

Original Article

A Systematic Review of the Studies about Therapeutic Touch after the Year of 2000

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Abstract

Aim: This systematic review was carried out to evaluate the studies about therapeutic touch which were conducted after the year of 2000.

Methodology: The databases such as Pubmed, Cochrane and Medline were searched to find related articles. Key words such as touch, therapeutic touch, nursing, therapeutic touch nursing and touch therapy were used to search. 25 studies were found in accordance with the inclusion criteria between January 2017 and May 2017.

Results: When the studies were examined, pain (in 10 studies), anxiety and agitation (in 7 studies), psychological and behavioral symptoms (in 4 studies), vital signs (in 3 studies), cortisol levels (in 3 studies), sleep quality (in 2 studies), fatigue (in 2 studies), vomiting intensity (in 1 study), hemoglobin and hematocrit levels (in 1 study) and life quality (in 1 study) were investigated. Six of the studies were conducted with the pre- and post-operative patients; five of them were conducted with the elderly individuals; four of them were conducted with the ecancer patients; four of them conducted with the individuals with dementia; three of them were conducted with the neonates; one of them was conducted with the pregnant women.

Conclusion: In conclusion, it has been thought that nurses can include therapeutic touch into care in order to provide more effective care because it can be easily applied and give effective results.

Key Words: Touch, Therapeutic Touch, Nursing, Complementary Therapies.

Introduction

Touch is one of the first senses and a basic human need. It is a concept which is so close with the word of therapy (Arslan & Yucel, 2017). Touch increases the communication between nurses and patients, ensures the regulation of vital signs and is effective on the physiological healing process. It ensures feeling of self-esteem by individuals and thus reduce the psychosocial problems of patients (Gleeson & Timmins, 2005). While touching patients by nurses only for applications and the profession is not an effective way to communicate with patients, the co-use of touching with interest

and support messages together with the professional-functional relationship will further strengthen the patient-nurse relationship. While the nurses give messages such as sincerity, interest, trust, courage, willingness to help and empathy to their patients by touching, the studies found that few of the nurses included touching in nursing care (Moroles, 1994; Ekizler, 1987). Complementary therapy is the name of all interventions that are applied in parallel to modern medicine in order for individuals to regain their health. According to the definition of the National Cancer Institute and the American Cancer Association, complementary

therapies are the therapies used with modern medicine (Ozcelik & Fadiloglu, 2009). Complementary and integrative therapies have been used since the first days of humankind. However, there has been an increase in the use of complementary therapies since the mid-20th century (Muslu & Ozturk, 2008).

Therapeutic touch (TT) is an approved complementary and alternative medicine method which allows the individuals to find their inner balance and in which the energy in the universe is affectionately used with a certain intention (Bagci & Yucel, 2019; Yucel, Arslan & Bagci, 2019). TT is the process of energy exchange; practitioners focus on healing by directing his hands on patients' bodies. According to Krieger, the imbalance in the energy field around the body can be accepted as a disease and can be rearranged after an evaluation by TT practitioners (Coppa, 2008). In recent years, TT has been widely used in health care in other countries due to its low cost and easy of use. Nurses' hands are the only tools required for TT (Moieni, et al. 2008). Despite the use of TT in health care settings, there is limited evidence to support its effectiveness (Blankfield, et al. 2001).

There are also some disagreements about the effectiveness of TT. Many researchers do not consider TT as an effective approach to improve patient health (Rosa, et al. 1998; Olson & Sneed, 1995). It is thought that this literature review will facilitate the determination of the priorities for future studies in this research area and will provide significant data for nurses by evaluating the results of the studies more clearly. This systematic review is a descriptive study which was conducted to analyze the results of the studies about TT between the years of 2001 and 2016 in terms of type, year, sample and subject.

Materials and Methods

Medline, Pubmed, Cochrane databases were searched and relevant articles were found. Key words such as touch, therapeutic touch, nursing and touch therapy were used for literature search.

Healing touch and the therapeutic touch are the most frequently confused applications, so the word of healing touch was not used for literature search.

