Annotated Bibliography
Published Therapeutic Touch™ Research
1975 to July, 2004

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Therapeutic Touch™: An Overview

In the complex field of complementary health care, no modality receives more attention and acceptance than Therapeutic Touch

Therapeutic Touch (TT) is considered to be an energy field modality and is a contemporary interpretation of several ancient healing practices - a consciously directed process during which the practitioner uses the hands as a focus for facilitating the healing process. The intervention is administered with the intent to enable people to re-pattern their energy toward wholeness and health. Therapeutic Touch can be used alone, or to enhance other interventions.

Therapeutic Touch is creating a worldwide impact by profoundly enhancing the quality of nurturing care from birth to death. Of benefit to both the practitioner and the client, this modality is proving to be a significant antidote to burnout in health care professionals.

Developed in the early 1970's by Dora Kunz and Dolores Krieger, Ph.D., R.N. (Professor Emerita of New York University), Therapeutic Touch is now practiced by thousands of healthcare professionals, holistic health practitioners and lay people throughout the world. Numerous colleges and universities teach it in their graduate and undergraduate nursing programs.

In Ontario, many hospitals and nursing agencies are encouraging their nurses to study the technique. Among those using Therapeutic Touch are hospice volunteers, AIDS care givers, addiction workers, midwives, occupational health nurses, and those involved with elder care.

Therapeutic Touch is perceived to be on the leading edge of 21st century *vibrational medicine*.

Assumptions

Several assumptions underlie Therapeutic Touch:

- In a state of health life energy flows freely in, through and out of the human energy field in an orderly manner.
- In disease or injury the flow of energy is affected and may be described as obstructed, disordered or depleted.
- Therapeutic Touch practitioners attempt to influence the energy flow to restore the integrity of the field and to move it toward wholeness and health.

Sessions

Always individualized, a session usually does not exceed 20 minutes. The client remains fully clothed. It can be administered while the client is in a sitting or lying position and is always followed by a period of rest.

Common Effects

Numerous dissertations and masters' theses have been done on Therapeutic Touch

Research and experience have shown the effectiveness of Therapeutic Touch in:

- eliciting the *Relaxation Response* and reducing anxiety
- changing the client's perception of pain
- facilitating the body's natural restorative process (i.e., the granulation of wounds and the calcification of fractures)
- enhancing the rapport between a client and a practitioner, counselor, or therapist.

Any condition which can be helped by these effects can benefit from Therapeutic Touch.

Practice by Nurses

In Ontario, under the College of Nurses Standards of Nursing Practice, Therapeutic Touch can be administered under clause 7.1 which states "promotes comfort using touch, massage and stress reduction techniques". The College maintains, however "the decision as to whether Therapeutic Touch is an acceptable treatment modality is the responsibility of the agency/institution. Once the decision has been reached, Therapeutic Touch can become part of the recognized plan of care".

Learning Therapeutic Touch

Therapeutic Touch is a natural potential and can be actualized through the intent to help or heal (i.e. enhancing the client's own ability to heal). It is a skill that requires sensitivity and needs to be practiced initially with supervision and feedback.

The basic course in Therapeutic Touch consists of three levels of instruction addressing the cognitive and experiential aspects of this modality. It is studied over a period of six months, with a minimum of 24 hours of instruction

Credentials

Those who meet the criteria of The Therapeutic Touch Network, Ontario, are granted the status of Recognized Practitioner and Recognized Teacher, which is renewed yearly upon evidence of continuing education. All Recognized Practitioners and Teachers carry an identifying card.

M. Simpson, July, 2003

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Introduction to the Annotated Bibliography

Content

This annotated bibliography includes the published quantitative and qualitative Therapeutic Touch™ (TT) research from 1975 to July, 2004. Only those studies reported in substantial detail in English and based on the Krieger/Kunz method of Therapeutic Touch are included. Where researchers made modifications to the Krieger/Kunz TT method, this is clearly noted.

The following sources were used to identify published TT research studies:

- Nurse Healers-Professional Associates International (NH-PAI) Therapeutic Touch 2000-2001 Bibliography and April, 2002 update;
- Update on 30 Years of TT research (compiled by P. Winstead-Fry and published in May, D. (2003). *The Therapeutic Touch Handbook: Levels Two and Three – Intermediate*);
- Bibliographies from meta-analytic studies of TT research (Peters, 1999; Winstead-Fry & Kijek, 1998); and
- Computerized searches of PubMed and CINAHL data bases

Evidence from case studies, master's theses, and doctoral dissertations, while making a valuable contribution to our understanding about Therapeutic Touch and to evidence-based practice, were not included in this bibliography. Listings of these works can be found in the NH-PAI bibliography or by searching the website *Dissertation Abstracts Online*.

Format

To the extent possible, the researchers' own words have been used. The annotations in this bibliography are descriptive rather than evaluative in nature. This format was chosen in light of the availability of the meta-analytic studies by Peters (1999) and Winstead-Fry and Kijek (1998). These two studies, summarized in this document, provide a clear and comprehensive analysis of the methodological limitations of the TT research as a whole. There are also numerous published reviews of the TT research which evaluate the merit of studies individually and collectively.

For ease of use, the 59 annotations in this bibliography have been divided into four sections: quantitative studies on the effects of TT; meta-analytic studies; quantitative studies on other aspects of TT; and qualitative studies. A combined reference list is included at the end of the document.

Acknowledgements

The breadth of the scientific knowledge about Therapeutic Touch reflects the passion, commitment, and foresight of the TT researchers profiled here. Their scholarly pursuit of truth is a precious gift to the Therapeutic Touch community—one that informs and supports our practice and complements the experiential knowledge gained from TT practitioners and recipients.

The personal, practical, and financial support provided by the Board of Directors of the Therapeutic Touch Network of Ontario (TTNO) for the compilation of this document is acknowledged with much gratitude. Their outstanding responsiveness to members and support of evidence-based practice and knowledge dissemination helps to assure the continued growth of Therapeutic Touch in the future.

Special thanks are extended to Mei-fei Elrick Ph.D. for her thorough proofreading and insightful comments and to Evelyn MacKay B.A., President of the TTNO, for her enthusiastic support, encouragement, and assistance with manuscript review.

Definition of Terms

Mimic TT (occasionally referred to as mock, sham, or placebo TT)

First used by Quinn in 1983, this intervention was designed as a control for the effects of the presence of a helping person and the placebo effect. Administered to the control group, mimic TT generally involves mimicking the movements of TT in a way that is indistinguishable to observers from real TT. There is no attempt to center and no intention to assist the recipient or direct energy. Attention is focused on mentally subtracting from 100 by 7's. Recently, it has been found that this intervention is best offered by a person not acquainted with TT, as experienced practitioners can find it distressing to withhold assistance and may shift automatically into the consciousness associated with TT when performing mimic TT hand movements.

Rogers' Science of Unitary Beings

A nursing model frequently used as the conceptual framework for TT research. In this model the person is viewed, not as a collection of parts of body systems, but rather as a unified whole—a dynamic energy field in continuous process with the environmental energy field.

Significant

In this document, this term refers to statistically significant findings where $p \leq .05$. This means that the probability of the observed difference or association occurring by chance alone is less than or equal to 5 in 100 and that the results are more likely to have occurred due to the intervention. In some cases, findings were significant at $p \leq .01$ (1 in 100) or $p \leq .001$ (1 in 1000). Clinical significance is also an important consideration and refers to the extent to which results have the potential to make a real and important contribution to health. Few TT researchers explicitly identified clinical significance in their papers, however many identified clinical implications of their findings in their concluding remarks.

Other Research Terms

Readers seeking explanations of other common research terms used in this document may find the following resources helpful:

Dictionary of Research Terms for Consumers at www.informedhealthonline.org

Reading research: A user-friendly guide for nurses and other health care professions. Available from Elsevier Canada at www.elsevier.ca or by calling 1-866-276-5533.

Quantitative Studies on the Effects of Therapeutic Touch.

Blankfield, R. P., Sulzmann, C., Goetz Fradley, L., Artim Tapolyai, A., & Zyzanski, S. J. (2001). Therapeutic Touch in the treatment of carpal tunnel syndrome. *Journal of the American Board of Family Practice, 14*(5), 335-342.

Keywords: pain; relaxation; nerve latency; carpal tunnel syndrome

Purpose: To determine whether Therapeutic Touch (TT) can improve objective indices of median nerve function in patients with carpal tunnel syndrome.
Design: Randomized, single-blind, placebo-controlled experimental design.
Participants: 21 adults with electrodiagnostically confirmed carpal tunnel syndrome.
Interventions: Participants received either TT or sham TT once a week for 6 consecutive weeks. After a 6 week period without treatment they then crossed over to receive the other intervention (either TT or sham TT). TT was provided by one of three nurses. One nurse was a beginner level practitioner and two were more experienced practitioners. Sham TT was provided by nurses who did not practice TT. Both TT and sham TT sessions lasted about 30 minutes.
Outcome Variables: Distal latencies of the median motor nerve were measured with an electroneurometer by the treating nurse. Participants also completed visual analogue scales measuring pain and relaxation.
Results: Changes in median motor nerve distal latencies, pain scores, and relaxation scores did not differ between participants in the TT group and the sham treatment group, either immediately after each treatment session or cumulatively. Immediately after each treatment session, however, there were improvements from baseline among all outcome variables in both groups. These changes were both statistically and clinically significant.
Conclusions and Recommendations: In this study TT was no better than placebo in influencing median motor nerve distal latencies, pain scores, and relaxation scores. However, the small sample size makes any conclusions tenuous and the results of studies correlating improved nerve latencies after surgery have been mixed. The changes in the outcome variables from baseline in both groups suggest that the placebo effect may possibly be a relaxation response. This possibility offers a fresh perspective by which to interpret findings of intervention research.

Braun, C., Layton, J., & Braun, J. (1986). Therapeutic Touch improves residents' sleep. *American Health Care Association Journal, 12*(1), 48-49.

Keywords: sleep

Purpose: To test the effectiveness of Therapeutic Touch (TT) in improving the quality of sleep in elderly nursing home residents.
Design: Single subject design with each individual serving as their own control.
Participants: 6 mentally alert nursing home residents, aged 75 to 96.
Interventions: The first 3 days were used to establish baseline sleep scores. On the

second 3 days (days 4, 5, and 6) participants spoke with the nurse at bedtime for 5 minutes before receiving 5 minutes of TT. Sleep scores were again measured without intervention on days 7, 8, and 9. Three residents participated for an additional 3 days, during which they spoke with the nurse for 10 minutes without receiving TT.
Outcome Variables: Visser's sleep quality questionnaire was completed by participants.
Results: Five of the six participants experienced better sleep with TT, with their sleep quality scores higher on the mornings following TT than on any other days. When these results were graphed they were deemed significant by the researchers. The sixth participant had focused on the television during treatments, causing the nurse to have difficulty centering. The three participants who experienced the dialogue intervention alone on days 10, 11, and 12 showed no improvement in sleep scores during that time. This finding appeared to confirm that improvement in sleep quality on days 4, 5, and 6 was the result of TT.
Conclusions and Recommendations: Overall, TT was effective in enhancing sleep quality for this group of nursing home residents. TT should be added to the nursing measures used to help elderly persons to sleep.

Cox, C., & Hayes, J. (1999). Physiologic and psychodynamic responses to the administration of Therapeutic Touch in critical care. *Complementary Therapies in Nursing and Midwifery, 5*(3), 87-92.

Keywords: critical care; physiological effects; psychodynamic responses

Purpose: To ascertain the significance of physiologic and psychodynamic responses of patients to Therapeutic Touch (TT) in a critical care setting.
Design: Time series design with triangulation of physiological measures with participants' verbal responses during interviews.
Participants: 53 patients, aged 34 to 90, in the intensive care unit or coronary care unit.
Interventions: Participants received an average of two TT sessions (range 1-10) from a nurse who had received training and 6 months of supervised practice in TT. All participants received the same length of treatment.
Outcome Variables: Heart rate, blood pressure, respirations, and peripheral oxygen saturation were measured. Unstructured interviews were also used to obtain descriptions of participants' experiences of TT.
Results: There were no significant changes in the physiologic variables, indicating that participants remained physiologically stable. The artificially imposed treatment time limit and prevalence of medication use may have been factors. Responses to the interviews were clustered into categories reflecting energy (e.g. warmth and tingling) and quiescence (e.g. relaxed and sleepy), with many participants falling asleep during or after TT.
Conclusions and Recommendations: No significant changes were found in physiologic variables and future studies should consider allowing treatments to continue until the energy field feels balanced. Nonetheless, participants found TT pleasurable and calming. This is very important in the stressful critical care environment and these results emphasize the importance of triangulation in research design. The findings suggest that

TT is a useful therapy to enhance relaxation and sleep in critically ill patients and should be part of routine nursing care for patients who have problems relaxing and falling asleep.

Denison, B. (2004). Touch the pain away: New research on Therapeutic Touch and persons with fibromyalgia syndrome. *Holistic Nursing Practice, 18*(3), 142-151.

