

Cancer Patients for Pain Complementaries and Integrated Approaches Used in Palliative Care

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Abstract: Nowadays, nursing is an effective and indispensable member of the health team both in Turkey and in the world. Because people need care practices any point their life experiences that end in health, well-being, discomfort, disease and death. While palliative care practices, which are seen as key point of nursing practices among care needs, are only care for patients in the last stage of life, it is opinion that it is necessary to reduce the pain level and improve the quality of life according to the palliative care principles. Recent cancer patients constitute a significant part of patients receiving palliative care and have problems due to symptoms caused by chemotherapy treatment. Pain is the most feared outcome of these symptoms. Pharmacological treatment, pain, community, despite various educational practices, patients often complain of problem. It is important to create complementary and integrated approaches to palliative care for pain, which significantly affects the daily living activities and quality of life of patients. In addition, complementary and integrated care practices in palliative care help to prevent nursing from being a job-oriented profession and to focus on nursing role and practices, not medical applications.

Keywords: Pain, Cancer, Palliative Care, Complementary and Integrated Approaches

1. Introduction

In recent years, significant changes have occurred in socio-cultural and population characteristics and medical diagnosis / treatment methods of societies. One of the important issues in health today is to improve the quality of life with palliative care practices. For this, individuals need to be able to perform self-care, prevent accidents and disabilities, and increase their capacity to work. In parallel with all these changes, the concept of palliative approach is gaining importance [1-2]. While palliative care practices have been performed only for the patients in the last stage of life, it is now advocated that palliative care should be applied as early as possible in patients who are aimed at reducing the pain level and increasing the quality of life according to the principles of palliative care [2-3]. In recent years, with the prolongation of life expectancy and technological advances, the concept of palliative care has become increasingly important. Palliative care practices have developed rapidly in recent years as a result of the increase in

the number of individuals living with chronic and life-threatening diseases and the attempts of health professionals to provide palliative care [1-3]. End-stage cancer patients constitute an important part of the patients receiving palliative care and have problems due to both cancer and the symptoms of the side effects of chemotherapy treatment. One of these symptoms is pain. Pain considered by patients as one of the most feared outcomes of cancer; It is a problem that approximately 60% of patients complain of despite pharmacological treatments, pain-related communities, and various interventions and educational practices. Cancer pain significantly affects the daily activities and quality of life of the patient. Therefore, it is important to establish palliative approaches to pain in cancer patients.

2. Method

2.1. Inclusion Criteria

The following criteria were taken into consideration in the

selection of the articles to be included in the study;

- (1) The results of this study suggest complementary and integrative approaches to pain used in palliative care in cancer patients;
- (2) the language of publication is Turkish or English;
- (3) published in the last decade (2008-2018);
- (4) access to the full text. Randomized controlled trials (RCTs) and quasi-experimental studies (LDS) were included in the study.

2.2. Reasons Not to Include in Research

Research and observations investigating complementary and integrated approach interventions to cancer patients receiving palliative care have not been included in the systematic review. The studies conducted in the last decade have been taken into consideration in the evaluation of current information. There is no study whose title or summary is not clear, full texts cannot be reached and the publication language is not Turkish / English.

2.3. Research and Selection of Studies

2.3.1. Sample Definition

Studies; In October 2017-March 2018 “OVID”, “Medline”, “Cochrane”, “Pubmed”, “Wiley Online Library” databases and “Google Scholar” and “YÖKSİS Theses” were selected. The following keywords were used; Researches in graduate and doctoral theses and nursing journals were also preferred. The titles and abstracts of all related articles identified by electronic search were independently reviewed by the researchers. The investigations of the researchers were then compared and 556 references were eliminated from the 516 studies included in the exclusion criteria, and the full texts of 21 studies were taken as the source for systematic review. Each of the selected articles includes research that includes a complementary and integrative approach to pain in cancer patients receiving palliative care.

2.3.2. Data Analysis

A standard data summary form was developed to summarize the data and the data was evaluated accordingly. The studies included independently by the researchers were summarized according to the data summarization form. Then the abstracts were compared and a consensus was established among the researchers.

In the content of data summarization form;

- a. Authors and year of the study,
- b. The name of the study and sample size,
- c. Design of the study,
- d. Dependent variables,
- e. Method of study,
- f. The findings of the study were included.

