

## Conference Paper

# Effects of Therapeutic Touch to Reduce Anxiety As a Complementary Therapy: A Systematic Review

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## Abstract

**Background:** The use of complementary and alternative medicine techniques has developed. The National Center for Complementary and Alternative Medicine places Therapeutic Touch in the bio field energy category. The literature review aims to critically evaluate data from clinical trials about testing the effectiveness of therapeutic touch as a comprehensive care in patients to reduce anxiety. **Methods:** For the purpose of the study, we employed the English articles in complementary therapy (Therapeutic Touch) area published within, 2001- 2018. This Systematic Review used electronic database including (EBSCO PubMed/Medline, Elsevier Science Direct, Google Scholar and Cochrane Library, Web of knowledge) from 2001 to 2018 to find out the literatures with the keywords: 'Therapeutic Touch' OR 'Anxiety', 'Healing Therapy' OR 'Complementary Therapy' OR 'Non-Pharmacological Therapy', and 'Nursing Therapy'. Finally, The search resulted 30 articles obtained were related to therapeutic touch. However, 23 articles were out of the inclusion criteria and were carried out on animals. The articles were evaluated based on a standard checklist presented by the Cochrane database. The articles were presented based on PRISMA format. **Result:** A total of 6 articles were in the final dataset in which it was found several positive effects of therapeutic touch on anxiety, pain, nausea, fatigue, and patients' quality of life that were supported by observations of biochemical parameters. **Conclusion:** Based on the reviewed articles, that the use of Therapeutic Touch, as a non-invasive intervention and complementary therapy, can improve health status of patients experiencing anxiety in various diseases such as cancer, heart diseases, stroke hypertension, anxiety and depression.

**Keywords:** therapeutic touch, anxiety, effect of therapeutic touch, complementary therapy

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## 1. Introduction

Complementary and alternative medicine or modalities (CAM) are defined by the National Center for Complementary and Alternative Medicine (NCCAM), National

Institutes of Health, as “health care approaches with a history of use or origins outside of mainstream medicine.” Various forms of CAM have been reported for centuries. Use of CAM declined with the appearance of antibiotics in the early 1900s and then regained popularity in the 1970s. The World Health Organization has noted that various forms of CAM have served as the primary health practice in developing countries for years and are expanding worldwide in countries where more conventional medicine is predominant. Numerous social, economic, and political factors have influenced the renewed interest in CAM in the United States. More than 1800 CAM therapies have been identified that can offer both benefits and risks to the users, so health care providers must have a basic knowledge of these therapies. CAM therapies that nurses may encounter in their practices, with specific attention to implications for acute and critical care nurses. [1]

Therapeutic Touch is the development of hands-on nursing interventions, the aim of which is to help or even cure clients by balancing the energy field. Therapeutic Touch aims to harmony, fill, and improve the flow of human’s energy by removing blockages in one’s biofield[2]. Therapeutic Touch treatment begins with concentration, the practitioner consciously focuses on clients with sincere intentions to help, at the same time he activates mental, physical relaxation and builds a state of consciousness[3]. During treatment of imbalances, the flow of energy is directed and harmonized with quiet hand movements and rhythmic, which supports energy balance, then the client’s energy is revalued, and the treatment is repeated if it is necessary[4]. Touch therapy is important where nurses can be directly near with patients and can provide alternative therapy nursing actions to overcome physical complaints due to the response of the diseases.

Therapeutic Touch was first developed in the 1970s by Dolores Krieger, a professor of nursing at New York University and Dora Kunz, a clairvoyant, sometimes described as relaxation, is often referred as the effect of TT [5]. Several studies have reported that Therapeutic Touch can reduce anxiety in the elderly and in burn patients Other studies found there is no significant difference in reducing anxiety with Therapeutic touch and other routine treatment [6].