Keywords: pain; quality of life; fibromyalgia

Purpose: To determine whether people with fibromyalgia syndrome (FS) experience decreased pain and improved quality of life when Therapeutic Touch (TT) is added to their treatment plan.
Design: Pilot study using a prospective pre-test-post-test, quasi-experimental, 2-group design with random group assignment.
Participants: 15 adults, aged 25-81, with physician confirmed FS and unsatisfactory pain management.
Interventions: The TT group received seated TT from experienced, credentialed practitioners. Treatment duration, determined by reassessment of the energy field, ranged from 11-14 minutes. The control group listened to a 10-15 minute information audiotape about complementary therapies. Interventions occurred weekly for 6 weeks.
Outcome Variables: Pain was measured by the Short Form McGill Pain Questionnaire with a vertical visual analogue scale. The Fibromyalgia Health Assessment Questionnaire, derived from the Stanford Health Assessment Questionnaire, measured health-related quality of life by evaluating participants' perceptions of ability to perform eight activities of daily living. Electronic infrared thermography (EIT), a diagnostic tool that detects changes in thermal patterns, was used to determine cutaneous skin temperature and size of 'hotspots.'
Results: Participants who received TT had a significant decrease in pain for each pre- to post-TT treatment, as well as significant improvement in quality of life (functional ability) from the pre-first to pre-sixth treatment. While the TT group had less pain and better quality of life compared to the control group, this difference did not achieve significance. Expected changes in hotspot temperature, size, and number were unknown and while some changes in size and temperature in the TT group were significant, results were mixed and dependent on location on the body. No significant differences were found in hotspots between the groups post-intervention. In the control group the predominant infrared pattern persisted while trends occurred in the TT group, suggestive of increased symmetry and decreased pain. These changes varied paradoxically with location on the body and may be interpreted in light of psychoneuoroimmunologic theory or the occurrence of the relaxation response.
Conclusions and Recommendations: TT may be an effective treatment for relieving pain and improving quality of life in this specific population of persons with FS. While results of this study should be interpreted cautiously, there is enough evidence to support further research. Electronic infrared thermography showed promise as an objective measure. Future studies should include larger samples, obtain baseline and pre- and post-measurements of pain and EIT images in both groups, evaluate relationships among

comorbid diagnoses, and group participants according to severity of pain for data analysis.

Eckes Peck, S. D. (1997). The efficacy of Therapeutic Touch for improving functional ability in elders with degenerative arthritis. *Nursing Science Quarterly, 11*(3), 123-132.

Keywords: arthritis; functional ability; elders

Purpose: To determine whether Therapeutic Touch (TT) improves functional ability in elders with arthritis compared to progressive muscle relaxation (PMR).
Design: Two-group longitudinal design with random assignment and repeated treatments and measures.
Participants: 82 non-institutionalized elders, aged 51 to 90, with at least a 6 month history of chronic pain and medically diagnosed arthritis.
Interventions: After 4 weeks of routine care, participants received six treatments, each 5-7 days apart and about 20 minutes long, either TT from experienced TT practitioners or PMR from nurses trained in Bernstein and Borkovec's technique.
Outcome Variables: The Arthritis Impact Measurement Scale was used. This tool measures mobility, pain, function of body parts, and ability to complete self-care, household tasks, work, and social activities, as well as satisfaction, tension, and mood related to functional disability.
Results: For both the TT and PMR groups, mean scores improved significantly on the subscales of pain, tension, mood, and satisfaction. For the TT group, hand function also improved significantly, while the PMR group showed significant improvement in walking and bending. Significantly better function was found among the TT group compared to the PMR group on the mobility and hand function subscales.
Conclusions and Recommendations: TT and PMR were effective in improving functional ability, with TT more effective than PMR. TT should be offered to persons with arthritis as one option for controlling pain and improving function. Future studies should include more racially diverse samples, provide more explicit questionnaire instructions, and examine length of treatment effect to determine optimum frequency.

Eckes Peck, S. D. (1997). The effectiveness of Therapeutic Touch for decreasing pain in elders with degenerative arthritis. *Journal of Holistic Nursing, 15*(2), 176-198.

Keywords: arthritis; pain; elders

Purpose: To determine whether Therapeutic Touch (TT) decreases pain in elders with arthritis compared with routine treatment and progressive muscle relaxation (PMR).
Design: Two-group longitudinal design with random assignment and repeated treatments and measures.
Participants: 82 non-institutionalized elders, aged 51 to 90, with at least a 6 month history of chronic pain and medically diagnosed arthritis.

Interventions: After 4 weeks of routine care, participants received six treatments, each 5-7 days apart and about 20 minutes long, either TT from experienced TT practitioners or PMR from nurses trained in Bernstein and Borkovec's technique.
Outcome Variables: Visual analogue scales for pain and distress were used.
Results: For both TT and PMR groups, pain and distress decreased significantly from the baseline period after the first treatment. Further decreases were seen with each subsequent treatment. The changes were also clinically significant, with participants commenting on their satisfaction with their level of activity. PMR was more effective than T.T., with differences approaching significance for pain and reaching significance for distress.
Conclusions and Recommendations: TT and PMR were effective in decreasing pain in elders with arthritis, with PMR more effective than TT. TT and PMR should be offered to persons with arthritis pain. Future studies should include more racially diverse samples with various types of pain and should examine length of treatment effect in order to determine optimum frequency.

Engle, V. F., & Graney, M. J. (2000). Biobehavioral effects of Therapeutic Touch. *Image: Journal of Nursing Scholarship, 32*(3), 287-293.

Keywords: anxiety; physiological effects; time perception

Purpose: To document immediate and short-term biobehavioral effects of Therapeutic Touch (TT), estimate the magnitude of TT effects, and compare TT effects to placebo responses.
Design: Repeated measures, pre-test-post-test quasi-experimental design.
Participants: 11 young and middle aged adults, either baccalaureate nursing students during their first clinical course or their faculty.
Interventions: Participants received noncontact TT from an experienced practitioner, who determined treatment duration. A week later, mimic TT was administered for the same length of time by one of two practitioners with no TT experience. Participants wore earplugs and face masks to avoid placebo effect.
Outcome Variables: Four physiological variables were measured: total pulse amplitude, blood pressure, pulse, and skin temperature. Three subjective variables were evaluated: state anxiety (a component of the State-Trait Anxiety Inventory), self-assessed health (10-rung Cantril ladder), and time perception of a 40 second interval of clock time.
Results: Total pulse amplitude and time perception decreased significantly immediately after TT, indicating vasoconstriction and time passing faster, with large and medium effect sizes significantly greater than placebo responses. Vasodilation, a relaxation response, was the expected response.
Conclusions and Recommendations: The clinical significance of the findings is not known and there are several possible explanations for the results. It appears that TT may have adverse and positive outcomes. Additional research is needed with larger, randomized samples living with moderate to severe health problems.

Gagne, D. (1994). The effects of Therapeutic Touch and relaxation therapy in reducing anxiety. *Archives of Psychiatric Nursing, 8*(3), 184-189.

Keywords: anxiety; psychiatry

Purpose: To compare the effects of relaxation therapy, Therapeutic Touch (TT), and mimic Therapeutic Touch with psychiatric inpatients suffering moderate to severe anxiety.
Design: Not specified. Group assignment was random.
Participants: 31 inpatients of a Veterans' psychiatric facility, aged 29 to 69.
Interventions: Participants received 2 sessions of TT, mimic TT (MTT) or relaxation therapy (RT). The TT and MTT sessions were administered by nurses and lasted 15 minutes each. RT was administered by a chaplain for 25-30 minutes using Benson's procedure.
Outcome Variables: Participants completed the State-Trait Anxiety Inventory (STAI) and were rated for amount of motor activity. Belief in the effectiveness of the intervention was also measured.
Results: RT and TT groups showed similar and significant reductions in STAI scores immediately after treatment. The reduction in the MTT group was not significant. Only the RT group showed a significant change in motor activity. Expectancy did not differ among groups but its correlation with the STAI varied with time, preventing further analysis.
Conclusions and Recommendations: Results suggest that both relaxation and TT are effective with experienced anxiety. Replication is recommended with a larger sample, multiple therapists to minimize therapist-specific effects, and the addition of physiological measures.

Giasson, M., & Bouchard, L. (1998). Effect of Therapeutic Touch on the well-being of persons with terminal cancer. *Journal of Holistic Nursing, 16*(3), 383-398.

Keywords: wellbeing; cancer

Purpose: To examine the effect of Therapeutic Touch (TT) on the well-being of persons with terminal cancer.
Design: Time-series design with random group assignment.
Participants: 20 persons with terminal cancer, aged 18-70, on a palliative care unit.
Interventions: The TT group received noncontact TT in bed from an experienced practitioner on 3 consecutive days. The control group participants were asked to lie down and relax, with the investigator silently positioned nearby the participant. Sessions for both groups lasted 15-20 minutes and occurred 1 hour after regularly prescribed analgesic.
Outcome Variables: Giasson's Well-Being Scale was used, incorporating visual analogue scales for pain, nausea, depression, anxiety, shortness of breath, activity, appetite, relaxation, and inner peace.

Results: The TT group showed a mean increase in well-being, while the control group showed a decrease. This difference was significant. Only the TT group experienced significantly increased sensation of well-being over time.
Conclusions and Recommendations: Persons with terminal cancer receiving TT have a higher sensation of well-being than do those participating in a rest period, and sensation of well-being increases following three TT sessions. Replication with a larger sample is recommended.

Gordon, A., Merenstein, J. H., D'Amico, F., & Hudgens, D. (1998). The effects of Therapeutic Touch on patients with osteoarthritis of the knee. *Journal of Family Practice, 47*(4), 271-277.

Keywords: pain; function; well-being**;** arthritis

Purpose: To determine the effects of Therapeutic Touch (TT) on pain, function, and general well-being in patients with osteoarthritis of the knee.
Design: Single-blinded randomized controlled trial.
Participants: 25 family practice patients, aged 40 to 80, with diagnosed osteoarthritis of the knee.
Interventions: Participants received either TT, mock TT, or standard care. Treatments occurred weekly for 6 weeks. Length of TT sessions was not artificially limited and mock sessions were matched for length.
Outcome Variables: The Stanford Health Assessment Questionnaire (HAQ), West Haven-Yale Multidimensional Pain Inventory (MPI) and visual analogue scales (VAS) for pain and general well-being were used. A qualitative depth interview was also conducted.
Results: On 10 of the 13 MPI scales, the TT group had significantly decreased pain and improved function as compared with placebo and control groups. The qualitative depth interview confirmed this result. The TT group began to relapse after completing treatment, but remained generally improved above baseline 7 weeks later. No significant differences were found on the HAQ Functional Disability Index, though significant improvements were seen in the TT group on HAQ general health status questions. No significant differences were found on the VAS pain scores, except once when the placebo group improved more than the TT group.
Conclusions and Recommendations: Significant differences were found in improvement in function and pain for patients receiving TT. A larger study is needed to confirm these results.

Hagemaster, J. (2000). Use of Therapeutic Touch in treatment of drug addictions. *Holistic Nursing Practice, 14*(3), 14-20.

Keywords: drug addictions; consumption; mood; relationships

Purpose: To examine the efficacy of Therapeutic Touch (TT) as an intervention to

prolong periods of abstinence in persons who abuse alcohol and/or other drugs.
Design: Between-subjects pilot study with random group assignment.
Participants: Volunteers recruited from alcohol and/or other drug aftercare groups. Sample size not specified.
Interventions: The TT and mimic (MTT) groups received weekly treatments for 8 weeks. A second control group received only weekly phone calls to determine frequency of drug use.
Outcome Variables: The Addiction Severity Index, Michigan Alcoholism Screening Test, Beck Depression Inventory, and Personal Experiences: Therapeutic Touch and Frequency of Alcohol/Drug Use Questionnaire were used.
Results: The greatest difference in scores from baseline to project end was seen in family/social relationships, employment, and alcohol/drug consumption. Only the TT group improved in these categories. There were no relapses in the TT group and one in each of the other two groups. Depression scores decreased in the TT group only, however the difference between groups did not achieve significance. Alcohol consumption decreased for all groups with no significant differences between them. Responses to the Personal Experiences questionnaire indicated improved sense of well-being and reduced alcohol/drug consumption in the TT group only, though both TT and MTT groups reported physical sensations and practitioners also reported unintentional experiences of energy transfer when offering MTT.
Conclusions and Recommendations: Preliminary indications are that TT could prolong periods of abstinence for alcohol and other drug abusers by improving mood and reducing social stressors. This tenuous conclusion is strengthened by the absence of relapse in the TT group. Further research is needed in which larger sample sizes could add statistical significance to the findings.

Heidt, P. (1981). Effect of Therapeutic Touch on anxiety level of hospitalized patients. *Nursing Research, 30*(1), 32-37.

Keywords: anxiety; cardiovascular disease

Purpose: To study the effects of Therapeutic Touch (TT) on the anxiety level of hospitalized patients, compared to casual touch and no touch.
Design: Not specified. Group assignment was based on matching scores on a self-evaluation questionnaire.
Participants: 90 cardiovascular patients, aged 21 to 65.
Interventions: The TT, casual touch, and no touch groups each received 5 minute sessions administered by the principal investigator, a registered nurse trained in TT. Casual touch involved taking of apical, radial, and pedal pulses. No touch consisted of discussion with the patient about how they were feeling and their response to treatment.
Outcome Variables: The A-State Anxiety scale was used. A post-test patient interview form asking for feelings and thoughts about the intervention was also completed.
Results: The TT group experienced significantly reduced state anxiety. This effect was significantly greater than that experienced by the casual touch and no touch groups. In the post-test interview, those in the TT group reported feelings of relaxation and sleep, while

a predominant theme in the casual touch group was the desire to be helpful to the researcher, and some of the no touch group participants indicated worry and concern.
Conclusions and Recommendations: Research on TT documents and lends further support to nursing research and clinical practice showing the effects of interpersonal relationships on patient care. Replication is recommended with a different population, multiple treatments, and inclusion of physiological indicators of anxiety. In addition, a casual touch procedure without the personal meaning of pulse measurement may be more suitable. The lack of time to resolve issues raised in the no touch discussion may also be considered a limitation or it may reflect a reality in the hospital environment.