In the studies included in this systematic study, meta-analysis could not be performed because the characteristics of the participants, intervention and measurement methods applied were not the same.

3. Result

Complementary and Integrated Approaches to Pain in Cancer Patients

Despite advances in science and technology in the world, cancer has become one of the most important health problems, according to World Health Organization (WHO) 2017 data, the second leading cause of death among heart diseases and causes 22.3% of all deaths [2-5]. Millions of people are diagnosed with cancer every year in the world and more than half of these patients die because of cancer [4-5]. Despite advances in medical and health sciences, cancer continues to be a process that includes many physical, psychological, social and spiritual difficulties for patients and their relatives, from the time of diagnosis, at the time of death and at the time of mourning. In addition, it negatively affects the quality of life and causes many disturbing symptoms and leads to a vicious cycle [6-7]. “Pain. Is one of the factors that frequently trigger this vicious cycle. Pain; It is described as an undesirable psychological experience by patients presenting or occurring with tissue damage or can be identified by this damage [7-8]. Pain experienced by cancer patients is identified as an important problem and its incidence is reported to be more than 90% in advanced patients and 50% in patients with metastases [8-9]. In a systematic review by Beuken, Everdingen, & De Rijke (2007) examining the prevalence of pain in cancer patients; pain was found to be 33% in patients receiving medication, 59% in patients receiving chemotherapy, 64% in patients with end-stage disease, and 53% in all disease stages [10]. Kara and Fesci (2008), 53.6% of patients receiving chemotherapy treatment, and 80% of patients diagnosed with advanced cancer experienced pain during the course of the disease [11]. Breivik, Cherny, & Collett (2009) in a study of 5084 cancer patients, in the last month, 56% of patients experiencing progressive pain from moderate to severe levels and 69% of the daily life activities were found to be difficult due to cancer. pain has been reported to affect 80-90% of patients [12]. Uysal et al. (2015), it was found that 90% of cancer patients who received palliative care complained of pain [13]. Beuken V and et al. (2016) in a study examining the prevalence of pain in cancer patients; pain was found to be 39.3% in patients receiving medication, 55% in patients receiving chemotherapy, and 66.4% in patients with metastasis in the late and advanced stages [14].

According to the data obtained from the literature, the most common symptom experienced by cancer patients is pain; In addition to medical treatments, it is supported by many complementary therapies [3, 15]. Medicines are widely used as a pharmacological method in medical treatment. Pharmacological methods in pain control are the most preferred treatment modality because of their rapid effect and simple application. The unconscious and intense use of analgesics used as pharmacological methods causes addiction in the individual and sudden release causes various physical symptoms. Therefore, it is recommended that drug use should be performed under the supervision of a doctor and

nurse [13, 15-16]. Another method used alone or in combination with pharmacological treatment to reduce and control pain level is non-pharmacological methods. The frequency of the use of non-pharmacological methods has been increasing in recent years especially in order to reduce the rate of analgesic use and increase the quality of life [17-18]. The importance of palliative care practices in meeting the physical, psychological, social and psychological needs of patients and their relatives during the treatment period from the time of diagnosis, to the time of death and after the mourning period is undeniable since the patients whose therapeutic approaches are over [6-7, 19]. WHO palliative

care; It is defined as an approach aimed at the early detection and treatment of physical, psychological, social and psychological problems, especially pain, and to improve the quality of life of patients and their relatives who face a life-threatening illness [20]. Since the development of palliative care practices prolongs the life expectancy of cancer patients, cancer patients experience pain longer. Palliative care practices are not only care given in the terminal period of life, but are also a method of care that should be combined with drug methods and life-prolonging treatment at every stage of the disease [13, 19, 21].