The effects of psychological stress, such as anxiety, experience increased attention in patients suffering from cardiac dysfunction. Anxiety tends to increased dysrhythmia, high blood pressure, pulse acceleration, and even sudden cardiac death[7]. The negative effects of anxiety can be intensified when a patient is undergoing a stress procedure such as cardiac[8, 9]

Unmanaged stress and anxiety in patients can cause considerable side effects, such as cardiac dysrhythmia, vascular spasms, and vascular lacerations. To prevent or reduce

complications of cardiac catheterization, it is necessary to assess the level of anxiety and the patient's ability to deal with stress before catheterization, then plan appropriate interventions to help manage stressful situations[10]. It is necessary to explore effective ways to minimize patient's anxiety before and during cardiac catheterization is very important.

The Diagnostic and Statistical Manual (DSM, APA) classifies anxiety disorders as acute stress disorder, generalized anxiety disorder, post-traumatic stress disorder, obsessive-compulsive disorder, specific phobia, social disorders, and panic disorder. Each disorder is characterized by uncontrolled and excessive worries, resulting in poor concentration and physical symptoms. Anxiety disorders are a common occurrence in modern society, with a 12-month prevalence rate estimated at 17% and with a lifetime prevalence of almost 25%. As a chronic disorder, it has a very large impact on quality of life and has direct and indirect economic consequences[6].

However, pharmacological therapy is often associated with adverse side effects, with attitudes toward antidepressants that consistently proven negative. However, psychological therapy is often impractical because of the time and commitment of resources needed. Therefore, effective and safe alternative interventions will improve patient safety [6].

Complementary Therapy Complementary and alternative therapies are very popular among patients with chronic diseases due to their extensive use[11]. Complementary therapies are popular as alternative pharmacological and psychological therapies in treating anxiety disorders[6]. Complementary therapy can reduce blood pressure, reduce breathing rates, reduce pain, relax muscles, reduce stress and depression, treat insomnia, and reduce adverse reactions during hemodialysis (HD). Modalities such as relaxation, music, touch therapy, deep breathing exercises, acupressure, acupuncture, art, yoga, and hypnosis have been used as independent nursing practices to minimize physical and psychological complications of kidney failure [12].

Complementary and alternative therapy refers to the variety, is generally not considered as a part of medical care in general. Complementary therapy became popular among patients with chronic diseases. There are many reasons about the use of this therapy, including frustration from conventional medicine, belief in the safety of CAT, especially herbal medicines. There are hundreds of complementary therapies that patients can choose from, some of which are acupuncture, chiropractic, yoga, herbal medicines and many others. From observations, complaints in patients with CKD with hemodialysis are treated more with medication.

The purpose of this literature search is to improve the thematic relevance of studies proves health and quality of life and increases for patients who experience anxiety in certain types of diseases.