Ireland, M. (1998). Therapeutic touch with HIV-infected children: A pilot study. *Journal of the Association of Nurses in AIDS Care, 9*(4), 68-77.

Keywords: anxiety; HIV; children

Purpose: To test the hypothesis that there would be a greater decrease in post-test state anxiety scores immediately following treatment in children treated with Therapeutic Touch (TT) than in children treated with mimic TT (MTT).
Design: Not specified. Group assignment in this pilot study was random.
Participants: 20 HIV-infected children, 6 to 12 years of age, recruited from two pediatric ambulatory care centers specializing in HIV disease.
Interventions: Those in the TT group received seated treatments lasting 5-7 minutes from an experienced practitioner. MTT was provided to seated participants by TT-naive fourth year nursing students and lasted 5 minutes.
Outcome Variables: The A-State Anxiety subscale of the State-Trait Anxiety Inventory For Children, was administered before and immediately after interventions. The children were also asked how they felt pre- and post-intervention.
Results: There was a significant decrease is post-test anxiety in the TT group but not in the MTT group. A variety of feelings and moods were noted pre- and post-treatment. Patterns were not specified. The magnitude of the mean difference in anxiety in the TT group was considerably lower than previous studies, however pre-treatment anxiety scores and verbal responses suggested that this was not an especially anxious sample of children.
Conclusions and Recommendations: The findings provide preliminary support for the use of TT in reducing the state anxiety of children with HIV infection. Future research should include longitudinal studies, comparison to other complementary modalities and nurturing touch, and use of a conceptual approach, such as psychoneuroimmunology, which would provide a biobehavioral framework.

Keller, E., & Bzdek, V. M. (1986). Effects of Therapeutic Touch on tension headache pain. *Nursing Research, 35*(2), 101-106.

Keywords: headache; pain

Purpose: To determine the effects of Therapeutic Touch (TT) on tension headache pain compared to placebo simulation.
Design: Not specified. Participants were blind to their random group assignment.
Participants: 60 volunteers, aged 18 to 59, from university student health clinics, the general university student and staff population, and the public. All had diagnosed tension headaches with no medication in the past 4 hours.
Interventions: Both TT and placebo (mimic) TT groups were asked to sit quietly during their 5 minute sessions and to breathe deeply. The purpose of the breathing was to optimize the TT response. No physical contact was used in either group.
Outcome Variables: Three scales from the McGill-Melzack Pain Questionnaire (MMPQ) were used pre- and post-intervention and at 4 hours.
Results: A significant proportion (90%) of the TT group experienced immediate and sustained reduction in headache pain on all three MMPQ subscales. The degree of relief was significantly greater than the placebo group for each subscale. Twenty-five TT and 15 placebo participants did not resort to intervening headache treatments. In this subset, the average 70% pain reduction sustained over the 4 hours following TT was twice that experienced by the placebo group. This difference was significant for all subscales.
Conclusions and Recommendations: TT may have potential beyond a placebo effect in the treatment of tension headache pain. Replication with different populations comparing TT to other treatments is recommended.

Kelly, A. E., Sullivan, P., Fawcett, J., & Samarel, N. (2004). Therapeutic Touch, quiet time, and dialogue: Perceptions of women with breast cancer. *Oncology Nursing Forum, 31*(3), 625-631.

Keywords: experiences of recipients; dialogue; cancer

Purpose: To compare the perceptions of women with breast cancer to Therapeutic Touch (TT) plus dialogue with perceptions of a control quiet time plus dialogue.
Design: Qualitative study based on Rogers' Science of Unitary Human Beings.
Participants: 18 women with early stage breast cancer (the first 18 women of a larger experimental study).
Interventions: The experimental group received a seated 10 minute TT session from an experienced practitioner while listening to a restful piano solo. This was followed by 20 minutes of dialogue where the nurse listened to the woman's story, answered her questions, and offered her caring supportive presence. The control group listened quietly to the same music for 10 minutes followed by similar dialogue with a different research nurse. These interventions occurred 1-7 days prior to surgery and again within 1 day of hospital discharge.
Data Collection: Telephone interviews were conducted 2-9 days after the post-operative intervention. The interviews lasted 2-28 minutes (mode = 3 minutes) and consisted of six open-ended questions. Questions focused on physical and emotional responses during and after the interventions.
Data Analysis: Content analysis by two investigators was used to identify answers to the interview questions as expressed in words, phrases, and sentences. Their lists were

compared to find commonalities and develop a coding tool. The investigators then coded the transcripts and compared and discussed their coding until they reached agreement. The frequency of the coded responses was calculated to identify recurring themes.
Results: There were few differences in participants' perceptions of experimental and control interventions. Both groups expressed feelings of calmness, relaxation, security, comfort, and a sense of awareness. Some also expressed positive regard for the nurse. Only participants who received TT reported body sensations, while only participants in the control group inquired about the study and its purpose, which may indicate a lack of perceived benefit of dialogue and quiet time.
Conclusions and Recommendations: Although the small sample size mandates caution when drawing conclusions, the women regarded either nursing intervention as a positive experience. Patients should be offered a choice of interventions. Nurses who are not trained in TT may use quiet time and dialogue to enhance feelings of calmness and relaxation in patients with breast cancer. Centering and adoption of an intention to help could also become standard preparation for quiet time and dialogue, which could enhance the nurse's therapeutic use of self. Future studies may explore the effect of treatment length, control for the amount of dialogue desired by each participant, isolate the effect of background music, and develop interview questions that are both understandable and consistent with the guiding theory.

Kramer, N. A. (1990). Comparison of Therapeutic Touch and casual touch in stress reduction of hospitalized children. *Pediatric Nursing, 16*(5), 483-485.

Keywords: stress; children

Purpose: To compare the effectiveness of Therapeutic Touch (TT) and casual touch for stress reduction of hospitalized children.
Design: Not specified.
Participants: 30 children, aged 2 weeks to 2 years, admitted to a pediatric unit for acute illness, injury, or surgery.
Interventions: Interventions were provided for 6 minutes by the researcher when the children were alone and experiencing stressful situations, including painful and nonpainful procedures, being forcibly held, departure of parents, and being awakened from sleep. Those receiving casual touch were comforted by being stroked or patted on head, upper torso, or arms while remaining recumbent in the crib. Those receiving TT also remained recumbent in the crib.
Outcome Variables: The tool, Physiologic Measure of Relaxation in Response to Touch, was developed for the study. It included pulse, peripheral skin temperature, and galvanic skin response, all measured by a biofeedback system.
Results: Physiologic relaxation was significantly greater at 3 minutes and 6 minutes for those receiving TT compared to those receiving casual touch.
Conclusions and Recommendations: TT decreases the time needed to calm a child after a stressful experience. A larger study is recommended with more diverse age groups and stress experiences.

Krieger, D. (1975). Therapeutic Touch: The imprimatur of Nursing. *American Journal of Nursing, 75*(5), 784-787.

Keywords: hemoglobin

Purpose: To determine whether patients receiving Therapeutic Touch (TT) experience significant changes in mean hemoglobin levels.
Design: Not specified.
Participants: 32 registered nurses trained in TT by Krieger or Kunz and 64 patients in health facilities.
Interventions: The experimental group received nursing care which included TT from a registered nurse. The control group received care, including simple touch required for routine nursing procedures, without TT.
Outcome Variables: Hemoglobin values were analyzed by technicians blind to the existence of a study. The nurses completed Shostrum's questionnaire measuring self-actualization.
Results: Hemoglobin levels changed significantly from pre-test values in the TT group. The difference in pre-post levels in the control group was not significant. Self-actualization scores of the nurses exceeded or approached the means for the sample on whom the test was standardized, suggesting that they possessed the qualities of a humanistic nurse, including the necessary motivation to help or heal which is needed for TT to be effective.
Conclusions and Recommendations: The hypothesis that patients receiving TT would experience significant changes in hemoglobin was supported. There is a need for further research on TT and discussion of the inferences of this study for nursing.

Krieger, D., Peper, E., & Ancoli, S. (1979). Therapeutic Touch: Searching for evidence of physiological change. *American Journal of Nursing, 79*(4), 660-665.

Keywords: physiological effects; practitioners; recipients

Purpose: To explore the physiological effects Therapeutic Touch (TT) may have on the healer/therapist as well as on the patient.
Design: Not specified.
Participants: The principal investigator and three patients from the pain and stress control outpatient department of a hospital. The patients included a man in his sixties with severe pain and impaired mobility, a 30 year old woman with a history of fibroid tumors, and a woman in her early thirties with severe chronic migraines and one reported grand mal seizure.
Interventions: On day 1, baseline data was recorded on Krieger while she was doing TT as well as while she was alone meditating. On subsequent days Krieger administered TT to the patients, with both patients and therapist connected to equipment that measured the physiological parameters. The co-investigators simultaneously made direct observations through the window of the electrically-shielded, sound-deadened testing chamber or

inside the chamber itself.
Outcome Variables: Measurements were made of Krieger's bipolar electroencephalogram (EEG) patterns, electro-oculograms (EOG), frontalis electromyographic (EMG) and left palmar galvanic skin response (GSR), and electrocardiogram (EKG). Patient monitoring involved EEG, EKG, palmar GSR, and temperature from the hands.
Results: The most significant finding was Krieger's EEG and EOG data. In all experimental conditions, her record showed an unusual amount of fast beta EEG activity, even when action of the frontalis muscle subsided. The EOG records Krieger's eyes in slight divergence with no movement, indicating a state of steady, deep concentration. No significant changes were recorded in the patient's EEG, EMG, GSR, temperature, or heart rate. Each patient reported relaxing during TT and the physiological records confirmed this. Although the patients had their eyes open during TT, they showed an abundance of large-amplitude alpha activity, a state normally accomplished with closed eyes. All patients experienced improvement with their physical complaints, though this may be unrelated to TT and no claims can be made.
Conclusions and Recommendations: Data from the practitioner revealed that the physiologic style of TT can be considered to be, in actuality, a healing meditation. It was also evident that the experience was important to the patients. Even if improvements were merely due to the placebo effect, learning to systematically maximize this process through the healing meditation of TT would, in itself, be a significant contribution to nursing. The authors believe, however, that TT goes beyond placebo. The report is presented to encourage further inquiry which will allow findings to be generalized.

Lafreniere, K. D., Mutus, B., Cameron, S., Tannous, M., Giannotti, M., Abu-Zahra, H., et al. (1999). Effects of Therapeutic Touch on biochemical and mood indicators in women. *Journal of Alternative and Complementary Medicine, 5*(4), 367-370.

Keywords: biochemical indicators; mood indicators

Purpose: To evaluate the effects of Therapeutic Touch (TT) on hormonal and neurotransmitter indicators, as well as indicators of mood and anxiety. Results with healthy women will inform future research with patients undergoing chemotherapy.
Design: Experimental pilot study with random group assignment.
Participants: 41 healthy female volunteers, aged 30 to 64.
Interventions: The TT group received three sessions from an experienced practitioner. The control group completed questionnaire measures.
Outcome Variables: The Profile of Mood States and State-Trait Anxiety Inventory were used. Hormones implicated in regulation of vomiting, namely cortisol, catecholamines, and nitric oxide, were measured.
Results: The TT group had significantly greater reduction in mood disturbance across sessions relative to the control group, with significantly less self-reported tension, confusion, and anxiety, and increased vigor. The TT group had a significant decrease in levels of nitric oxide. No significant effects emerged for cortisol or catecholamines. Changes emerged most strongly in the third experimental session.

Conclusions and Recommendations: Significant reductions in mood disturbance and nitric oxide were experienced over the course of three TT sessions. Group differences emerged most strongly in the third session, suggesting that the beneficial effects of TT were cumulative. Further research is warranted with breast cancer patients experiencing treatment-related distress.

Lin, Y. S., & Gill Taylor, A. (1999). Effects of Therapeutic Touch in reducing pain and anxiety in an elderly population. *Integrative Medicine, 1*(4), 155-162.

Keywords: pain; anxiety; cortisol; elderly

Purpose: To test the efficacy of Therapeutic Touch (TT) in reducing chronic pain and anxiety in an elderly population.
Design: Pre-post-test, single blind study with stratification by facility prior to randomization into three groups.
Participants: 90 cognitively intact elders experiencing high intensity chronic musculoskeletal pain. Participants were recruited from seven facilities, including retirement communities, nursing homes, adult day care, and community senior centers.
Interventions: The TT group received 20 minute TT sessions from one practitioner, while the mimic group received 20 minute sessions of mimic TT (MT) from another nurse with no TT training, and the control group received standard care (SC) only. TT and MT sessions occurred on 3 consecutive days at the participants' facility.
Outcome Variables: Pain was measured by an 11-point numeric rating scale, while anxiety was measured with Form Y-1 of the State-Trait Anxiety Inventory. Salivary cortisol, a physiological indicator of stress, was analyzed using radioimmunoassay.
Results: There was a significant reduction in pain ratings in the TT group compared to the MT and SC groups, yielding a large effect size of .92. Anxiety in the TT group was also significantly reduced compared to MT and SC groups, with an effect size of .35. Salivary cortisol levels were relatively low at baseline and showed little change. Salivary cortisol levels were strongly correlated with anxiety, but not with pain.
Conclusions and Recommendations: This study demonstrated that TT is effective in reducing self-reported pain and anxiety in an elderly population. Physiological responses to TT need further study.

Meehan, T. C. (1993). Therapeutic Touch and postoperative pain: A Rogerian research study. *Nursing Science Quarterly, 6*(2), 69-78.

Keywords: pain; postoperative

Purpose: To determine the effects of Therapeutic Touch (TT) on pain experience in postoperative patients, compared to mimic TT (MTT), or standard intervention of narcotic analgesic (SI).
Design: A single trial, single-blind, three-group design with randomized block assignment according to pre-intervention pain.