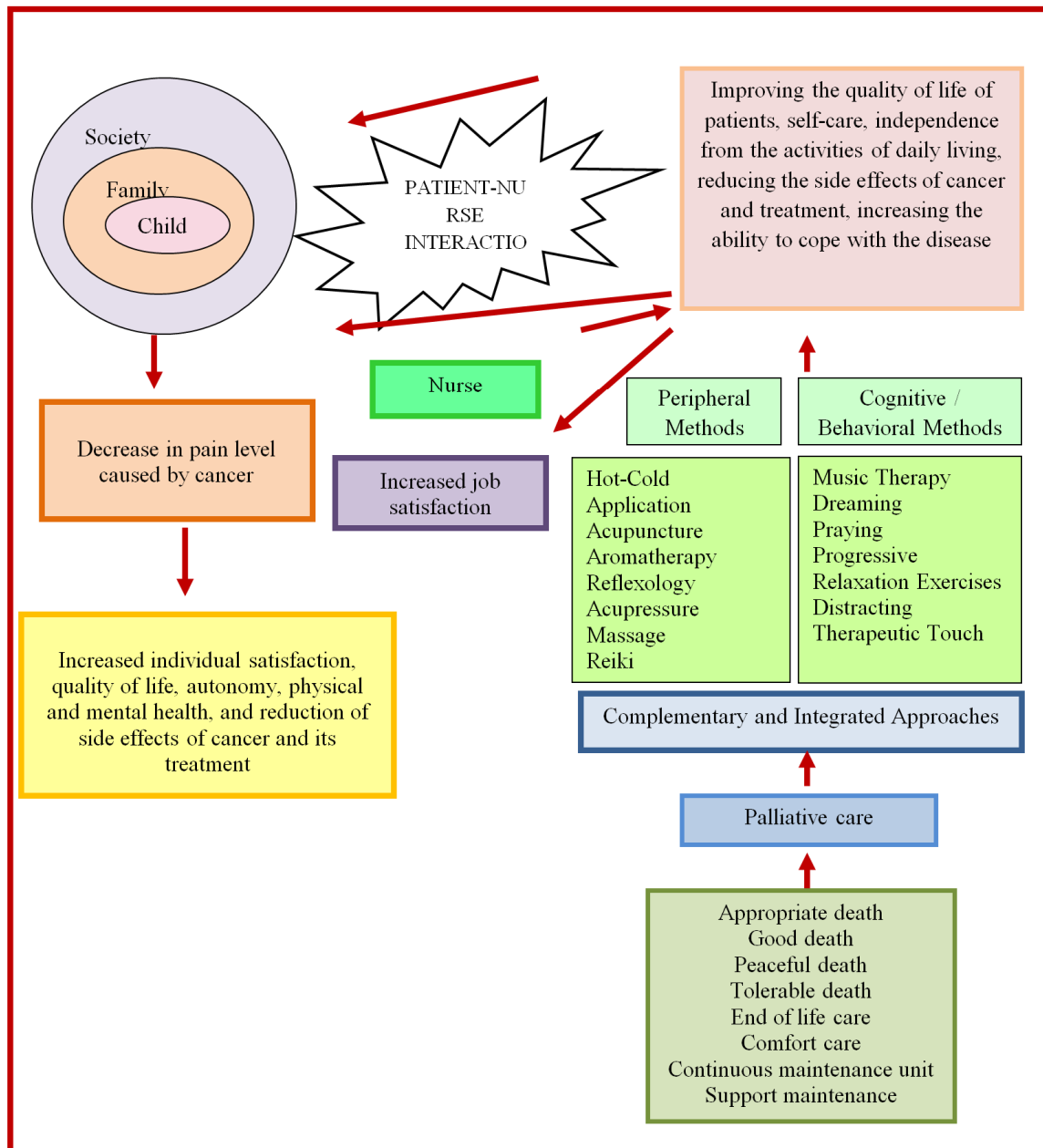


Figure 1. Concept map: Patient-nurse interaction and results related to complementary and integrated approaches in palliative care.

The use of pharmacological and non-pharmacological methods as a palliative approach to pain in cancer patients provides the patient with a quality life that he can perform

daily life activities without difficulty [18-19]. Non-pharmacological methods are divided into peripheral (skin stimulation) methods and cognitive / behavioral methods and

are shown in Figure 1. Peripheral methods, according to the gate-control theory, by inhibiting the small diameter fibers carrying the message of pain by eliminating the stimulus felt as pain, cognitive / behavioral methods; it reduces or controls pain level by creating changes in emotional factors [22-24]. Peripheral methods include hot-cold treatments, acupuncture, aromatherapy, reflexology, acupressure, massage and reiki; in cognitive / behavioral methods; music therapy, dreaming, praying, progressive relaxation exercises, attention and therapeutic touch [25-27].