The research articles and theses about TT in English which were published between the years of 2001-2016 were included in the study, congress abstracts and reviews were excluded from the study. As a result of the literature review conducted between January 2017 and May 2017, 16195 studies were found. The studies were firstly evaluated according to their titles; 16127 studies which were not related to the subject of the study were excluded. The remaining 68 studies' abstracts and full texts were evaluated in terms of inclusion and exclusion criteria; total of 25 studies were found to meet the criteria.

The sample of the study consisted of 25 studies about the therapeutic touch, one of the complementary and integrative care practices which are the independent functions of nurses (Figure I). Medline, Pubmed, Cochrane databases were searched and relevant articles were found. Key words such as touch, therapeutic touch, nursing and touch therapy were used for literature search. Healing touch and the therapeutic touch are the most frequently confused applications, so the word of healing touch was not used for literature search. The research articles and theses about TT in English which were published between the years of 2001-2016 were included in the study, congress abstracts and reviews were excluded from the study. As a result of the literature review conducted between January 2017 and May 2017, 16195 studies were found. The studies were firstly evaluated according to their titles; 16127 studies which were not related to the subject of the study were excluded. The remaining 68 studies' abstracts and full texts were evaluated in terms of inclusion and exclusion criteria; total of 25 studies were found to meet the criteria. The sample of the study consisted of 25 studies about the therapeutic touch, one of the complementary and integrative care practices which are the independent functions of nurses (Figure I).

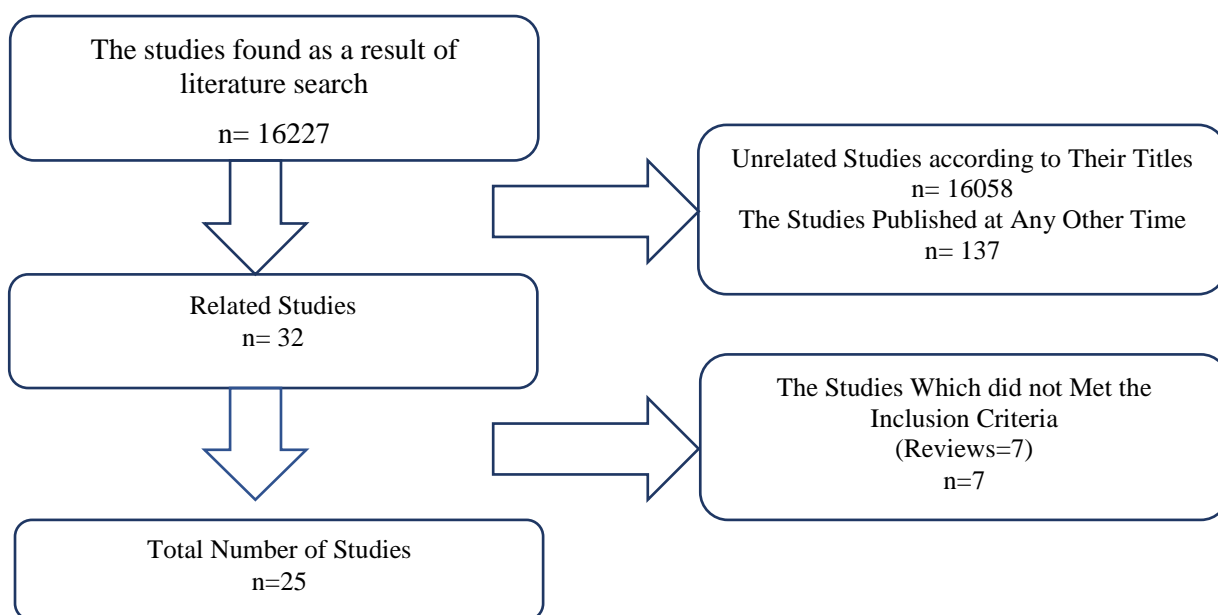


Figure 1. Study Selection Process of the Systematic Review

Table I. Characteristics of the Studies on Hand Massage Practices

Name of tek Study	Authors and Publication Date	Type of the Study	Number and Characteristic of the Sample	Result
Therapeutic Touch in the Treatment of Carpal Tunnel Syndrome	Blankfield, Sulzmann, Fradley, Tapolyai & Zyzanski (2001)	Randomized, single blind, experimental study	11 patients in the TT group, 10 patients in the pseudo TT group, totally 21 Carpal Tunnel Syndrome patients.	There was no significant difference between the TD group and the pseudo TD group from the first treatment session to the last treatment session in terms of the mean motor nerve distal latencies, pain and relaxation scores. However, immediately after each treatment, basal improvements were observed in the outcome variables in both groups. In this study, it was not concluded that TT was more effective than placebo in median motor nerve distal latencies, pain and relaxation scores.