Participants: 108 postoperative patients, aged 23 to 79, having major elective abdominal or pelvic surgery.
Interventions: The TT group received a standardized 5 minute treatment from an RN who was an experienced TT practitioner. MTT was administered for 5 minutes by a trained RN research assistant with no TT experience. The SI was a 5 minute interaction in which the unit staff RN administered prescribed prn narcotic analgesic followed by a general assessment. TT and MTT groups could request analgesic if their interventions didn't help.
Outcome Variables: A visual analogue scale measuring pain intensity was used.
Results: A substantial reduction in pain (42%) occurred in the SI group, with a 13% reduction in the TT group and no reduction in MTT scores. Differences between TT and SI means were significant, indicating narcotics were more effective, while differences in means between TT and MTT approached significance. There were significantly fewer requests for analgesic in the TT group than the MTT group and TT participants waited a significantly longer time before requesting analgesic. Among participants who waited at least 1 hour before requesting analgesic, the TT group had a 37% mean decrease in pain versus a 25% mean decrease in the MTT group.
Conclusions and Recommendations: TT did not significantly decrease postoperative pain compared to the placebo control intervention. Secondary analyses suggest that TT may decrease patients' need for analgesics. Future studies should establish greater validity and reliability of MTT and compare the effects of TT against mild analgesics. A longer, more natural, length of TT intervention may provide a better test of its efficacy with intense pain.

Olson, M., Sneed, N., Bonadonna, R., Ratliff, J., & Dias, J. (1992). Therapeutic Touch and post-hurricane Hugo stress. *Journal of Holistic Nursing, 10*(2), 120-136.

Keywords: stress; physiological effects

Purpose: To determine the effect of Therapeutic Touch (TT) in reduction of stress following a natural disaster and to investigate methodological issues raised in previous studies regarding treatment length and documentation of nonverbal interaction.
Design: Preliminary repeated-session approach.
Participants: 23 university faculty, staff, and students, aged 18-60, who either worked during the hurricane or suffered loss as a result of the event.
Interventions: Participants received two TT sessions, lasting 6.8-20 minutes and separated by 3-7 days, from one of two experienced practitioners. Eight participants attended the third control session involving test completion, physiological monitoring, and sitting quietly with the practitioner for 20 minutes.
Outcome Variables: Heart rate, blood pressure, skin temperature, and respiratory rate were measured and visual analogue scales evaluating current and usual stress levels were completed. Practitioners and participants also marked figure forms in places where sensations were perceived during treatment.
Results: Anxiety scores decreased significantly after TT and also when TT sessions were compared to control sessions. Physiological outcomes of TT showed a trend towards

relaxation, however were not significantly different between treatment and control sessions. Decreased state anxiety was significantly correlated with session length. Drawings of location of sensations proved difficult to score.
Conclusions and Recommendations: Data support earlier findings of reductions in perceived stress following TT among stressed individuals. Future studies should take place in environmentally controlled settings, use nondistracting physiological measurement techniques, determine treatment length by subjective cues within a defined range, and use qualitative measures of agreement between practitioner and participants to validate the interaction.

Olson, M., & Sneed, N. (1995). Anxiety and Therapeutic Touch. *Issues in Mental Health Nursing, 16*(2), 97-108.

Keywords: anxiety

Purpose: To work out the methodological problems inherent in studies of Therapeutic Touch (TT) and to investigate the effects of TT in a healthy sample of adults experiencing an episodic stressful event.
Design: Four-group, repeated measures experimental design. Participants were divided into high- and low-anxiety groups based on scores on the State-Trait Anxiety Inventory (STAI) and then randomly assigned to TT or control groups.
Participants: 40 professional caregivers enrolled in health-related graduate programs.
Interventions: The TT group received seated TT from an experienced practitioner and the control group sat quietly in the presence of the investigator for 15 minutes. This occurred 3-4 days before a known stressor (exam, presentation, or paper due date) and again 1 day prior.
Outcome Variables: The STAI, Profile of Mood States (POMS), and a visual analogue scale (VAS) for anxiety were administered at baseline, after each session, and on the day after the stressor.
Results: Among the high-anxiety participants, both TT and control groups experienced decreased STAI scores, with the TT group becoming less anxious compared to the control group after the third session. Among the low-anxiety participants, both TT and control groups experienced a slight decrease in anxiety scores, with the control group then experiencing an increase prior to the stressor. Calculation of means across sessions revealed that both control groups experienced consistent anxiety levels before the stressor and a drop afterwards, compared to the two TT groups who experienced reduced anxiety levels before the stressor with an increase in anxiety afterwards. None of these changes were significant and calculations revealed that a sample size of 76 people in each group would be needed to demonstrate significance of STAI score differences.
Conclusions and Recommendations: Consistent with previous studies, perceived anxiety seems to decrease after TT in highly anxious persons. There is little value in continuing to study TT in persons with low anxiety. Highly significant correlations among the VAS, STAI, and POMS suggest that the simple and efficient VAS can be used in future studies.

Olson, M., Sneed, N., LaVia, M., Virella, G., Bonadonna, R., & Michel, Y. (1997). Stress-induced immunosuppression and Therapeutic Touch. *Alternative Therapies in Health and Medicine, 3*(2), 68-74.

Keywords: stress; immune function

Purpose: To evaluate the effectiveness of Therapeutic Touch (TT) in reducing the adverse immunological effects of stress among highly stressed students. Long-term goals are to develop methods by which a variety of stress-reduction techniques can be tested for efficacy.
Design: Experimental pilot study with random group assignment.
Participants: 20 healthy medical and nursing students taking professional board examinations who were highly stressed, as indicated by scores on the state scale of the State-Trait Anxiety Inventory (STAI).
Interventions: The TT group received three treatments from an experienced practitioner in the week prior to exams. The control group completed the research tool and contributed a blood sample at each data collection session. Both groups received a dose of *haemophilus* vaccine on the day before their exams in order to compare in vivo antibody response to a safe vaccine.
Outcome Variables: Participants completed a revised Impact of Events Scale, the Profile of Mood States (POMS), and the STAI. Blood samples were analyzed for T-lymphocyte function (CD25) and levels of three major immunoglobulin classes and IgG subclasses.
Results: Participants who received TT and those who did not had significantly different levels of IgA and IgM. CD25 and IgG levels also differed in the expected direction between the two groups, but the differences were not significant. Programmed cell death was also significantly different between groups, though no explanation was offered for this finding. No difference was found between groups in response to the vaccine. STAI scores changed in the expected direction, but did not reach significance.
Conclusions and Recommendations: Some evidence from this study suggests that TT may influence the immune system, though the small sample size mandates cautious interpretation of the results. Replication of the testing of immunoglobulins in relationship to stress and stress-reduction techniques is clearly needed. Future studies should involve larger samples, include more careful controls for nutritional status, and eliminate the POMS measure as well as measures of antibodies to *haemophilus*. There is a need for further development of immunological theory and appropriate control measures for TT.

Philcox, P., Rawlins, L., & Rodgers, L. (2002). Therapeutic Touch and its effect on phantom limb and stump pain. *Journal of the Australian Rehabilitation Nurses' Association, 5*(1), 17-21.

Keywords: pain; well-being; physiological effects; phantom limb

Purpose: To determine the effectiveness of Therapeutic Touch (TT) in alleviating the stump and phantom limb pain of amputees.

Design: Single blind randomized controlled clinical pilot study.
Participants: 9 amputees with stump and/or phantom pain.
Interventions: Participants were randomly assigned to receive TT, mimic TT, or no TT. Sessions took place 3 times a week for 4 weeks and lasted approximately 20 minutes. Participants were lying on their beds and were asked to wear an eye mask so that they were unaware of group assignment.
Outcome Variables: Vertical visual analogue scales for pain and well-being were used. Observations were made of temperature, pulse, respirations, and blood pressure.
Results: Improvement in pain was significantly greater in the TT group immediately after treatment with this group experiencing a 75% improvement compared to 29% in the mimic group and 21% in the control group. Greater improvements in the TT group 1 hour after treatment did not reach significance. Initial review of the well-being data showed that it was not sufficiently detailed or time-specific, therefore further analysis was deemed unwarranted. Analysis of vital signs failed to show any significant change with the exception of an increase in blood pressure in the mimic group, a result whose clinical significance was questioned.
Conclusions and Recommendations: This study supports the use of TT by nurses working in a rehabilitation setting. Further studies with a larger sample are recommended.

Quinn, J. F. (1984). Therapeutic Touch as energy exchange: Testing the theory. *ANS Advances in Nursing Science, 6*(2), 42-49.

Keywords: anxiety; cardiovascular disease

Purpose: To determine the effect of Therapeutic Touch (TT) without physical contact on state anxiety of hospitalized cardiovascular patients.
Design: Experimental pre-test-post-test design with random group assignment.
Participants: 60 hospitalized cardiovascular patients, aged 36 to 81.
Interventions: The TT group received 5 minutes of noncontact TT from nurses experienced in TT. The control group received 5 minute mimic TT sessions from nurses with no knowledge of TT.
Outcome Variables: The State-Trait Anxiety Questionnaire was used.
Results: The TT group demonstrated a significantly greater decrease in state anxiety than the mimic control group.
Conclusions and Recommendations: The theorem that the effects of TT do not depend on actual physical contact was supported. Combined with Heidt's work, this suggests that an average 17% decrease in state anxiety can be expected with TT in this population. Further research is needed to increase the reliability of this finding, test the theory of energy exchange, and compare the effects of contact TT with noncontact TT.

Quinn, J. F. (1989). Therapeutic Touch as energy exchange: Replication and extension. *Nursing Science Quarterly, 2*(2), 79-87.

Keywords: anxiety; physiological effects; cardiovascular surgery

Purpose: To replicate and extend previous research (Quinn, 1984) and determine the effect of noncontact TT, without eye or facial contact, on anxiety level among open heart surgery patients.
Design: Experimental pre-test-post-test design with random group assignment.
Participants: 153 patients undergoing open heart surgery, aged 29 to 83.
Interventions: On the day prior to surgery, participants received either TT, mimic TT, or no treatment. The TT and mimic TT groups lay facing away from the practitioner during a 5 minute session administered by the principal investigator. The no treatment group was asked to remain on their sides in bed for the 5 minute 'treatment' period.
Outcome Variables: The A state anxiety scale (STAI) was used. Systolic blood pressure and heart rate were also monitored.
Results: All of the post-test measures changed in the predicted direction, i.e. the largest change occurred in the TT group, however none of the differences among groups were significant. Diastolic blood pressure, thought to be a more stable component, decreased significantly more in the TT group.
Conclusions and Recommendations: Conclusions about effectiveness cannot be made due to the pervasive use of sedating and cardiovascular medications, the 5 minute limit on treatment time, and use of the investigator as practitioner. Each of these concerns is discussed in detail. Future research should address these limitations and include qualitative data from both the practitioner and participant.

Quinn, J. F. (1993). Psychoimmunologic effects of Therapeutic Touch on practitioners and recently bereaved recipients: A pilot study. *ANS Advances in Nursing Science, 15*(4), 13-26.

Keywords: anxiety; mood; experience of time; lymphocyte activation; bereavement

Purpose: To address conceptual inconsistencies and other methodologic issues identified in previous Therapeutic Touch (TT) research and provide direction for future studies by exploring the appropriateness and suitability of a combination of psychologic and immunologic outcome measures.
Design: Descriptive with research questions derived from a unitary perspective.
Participants: Two experienced TT practitioners and four recently bereaved persons, aged 47 to 72.
Interventions: One participant received four treatments, while the others received seven. One practitioner administered 18 of the treatments and the other 14. Practitioners administered TT as they usually did (contact or noncontact) and for the length of time they deemed appropriate.
Outcome Variables: The State-Trait Anxiety Inventory (STAI) and Affect Balance Scale (ASB) were used as well as a visual analogue scale measuring perception of the effectiveness of TT. Recipient and practitioner estimates of length of treatment, a possible indicator of assumed shifts in consciousness, were recorded. Blood samples were evaluated for seven measures of immune function.

Results: Recipients had an average 29% decrease in state anxiety post-TT. Trait anxiety increased in two participants and decreased in two. Anxiety scores for practitioners were at, or close to, zero pre- and post-TT and seemed unrelated to recipient anxiety scores. Almost all positive affect dimensions on the ABS increased dramatically in recipients, as did the positive total, while there was a dramatic decrease in almost all negative affect dimensions and the negative total. This pattern was similar among practitioners. Recipients from one practitioner rated the effectiveness of their treatments 54% higher than recipients of the second practitioner and their ratings were also more congruent with the practitioner's. Similarly, recipients of the first practitioner experienced greater time distortion and the direction of time distortion was the same as the practitioner. Time distortion congruence was 50% with the second practitioner. There were no consistent variations in four of the immunologic markers. There was a consistent decrease in the percent of suppressor T cells for all recipients. Practitioners had 47% and 35% lower T8 than recipients at baseline and one practitioner experienced a further decline. Changes occurred in two other immunologic measures but were not consistent.
Conclusions and Recommendations: Changes that may be related to TT occurred in both recipients and practitioners and were observed in immunologic, psychologic, and unitary measures. Replication with a large sample, a longitudinal approach, and videotaping of treatments is recommended and should include further exploration of immunological response and experience of time.

Randolph, G. L. (1984). Therapeutic and physical touch: Physiological response to stressful stimuli. *Nursing Research, 33*(1), 33-36.

