Dementia." *Research in Complementary Medicine* 16.3 (2009): 181-189. Print

Keywords: behavioural symptoms, dementia, nursing home, salivary cortisol, Therapeutic Touch, mental healing
ABAB design, interrupted time series

Purpose: To examine the effect of Therapeutic Touch on behavioral symptoms of dementia (BSD) and basal cortisol levels among nursing home (NH) residents with dementia.

Design: Using a double blind experimental interrupted time series ABAB design, 65 participants were assigned to one of three groups

Participants: Sixty-five people with dementia living in a nursing home where randomly assigned to one of three groups.

Intervention: The experimental group received Therapeutic Touch with contact on the neck and shoulder delivered twice daily for three days (administered over 2 separate treatment periods). The placebo group received a mimic Therapeutic Touch treatment identical in appearance to Therapeutic Touch and the control group received routine care.

Outcome Variables: Study outcomes of BSD were measured by the modified Agitated Behavior Rating Scale and salivary cortisol levels, measured by enzyme-linked immunosorbent assay. Sixty-four residents aged 67-93 (M=85.5) completed the study. Restlessness was significantly reduced in the experimental group compared to the control group. There was a significant difference in morning cortisol variability among group across time periods.

Conclusions and Recommendations: Findings suggest Therapeutic Touch may be effective for management of symptoms like restlessness coupled with stress reduction. Therapeutic Touch is non-invasive, readily learned and can provide a non-pharmacologic alternative for selected persons with behavioral symptoms with dementia (BSD).

Zolfaghari, M., Eyboosh, S., Hazrati, M. "Effects of Therapeutic Touch on Anxiety, Vital Signs, and Cardiac Dysrhythmia in a Sample of Iranian Women Undergoing Cardiac Catheterization" *Journal of Holistic Nursing* 30.4 (2012): 225-234. Print

Keywords: alternative therapies; holistic nursing; Therapeutic Touch; stress management

Purpose: To investigate the outcomes of Therapeutic Touch (TT) on anxiety, vital signs and cardiac dysrhythmia in women undergoing cardiac catheterization.

Design: Randomized, three group experimental study - TT, placebo/simulated TT, and control, neither TT nor placebo TT.

Participants: Female patients aged 35-65 years undergoing cardiac catheterization with no history of hallucinations, anxiety or other physical problems.

Intervention: One of the researchers, a qualified TT practitioner, offered TT to the treatment group (n=23) and placebo TT group (n=23) as described by Nurse Healers -Professional Associates International (2008). When offering placebo/simulated TT, she altered the treatment, e.g., did not assess, did not decide to help the patient, held hands 7-8 inches from patient.

Data Collection: Prior to cardiac catheterization, data were collected by having all patients complete the Spielberger anxiety test measuring state and trait anxiety. The cardiac dysrhythmia checklist was completed and vital signs recorded. These data also were gathered after the catheterization.

Outcome Variables: Therapeutic Touch significantly decreased state anxiety but not trait anxiety, decreased the incidence of all cardiac dysrhythmias except premature ventricular contraction, and regulated vital signs in the intervention group versus placebo/simulated and control groups.

Conclusions: Therapeutic Touch is an effective approach for managing state anxiety, regulating vital signs, and decreasing the incidence of cardiac dysrhythmia during stressful situations such as cardiac catheterization.

The Annotated Bibliography of Published Therapeutic Touch™ Research July 2004 to 2012 was compiled by Mei-fei Elrick, PhD, for the members of The Therapeutic Touch Network of Ontario (TTNO).

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