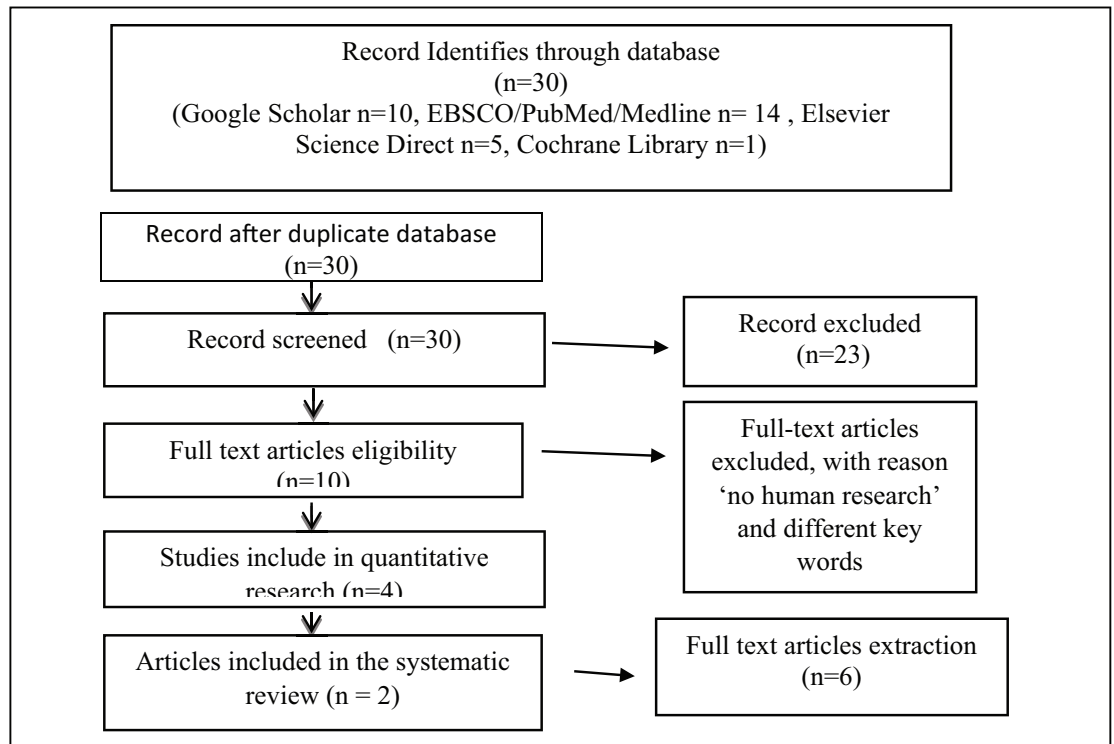
## 2. Methods

Search strategy: These search process was performed using the following by keywords: 'Therapeutic Touch' OR 'Anxiety', 'Healing Therapy' OR 'Complementary Therapy' OR 'Non-Pharmacological Therapy', and 'Nursing Therapy'. The chronological search range was between 1 January 2019 and 17 February 2019. Databases were used for searching literature included: Google Scholar=10, Elsevier Science Directn=5, EBSCO / PubMed / MEDLINE= 14, and the Cochrane Library=1. These articles were then filtered according to full text and publication year between 2001 -2018 and resulted in 6 articles. These 6 articles were used by Therapeutic Touch, anxiety and complementary therapy. Finally, these 6 articles were filtered based on inclusion and exclusion criteria (see below) and were produced in 6 articles. The search process on the databases is shown in

A Critical appraisal was later performed according to the study design of the articles. The Critical Appraisal Skills Program (CSAP) was used for analysis (CASP, 2015). Seven articles were analyzed through data extraction. Variables acquired through extraction data were: authors name (s), year of study and publication, intervention method, and study findings.

## 3. Data Extraction

Inclusion assessment, the methodology of the trial will be assessed by two independent review authors. Data will be extracted on individuals, methods, interventions, outcomes and results. This data will be recorded on hard copy datasets, clarification on the aspects of study design/data will be sought from the respective authors.



**Figure 1:** Result of a systematic search in database related to Therapeutic Touch to Reduce Anxiety As Complementary Therapy.

TABLE 1: Description of studies included studies.

Author & Year	Title	Study design	Device used	Result
Tabatabaee, A., & Tafreshi, MZ (2016)	Effects of Therapeutic Touch in Patients with Cancer: a Literature Review (Tabatabaee & 2016)	<ul style="list-style-type: none"> <li>This review was carried out by searching scientific databases including Scopus, Google Scholar, Science Direct, PubMed using key words of healing touch, therapeutic touch, touch therapy, cancer, neoplasm within the year 1990 to November, 2015.</li> </ul>	<ol style="list-style-type: none"> <li>This study was conducted in the form of a literature review.</li> <li>A search strategy was created with the help of an information specialist To reduce subjective selection bias, the</li> <li>Inclusion process and the quality of</li> <li>The searches were limited to the period between 1990 and early 2015.</li> <li>Language papers in any other language than English were excluded.</li> </ol>	<ol style="list-style-type: none"> <li>The number of 334 articles was found on the basis of the key words,</li> <li>17 articles related to the objectives of the study.</li> <li>A total of 6 articles were in the final dataset on pain, nausea, anxiety and fatigue, and quality of life and also on biochemical parameters were observed in</li> </ol>