Keywords: stress; physiological effects

Purpose: To determine the physiological difference between groups reacting to stressful stimuli when treated by either Therapeutic Touch (TT) or physical touch.
Design: Experimental double blind study with random group assignment.
Participants: 60 healthy female college students, aged 19 to 53.
Interventions: An unpleasant film was used as the stressful stimulus. It depicted a tribal ceremony involving operations performed with a sharp stone on the genitals of adolescent boys. Participants received the interventions while viewing the film. The TT group received modified TT from one of eight registered nurses with more than a year of TT experience. The control group received physical touch with the same hand position (abdomen and back) from one of eight registered nurses with no knowledge of TT.
Outcome Variables: Physiological response was measured by muscle tension (skin conductance level), electromyography (EMG), and skin temperature, which were representative of central, autonomic, and peripheral nervous system functions.
Results: For both groups, skin conductance and EMG readings demonstrated an increased physiological stress response to the film, while skin temperature remained unchanged. There were no significant differences found in the responses between groups.
Conclusions and Recommendations: While TT is an increasingly taught, practiced, and research-supported phenomenon, this study found no differences in its testing. Future researchers may wish to consider the effect of employing healthy versus ill participants.

TT research would also benefit from the development of a test validating the practitioner's ability.

Samarel, N., Fawcett, J., Davis, M. M., & Ryan, F. M. (1998). Effects of dialogue and Therapeutic Touch on preoperative and postoperative experiences of breast cancer surgery: An exploratory study. *Oncology Nursing Forum, 25*(8), 1369-1376.

Keywords: anxiety; mood; pain; cancer

Purpose: To obtain preliminary data and determine the feasibility of a large scale study to test the efficacy of Therapeutic Touch (TT) and dialogue on pre- and postoperative anxiety and mood and postoperative pain from breast cancer surgery.
Design: Experimental with random group assignment and research nurses blind to the differences in the experimental and control group treatments.
Participants: 31 women, aged 31-84, following diagnosis of breast cancer but prior to definitive surgery.
Interventions: The TT group received a seated 10 minute session from an experienced practitioner while listening to a restful piano solo. This was followed by 20 minutes of dialogue where the nurse listened to the woman's story, answered her questions, and offered her caring, supportive presence. The control group listened quietly to the same music for 10 minutes followed by similar dialogue with a different research nurse. These interventions occurred 1-7 days prior to surgery and again within 1 day of hospital discharge.
Outcome Variables: The State-Trait Anxiety Inventory, Affects Balance Scale, and a visual analogue scale for pain were used.
Results: After controlling for trait anxiety, the TT group had significantly lower state anxiety following the preoperative treatment session than the women in the control group. No differences were found for preoperative mood or for any postoperative measures.
Conclusions and Recommendations: The combination of dialogue and TT was associated with a lower preoperative pattern manifestation of state anxiety than dialogue and quiet time. Future studies with a larger and more diverse sample are needed using a design that will isolate the effects of TT and include the higher anxiety period associated with diagnosis. To enhance recruitment, researchers should educate surgeons about study benefits or seek alternative recruitment strategies.

Simington, J. A., & Laing, G. P. (1993). Effects of Therapeutic Touch on anxiety in the institutionalized elderly. *Clinical Nursing Research, 2*(4), 438-450.

Keywords: anxiety; elders

Purpose: To determine the effects of Therapeutic Touch (TT) on state anxiety in institutionalized elderly persons.
Design: Double-blind, 3-group experimental design with random group assignment.

Participants: 105 cognitively capable residents of long-term care facilities.
Interventions: The TT group received TT from the nurse investigator. The TT process was modified so that it was provided during a back rub. Control group 1 received a back rub from the investigator, who purposefully prevented centering and energy transfer. Control group 2 received a routine back rub from a nurse unfamiliar with TT. All back rubs were performed for 3 minutes using a specified procedure, with participants asked to take slow deep breaths.
Outcome Variables: The State-Trait Anxiety Inventory was used, with modifications for an aging population. To control for testing effect, pre-intervention measures were not used, homogeneity being assumed by random assignment.
Results: Anxiety of the TT group was significantly lower than control group 2. Anxiety was also lower among the TT group than control group 1, but this difference was not significant. No significant difference was found between scores for the two control groups.
Conclusions and Recommendations: Findings did not strengthen the belief that effects of TT are more than placebo, however were consistent with the idea that once a person learns TT, it may be impossible to discontinue the process at will. Results suggest that TT has potential for enhancing quality of life for this population. Replication is recommended and should explore the sustained and cumulative effects of TT on anxiety as well as other means of measuring anxiety with elderly persons.

Smith, D. W. (2000). Pattern changes in people experiencing Therapeutic Touch, phase I. *Rogerian Nursing Science News, 12*(3), 3-4 [Abstract].

Keywords: power; spirituality; effects on TT students

Purpose: To identify human field pattern changes in people learning to practice Therapeutic Touch (TT).
Design: Pre-experimental.
Participants: 63 university students.
Interventions: Completion of a three credit university course on TT theory and practice over three semesters.
Outcome Variables: Power and spirituality, both theoretically derived within Rogers' Science of Unitary Human Beings, were measured as human field indicators of increasing diversity. Power was measured by Barrett's Power as Knowing Participation in Change Test, while spirituality was measured with Elkin's Spiritual Orientation Inventory.
Results: After completing the TT course, students manifested significantly greater power and spirituality. The relationship of power to spirituality was supported in pre- and post-tests, as in previous studies.
Conclusions and Recommendations: This study demonstrated a relationship of TT to power and spirituality among TT students. It provided a foundation for an experimental study using these and other measures to study pattern changes in healers and healees before and after a series of TT sessions.

Smith, D. W. (2001). Pattern changes in people experiencing Therapeutic Touch, phase II. *Rogerian Nursing Science News Online, 1*(1), [Abstract].

Keywords: power; spirituality; diversity; pain; stress; physiological effects

Purpose: To measure manifestations of pandimensional change in human field patterns in both healers and healees experiencing a series of Therapeutic Touch (TT) treatments.
Design: Pre-experimental.
Participants: 19 volunteers.
Interventions: Participants received 5-8 TT sessions from one of four experienced TT nurse practitioners. Treatment duration was determined by the healer's field pattern recognition and ranged from 5-19 minutes.
Outcome Variables: For both healers and healees the Power as Knowing Participation in Change Test, Spiritual Orientation Inventory, and Diversity in Human Field Patterning Scale were used to measure power, spirituality, and diversity, concepts derived from Rogers' Science of Unitary Human Beings. Pain and stress were measured by visual analogue scales while pulse and blood pressure were measured electronically.
Results: Participants experienced significant reduction is stress each week; lessened pain each week with significant levels for 4 weeks; lower systolic blood pressure all but the first week with 6 weeks at significant levels; and slower pulse all but the eighth week with significance for 4 of those weeks. Spirituality was also significantly greater among healers and healees. Changes in power were in the predicted direction but did not achieve significance. There was significant change in diversity away from the predicted direction. No relationship was found among outcomes of TT and duration of treatment.
Conclusions and Recommendations: The findings support the notion that TT promotes pandimensional field pattern changes and that similar pattern changes manifest in both healers and healees. Support for TT as an intervention for pain and stress is also demonstrated.

Smith, D. W., Arnstein, P., Cowen Rosa, K., & Wells-Federman, C. (2002). Effects of integrating Therapeutic Touch into a cognitive behavioral pain treatment program. *Journal of Holistic Nursing, 20*(4), 367-387.

Keywords: pain; power; self-efficacy; cognitive behavioral treatment

Purpose: To determine the effects of offering Therapeutic Touch (TT) as an adjunct to cognitive behavioral therapy (CBT) for people with chronic pain.
Design: Pilot study with a preexperimental (pre-test/post-test) design and randomized group assignment.
Participants: 12 adults, aged 31-56, experiencing pain for periods ranging from 13 months to 22 years.
Interventions: For the first 3 weeks, those in the experimental group received three TT sessions from experienced practitioners with the duration of treatment determined by energy field cues. In addition, both the TT and control groups were taught methods of

independently eliciting the relaxation response. Beginning in the fourth week, all participants met together for a nine-session CBT program which included daily practice, readings, and exercises.
Outcome Variables: The Pain Disability Index measuring interference with daily living, two visual analogue scales measuring intensity of pain and distress, and the Chronic Pain Self-Efficacy Scale, measuring ability to use specific skills to cope/function, were used. The Power as Knowing Participation in Change Tool measuring awareness, choice, freedom to act intentionally, and involvement in creating change was also used. In addition, participants submitted weekly summaries of pain, relaxation practice, and pain treatments.
Results: Trends for the entire sample were in a desirable direction for all variables. The TT group experienced significant improvements in power and self-efficacy. Given the small sample size, there was not enough power to show significant differences when the control group was compared to the experimental group, however trends suggested greater gains for those in the TT group for all variables. The TT group also had a lower attrition rate.
Conclusions and Recommendations: Findings were consistent with earlier research supporting the benefits of using CBT and TT for people with chronic pain and add to the body of knowledge that TT lowers emotional distress, decreases pain sensations, and enhances unitary power. This suggests that TT may be a useful adjuvant to CBT for people with chronic pain to improve clinical outcomes, reduce attrition, and enhance unitary power. Larger randomized clinical trials are needed. These should blind the CBT leader and investigator to group assignment and randomize patients to one of three arms: TT only, TT or relaxation plus CBT for the duration of the study, or CBT only.

Smith, M. C., Reeder, F., Daniel, L., Baramee, J., & Hagman, J. (2003). Outcomes of touch therapies during bone marrow transplant. *Alternative Therapies in Health and Medicine, 9*(1), 40-49.

Keywords: bone marrow transplant; engraftment; complications; perceived benefit

Purpose: To investigate the effects of Therapeutic Touch (TT) and massage therapy (MT) on the outcomes of engraftment time, complications, and perceived benefits of therapy during bone marrow transplant.
Design: Randomized clinical trial without blinding to group assignment.
Participants: 88 patients, aged 18 to 70, receiving either autologous or allogeneic bone marrow transplant were recruited. Twenty seven of them later withdrew, primarily because they had wished to be assigned to the MT group.
Interventions: Participants in the TT group received TT from nurses with at least 1 year of TT practice. Mutual sense of completion indicated time to end the session. Participants in the MT group received a 30 minute Swedish massage from registered nurses, certified in massage therapy with at least 3 years of experience. Those in the friendly visiting (FV) control group received 30 minutes of social conversation from a lay person who was not a family member. Interventions occurred every third day from the initiation of chemotherapy until program discharge.

Outcome Variables: Time for engraftment (days from transplant until third consecutive neutrophil count >500 per (mu)L, complications (scores on a toxicity index that represented variations in function in 11 areas), and patients' perceptions of benefits of therapy (scores on a 12-item semantic rating scale developed by the researchers) were measured.
Results: No significant difference in engraftment time was found among the three groups, however the TT group had the lowest mean number of days for engraftment despite having a higher proportion of patients receiving the more toxic treatment protocol. Neurological complications were significantly decreased among the MT group compared to the FV control group. No differences were found among the three groups with respect to the other 10 complication categories or in the total mean score for complications. The response rate of the benefits survey, received within 2 weeks of discharge, was 46%. Patient perception of benefit was significantly higher for the MT group compared to the FV group. The mean scores on the comfort subscale were significantly higher for patients receiving either MT or TT compared with the FV control group.
Conclusions and Recommendations: Massage therapy may be effective in altering the psychological and neurological complications associated with chemotherapy during bone marrow transplant. Both massage and Therapeutic Touch provide comfort to patients undergoing this process, which warrants integration of TT and MT into routine patient care. Results should be viewed with caution because of the number of withdrawals, low response rate on the perception survey, and relatively minimal experience of the TT practitioners. Future research should involve larger samples, TT therapists with at least 5 years of experience, analysis of characteristics of participants who withdraw, evaluation of additional physiological indicators, more attention to mimic and placebo control procedures, and measures to identify ideal length, time, and frequency of treatments as well as duration of benefits.

Sneed, N., Olson, M., Bubolz, B., & Finch, N. (2001). Influence of a relaxation intervention on perceived stress and power spectral analysis of heart rate variability. *Progress in Cardiovascular Nursing, 16*(2), 57-64, 79.

Keywords: autonomic nervous system; heart rate variability; anxiety; stress; effects on practitioners and recipients

Purpose: To determine whether power spectral analysis (PSA) of heart rate variability (HRV) has potential as an outcome measure for assessing effectiveness of the stress-reducing technique Therapeutic Touch (TT).
Design: Non-experimental.
Participants: 30 healthy employees and students, aged 23 to 55, of a university medical center.
Interventions: Following a rest period, participants received seated TT from one of three registered nurse TT practitioners with more than 10 years of experience. Treatment length was at the discretion of the practitioner and ranged from 6-16 minutes.
Outcome Variables: The state anxiety scale of the State-Trait Anxiety Inventory (STAI)

was used as a validation measure for a stress/anxiety visual analogue scale (VAS). Power spectral analysis (PSA) of ambulatory electrocardiogram (EKG) tapes was also conducted. All measures were performed on both recipients and practitioners.
Results: Perceived stress (VAS) decreased significantly for both practitioners and recipients. Mean parasympathetic to sympathetic ratio (HF/LF) increased significantly for recipients but was unchanged for practitioners. There was little association between participants' VAS scores and HF/LF ratios or between any practitioner and participant scores. Further analysis revealed that four participants accounted for the overall change in mean HF/LF ratio and that 7 participants had HF/LF change in the opposite direction from that predicted even though they perceived less stress (VAS) at the end of the treatment.
Conclusions and Recommendations: The validity of PSA as a measure of autonomic nervous system (ANS) balance in response to relaxation is questioned. Future studies should include a control group, other measures of autonomic nervous system activity, and recruit participants who perceive themselves to be highly stressed.

