Aromatherapy Application in Nursing Care: Systematic Analysis of Studies Conducted Over the Past Decade in Turkey

Hemşirelik Bakımında Aromaterapi Uygulaması: Türkiye’de Son 10 Yılda Yapılan Çalışmaların Sistematik Analizi

ABSTRACT 
Objective: Aromatherapy offers energy, treatment, and the balancing of body, mind, and soul by both scientific and artistic approaches. It is a non-pharmacological method that releases the healing power of essential oils obtained from herbal resources for improving a person mentally, physically and spiritually and also provides homeostasis. Aromatherapy has been used for 4,000 years as an integrative and complementary care practice. The purpose of this literature review is to analyze the studies of aromatherapy conducted in Turkey. In particular, regarding the type of research, investigators characteristics, sampling, subjects, and conclusions of the studies. 

Material and Methods: Theses and studies about aromatherapy conducted by nurses between the years of 2007–2017 are included in this study. The data from the theses were obtained from the ‘Turkey National Theses Database’ and the databases of medicine and nursing (ScienceDirect, Pubmed, and Ulakbim). The research sample comprises 35 studies conducted in Turkey between the years of 2007-2017. 

Results: There were 35 studies about aromatherapy conducted in Turkey between 2007 and 2017. Of these, 77.1% (n=27) were postgraduate and doctoral theses. In this survey, 25.7% (n=9) are postgraduate theses, 51.4% (n=18) are doctoral theses, and 22.8% are research papers. Aromatherapy is mostly researched in doctoral theses in Turkey. 

Conclusion: It was observed that pregnant women, the elderly, and patients with osteoarthritis, dementia, and cancer are most analyzed in studies conducted about the application of aromatherapy. In these studies, aromatherapy was used for pain control, relieving constipation, managing symptoms such as tiredness and anxiety, and increasing the quality of life. It is thought that aromatherapy has a positive effect on physiological and psychological well-being. Ease of use, efficiency and affordability are factors that increase the use of aromatherapy. To continue in this direction, nurses need to apply therapies that have multi-dimensional benefits, such as aromatherapy, correctly and effectively by learning from experienced professionals and attach these applications to nursing care by analyzing evidence-based surveys in the relevant areas.

Keywords: Aromatherapy; nursing

ÖZET 
Aromaterapi, hem bilimsel hem de sanatsal olarak uygulanmaya devam eden, zihinsel ve ruhsal recordlenmesini, enerjiyi veren ve tedavisinin bir parçasıdır. Küçük zihinsel, bedensel ve ruhsal olarak ışınlanır ve homeostasisi dengelenir. Bu yöntem, bilimsel ve sanatsal yaklaşımlarla, 4,000 yıllık geçmişi olan aromaterapi uygulaması ile ilgili Türkiye’de yapılan araştırmaların tıbbi, araştırma ve bilimsel olarak önemlidir. Aromaterapi, hemşirelik bakımında uygulanan bir yöntemdir ve hemşirelerin hem bilimsel hem de sanatsal yaklaşımları ile ilgili çalışmalara dair bilgi sağlar. Bu çalışmadan, hemşirelerin aromaterapi uygulamasına dair gerçeklerin ve araştırmaların tıbbi, araştırma ve bilimsel anlamda önemlidir.

Aromaterapi, hemşirelerin hem bilimsel hem de sanatsal yöntem olarak uygulanan bir yöntemdir ve hem hemşirelik bakımında uygulanan bir yöntemdir. Bu yöntem, 4,000 yıllık geçmişi olan aromaterapi uygulaması ile ilgili Türkiye’de yapılan araştırmaların tıbbi, araştırma ve bilimsel olarak önemlidir. Aromaterapi, hemşirelerin hem bilimsel hem de sanatsal yaklaşımları ile ilgili çalışmalara dair bilgi sağlar. Bu çalışmadan, hemşirelerin aromaterapi uygulamasına dair gerçeklerin ve araştırmaların tıbbi, araştırma ve bilimsel anlamda önemlidir.