Author & Year	Title	Study design	Device used	Result
Do, E., Terap, T., Sobre, U., Em, S., Com, P., Cr, DOR, ... Pavam, M. (2010)	The effectiveness of Therapeutic Touch on pain, depression and sleep in patients with chronic pain: clinical trial (Do et al ., 2010)	<ul style="list-style-type: none"> <li>• Krieger-Kunz method, during 1 month,</li> <li>• Sample 30 people aged 60 years or older.</li> <li>• A random sample.</li> <li>• Each subject received 8 (eight) Therapeutic Touch sessions</li> <li>• Following twice per week, one Mondays and Wednesday for some subjects</li> </ul>	<ol style="list-style-type: none"> <li>1. Visual Analogue Scale.</li> <li>2. Beck Depression Inventory</li> <li>3. The Pittsburgh Sleep Quality Index before the first and after the last session.</li> <li>4. Sessions were held individually, in rooms at the health unit, by researchers with previous training to apply the technique.</li> <li>5. Each session took about 25 minutes</li> </ol>	<ol style="list-style-type: none"> <li>1. Considering each individual session, the scores showed a significant drop in pain intensity in all sessions.</li> <li>2. The statistics between average VAS scores before the first (1,647) and after the eighth session (0.270) also showed a significant decrease (<math>p = 0.007</math>) in pain intensity.</li> <li>3. The global average score on Beck's Depression Inventory was 31.43 before the first and 26.60 after the last session. The statistical tests showed a significant difference between the average scores (<math>p = 0.006</math>).</li> <li>4. The global average sleep quality score before the first Therapeutic Touch session was 9,067, against 5,233 after the last session. The difference between these average scores was significant (<math>p = 0.000</math>).</li> </ol>

Author & Year	Title	Study design	Device used	Result
(Study, 2015)	Effects of Therapeutic Touch on Anxiety, Vital Signs, and Cardiac Dysrhythmia in a Sample of Iranian Women Undergoing Cardiac Catheterization	<ul style="list-style-type: none"> <li>• A Quasi-Experimental Study</li> <li>• Sample 69 women ranging age 35-65 years</li> <li>• The participants had no history of hallucination, anxiety, or other psychological problems.</li> <li>• Participants must be aware and have at least sixth grade literacy level.</li> <li>• Participants were randomly assigned into an intervention group (n = 23; received 10-15 minutes TT), a placebo group (n = 23; received 10-15 minutes simulated touch), and a control group (n = 23; did not receive any therapy).</li> </ul>	<ul style="list-style-type: none"> <li>• Spielberg's anxiety test,</li> <li>• Cardiac dysrhythmia checklist,</li> <li>• Vital signs recording sheet.</li> <li>• Statistical analyzes were considered to be significant at .05 levels</li> </ul>	<ol style="list-style-type: none"> <li>1. Anxiety p &lt;0.0001 but not trait anxiety (p = 0.88), decreased the incidence of cardiac dysrhythmias p &lt;0.0001 except premature ventricular contraction (p = .01), and regulated vital signs p &lt;0.0001 in the intervention group versus the placebo and control group.</li> <li>2. Touch Therapies are an effective approach to managing state anxiety, regulating vital signs, and decreasing the incidence of cardiac dysrhythmia during stressful situations, such as cardiac catheterization, in Iranian cardiac patients.</li> </ol>
(Aghabati, Mohammadi, and Esmail 2010)	The Effect of Therapeutic Touch on Pain and Fatigue of Cancer Patients Undergoing Chemotherapy	<ul style="list-style-type: none"> <li>• Experimental Study</li> <li>• A randomized and three-groups experimental study</li> <li>• 90 Patients undergoing chemotherapy,</li> <li>• Exhibiting pain and fatigue of cancer,</li> <li>• in the Cancer Center of Imam Khomeini Hospital in Tehran, Iran.</li> </ul>	<ul style="list-style-type: none"> <li>• Pain and fatigue were observed and after the intervention for 5 days (once a day).</li> <li>• The intervention consisted of 30 min A day for 5 days between 10:00 am and 10:30 am</li> <li>• The Visual Analogue Scale (VAS) of pain</li> <li>• Rotten Fatigue Scale (RFS) completed for 5 days before and after the intervention by the subjects.</li> </ul>	<ol style="list-style-type: none"> <li>1. The TT (significant) was more effective in treating patients with chemotherapy than the usual care group, the</li> <li>2. Placebo group indicated a decreasing trend in pain and fatigue scores compared with the usual care group.</li> </ol>