Snyder, M., Egan, E. C., & Burns, K. R. (1995). Interventions for decreasing agitation behaviors in persons with dementia. *Journal of Gerontological Nursing, 21*(7), 34-40.

Keywords: relaxation; agitated behaviors; Alzheimer's Disease

Purpose: To explore the efficacy of hand massage and Therapeutic Touch (TT) in producing relaxation and decreasing agitation behaviors in persons with dementia.
Design: An experimental crossover design was used in this pilot study with participants serving as their own controls.
Participants: 17 residents, aged 66 to 90, with the highest incidence of agitation behaviors on a 31-bed Alzheimer Care Unit.
Interventions: Participants received 5 minutes of hand massage for 10 days, 10 minutes of TT for 10 days, and 10 minutes of presence (which served as the control condition) for 5 days. Five day observation periods occurred before and after each intervention. The modified TT process used in the study involved centering, transmitting calming energy with one hand on the participant's back and the other holding the participant's hand, and unruffling through the entire field. All interventions were administered by the registered nurse investigators.
Outcome Variables: Relaxation was measured by pulse rate and Luiselli et al.'s Relaxation Checklist. Three anxious behaviors that were specific for each participant were identified and their frequency rated on a 5-point scale before and after interventions. Three targeted agitation behaviors that were specific for each participant were identified and their frequency monitored by agency staff in 3-hour increments from 6 a.m. to 9 p.m. during the 45 days of data collection.
Results: Indices of relaxation increased significantly after hand massage and TT for both the first and second 5 days of these interventions. No significant changes occurred with presence. Significant improvements in anxiety behaviors occurred during both 5-day periods of hand massage and during the second 5 days of TT. No significant differences

occurred with presence. No significant differences were found in the frequency of targeted agitation behaviors for any of the groups.
Conclusions and Recommendations: Both hand massage and TT produced a relaxation response in persons with dementia, with hand massage producing a greater level of relaxation than TT. Both interventions were more effective than presence. The length of the relaxation response was not determined and needs further study as hand massage and TT may produce relaxation of sufficient length to diminish agitation behaviors during nursing care. Future studies should consider the extent to which the protocol can be implemented and the presence of adverse environmental variables. Studies should also involve larger samples and explore other interventions.

Turner, J. G., Clark, A. J., Gauther, D. K., & Williams, M. (1998). The effect of Therapeutic Touch on pain and anxiety in burn patients. *Journal of Advanced Nursing, 28*(1), 10-20.

Keywords: pain; anxiety; T-lymphocytes; burns

Purpose: To determine whether Therapeutic Touch (TT) versus sham TT produces greater pain relief as an adjunct to narcotic analgesia, a greater reduction in anxiety, and alterations in plasma T-lymphocyte concentrations among burn patients.
Design: Single-blinded randomized clinical trial.
Participants: 99 patients, aged 15 to 68, hospitalized for severe burns.
Interventions: The TT group was treated by experienced practitioners. The control group received sham TT from trained research assistants with no prior knowledge of TT. Both groups received the intervention daily for 5 days.
Outcome Variables: The McGill Pain Questionnaire, visual analogue scales (VAS) for pain, anxiety and satisfaction with therapy, and an Effectiveness of Therapy Form were used. Lymphocyte subset and white blood cell counts were analyzed and use of medication for anxiety, depression, and pain was monitored.
Results: The TT group reported significantly greater reduction in pain on the McGill tool and in anxiety on the VAS. Lymphocyte subset analysis (n=11) showed decreasing total CD8 and lymphocyte concentration for the TT group. The impact of this change on immunity is unknown. Differences in other measures and medication use were not significant.
Conclusions and Recommendations: Results suggest that the combination of TT with analgesia produced more complete pain relief than analgesia alone and support using TT as an adjunct to analgesia. The findings add support to the effectiveness of TT in reducing pain and anxiety. Replication should include a treatment as usual control group and exclude background music.

Vaughan, S. (1995). The gentle touch. *Journal of Clinical Nursing, 4*(6), 359-368.

Keywords: physiological effects; pain

Purpose: This pilot study investigated the effect that Therapeutic Touch (TT) may have on measurable physical signs and health perception.
Design: Quasi-experimental.
Participants: 60 adults, aged 20 to 71, recruited from a TT clinic, hospital, and community group.
Interventions: The TT group received TT for 5 minutes in a supine position then were asked to turn over to a prone position for a further 5 minutes of treatment. Treatment length and positions were the same for the group receiving mimic TT. The control group had their eyes covered with cotton pads while lying supine. Apart from being asked to turn over after 5 minutes, the practitioner did not approach these participants, but sat in a chair on the other side of the room. The nurse researcher acted as practitioner for all three groups and relaxation music was played during all sessions.
Outcome Variables: Blood pressure and heart rate were measured electronically and skin responses were measured with a modified biofeedback machine. Pain was assessed with a visual analogue scale and participants completed a researcher-designed questionnaire on their perception of their health status. The relaxation response was also measured by an unspecified method.
Results: There were no significant changes in physical signs. There was a trend in the expected direction for systolic blood pressure, but the predicted trend for diastolic blood pressure was actually reversed. No obvious trends were noted in the pulse rate. Changes in the relaxation response were not significant, but there was a trend in the expected direction. Pain relief immediately after the first session and again 1 week later was perceived as significantly improved by the TT group only. The duration of the effects was also significant for the TT group only, some of whom continued to feel health benefits a week later.
Conclusions and Recommendations: The TT group perceived significant beneficial changes in their health status, particularly those in pain. TT should be viewed by nurses as an extremely useful skill to develop. Future studies should include larger samples, exclude anyone undergoing concurrent nonpharmacological treatment, and explore further the effect of TT on diastolic blood pressure.

Wirth, D. P. (1990). The effect of non-contact Therapeutic Touch on the healing rate of full thickness dermal wounds. *Subtle Energies, 1*(1), 1-20.

Keywords: wound healing

Purpose: To test the hypothesis that individuals who were treated by a Therapeutic Touch (TT) practitioner with noncontact TT would have a faster rate of wound healing than those who were not treated.
Design: Randomized double-blind placebo-controlled study.
Participants: 44 healthy male university students, aged 21 to 32.
Interventions: Full thickness dermal wounds were incised on the lateral deltoid region using a skin punch biopsy instrument and wounds were dressed with gas-permeable polyurethane dressings. Active and control treatments were comprised of five daily 5-minute sessions of exposure to a hidden experienced TT practitioner or to sham exposure.

The TT procedure was modified by using a special door to isolate the practitioner from the participants, precluding the role of suggestion, expectation, and the placebo effect.
Outcome Variables: Wound surface areas were measured on days 0, 8, and 16 using a direct tracing method and digitization system.
Results: The TT group experienced a significant acceleration in the rate of wound healing as compared to the control group at days 8 and 16. Complete healing on day 16 occurred in 13 of the 23 TT treated group versus 0 of the 21 in the control group.
Conclusions and Recommendations: The results indicate that noncontact TT is an effective healing modality on full-thickness human dermal wounds. The use of a double-blind design, as well as a specially modified door to isolate the TT practitioner from the participants, added confidence to the results by precluding the role of suggestion, expectation, and the placebo effect.

Wirth, D. P., Richardson, J. T., Eidelman, W. S., & O' Malley, A. C. (1993). Full thickness dermal wounds treated with non-contact Therapeutic Touch: A replication and extension. *Complementary Therapies in Medicine, 1*(3), 127-132.

Keywords: wound healing

Purpose: To study the effect of noncontact Therapeutic Touch (NCTT) on the rate of wound healing and associated factors for full thickness dermal wounds.
Design: Double-blind, placebo controlled study with random group assignment.
Participants: 24 healthy volunteers, aged 35 to 63, recruited from a group practicing relaxation and visualization techniques.
Interventions: Full thickness dermal wounds were administered in the deltoid area with a punch biopsy instrument by an experienced physician blinded to experimental protocol and participant assignment. Wounds were dressed with occlusive polyurethane dressings. The TT group received 5 minutes of TT from an RN with over 5 years of TT experience. The TT procedure was modified so that sessions took place through a one-way mirror in order to eliminate the influence of suggestion, expectation, and the placebo effect. Unknown to the participants, the practitioner room was vacant when the control group participants were present. Interventions occurred daily for 10 days.
Outcome Variables: At dressing changes on days 5 and 10, wounds were assessed by a physician for infection, re-epithelialization, wound closure, scar formation, pigmentation of scar, and cosmetic appearance. In addition, photographs of the wounds taken on these days were shown to three independent physicians who were asked to categorize them as fully healed or not fully healed.
Results: The wound re-epithelialization rate was significantly greater for the TT group versus the control group on both day 5 and day 10. The control group contained 12 unhealed wounds on day 5 and 8 unhealed wounds on day 10. The TT group, in contrast, contained 5 unhealed wounds on day 5 and only 2 unhealed wounds on day 10. There was insufficient data to analyze differences in infection as only one participant was affected. The large number of unhealed wounds in the control group also precluded analysis of scar formation, pigmentation, and cosmetic appearance.
Conclusions and Recommendations: The results suggest that NCTT, in combination

with traditional medical care, is a safe and effective therapeutic intervention for full thickness dermal wounds. Further research is needed to determine if NCTT therapy would be beneficial to the healing process of other types of wounds.

Wirth, D. P., Barrett, M. J., & Eidelman, W. S. (1994). Non-contact Therapeutic Touch and wound re-epithelialization: an extension of previous research. *Complementary Therapies in Medicine, 2*(4), 187-192.

Keywords: wound healing

Purpose: To examine certain aspects of the energy based theory of non-contact Therapeutic Touch (NCTT) and the mechanisms of action by which NCTT may operate.
Design: Randomized, double-blind, within subject, crossover design.
Participants: 25 healthy adults, aged 18 to 35, selected from respondents to poster and billboard announcements.
Interventions: Full thickness dermal wounds were administered on the lateral deltoid with a punch biopsy instrument by an experienced physician blinded to group assignment. Non-occlusive dressings were applied and changed daily. The TT procedure was modified to eliminate the possible influence of suggestion and the placebo effect. In part A of the experiment, the treatment group received NCTT through a one-way mirror for 5 minutes per day for 10 days. The practitioner concentrated on the image seen through the mirror as well as a video monitor image of the participants. The participants also met as a group on even days for 90 minutes of biofeedback and visualization/relaxation exercises. Control group participants in part A were treated similarly except that opaque glass was placed over the mirror so that the practitioner concentrated solely on the video image of the participant. Unbeknown to the practitioners, the image on the video monitors was an image of the participant located on the floor below them rather than in the adjacent hallway. After a 1 week rest period, part B of the study was conducted. Participants had their opposite arm biopsied and those in the treatment group became control group participants and vice versa. All sessions were provided by one of two experienced TT practitioners.
Outcome Variables: At days 5 and 10 of the study, the wounds were assessed by the physician and classified as fully healed or not fully healed. Wounds were determined to be fully healed when no scab formation was present and complete re-epithelialization or wound closure had occurred.
Results: On both days 5 and 10, the numbers of fully healed wounds was insufficient to conduct the planned statistical comparisons.
Conclusions and Recommendations: The data indicated a non-significant effect for the treatment versus control group. Future studies should consider the following key factors: effectiveness of practitioners; inhibitive or dampening effect of plastic; impact of concurrent relaxation therapies; sensitivity of the outcome variable; dressing type; influence of distance; and practitioners' beliefs about the effect of distance.

Wirth, D. P., Richardson, J. T., Martinez, R. D., Eidelman, W. S., & Lopez, M. E. (1996).

Non-contact Therapeutic Touch intervention and full-thickness cutaneous wounds: A replication. *Complementary Therapies in Medicine, 4*(4), 212-216.

Keywords: wound healing

Purpose: To examine the effect of Therapeutic Touch (TT) on the healing rate of full-thickness dermal wounds.
Design: Randomized double-blind study.
Participants: 32 healthy adults, aged 23-41.
Interventions: Full-thickness dermal wounds on the lateral deltoid were administered to all participants with a punch biopsy instrument. For 10 days the experimental group received non-contact TT from a hidden practitioner, who altered the usual TT procedure and worked through a one-way mirror in an effort to preclude the confounding factors of suggestion, expectation, and the placebo effect. The control group also came to the lab for 5 minutes on each of the 10 days, however, unknown to them, the practitioner room was vacant at these times.
Outcome Variables: Rate of wound re-epithelialization was measured on days 5 and 10. In addition to the initial physician's observations, photographs were also assessed by two independent physicians. Wounds were categorized as fully healed or not fully healed.
Results: No wounds were fully healed on day 5. On day 10, the wounds of four of the control group were fully healed compared to none of the TT group wounds.
Conclusions and Recommendations: In contrast to the earlier study, significantly accelerated wound healing occurred for the control group compared to the TT group. Nevertheless, findings were considered important because of the possible inhibitory response exhibited by the TT group. The practitioner and 81% of the treatment group experienced flu-like symptoms. This is the first study to show this effect when there was double-blind methodology and physical separation of practitioner and participants.

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Outcome Variables: Six agitated behaviors (manual manipulation, escaping restraints, searching and wandering, tapping and banging, pacing and walking, and vocalization) were measured using the Modified Agitated Behavior Rating Scale. Participants were observed for intensity and frequency of behaviors every 20 minutes for 10 hours a day for 3 days pre- and post-intervention.
Results: Those receiving TT exhibited a significant decrease in vocalization and there was a trend toward decreased manual manipulation. A difference approaching significance for searching and wandering was ascertained for the mimic group after intervention compared to the control group. Post-intervention decreases in disruptive behavior coincided with the times the intervention was administered.
Conclusions and Recommendations: TT offers a noninvasive, clinically relevant modality that could be used routinely to decrease or prevent disruptive behaviors and increase the safety and comfort of those with Alzheimer's disease.