The Effects of Integrating Therapeutic Touch in Cognitive Behavioral Pain Treatment Program: A Clinical Pilot Study Report	Smith, Rosa & Wells-Federman (2002)	Experimental	A total of 12 people between the ages of 31-56, consisting of 3 men and 9 women.	As a result of this study, it was found that the patients who received TT were significantly more improved in terms of self-efficacy and unitary power than those who received cognitive behavioral therapy; this effect was lower in wear rates. In this pilot study, it was supported that providing TT in addition to cognitive behavioral therapy to improve clinical outcomes and to be effective in patients with chronic pain.
Effects of Therapeutic Touch on Stimulated Behavior and Cortisol Levels in Alzheimer's Patients	Woods & Dimond (2002)	Experimental	10 patients with moderate to severe Alzheimer's disease who were in the private care unit, aged between 71-84 years.	According to the variance analysis in repeated measurements, significant decreases were observed in general agitation behavior, two specific behaviors, vocalization, stepping or walking during and after the treatment. According to ANOVA and Friedman tests, there was no significant decrease in salivary and urine cortisol levels. This is because the small sample size and the lack of a comparison group.
The Outcomes of Touch Therapies During Bone Marrow Transplantation	Smith, Reeder, Daniel, Baramée & Hagman (2003)	Randomized, controlled clinical trial	Totally 88 adult patients in the bone marrow transplantation unit, 31 of them in the TT group, 27 of them in the massage therapy group, 30 of them in the friendly visit (control) group.	Massage therapy was effective in altering chemotherapy induced psychological and neurological complications during bone marrow transplantation. Both massage and TT provided comfort to the patients living this difficult process.
The Effect of Therapeutic Touch in the Treatment of Drug Addict Pregnant Women	Larden, Palmer & Janssen (2004)	Randomized controlled study	54 pregnant women who were admitted to the substance addiction unit to be included in the application, control and placebo groups.	In the TT group, the anxiety score significantly decreased on the 1st, 2nd and 3rd days. When they evaluated individually, no significant difference was found between the groups in terms of symptom levels. TT was thought to be have value as an adjunctive measure in the treatment of chemical dependence in pregnant women.
The Effect of Therapeutic Touch on the Frequency and Severity of Behavioral Symptoms of Dementia	Woods, Craven & Whitney (2005)	Randomized, double-blind, experimental study	57 elderly individuals with dementia-related behavioral symptoms, aged between 67-93 years, in the long-term special care facility in the placebo, experimental and control groups.	According to the ANOVA and Kruskal-Wallis tests, a significant difference was found in the behavioral symptoms in the experimental group. In conclusion, the study supported the clinical significance of TT for alleviating the behavioral symptoms in the demented patients.