Author & Year	Title	Study design	Device used	Result
Mahin Moeini, Zahra Zare, Maryam Hazrati, Mahmood Saghaei (2008)	Effect of Therapeutic Touch on Patients' Bypass Surgery	<ul style="list-style-type: none"> <li>• Randomized Control Trial Clinical Control of</li> <li>• Independent variables on anxiety</li> <li>• Dependent variable CABG</li> <li>• Simple random sampling</li> <li>• Participation select 44 patients from two separated lists of random numbers of women and men who were waiting to undergo the CABG surgery</li> <li>• Place at Shiraz Namazi Hospital The</li> </ul>	<ul style="list-style-type: none"> <li>• Data was collected using the Spielberg's Anxiety Inventory.</li> <li>• The patients' anxiety was measured using a questionnaire with two sections; The first section included demographic information, the second section included the Spielberg's State Anxiety Inventory.</li> </ul>	<ol style="list-style-type: none"> <li>1. Therapeutic touch can reduce the state of waiting for CABG surgery.</li> <li>2. Paired t-test showed a significant difference between the mean of state anxiety before and after the intervention in the case. group (<math>p &lt; 0.05</math>; <math>M = 60.91</math>, <math>SD = 8.53</math> before the intervention and <math>M = 28.32</math> and <math>SD = 4.18</math> after the intervention)</li> <li>3. Paired t-test also showed a significant difference between the mean of state anxiety in the control group before and after intervention (<math>p = 0.272</math>; <math>M = 58,181</math>, <math>SD = 11.27</math> before and <math>M = 57.86</math>, <math>SD = 11.23</math> after).</li> <li>4. Student t-test showed a significant difference between the state of anxiety of two groups of control and case after intervention (<math>p = 0.000</math>; <math>M = 32,590</math>, <math>SD = 7,956</math> for the case and <math>M = 0.318</math>, <math>SD = 1,323</math> for the control group)</li> <li>5. Finally , it is important to mention that using therapeutic touch as a technique with professional performance management, it is a duty to improve patients' health and solve their problems.</li> </ol>



Author & Year	Title	Study design	Device used	Result
(Robinson et al., 2009)	Therapeutic touch for anxiety disorders	<ul style="list-style-type: none"> <li>Literature review</li> <li>Studies in anxiety was a secondary symptom of a different disorder (for example depression or other psychiatric diagnoses) were excluded.</li> </ul>	<ul style="list-style-type: none"> <li>As defined by trial lists with anxiety disorders, diagnosed by Diagnosis and Statistical Manual (DSM-IV) (APA1994), International Classification of Disease (ICD-10) (WHO 1992),</li> <li>Valid diagnostic instruments, or other self-rated or clinician-rated validated instruments that assess the level of anxiety symptoms, irrespective of gender, race or nationality.</li> </ul>	<ol style="list-style-type: none"> <li>Two review authors independently applied inclusion criteria.</li> <li>Further information was sought from trial lists where papers contained insufficient information to make a decision about eligibility.</li> <li>Main results No randomized or quasi-randomized controlled trials of therapeutic touch for anxiety disorders were identified</li> </ol>

#### 4. Discussion

Complementary alternative medication therapy has proven to reduce anxiety and depression, to minimize the pain and to boost immune function. Systematic review shows the evidence for the efficacy of complementary therapies in treating pain, dyspnea and nausea and vomiting for patients in times of life crisis. There were differences in fatigue scores before and after complementary therapy in three groups for 5 days in 21 adult patients at risk. Complementary therapies such as acupuncture, transcutaneous electrical nerve stimulation, supportive group therapy, self-hypnosis and massage therapy can be pain relief for patients with cancer or critically ill patients. The results showed that Therapeutic touch was significantly more effective in the pain and fatigue of the experimental group than in placebo in the control group[13].