Anahtar Kelimeler: Aromaterapi; hemşirelik

Copyright © 2018 by Türkiye Klinikleri

DOI: 10.5336/jtracom.2018-62137
AROMATHERAPY

Aromatherapy is an inexpensive and non-pharmacological application used to heal people. The first use of aromatherapy was up to four thousand years ago. This non-pharmacological method is applied to the body in vegetable oils for healing, recuperation and feeling good via massages, compresses, inhalation (air passage) or in baths. Aromatherapy is an area of phytotherapy, which is known as herbalism, and the focus point is to control the symptoms rather than treat them. According to the surveys, the essential oils used in aromatherapy have several impacts on health such as relaxation, anti-inflammatory, analgesic, disinfection, antioxidant and decreases in blood urea level. It is especially emphasized that aromatherapy establishes mood control and has anxiolytic and antidepressant effects. Moreover, aromatherapy is used to reduce pain, improve memory and fix cognitive disorders in dementia diseases.

The purpose of this research is to analyze studies conducted in Turkey of a 4,000-year-old aromatic treatment application that is one of the integrative and complementary care practices. The type of research, investigators characteristics, sampling, subjects, and conclusions of the studies are assessed in the present study.

We turn to natural therapeutic methods to become free from the problems of the stressful lifestyle of a modern era and to have a healthy soul and an integration of body and mental power. Aromatherapy is a leading natural therapy and has become popular as a protective treatment that allows a person to feel good and energetic without the adverse effects of chemical drugs. Particularly in recent years, people have been drawn towards natural methods by noticing the great wealth in nature. The interest in natural treatment methods has gradually increased day by day and there is a significant sign of change in behaviours concerning health in many people due to these treatments. People are no longer aware of the necessity to take responsibilities for the needs of the body and pay attention to its voice. It is accepted today that aromatherapy has a remarkable place among natural and supportive treatments.

THE ENTRY WAYS, ADMINISTRATION ROUTE, AND MECHANISM OF ACTION OF ESSENTIAL OILS

Aromatherapy can be applied by topical means (directly to the skin, compresses or in a bath), internal means (application in mucosa via mouthwash, vaginal or rectal route) and by means of an inhaler (inhalation with or without vapour, directly or indirectly). Essential oils used by the oral route are known as aromatic medicine and applied in a gelatine capsule. The key oils used by the oral route are prepared by mixing with alcohol, honey water and vegetable oils. When essential oils are absorbed by the skin they create a layer on the epidermis, then interact with the epidermis and circulation. Massage increases the absorption of oils by the skin via heat and friction. The volatile molecules in oil reach odour receptors that are sensitive enough to be stimulated even with very light smells in the nasal tunnel when the essential oils are breathed in. Different odour receptors are transferred to the limbic system via an electrochemical message formed in receptors, olfactory bulb, and olfactory path and the molecules associated with several areas. This condition stimulates emotional responses and memory via the hypothalamus and causes the responses to be sent to other parts of the brain and the body. The messages received turn into euphoria, relaxation, sedation and stimulate neurochemical reactions. It is known that lavender reduces external emotional stimulators by increasing inhibitory neurons including gamma-aminobutyric acid (GABA). It is provided to be inhibited of small-scale fibres carry the pain message by being activated the thick-scale fibres by massage. As a result of this, the transfer of sensation of pain to the Cortes by being closed of the pain door. The touch receptors are stimulated during aromatherapy via massage, and the pain is localized in a narrow area. Moreover, receptors that provide the swing of endogenous substances such as morphine are stimulated via massage. The
level of endorphins increases with this warning and prevent painful stimulators from reaching the central nervous system.3-7

USE OF AROMATHERAPY IN CLINICS AND THE POSITION IN NURSING

The problems that necessitate aromatherapy are as follows:

Infection, insomnia, nausea and vomiting, pain and inflammation, stress management, cardiological problems, elderly care problems, dermatological problems, endocrinological problems, end of life maintenance problems, immunological problems, childbirth problems, oncological problems, paediatric problems, psychiatric care problems, respiratory system problems, and intensive care problems.