4. Discussion

4.1. Pain Control Methods

4.1.1. Peripheral (Skin Stimulation) Methods

(i). Hot and Cold Applications

In the oldest data about human life, hot and cold applications, which are known to be used in the treatment of diseases, are an effective and widespread method used to relieve pain [22, 24]. The hot application by means of heated hot water packs filled with water, hot moist compresses, electric heating packs, chemical gel packs and hydrotherapy provides vasodilation, dissolves muscle spasm, increases blood flow, reduces the effects of pressure, tension and hypoxia on the nerve endings, and pain in that area. increases pain threshold and reduces pain [22, 24, 28, 29]. Cold application is carried out with ice packs, chilled chemical gel packs and cold baths, and it is effective in decreasing the heat of the receptors in the body, increasing skin sensitivity and creating vasoconstriction effect and reducing edema, blood flow and pain level [22, 28]. In the studies, it was determined that the application of hot-cold reduces pain, accelerates circulation and provides relief [30-32].

(ii). Acupuncture

Acupuncture, which is one of the important elements of traditional Chinese medicine, is a scientific treatment that enables the body to regain its balance as a result of stimulation of special points in the body with needles. Acupuncture is effective in reducing chronic pain in cancer patients by exerting secretion of enkephalins and increasing serotonin levels from endogenous opioids known to have an effect on regulating mental and psychological state [33-35]. In studies with cancer patients with pain, acupuncture has been found to be a complementary, self-medicating, non-medication treatment that reduces cancer-related symptoms (pain, digestive problems, neuropathy), and is self-medicating [36-39].

(iii). Aromatherapy

Aromatherapy, which is used to improve, balance and relieve symptoms of individuals' physical, psychological, and spiritual health, is an essential oil obtained from plants; massage, inhalation, compress and bath methods such as the application of the body [40-41]. Some analgesic components in oils, endorphins in the brain stem, such as serotonin,

noradrenaline and dopamine affect the release of substances and as a result of the emergence of analgesic properties due to the emergence of analgesic properties are used today for therapeutic purposes to control pain [24, 42, 43]. In studies examining the effect of aromatherapy in patients receiving chemotherapy, it was found that aromatherapy reduces pain and provides relief and relaxation of the patient [44-47].

(iv). Reflexology

Reflexology, a treatment method that involves balancing the blood circulation and nervous system, alleviating the side effects of chemotherapy, improving the quality of life, regulating the function of the sympathetic and parasympathetic nervous system, stimulates the release of endorphins in the body and stimulates the release of endorphins in cancer patients [48, 49]. In studies conducted with patients with cancer pain, it was found that reflexology application decreased the level of pain, anxiety and fatigue by taking the attention in another direction, had a positive effect on the daily life of the patient and increased sleep quality [50-55].

(v). Acupressure

The aim of acupressure which is a noninvasive treatment method applied by applying pressure with finger, palm or special bands to certain points that provide energy flow in the body, activating blood circulation, providing neurological effect and relaxation, thus reducing the pain of the individual and thus maintaining the normal functions of the body [56-58]. In studies with patients with cancer pain; It is stated that acupressure application reduces pain and provides relief by reducing tension in muscles and this result is the preliminary evidence of acupressure's pain reduction effect [59-61].

(vi). Massage

Massage used by many cultures as a treatment art because of its therapeutic and relaxing effect; By activating the door control system in the body, endorphin hormone secretion by increasing the pain threshold reduces the perception of pain [24-27]. In studies conducted with patients with cancer pain, it has been found that massage application increases the pain threshold and reduces the pain level [62-63]. Cutshall, Mahapatra, & Hynes (2017) concluded that there is insufficient evidence about the use of massage in the clinical practice of pain management of cancer patients receiving outpatient chemotherapy and there are few studies on the subject [64].

(vii). Reiki

Reiki application, called healing method, is used to balance the energy flow in the individual and the practitioner tries to re-circulate the energy in the blocked channels by sending his own energy to the energy points [65-67]. In the researches, it was found that reiki application is a practice that provides harmony between body, mind and soul, shortens the length of hospital stay, increases patient satisfaction, provides relief, facilitates transition to sleep, reduces pain, fatigue, nausea, emotional distress and anxiety

levels [68-71].