Therapeutic touch reduces the pain of the elderly who suffer from degenerative arthritis. Spiritual healing, as a therapy for chronic pain, significantly decreases pain intensity during therapy sessions. Therapeutic Touch decreases pain intensity in patients with Fibro-Myalgia Syndrome during six therapy sessions. Therapeutic Touch reduces pain in clients with cancer in six treatment sessions. Therapeutic Touch and Healing Touch on Cancer Symptoms can reduce anxiety and touch healing reduce fatigue, and that both reduce total mood disorders. It is found decreasing the scale of pain after Therapeutic touch, massage, when using fewer non-steroidal anti-inflammatory drugs for 4 weeks. [13].

Therapeutic Touch is a therapy to convey concern that is non-invasive, easy to learn, and can provide non-pharmacological interventions for pain and fatigue. Therapeutic Touch can be applied at home, at any time, and does not require special equipment [13].

Therapeutic Touch can reduce anxiety in patients before CABG surgery. Post-white et al reported that healing Therapeutic Touch was more effective than standard treatments in reducing pain, mood disorders, and fatigue in patients with cancer who received chemotherapy. Therapeutic Touch nursing interventions can be used to increase feelings of calm and relaxation in patients with breast cancer and reduce anxiety. The research showed a significant difference between nurse anxiety before and after intervention, studied self-reported pain and anxiety in the elderly population using Spielberg's Anxiety Inventory to measure anxiety. Salivary cortisol levels were analyzed after 20 minutes of touch therapy with a single blind method. The results showed that there was a significant reduction in pain in the Therapeutic Touch group. The effect of anxiety is significantly reduced and salivary cortisol levels show little change [14]. Studies the effects of Therapeutic Touch to reduce children's anxiety before receiving an injection and report very significant differences in children's anxiety before and after injection. [15].

Patient anxiety can cause many problems and the goal of professional nursing is to improve the patient's condition, comfort them and reduce their anxiety. Therapeutic Touch is simple, inexpensive and feasible in all health centers and even in patients' homes to entertain them. The results of this study reveal the effectiveness of Therapeutic touch is a safe intervention in reducing patient anxiety. Nurses must be trained to use touch therapy techniques and apply them in emergency situations to help patients, other nurses and medical personnel, because the medical profession has the potential to cause stress. Therapeutic Touch is a professional technique in applicable nursing interventions and is worthy of these skills to improve patient health and resolve patient problems [15].

Recipients of Therapeutic Touch often report subjective benefits, including improvement in mood, well-being, and interpersonal relationships, reduction of pain, nausea, anxiety, and fatigue, increased vitality, and satisfaction with touch therapy. Meehan et al. in their study it was also shown that Therapeutic Touch can be used as a supplement in relieving pain in patients after surgery. Investigating the effect of therapeutic touch on the level of pain in patients with osteoarthritis of the knee came to the conclusion that therapeutic touch can reduce pain and improve function in patients [16]. Results obtained from four studies in parents proved positive regardless of diagnosis. Physical

status such as pain, appetite, and sleep increases; markers of behavior such as worries, explosions, and anxiety diminish; and behaviors that make staff work easier, such as compliance with daily routines, decreased treatment, and increased functional ability, all support the use of TT for this population.

Significant reductions in pain, nausea and anxiety were immediately observed after intervention in postoperative days one and two, and in pain and anxiety on the third day of postoperative compared to the pre-intervention level. These findings indicate that Therapeutic Touch interventions are feasible and acceptable for patients undergoing bariatric surgery, and significantly increase their pain, nausea and anxiety. Believes that energy therapy can be used to improve various symptoms in patients with cancer. The aim of Therapeutic Touch is to restore balance, harmony and sense of well-being. Therapeutic Touch is based on loving intention through light touch or placement of hands outside the body which is often done by nurses [17].