Woods, D. L., & Dimond, M. (2002). The effect of Therapeutic Touch on agitated behavior and cortisol in persons with Alzheimer's Disease. *Biological Research for Nursing, 4*(2), 104-114.

Keywords: agitation; cortisol; Alzheimer's Disease

Purpose: To determine the effect of Therapeutic Touch (TT) on the frequency of agitated behavior and salivary and urine cortisol levels in persons with Alzheimer's Disease (AD).
Design: Within-subject, interrupted time-series pilot study.
Participants: 10 residents of a special care unit, aged 71-84, with moderate to severe AD and agitated behaviors.
Interventions: Participants received contact TT from the investigator for 5-7 minutes twice a day for 3 days.
Outcome Variables: A modified Agitated Behavior Rating Scale measured manual manipulation, restraint escape attempts, searching or wandering, tapping or banging, vocalization, and pacing or walking. Trained nursing students, naive to TT and blind to study purpose and intervention type and timing, served as observers. Levels of cortisol, which may be related to stress reactivity, were determined using urine and salivary specimens. Data collection and analysis occurred in four phases: baseline (4 days), treatment (3 days), post-treatment (11 days), and a final period 18 days later (3 days).
Results: There was a significant decrease in overall agitated behavior and in two specific behaviors, vocalization and pacing or walking, during treatment and post-treatment with data suggesting a sustained treatment effect of 1-1.5 days. A decreasing trend over time was noted for salivary and urine cortisol, though this did not achieve significance.
Conclusions and Recommendations: This study suggests that TT has the potential to decrease vocalization and pacing, two prevalent behaviors, and may mitigate cortisol levels in persons with AD. Future research should test the immediate and long-term effects of TT and compare it to other non-invasive, nonpharmacological modalities, using a within-participant design to determine the characteristics of individuals who will benefit from the treatment.

Woods, D. L., Rapp, C. G., & Beck, C. (2004). Escalation/de-escalation patterns of behavioral symptoms of persons with dementia. *Aging and Mental Health, 8*(2), 126-132.

Keywords: agitated behaviors; Alzheimer's Disease

Purpose: To determine the probability of vocalization escalating/de-escalating across time from pre-Therapeutic Touch (TT) to post-TT when compared to placebo and control interventions.
Design: Randomized, double-blind, three-group experimental design.
Participants: 57 residents of Alzheimer's special care units, aged 67 to 93. All participants exhibited disruptive behaviors.
Interventions: Participants received either TT with contact on the neck and shoulders, mimic TT, or no treatment. Sessions lasted 5-7 minutes and occurred twice daily for 3 days.
Outcome Variables: Six agitated behaviors (manual manipulation, escaping restraints, searching and wandering, tapping and banging, pacing and walking, and vocalization) were measured using the Modified Agitated Behavior Rating Scale. Participants were observed for intensity and frequency of behaviors every 20 minutes for 10 hours a day for 3 days pre- and post-intervention.
Results: Sequential analysis revealed that behaviors persist from one 20 minute period to the next if one does not intervene. The persistence of vocalization at intensity level 2 (moderate) changed from pre-intervention (mean conditional probability 29%) to post-intervention (mean conditional probability 13%).
Conclusions and Recommendations: The findings suggest that TT can de-escalate behavioral and psychological symptoms of dementia. The use of TT as a preventive intervention for persons at risk for disruptive vocalization is supported. Further research, framed within the Needs Driven Dementia-Compromised Behavior Model, is needed to determine which factors contribute to or mitigate escalation and de-escalation of behavioral and psychological symptoms of dementia.

Meta-analytic Studies

Peters, R. M. (1999). The effectiveness of Therapeutic Touch: A meta-analytic review. *Nursing Science Quarterly, 12*(1), 52-61.

Keywords: meta-analysis

Purpose: To explore the adequacy of scientific evidence, published between 1986 and 1996, supporting Therapeutic Touch (TT) as a nursing intervention. Key questions are: (a) Does TT produce the desired outcome in treated subjects?; and (b) are TT outcomes significantly different than those found in the control group?
Method: The study-effect meta-analysis method (Bangert-Drowns) was used. It was modified (Glass) to allow inclusion of flawed studies and a fail-safe N was calculated to compensate for potential publication bias. Nine of 36 research reports reviewed met the inclusion criteria. Study characteristics were coded for quality and data were analyzed to determine the occurrence and magnitude of treatment effect.
Results and Conclusions: The review found incomplete description of demographic characteristics, random assignment practices, practitioner experience, practitioner and researcher relationship, outcome data, and refusal and drop-out rates. TT practices and methods used to control placebo and Hawthorne effects varied in the studies. The results seem to indicate that TT has a positive medium effect on physiological and psychological variables. It also appears that TT produces a medium effect on physiological outcomes when comparing TT groups with control groups. However, substantive claims cannot be made due to methodological flaws and the limited number of studies. More rigorous research, addressing the methodological flaws identified, is needed to establish a solid body of evidence.

Winstead-Fry, P., & Kijek, J. (1999). An integrative review and meta-analysis of Therapeutic Touch research. *Alternative Therapies in Health and Medicine, 5*(6), 58-67.

Keywords: meta-analysis

Purpose: To perform an integrative research review (IRR) and meta-analysis of Therapeutic Touch (TT) research. Key questions are: (a) what are the substantive characteristics of the sample, the TT practice, and the article/dissertation in studies from 1975 to 1997?; (b) what does the research demonstrate regarding the efficacy of TT?; and (c) based on the results, what are the gaps, trends, and outcomes of the TT studies?
Method: Meta-analysis and IRR techniques of Smith et al. were used. Thirty-eight studies were identified and included in the initial steps of the IRR. Data on 32 substantive characteristics of the sample, the TT procedure, and the article/dissertation were extracted using Moody's method. Thirteen studies reporting means and standard deviations of treatment and control groups were included in the meta-analysis.
Results and Conclusions: The review demonstrated that there are many approaches to TT research, samples are described incompletely, and TT practices vary in the studies.

Most of the studies supported hypotheses regarding the efficacy of TT, though a number had mixed or negative results. A meta-analysis was performed on 13 studies. The average effect size in these studies was .39, which is described as moderate. This was expected, as TT purports to heal rather than cure. Problematic trends included the illogical use of healthy persons as subjects, over-reliance on the State-Trait Anxiety Inventory, artificially limiting treatment time to 5 minutes, and the researcher acting as healer. Given the mixed outcomes, more research is needed on the efficacy of TT. Researchers must study ill persons, report all steps in the Krieger-Kunz TT method, and examine the effects of TT over time in persons with chronic illnesses.

Quantitative Studies on Other Aspects of Therapeutic Touch

Lowry, R. C. (2002). The effect of an educational intervention on willingness to receive Therapeutic Touch. *Journal of Holistic Nursing, 20*(1), 48-60.

Keywords: willingness to receive; education

Purpose: To test the effect of an educational intervention on participants' willingness to receive Therapeutic Touch (TT).
Design: Quasi-experimental.
Participants: 108 participants recruited from three nursing programs and one professional business women's group.
Interventions: A 10 minute talk was given by the investigator, a TT practitioner, on the concept of energy fields, types of energy healing, history and uses of TT, and TT research. This was followed by a 5 minute demonstration with an explanation of the phases of TT and a 10 minute question period.
Outcome Variables: An investigator-designed questionnaire was completed before and after the intervention. It included demographic questions, six yes/no questions that could relate to participants' attitudes toward TT, and a 6-point scale measuring willingness to receive TT. Participants were also asked to provide written comments about the reasons for their willingness ranking.
Results: For all participants combined, the educational intervention significantly increased willingness to receive TT, with 46% of participants experiencing an increase in willingness, 11% experiencing a decrease in willingness, and 43% unchanged. Two of the three nursing groups showed no significant increase. Limitations which could account for this finding were described. Increased willingness was related to better understanding, experiences during the demonstration, the need to solve current health problems, and the desire to gain knowledge through experiencing a TT treatment. Many of those experiencing a decrease in willingness explained that they did not believe in the basic concepts of TT.
Conclusions and Recommendations: The findings suggest that, in some instances, education can increase willingness to participate in TT treatments. Future research should examine whether treatment effectiveness is related to education and/or increased willingness to receive treatment.

Wright, S. M. (1991). Validity of the human energy field assessment form. *Western Journal of Nursing Research, 13*(5), 635-647.

Keywords: assessment methods

Purpose: To establish construct validity of the human energy assessment form, which was developed to record the basic findings of the energy field assessment.
Design: Not specified.
Participants: 52 adult outpatients with chronic non malignant pain and a diagnosis of musculoskeletal pain, fibrositis/fibromyalagia, or osteoarthritis.

Interventions: The practitioner did a complete assessment of the energy field while the participants kept their eyes closed. Following the assessment the practitioner recorded the findings. The participants completed the study questionnaire.
Outcome Variables: The Brief Pain Inventory was used to assess pain intensity, location, quality, history, and its interference with activities. A visual analogue scale was used to assess pain intensity. Three subscales of the Profile of Mood States were also completed.
Results: Overall strength of the energy field disturbance was significantly related to fatigue and vigor, but not depression. There were no significant relationships between the intensity of the field disturbance and pain intensity. Interrater reliability of the human energy field assessment was 84% at pre-collection, 83% at mid-collection, 86% at post-data collection.
Conclusions and Recommendations: There is some evidence for construct validity and interrater reliability of the energy field assessment as it is used in the practice of TT. Future studies should increase the sample size and add a control group without pain. Further study related to fatigue and depression is indicated.

Qualitative Studies of Therapeutic Touch

Barrington, R. (1994). A naturalistic inquiry of post-operative pain after Therapeutic Touch. In D. A. Gaut & A. Boykin (Eds.). *Caring as healing: Renewal through hope*, (pp. 199-213). New York: National League of Nursing.

Keywords: pain; post-operative; experiences of recipients

Purpose: To examine the patient's lived experience of Therapeutic Touch (TT) during post-operative pain phenomena.
Design: Naturalistic inquiry in a level 1, qualitative descriptive design following the phenomenological method.
Participants: 6 patients, aged 39-77, undergoing coronary artery bypass surgery.
Data Collection: Participants received TT from the researcher, an experienced practitioner. Sessions lasted 3-8 minutes and occurred 48-56 hours after surgery and again 24 hours later. Semi-structured interviews, including a pain visual analogue scale and observation of nonverbal cues, were conducted pre-operatively and after each TT session. Within 1 hour after each TT session or interview a researcher log of personal experiences and reflections was written to record, and set aside, researcher assumptions.
Data Analysis: Themes were extracted from the transcripts and were then compared across participants and transformed into categories. The data were then reduced to concepts in a descriptive matrix. An independent researcher reviewed the transcripts to confirm categories. The same analysis format was used to examine the researcher log.
Findings: Patterns which emerged were: (a) experiences relating to comfort (pain eliminated or significantly reduced), soothing sensations, visions, and energy flow; (b) expressions relating to a changed affect noted by the researcher, such as decreased respirations and lower voice pitch; and (c) perceptions relating to insights received during or after TT. An incidental finding was a transient increase in temperature in 50% of cases. Participants rated the TT session positively, with the exception of one individual who dropped out of the study.
Conclusions and Recommendations: The data offer substantial evidence that TT reduces or eliminates post-operative pain, produces perceived relaxation, soothing, calming, and an overall feeling of well-being. This provides a basis for expanding the alternatives for pain management. Incidental findings suggest a possible increased immune response and that the practitioner's intent to care is received by the recipient as pattern manifestations in the form of visions, feelings, and insights. Future studies should be performed with two researchers, one performing TT and the other as interviewer. Further study of intention is recommended as well as a triangulated study to explore immunological effects of TT.

France, N. E. (1993). The child's perception of the human energy field using Therapeutic Touch. *Journal of Holistic Nursing, 11*(4), 319-331.

Keywords: experience of receiving; experience of perceiving; child;

Purpose: To explore the child's lived experience of perceiving the human energy field using Therapeutic Touch (TT).
Design: Descriptive, exploratory phenomenological design.
Participants: 11 healthy children, aged 3 to 9, identified through the researcher's acquaintances.
Data Collection: Four to six sessions of 20-40 minutes each were used. In the first three sessions, the child drew and described a picture of how they felt. After being told that the researcher would feel the energy around their body, they then received T.T. and drew and described a second picture of what the experience was like. During the third, fourth, or fifth session, the researcher asked the child if he or she could do what the researcher did with a parent, sibling, pet, or the researcher herself. During the final session, each child felt the energy around another study participant. The receiving child drew and described a picture of how he/she felt before the experience and both children drew and described pictures after the experience. Mothers recorded any independent attempts by the child to practice TT as well as anything the child said about the experience. The researcher's thoughts, feelings, and insights were also recorded in a diary.
Data Analysis: Husserl's phenomenological method guided exploration and description.
Findings: The children described a variety of perceptions of their TT experience, with a sense of movement being most common. Whether the children were receiving TT from the researcher or from another child, their descriptions of the experience were similar, as were their bodily expressions/movements of relaxation. Each child indicated that he or she could "feel someone's energy" and parental diaries revealed that the children tried TT on their own with the intent to help. Three essential structures of the child's lived experience were identified. "Being with" conveyed the relationship that existed without expectations, prejudices, or barriers. "Taking in the world to know more" was manifested by repeating/enduring patterns of expression and behavior, including the relaxation response. "Struggling to make sense of it" involved the struggle to translate and relate the experience. "That look" was recognized as the synthesis of unity among the essential structures and was captured on videotape and affirmed by faculty judges. It conveyed a knowing and being reflected in the eyes of the child.
Conclusions and Recommendations: The findings suggest that the child can feel the human energy field with purpose or intent to help and that the child was in a meditative reflective state. This supports TT as an innate potential and as a healing meditation. A coherence of the findings gives evidence of congruence with Rogerian Science and Husserlian phenomenology.