4.2. Cognitive / Behavioral Methods

4.2.1. Music Therapy

Music therapy is one of the oldest aesthetic treatment methods that provide benefits by meeting the physical, sensory, cognitive and social needs of patients and maintaining their mental health [18, 72]. In the studies performed, cancer patients felt that their pain was alleviated by listening to music and feeling that their bodies were relaxed. In addition, it was emphasized that music therapy is an effective, non-invasive and inexpensive application to control and reduce cancer pain, but there is a need for studies in which patients are asked about their music preferences [73-75]. In another study, it was found that music was effective in reducing pain in cancer patients, but the effect of music was found to be higher and more effective in the group preferred by the patients [76-78].

4.2.2. Dreaming

It is a way of thinking which is used regularly by most people, and it is a method of focusing on the attention that provides relaxation and desire to control in the individual. The individual imagines the pleasant scenes such as the sea, the lake and the forest, away from the painful stimulus or imagines that the painful area has turned into ice. It is thought that dreaming together with rhythmic breathing and relaxation may have positive effects on strengthening the effects of treatment, reducing pain expectation and side effects by supporting the patient's participation in individual care [23, 79, 80].

4.2.3. Praying

Cancer is a health problem that causes pain, which is difficult to cope with intensive treatment practices by patients and their relatives, creates stress, and affects life by causing various physical, psychological, social and spiritual problems [79, 81, 82]. Patients use a variety of coping methods to reduce and control the symptoms caused by cancer. It was observed that the physical, social, spiritual and spiritual conditions of the patients who used the methods of prayer and coping with belief were improved [81-83]. In a study conducted with women with breast cancer, it was found that prayer was important for 88% of women and 85% was an aid in coping with pain and other symptoms [82]. In other studies, it was emphasized that praying has an important effect on the coping and acceptance of the patients who have problems in accepting the disease such as cancer, it has been seen that it increases the quality of life, hope of getting rid of the disease and the ability to make meaning from the disease, but studies about the effect of praying in the management of pain in cancer patients are insufficient [81-83].

4.2.4. Progressive Relaxation Exercises

Progressive relaxation exercises, which are one of the cognitive / behavioral treatment methods, provide voluntary contraction and passive loosening of large muscles voluntarily, resulting in a decrease in the functions of the

sympathetic nervous system and an increase in the functions of the parasympathetic nervous system. In the studies carried out in cancer patients; progressive relaxation exercises have been found to reduce pain levels, effective, easy to apply and inexpensive method [84-85].

4.2.5. Draw Attention

The distraction method, which enables the patient's attention to be focused in a different place, enables the control and reduction of the symptoms experienced by the individual [86-87]. Although this method is not a method that directly reduces pain, it increases the pain threshold and increases its resistance to pain [23, 88]. It includes multiple applications such as watching a movie, listening to funny stories or music, having pictures taken by the individual. A method that focuses on the individual's coping with the symptoms caused by chemotherapy; it increases the individual's sense of control, activity level and work capacity, and reduces the feeling of weakness, side effects of pharmacological methods, and the level of pain and anxiety [23, 88, 89].

4.2.6. Therapeutic Touch

Therapeutic touch, which positively affects patients' consciousness, aims to help individuals, is considered to be an effective method to improve comfort and well-being, and to integrate energy-enhancing, regulating, balancing and preserving with hands to treat symptoms caused by imbalance in energy fields. is a treatment method [90-91]. Tabatabaee et al. (2016), in his study, it was found that a total of seven sessions of therapeutic touch application to cancer patients for four weeks positively affected the patients physically and psychologically, decreased the pain level and was one of the important cognitive / behavioral methods frequently used by health professionals in recent years [92].

5. Conclusion

In this review, it is seen that the peripheral and cognitive methods used in palliative care in cancer patients are used to reduce and control pain level and it is confirmed that these methods have a positive or negative effect on pain level. Based on the findings obtained from the review, peripheral methods include "hot-cold applications, acupuncture, aromatherapy, reflexology, acupressure, massage, reiki"; It was concluded that terapi music therapy, daydreaming, praying, progressive relaxation exercises, distracting and therapeutic touch den which are cognitive methods provide a significant decrease in the perceived pain level of the patients. Peripheral and cognitive methods may contribute positively to reducing the pain level of cancer patients experiencing pain, including palliative care patients. In this context, it is recommended to conduct large sample studies to determine the effect of peripheral and cognitive methods on pain level and other symptoms, to determine effective methods, to test these methods in clinical settings and to use them in clinics.