Physiologically, TT appears to affect the autonomic nervous system, by changing the ratio of high frequency heart rate to low frequency, which reflects a larger parasympathetic tone and reduces sympathetic activation.

Relaxations responses help explain the effects of Therapeutic Touch. The underlying assumption of Therapeutic Touch is that the human layer is a system of Energy and energy fields beyond several inches outside the surface of the skin. There are three different interventions including (a) nurses become aware of the benefits of Therapeutic Touch for their patients, (b) the assessment phase, where a nurse uses their hand movements slowly, gently, and sweeps from the patient's head and continues to the patient's feet to assess the existence of signs of energy mismatch, and (c) the un-ruffling phase, in which a nurse uses their hand symmetrical movements above the patient's energy field with the aim of smoothing or eliminating energy congestion [16].

Therapeutic Touch is a standard bio field therapy that uses gentle touch and movement in the patient's "energy field," with the aim of restoring balance in the patient's energy system and strengthening the patient's "healing capacity". Therapeutic Touch has been shown to improve the well-being of cervical cancer and breast cancer patients during radiation and to reduce pressure and fatigue during chemotherapy. Therapeutic Touch has reduced anxiety, promotes relaxation, reduces pain, reduces depression, and increases feelings of well-being. This method allows the instructor to provide technical skills and build relationships with patients so that congratulations and professional motivation will be improved. The ease of training and feasibility in various settings without the need for special tools also makes touch therapy a good choice for many patients and nurses [17]. The drawback is that there is no clear reason for the specificity

or duration of treatment. In addition, the study showed a substantial difference in the frequency of interventions carried out every day, once a week, and twice a week. The duration of the treatment session ranges from 10–40 minutes; however, the average time is usually 10-15 minutes. The role of several variables such as physical activity, psychological and gender problems is ignored, or not mentioned [17]. Complementary approaches and alternative practices help individuals to lead healthy lives and improve their quality of life. This approach is a unique opportunity for nurses so they can provide holistic care. Massage, one of the complementary and alternative approaches that is effective in eliminating the overall symptoms and side effects of cancer patients due to illness and treatment. Although there are several studies evaluating the efficacy of massage applied to cancer patients on quality of life [18]. When the anxiety level of patients participating in our investigation was considered, it was observed that the average anxiety score of patients in the control group increased after chemotherapy but the average anxiety score of patients in the intervention group declined after chemotherapy. Back massage during effective chemotherapy on anxiety suffered during chemotherapy and that massage significantly reduces anxiety. After patients a day after chemotherapy, the patients stated that they had comfortable sleep and they felt more energetic and comfortable, which supported the findings of our study. back massage during chemotherapy, nursing practice, is an effective method of reducing the level of anxiety suffered by individuals. It was stated that massage applied to control symptoms in cancer patients affects anxiety more than it affects all other symptoms [18].

**The Energy Field;** Therapeutic Touch touches centered on the theory of body, mind, and emotions joining together to form complex energy fields. Good health shows a balanced energy field while disease represents imbalance. How come I'm looking forward, he is the hero of his touch on the Assertions of Nursing theorist Martha Rogers.

This theory states that the energy field is symmetrical and balanced when a person is healthy, which allows energy to flow evenly. Physical and psychological symptoms, such as pain and anxiety, cause imbalances in the field.

## 5. Conclusion

We hope that in the future this intervention can be part of mandatory interventions for nurses in the hemodialysis room. This systematic review shows that therapeutic intervention can be used as an alternative nursing intervention to reduce anxiety levels in various patients' disease conditions. Therapeutic Touch contributes to advancing

nursing practice that is recognized as a unique human approach to healing, stimulates research and education, and contributes to the future transformation in health care

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## Conflicts of Interests

No conflict interests were disclosed in this study.

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