Aromatherapy has become one of the most popular methods used by nurses to improve their patient care and strengthen the quality of nursing.8 Clinical aromatherapy reinforces nursing by contributing to nursing science and its art. In addition to this, aromatherapy provides nurses with satisfaction from their job during the care process by bringing balms to the nursing agenda once again. The development of the nursing profession continues and targeted anticancer therapy (TAT) applications from nurses who want to complete this development as soon as possible are a significant advancement in this profession. Nurses can discuss their experiences with essential oil use via nursing theories and nursing diagnosis.9 The number of periodicals on aromatherapy increases with each passing day all over the world. Aromatherapy continues to grow in maturity, arguably to be in line with nursing philosophy and theories. Aromatherapy can be easily and efficiently adapted to nursing practices. Essential oils are safe when they are applied by well-educated and cautious people. Because the safe application of aromatherapy necessitates a specialized knowledge and ability, education topics about essential oils can be attached to the nursing curriculum. Additionally, aromatherapy can be taught in a nursing-related unit. For example, a subject entitled ‘How an aromatherapy oil mixture is prepared to decrease pain and relax the patient’ may be taught in a unit about pain.4 Despite the rapid progress in modern medicine during recent years, we can say that modern medicine has not responded to an integrated approach, which is a crucial concept in patient care. This is the deficiency in modern medicine, it cannot respond to the uniqueness of each person and their different requirements. The deficit mentioned can be closed by a holistic nursing approach.10,11 The care needs that cannot be met by modern medicine should be supported with TAT methods applied by nurses under the light of evidence-based information. The western medicinal authorities have started to give due importance to TAT implementation and also support the institutions and organizations for bringing the subject to a scientific platform. Supportive treatment approaches need to be considered at a scientific level and TAT activities, which are non-scientific, need to be controlled.

RISKS IN AROMATHERAPY AND POINTS TO BE TAKEN INTO CONSIDERATION

The guide offered by Kyle and Temmen has six fields to take into consideration for nurses in the application of aromatherapy: defining the best method of application, defining the density of the mixture, selecting the carrier oil used in massages, clarifying it, specifying that the patient is ready and motivated for a massage application and revealing the result criteria.12 Several precautions need to be taken during the practice of aromatherapy. Care must be taken to avoid contacting the eyes and mucous membranes with essential oils. Essential oils also must be kept out of the reach of children. Essential oils should be used cautiously in patients with hypertension, epilepsy, allergies and also in pregnancy. It must not be forgotten that the volatile essential oils can interact with other drugs. Some essential oils may cause allergic skin reactions. The topical application of essential oils such as dill, lime, orange, and Ruta graveolens can cause light-sensitiveness and exposure to the sunshine for a long time may conduce ambustions. Furthermore, the overuse of some essential oils can be toxic.
MATERIAL AND METHODS

This study is a record survey conducted to analyze the use of aromatherapy in nursing in Turkey. Theses and investigations undertaken between the years of 2007 and 2017 were included in this study. The data were obtained from the research in the 'Turkey National Thesis Database' and the databases of medicine and nursing (ScienceDirect, Pubmed, and Ulakbim). Scanning was actualized by using the keywords ‘aromatherapy, nursing.’ The research sample was composed of 35 studies conducted in Turkey between 2007-2017. Between the years mentioned above, we found 12 theses about aromatherapy with restrictions in use implemented by the author, 15 available theses were obtained besides those 12. In total, 27 theses about aromatherapy in nursing were reviewed. Since compilations on aromatherapy did not provide any research results, they were not included within the scope of this study.

SAMPLE AND EVALUATION

Scanning was actualized by using the keywords ‘aromatherapy’ and ‘nursing’ in databases of medicine and nursing (ScienceDirect, Pubmed, and Ulakbim) and the ‘Turkey National Database’ between July 2016 and August 2017. Thirty-five surveys within this research were evaluated as manuals and include the years of enrolment, disciplines, sampling group, type, purpose of the research, methods of administration and investigation results.