6. Recommendations

For palliative treatment of cancer patients, good planning and nurses' training and experience are needed. Improving the quality of life, relieving symptoms, and supporting the patients and their relatives in a way that is worthy of human

dignity is very important in patients who have no chance of cure. It is suggested that palliative treatment of cancer patients can be provided with the active support of not only nurses engaged in oncology, but also all other branches and physicians.

Table 1. Studies Related to the Subject.

Author / Year	Type of Research	Number and Group of Samples	Intervention	Results
Blyth et al. (2005)	Community based work	474 cancer patients experiencing pain	The methods used when patients experienced pain were determined.	It was determined that 47% of the patients were using medication, 31.5% were resting, 25.8% were exercising, and 23.4% were doing hot / cold treatment to reduce the pain level. As a result of the study, it was found that the application of hot and cold significantly reduced the pain level of the patients ($p \leq 0.05$).
Bacaksız et al. (2008)	Descriptive Work	199 patients	The methods used by the nurses in patients experiencing pain were determined.	It was determined that the application of hot and cold reduces the pain level of the patient, accelerates circulation and provides relief.
Chen et al. (2013)	Randomized controlled study (RCS)	60 patients (30 patients in the study, 30 patients in the control group)	The study group received acupuncture for 30 minutes; control group received standard chemotherapy treatment.	It was determined that acupuncture application significantly reduced cancer-related pain levels in patients ($p \leq 0.05$), and it was determined that the organism was a self-healing complementary method.
Tofthagen et al. (2015)	RCS	50 cancer patients (25 patients in the study, 25 patients in the control group)	The study group received acupuncture for 4 weeks; control group received only standard chemotherapy treatment.	Cancer-related symptoms (pain, digestive system problems, neuropathy) were significantly reduced in patients receiving acupuncture ($p \leq 0.05$).
Babashahi et al. (2013)	RCS	40 Acute Myeloid Leukemia (AML) patients (20 patients in the study, 20 patients in the control group)	The study group received 20 minutes of lavender aromatherapy for 4 weeks; control group received only standard chemotherapy treatment.	It was determined that lavender aromatherapy application significantly reduced pain ($p \leq 0.05$) and provided relief and relaxation.
Dikmen & Terzioğlu (2018)	RCS	80 gynecological cancer patients (20 patients reflexology, 20 patients progressive relaxation exercise group, 20 patients reflexology and progressive relaxation exercise was applied together, 20 patients control group)	The study group was divided into three groups (reflexology group, progressive relaxation exercise group, reflexology and progressive relaxation exercise group).	The control group received standard treatment. In the group where reflexology and progressive relaxation exercises were applied together; pain and fatigue levels decreased significantly ($p \leq 0.05$) and quality of life increased ($p \leq 0.05$).
Tarrasch et al. (2018)	RCS	72 breast cancer patients (36 patients in the study, 36 patients in the control group)	The study group received reflexology for 10 weeks and the control group received only standard treatment.	It was found that cancer insomnia, pain and fatigue levels decreased significantly in patients undergoing reflexology ($p \leq 0.05$).
Tsay et al. (2008)	RCS	61 operated gastric and liver cancer patients (31 patients in the study, 30 patients in the control group)	The study group received reflexology for 20 minutes for 3 days on days 2, 3 and 4 postoperatively; control group received standard treatment.	In the reflexology group; analgesia intake, pain and anxiety levels were significantly decreased ($p \leq 0.05$).
Hodgson & Lafferty (2012)	RCS	18 individuals with cancer treatment completed in nursing homes	The study group was divided into 2 groups. One group received 20 minutes of reflexology, the other group received 20 minutes of massage, and the control group received standard care.	There was a significant decrease in cortisol hormone level ($p \leq 0.05$) and pain level ($p \leq 0.05$) in reflexology and Swedish massage groups.
Chien et al. (2015)	Pilot Work	31 breast cancer patients	31 patients underwent acupressure for 3 days in 7 days and 3 sessions.	After acupressure treatment, there was a significant decrease in sleep quality, pain and fatigue ($p \leq 0.05$).
Sharif Nia et al. (2017)	RCS	100 leukemia patients (50 patients study, 50 patients control group)	The study group received acupressure for 8 minutes in 4 weeks and 12 sessions, while the control group received only standard chemotherapy treatment.	It was found that there was a significant decrease in the short-term pain level in patients undergoing acupressure ($p \leq 0.05$).
Serçe et al. (2018)	RCS	40 Cancer patients with bone metastasis (20 patients study, 20	The study group received acupressure for 10 minutes for 8 days each	There was a significant decrease in pain level ($p \leq 0.05$) in patients receiving