Effects of Therapeutic Touch on Hemoglobin and Hematocrit Levels	Movaffaghi, Hasanpoor, Farsi, Hooshmand & Abrishami (2006)	Randomized, controlled, double-blind, clinical study	45 female students in the application group, 28 of them in the placebo group, 13 of them in the control group, totally 89 female students.	TT and pseudo TT significantly increased hemoglobin and hematocrit levels. There was no significant change in the control group. TT was more effective than pseudo TT in terms of increasing hemoglobin levels.
Effectiveness of Therapeutic Touch in Patients with Dementia	Wang & Hermann (2006)	Nonrandomized semiexperimental study	Totally 14 patients with dementia who were hospitalized in the dementia care unit, 8 of them in the control group and 6 of them in the application group	There was a significant decrease in the agitation behaviors of the subjects in the treatment group. In the control group, there was less decrease.
Does Therapeutic Touch Facilitate the Problems and Distress of Patients with Stereotactic Breast Biopsy?	Frank, Frank, March, Judson, Barham & Mertens (2007)	Randomized, controlled experimental study	82 female patients with non-palpable, non-mammographically detected breast lesions	No significant difference was found between the TT group and the pseudo TT group in terms of post-biopsy pain, anxiety, fear or physiological parameters. Similarly, no difference was found between the groups when pre- and post-biopsy parameters in any of the measured psychological or physiological variables were taken into account. It was concluded that the women undergoing stereotactic core biopsy obtained no significant benefit from TT.
The Effect of Therapeutic Touch on the Pain, Function and Life Quality of Patients with Osteoarthritis	Smith, Kimmel & Milz (2008)	Single blind, randomized, controlled pilot study	A total of 60 patients with osteoarthritis in at least one knee, over the age of 50 years who admitted to a family medicine center.	The results showed that TT administration (2 times a week for 8 weeks) reduced the osteoarthritis pain and stiffness of the knees.
Gradual Effects of Therapeutic Touch for Reducing Anxiety in University Students	Gomes, Silva & Araújo (2008)	Quantitative type experimental study	A total of 42 students, 21 of them in the experimental group and 21 of them in the control group.	The data analysis revealed statistically significant decreases in anxiety in both groups.
Effectiveness of Therapeutic Touch on the Agitation in Individuals with Alzheimer's Disease	Hawranik, Johnston & Deatrich (2008)	Randomized, controlled experimental study	51 patients with Alzheimer's disease who were hospitalized in long-term care facilities in TT, pseudo TT and routine treatment groups	Non-physical aggressive behavior significantly reduced in the TT group. The study provided preliminary evidence to demonstrate that TT is an effective treatment for reducing physically non-aggressive behavior, such as wandering and uneasiness.
The Effectiveness of Therapeutic Touch on the Weight, Complications and Duration of Hospitalization in Preterm Infants in the Newborn Unit	Domínguez Rosales, Albar Marín, Tena García, Ruíz Pérez, Garzón Real, Rosado Poveda & González	Experimental	A total of 78 premature neonates in the intensive care unit, 39 of them in the control group and 39 of them in the experimental group.	TT reduced hospitalization and the presence of complications.

Caro (2009)				
The Use of Therapeutic Touch to Manage Post-operative Pain in Elderly Individuals	McCormack (2009)	Randomized, controlled clinical study	30 elderly individual in each groups as experimental, control and placebo groups, totally 90 postoperative elderly individuals.	In the experimental group, a significant decrease was observed in the pain level scores of 22 (73%) of 30 elderly individuals from the pre-test to post-test ($t[7]= 7.24, p<0.01$).
The Effect of Therapeutic Touch on the Vital Signs of Patients Before Coronary Artery Bypass Graft Surgery	Zare, Shahsavari & Moeini (2010)	Clinical Study	44 patients with coronary artery bypass graft surgery were included in the treatment and control groups.	The test results showed significant differences between the mean heart rates and respiratory rates in both groups before and after TT.
The Effect of Therapeutic Touch on Postoperative Patients	Coakley & Duffy (2010)	Experimental	Totally 21 post-operative patients after vascular surgery, 12 of them in the application group, 9 of them in the control group	The participants receiving TT were found to have lower levels of pain and cortisol, and higher levels of natural killer lymphocytes compared to the individuals receiving routine treatment. The findings support that TT may be a beneficial intervention for patients.
The Effect of Therapeutic Touch on Pain, Depression and Sleep in Patients with Chronic Pain: Clinical Study	Marta, Baldan, Berton, Pavam & Silva (2010)	Experimental	30 patients aged 60 years or older with chronic pains except oncological pain.	As a result of the analysis of the data, there were significant decreases in pain intensity, depression, self-evaluation scores and the scores on sleep quality index ($p<0.05$). TT was found to be effective for alleviating pain intensity, depressive attitudes and symptoms, as well as for improving sleep quality.
The Effect of Therapeutic Touch on the Pain and Fatigue of Patients Receiving Chemotherapy	Aghabati, Mohammadi & Esmaili (2010)	Randomized, controlled clinical study	A total of 90 female patients having pain and fatigue symptoms and receiving chemotherapy were included in the study, 30 of them in the placebo group, 3 of them in the application group and 30 of them in the control group.	There were significant decreases in the pain and fatigue scores of the treatment group compared to the usual care group; the pain and fatigue scores of the placebo group decreased compared to the usual care group.
Application and Evaluation of Therapeutic Touch in Burned Patients: An Educational Experience to Conduct a Scientific Study in a Non-Academic Nursing Environment	Busch, Visser, Eybrechts, van Komen, Oen, Olff, Dokter & Boxma (2012)	Experimental	38 burned individuals.	Pain-related anxiety decreased in the TT group on the 10th day. Less morphine was given to the subjects in the TT group on days 1 and 2. On the second day, the cortisol level was higher in the TT group before changing medical dressing.
The Effect of Therapeutic Touch on the Anxiety, Vital	Zolfaghari, Eybpoosh, Hazrati (2012)	Semi Experimental	23 women at the ages of 23-65 year in each groups as application, control and placebo	TT was an effective approach to manage situation anxiety, to regulate vital signs and to reduce cardiac arrhythmia during