Heidt, P. (1990). Openness: A qualitative analysis of nurses' and patients' experiences with Therapeutic Touch. *Image: Journal of Nursing Scholarship, 22*(3), 180-186.

Keywords: experiences of recipients; experiences of practitioners

Purpose: To explore and describe the experiences of nurses and patients in the process of giving and receiving Therapeutic Touch (TT).
Design: Grounded theory methodology.
Participants: 7 nurses, aged 38 to 45, who had practiced TT for at least 3 years and 7

patients, aged 34 to 60, who had received TT for various health concerns between 10 and 100 times prior to the research.
Data Collection: One TT session for each pair was observed. Continuous notes were made of all verbal and nonverbal expressions, movements, and interactions. Each participant was interviewed separately post-TT, using broad descriptive questions to explore their experience. Interviews lasted approximately 90 minutes for nurses and 50 minutes for patients.
Data Analysis: Transcripts were reviewed for key words/phrases which captured participants' meanings. The coded data were then abstracted into categories of experience. The parallel categories of nurses and patients were combined to indicate their complementary nature. Main themes were identified. Data from observations were analyzed in the same manner and examined for congruence with interviews. Coding was evaluated by three reviewers and each participant was asked to review the analyzed data to clarify misperceptions and/or add new data.
Findings: TT was experienced as opening to the flow of universal life energy. The experience of opening intent consisted of three interrelated experiences: quieting, affirming, and intending, while opening sensitivity involved interrelated experiences of attuning and planning, and opening communication consisted of interrelated experiences of unblocking, engaging, and enlivening universal life energy.
Conclusions and Recommendations: The nurses' experiences indicate that their conscious use of self included more than the sense of physical touch. Practitioners opened and deepened their consciousness, offering a therapeutic relationship and facilitating the treatment process. In many instances the experiences of the patient paralleled those of the nurses. More qualitative study is needed to explore and describe each of the categories of experiences, examine the relationships between categories, and explore the relationships between participants' experiences and existing theoretical frameworks.

Kiernan, J. (2002). The experience of Therapeutic Touch in the lives of five postpartum women. *MCN American Journal of Maternal Child Nursing, 27*(1), 47-53.

Keywords: experiences of recipients; postpartum

Purpose: To examine the experience of Therapeutic Touch (TT) in the lives of postpartum women.
Design: Qualitative. Specific qualitative approach not specified.
Participants: 5 women, aged 28 to 38, pregnant for the first time.
Data Collection: The investigator, an experienced TT practitioner and teacher, provided TT during home visits that focused on postpartum issues and concerns and occurred 2-3 times weekly for 2 months after birth. The hour-long visits were audiotaped and continuous observations were made. Detailed descriptions, impressions, reflections, and analytic memos were written in a log after the visit. The transcripts also became part of the log.
Data Analysis: Codes were developed as a way of classifying and filing data. As patterns in the coding began to emerge, they were organized into categories that became the next level of refinement of analysis. Linkages between categories were sought and

reorganization of the categories evolved the themes or essences of the womens' experiences.
Findings: Five themes or essences of the experience emerged: feeling relaxed, feeling open, feeling cared for, feeling connected, and feeling skeptical. At a higher level of synthesis, the overarching theme was intimacy. The researcher depicted this theme diagrammatically with a web of intimacy comprised of interconnected, interweaving figure eights comprised of participant and researcher statements.
Conclusions and Recommendations: TT became the pivotal experience around which the home visit flowed. It facilitated an openness, a feeling of being safe and cared for, and an interconnectedness that fostered a sense of tranquility and peace. Although it is unknown whether it was the visit, the interaction, or the TT that helped the women feel cared for, the experience of participating in TT seemed to add a dimension of mutual caring that added a special and unique quality to the home visit.

Lionberger, H. L. (1986). Therapeutic Touch: A healing modality or a caring strategy? In P. L. Ching (Ed.). *Nursing research methodology: Issues and implementation*, (pp. 169-180). Rockville, MD: Aspen.

Keywords: interpretations of practitioners

Purpose: To discover the interpretations of Therapeutic Touch (TT) offered by nurses practicing the technique in order to identify underlying meanings and intents.
Design: Interpretive study using a phenomenological approach.
Participants: 51 registered nurses with moderate to extensive TT experience and 20 patients, 17 of whom had attended TT workshops.
Data Collection: Interviews consisted of loosely constructed questions designed to elicit participants' experiences with TT, ideas about what helps or hinders effectiveness, and how TT is similar or dissimilar to usual nursing practice.
Data Analysis: Transcribed interviews were first analyzed to capture nurses' stated practices and interpretations of TT. Interviews were then compared to identify common meanings. Finally, interpretive commentary was developed, based on issues raised in the first two levels of interpretation.
Findings: Nurse participants saw caring as a feature of usual nursing care that was made visible and operationalized in TT. Patients described caring as that part of the therapist-patient interaction that set TT apart from other health care practices. Two elements of caring in TT emerged most vividly. The first, focused attention, was achieved through centering and was characterized by disciplining attention, achieving a calm, relaxed state, establishing receptivity, and becoming a channel. The second caring element was a healing intent for wholeness, wellness, and mobilization of the patients' natural healing tendencies.
Conclusions and Recommendations: This study found strong evidence for the primacy of intentional and freeing aspects of TT practice. The findings present an explanation complementary to energy exchange for understanding the interpersonal dynamics of the practice. Descriptions of the use of caring and compassion in manipulation of energy flow testify to the interdependence of these two explanations. Any single theoretical base

is unlikely to capture the complexity of the intervention and theories for future research suggested by the findings include caring, social support, stress, and coping.

Potter Hughes, P., Meize-Grochowski, R., & Duncan Harris, C. N. (1996). Therapeutic Touch with adolescent psychiatric patients. *Journal of Holistic Nursing, 14*(1), 6-23.

Keywords: experiences of recipients; adolescents; psychiatry

Purpose: To describe adolescent psychiatric patients' experience of receiving Therapeutic Touch (TT).
Design: Exploratory qualitative.
Participants: 7 adolescent psychiatric inpatients, aged 12-16, without overt psychoses, paranoia, or delusional ideation. Two adolescents chose to withdraw after the first TT session but wished to be interviewed and were included in the analysis.
Data Collection: Participants received a total of 31 TT treatments over two 2-week periods from three intermediate level TT nurse practitioners. Treatment length and use of touch were at the discretion of the practitioner. For each session the nurses had a dialogue with the adolescent before and afterwards, asking how he or she was feeling and observing any vocalizations, affect, and posture. Within 1 day of each participant's first (n=7) and last sessions (n=5), they were interviewed by the primary investigator. Semi-structured open-ended questions were used to explore their perception of hospitalization and relationship with the nurse, physical sensations noted during treatment, degree of safety experienced, any learning derived from the experience, and any perceived benefits. Three of the adolescents participated in a group interview to clarify the researcher's impressions and add any new descriptors.
Data Analysis: Responses were systematically hand coded. Patterns were identified and grouped into 20 substantive categories according to similarity of concepts. The groupings were discussed among researchers and refinements made as needed. Constant comparison and reflection were used to develop and define five emergent categories in which two major themes emerged.
Findings: The theme ‘therapeutic relationship’ included the categories of relationship with the nurse and judgments of the experience. Participants described improved communication with their nurses, TT making a difference in their treatment, and feeling free from harm. The theme ‘body/mind connection’ included experiences of relaxation, an expanded awareness of body sensations, which often involved relief from somatic symptoms, and changes in affect and behavior from initial anxiety, anger, and negativity to expressed happiness, calmness, and clear thinking.
Conclusions and Recommendations: The adolescents reacted positively to TT, both to the relaxation and to the opportunity for individual attention from the nurse. While the results cannot be generalized, TT may provide the nurse with opportunities for building a relationship with the patient, offering noninvasive nurturing touch, and reducing stress and anxiety. Further study with psychiatric patients should include an integrated qualitative/quantitative approach with physiological measures of relaxation, pre- and post-psychological testing, and gathering of subjective data from patients and nurses.

Samarel, N. (1992). The experience of receiving Therapeutic Touch. *Journal of Advanced Nursing, 17*(6), 651-657.

Keywords: experiences of recipients

Purpose: To describe the experience of receiving Therapeutic Touch (TT).
Design: Qualitative approach informed by phenomenology.
Participants: 20 volunteers from two conferences, aged 30 to 68, who had been receiving TT for varying lengths of time ranging from 2 days to 7 years.
Data Collection: During the first interview, participants were asked 'What is your experience of TT?' A second clarifying interview was conducted 2-4 days later.
Data Analysis: Content analysis was conducted using an adaptation of Giorgi's operations of phenomenological analysis. After the clarifying interview the individual synthesized descriptions were translated into a general structural description.
Findings: The lived experience of TT was described as a linear process that began with the perception of unmet needs and decision to seek treatment. The general structural description of the meaning of the lived experience of TT was a dynamic, multidimensional experience of developing awareness and personal change leading to resonating fulfillment.
Conclusions and Recommendations: TT was experienced as a fulfilling multidimensional experience that facilitated personal growth. Further study of the experience with a more representative sample is recommended, as well as development of methods to measure these experiences.

Smyth, D. (1996). Healing through nursing: The lived experience of Therapeutic Touch, part two. *Australian Journal of Holistic Nursing, 3*(1), 18-29.

Keywords: experiences of recipients

Purpose: To understand what it means for a patient to experience Therapeutic Touch (TT).
Design: Phenomenological study.
Participants: Not described.
Data Collection: Participants interviewed in this study discussed, reflected on, and remembered their experiences of TT.
Data Analysis: Along with phenomenological reflection, a hermeneutic process of uncovering hidden and explicit meaning was used in information analysis. This was guided by procedural activities of van Manen's method.
Findings: Three themes emerged from the underlying structure of being-in-another-world: omnipresence, engagement, and enlivement. Omnipresence involved the notion of interconnectedness with the nurse, universe and/or the divine. Engagement involved an awareness of opening to the healing process, in relationship with the centerd, intentional presence of the TT nurse. Enlivement involved an actualization of healing energy seen as repatterning of participants' perspectives, both during and after TT, which had them

relating differently to their health problem.
Conclusions and Recommendations: Experiencing TT leaves a person momentarily situated in another world in which they are connected with other levels of their being, perhaps interfacing with their spiritual being. The focused intent and unconditional role of the nurse was central to the healing relationship.

Sneed, N., Olson, M., & Bonadonna, R. (1997). The experience of Therapeutic Touch for novice recipients. *Journal of Holistic Nursing, 15*(3), 243-253.

Keywords: experiences of recipients

Purpose: To determine how people describe their first experience of Therapeutic Touch (TT) and compare this to dimensions of experience described in the literature.
Design: Descriptive.
Participants: 11 graduate students, aged 20-39, who reported anxiety prior to an academic stressor.
Data Collection: Participants received TT from one of two experienced practitioners and were interviewed immediately following the second treatment by the same practitioner. In interviews lasting 20-30 minutes, participants were first asked what it was like to receive TT. If not addressed by the participant, they were then prompted to think about any physical sensations, thoughts, visual images, feelings, and spiritual transcendent experiences they may have experienced.
Data Analysis: Descriptive statements were identified and then analyzed independently by two of the investigators and categorized into existing categories of relaxation, physical, mental/emotional, or spiritual/transcendent. A new category, cognitive, also emerged. The same process was then undertaken by two other raters.
Findings: All participants reported feeling relaxed and had physical sensations and cognitive activity during the TT sessions, with most of the statements fitting into these categories. Fewer statements reflected emotional or spiritual experiences and not all participants had these experiences.
Conclusions and Recommendations: For these novice recipients, TT was primarily a physical and cognitive experience that resulted in feeling and/or being relaxed during the treatment. Emotional or spiritual experiences may occur after an individual has more experience with the intervention. In future research, care needs to be taken not to suggest outcomes to participants in the consent form or by verbal interview prompts. Factors related to the development of experiential changes over time should be explored.

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The Therapeutic Touch Network of Ontario

The Therapeutic Touch Network of Ontario was established in 1986 and incorporated as a non-profit organization in 1994. It is the governing body of this modality and as such, sets standards for professional practice and guidelines for teaching Therapeutic Touch™ in Ontario.

The Therapeutic Touch Network of Ontario is one of 6 regional networks across Canada. While independent of each other, the Canadian Networks cooperate and communicate in their mutual effort to foster the growth and acceptance of Therapeutic Touch™.

The Therapeutic Touch Network of Ontario:

- grants the status of Recognized Practitioner and Recognized Teacher to practitioners who undertake advanced study and practice in Therapeutic Touch™.
- provides a Referral Service to members of the public who wish to find a Recognized Practitioner or Teacher.
- maintains a Speakers Bureau of experienced speakers for conferences, in-service education and public presentations.
- sponsors a Teachers Collective and over 60 Practice Groups throughout Ontario
- publishes a quarterly newsletter, *In Touch*.
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The Therapeutic Touch Network of Ontario promotes practice and acceptance of Therapeutic Touch™ as developed by Dora Kunz and Dolores Krieger Ph.D., R.N., and recognizes its effectiveness as a non-invasive complementary modality in health care.

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MJS, October, 2003