Author / Year	Type of Research	Number and Group of Samples	Intervention	Results
		patients control)	session; control group received only standard treatment.	acupressure.
Jane et al. (2011)	RCS	72 Cancer patients with bone metastasis (36 patients in the study, 36 patients in the control group)	45 minutes of massage for 5 days; control group received standard chemotherapy treatment.	There was a significant decrease in pain level ($p \leq 0.05$), a significant increase in sleep quality ($p \leq 0.05$), and improvement in mood and relaxation in massage patients.
Toth et al. (2013)	RCS	29 Patients with metastatic cancer (20 patients study, 9 patients control group)	The study group received 3 sessions of 15-45 minutes of massage each week; control group received only standard treatment.	There was a significant decrease in pain level ($p \leq 0.05$) and a significant increase in sleep and quality of life ($p \leq 0.05$) in patients receiving massage.
Demir et al. (2015)	RCS	18 cancer patients (8 patients study, 10 patients control group)	The study group was reiki 30 minutes each evening for a week; control group received only standard treatment.	There was a significant decrease in fatigue, pain and anxiety levels in the reiki group ($p \leq 0.05$).
Kirshbaum et al. (2016)	Cross-sectional Study	10 breast cancer women patients	10 breast cancer patients received 30 minutes of reiki.	It was found that there was a significant decrease in the short-term pain level in patients who underwent reiki treatment ($p \leq 0.05$).
Rosenbaum & Velde (2016)	RCS	150 cancer patients (50 patients yoga, 50 patients massage, 50 patients reiki group)	The effects of reiki, massage and yoga on pain levels were examined.	Reiki treatment was found to be more effective in reducing cancer pain significantly ($p \leq 0.05$) compared to the other two applications.
Lee et al. (2015)	Case study	2 patients with ovarian cancer	Two ovarian cancer patients were given 4 sessions of oriental music for 2 weeks, 2 hours and 1 hour.	In a case study examining the effect of music therapy in patients with ovarian cancer, it was found that music played during chemotherapy significantly reduced pain levels in patients ($p \leq 0.05$).
Jourt-Pineau et al. (2013)	Prospective study	24 cancer patients receiving chemotherapy	24 patients who had received chemotherapy treatment had 30 minutes of music listening before each chemotherapy session.	It was found that the music played during chemotherapy significantly decreased the pain level in patients ($p \leq 0.05$).
Kurt & Kapucu (2018)	RCS	49 breast cancer patients receiving chemotherapy (25 patients in the study, 24 patients in the control group)	The study group consisted of 27 minutes of progressive relaxation exercise during 4 chemotherapy treatments; control group received only standard chemotherapy treatment.	Pain, anxiety and fatigue levels were significantly decreased ($p \leq 0.05$) and sleep quality was significantly increased ($p \leq 0.05$) in the progressive relaxation group.
Tabatabaee et al. (2016)	RCS	90 cancer patients receiving chemotherapy (30 patients study, 30 patients placebo, 30 patients control group)	The study group received a total of seven sessions of therapeutic touch for four weeks; The placebo group was placed around the body in a motion away from the body for the same time and was moved to touch without specific order. The control group received only standard chemotherapy treatment.	It was reported that therapeutic touch positively affected patients physically and psychologically, decreased pain level significantly ($p \leq 0.05$) and was one of the cognitive / behavioral methods that increased in importance and use among nurses in recent years.

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