Signs and Cardiac Dysrhythmia in the Iranian Women with Cardiac Catheterization			groups, totally 69 women	stressful conditions in the Iranian women with heart disease such as cardiac catheterization.
The Effect of Therapeutic Touch on the Vital Signs of Newborns	Ramada, Almeida & Cunha (2013)	Semi Experimental	40 newborns in the neonatal intensive care unit, who sent for therapeutic touch after painful interventions	TT was shown to increase the relaxation of babies, to help to reduce vital signs and basal metabolic rate.
Therapeutic Touch was Not Therapeutic to reduce the Pain of Preterm Babies: A Randomized Clinical Study	Johnston, Campbell-Yeo, Rich, Whitley, Fillion, Cogan & Walker (2013)	Randomized Controlled Clinical Trial	Totally 55 preterm newborns under the age of 30 gestational weeks who hospitalized in the second-stage neonatal intensive care unit, 27 of them in the therapeutic touch group; 28 of them in the pseudo therapeutic touch group	No statistically significant difference was found between the groups.
A Case-Controlled, Single-Center, Open-Labelled Pilot Study Investigating the Feasibility of Therapeutic Touch in Preventing Radiation Dermatitis in Women with Breast Cancer Receiving Adjuvant Radiotherapy.	Younus, Lock, Vujovic, Yu, Malic, D'Souza & Stitt (2015)	Cohort study	It consisted of 2 groups as TT and control groups, 49 women who received adjuvant radiation for Stage I/II breast cancer after conservative surgery.	There was no significant difference in terms of life quality, mood and fatigue before and after the study.
Effect of Therapeutic Touch on the Acute Chemotherapy Induced Vomiting Intensity in the Women Having Breast Cancer and Receiving Chemotherapy	Matourypour, Vanaki, Zare, Mehrzad, Dehghan & Ranjbaran (2015)	Single blind, randomized, clinical trial	36 women having cancer and receiving chemotherapy in each groups as control, placebo and intervention groups, totally 108 patients	As a complementary treatment, TD was found to be effective in chemotherapy-induced vomiting.
Effect of Therapeutic Touch on the Pain Parameters in the Cancer Patients: Randomized Clinical Trial	Tabatabaee, Tafreshi, Rassouli, Aledavood, AlaviMajd & Farahmand(2016)	Randomized controlled clinical trial	3 groups as application, control and placebo groups consisted of 90 male patients at the ages of 20-65 years with cancer-related pain approved by a physician.	There were significant differences between these 3 groups in terms of their post-test scores of general patient activities, mood, walking ability, relationships with others and sleep. According to the paired comparison of groups, there were significant differences between both the experimental and control groups and the experimental and placebo groups. No significant

difference was found between the placebo and control groups. The post-test revealed a significant difference between the sleep scores of the patients in these three groups. In addition, positive and negative significant differences were observed between the application, placebo, and control groups, respectively, at the beginning and at the end of the procedure, in terms of the effect of pain on walking ability.

Discussion

Although there are many studies on TT which is one of the complementary and integrative therapies as an independent function of nurses, which were conducted with different sample groups, the number of published studies in Turkey is quite low (Yılmaz, Birer & Baydur, 2016). Most of the studies were conducted to analyze the pain and anxiety levels of the elderly patients, cancer patients and postoperative patients (Tabatabaee, et al. 2016; Matourypour, et al. 2015; Johnston, et al. 2013; Busch, et al. 2012; Zolfanghari, Eybpoosh & Hazrati, 2012; Aghabati, Mohammadi & PourEsmail, 2010; Coakley & Duffy, 2010; Marta, et al. 2010; Gomes, Silva & Araújo, 2008; McCormack, 2009; Hawranik, Johnston & Deatrich, 2008; Smith, Kimmel & Milz, 2008; Frank, et al. 2007; Wang & Hermann, 2006; Larden, Palmer & Janssen, 2004; Smith, et al. 2003; Smith, et al. 2002; Woods & Dimond, 2002; Blankfield, et al. 2001). In the studies that investigated the effect of TT on pain, it was found that most of the studies were performed with postoperative patients or patients with small interventional procedures (Zolfanghari, Eybpoosh & Hazrati, 2012; Coakley & Duffy, 2010; Frank, et al. 2007; Smith, et al. 2003). As a result of some studies, TT was found to be effective in reducing and controlling pain while it was ineffective for others (Tabatabaee, et al. 2016; Matourypour, et al. 2015; Johnston, et al. 2013; Busch, et al. 2012; Aghabati, Mohammadi & PourEsmail, 2010; Coakley & Duffy, 2010; Marta, et al. 2010; McCormack, 2009; Smith, Kimmel & Milz, 2008; Frank, et al. 2007; Smith, et al. 2002; Blankfield, et al. 2001). When the studies were examined, it was seen that the other variables which effectiveness levels were evaluated were anxiety and agitated behaviors. Most of these studies were performed with elderly and demented individuals (Hawranik, Johnston & Deatrich, 2008; Wang & Hermann, 2006; Woods, Craven & Whitney, 2005; Woods & Dimond, 2002). The results of these studies showed that TT is an effective method for reducing and eliminating anxiety and agitated behaviors (Busch, et al. 2012; Gomes, Silva & Araújo, 2008; Hawranik, Johnston & Deatrich, 2008; Wang & Hermann, 2006; Larden, Palmer & Janssen, 2004; Smith, et al. 2002; Woods & Dimond, 2002). Movaffaghi et al. (2006) conducted a study

with 89 anemic female students and found that TT significantly increased hemoglobin and hematocrit levels (Movaffaghi, et al. 2006). Domínguez Rosales et al. (2009) investigated the effects of TT on the weight, the status of having complications and the duration of hospital stay of 78 premature neonates in the NICU and found that TT decreased the duration of hospital stay and the status of having complications (Dominguez, et al. 2009). In another study conducted with the neonates, the effect of TT on the vital signs of the neonates was examined; it was found that TT increased the relaxation of the neonates and helped to reduce the increased vital signs due to painful stimulus (Ramada, Almeida & Cunha, 2014). In another study conducted with the adult patients which evaluated the effect of TT on their vital signs, it was found that there was a significant difference between the mean heart rates and respiratory rates of the patients received TT and the patients not received TT (Zare, Shahsavari & Moeini, 2010).

Matourypour et al. (2016) investigated the effect of TT on the acute chemotherapy-induced vomiting intensity in the women with breast cancer receiving chemotherapy. It was found that TT was effective in chemotherapy-induced vomiting (Matourypour, et al. 2015). In another study conducted with a different group of patients with breast cancer who treated with a different treatment method, it was concluded that TT had no effect on their quality of life, mood and fatigue (Younus, et al. 2014).

Conclusion

In conclusion, the studies on TT which has no side effect, is non-invasive, silent, non-distracting, painless easily applicable in every environment, does not require any intervention to the patient's privacy and any mandatory position of the patient, in which the duration and the number are completely dependent on the practitioner and the patient, were shown. The studies showed that TT is an effective method for managing pain, anxiety and many other symptoms. The inclusion of TT in nursing care by nurses receiving training about TT has been thought to decrease the number of symptoms in patients and to strengthen the patient-nurse relationships. As a result of this systematic review, it has been thought that the number of evidence-based studies related to this

practice, which is very little known in Turkey, will increase. Thus, its using in clinical applications will increase.

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