RESULTS

According to the results of the research, there were 35 surveys on aromatherapy in nursing in Turkey between the years 2007-2017. Of these, 77.1% (n=27) were postgraduate and doctoral theses, 25.7% (n=9) were postgraduate theses, 51.4% (n=18) were doctoral theses, and 22.8% (n=8) were research papers (Tables 1-3). It was observed that the aromatherapy was studied mostly in doctoral theses. In total, 80% (n=28) were planned experimental studies and 20% (n=7) were semi-experimental. With regards to location, 37.1% (n=13) of the studies were conducted by the Department of Internal Diseases Nursing, 11.4% (n=4) of the studies were carried out by the Department of Nursing Principles, 5.71% (n=2) were conducted by the Department of Public Health Nursing, 11.4% were carried out by the Department of Surgical Diseases Nursing, 5.71% (n=2) were conducted by the Department of Pediatry Nursing, 8.57% (n=3) were administered by the Department of Gynecology Nursing. In total, 20% (n=7) of the studies about aromatherapy analyzed the effect on sleep quality, 31.4% (n=11) analyzed the effect on stress and anxiety, 20% (n=7) analyzed the effect on vital signs and functional status, 28.5% (n=10) analyzed the effect on pain, and 8.57% (n=3) researched the effect on life quality and tiredness. Moreover, it was determined that aromatherapy reduces colic and tiredness in babies, pruritus, and constipation in patients receiving haemodialysis, and nausea and vomiting caused by the adverse effects of chemotherapy. Besides these effects, aromatherapy had a positive impact on increasing the quality of life, comfort and satisfaction, pain, sleep, anxiety, stress, vital signs, and childbirth. In regards to the application of aromatherapy, 51.4% (n=18) of the nurses used inhalation, 40% (n=14) used massage and 8.5% (n=3) used inhalation and massage techniques together. Only one of the aromatherapy applications administrated by inhalation did not give a positive result.

DISCUSSION

It was observed that people who mostly considered aromatherapy were affected by stress, anxiety, pain, sleep, tiredness and premenstrual syndrome. According to the findings of the research, treatment using sense of smell was used to control pain, increase the quality of life, remove constipation, manage symptoms like tiredness, anxiety, and sleep. This type of therapy can also reduce pruritus in patients receiving haemodialysis and nausea from the adverse effect of chemotherapy. It was also found that aromatherapy reduces the perception of pain in the first stages of childbirth, increases the level of comfort and satisfaction, and enhances the sleep quality of women in the menopausal period. Moreover, lavender oil inhalation
| Research Name | Authors and Year Released | Location and Type of Research | Sample Number and Features | Effect-Result and Research Objective | Route of Application |
|---------------|---------------------------|-------------------------------|---------------------------|--------------------------------------|----------------------|
| Examination of the Effect of Back Massage Applied with Lavender Oil on Sleep Quality of the Elders | Seyhan Yaman 2011 | Firat University Health Sciences Institute | 68 Elders | Examining the effects of back massage applied with lavender oil on sleep quality of the elders | It is found that the aromatherapy back massage is effective on the sleep of the elders via massage application |
| The Effect of Aromatherapy on Stress and Anxiety of Nurses Working in the Intensive Care Unit | Nadye Bang 2015 | Cukurova University Health Sciences Institute Nursing Department | 45 Nurses | Determining the effect of stress and anxiety of nurses working in intensive care unit | It is determined that applied lavender does not have an effect on vital signs with stress and anxiety via Inhalation Application |
| The Effect of Aromatherapy on Childbirth | Hafer Karabulut 2014 | Istanbul University Institute of Health Sciences Gynecology Nursing Experimental | 60 Pregnants | Determining the effects of aromatherapy on childbirth | It is found that it reduces the feeling of birth pain, level of anxiety, and duration of delivery and supports the pain and confidence during the procedure |
| The Effect of Inhaler Aromatherapy Applied During Port Catheterization for Oncology Patients on Pain | Sümeyra Mihrap İlter 2016 | Gaziantep University Health Sciences Institute-Experimental | 60 oncologic patients | Evaluating the effect of aromatherapy on pain in the port catheterization process | It is seen that the pain experienced by the patient due to the procedure decreased by inhaler aromatherapy in the port catheterization process; also the compliance with the treatment increased |
| Examination of the Effect of Aromatherapy Massage on Anxiety and Sleep Quality in the Preoperative Period | Cahide Ayik 2016 | Dokuz Eylül University Institute of Health Sciences | 60 patients | To examine the effect of aromatherapy massage on anxiety and sleep quality in the preoperative period | It is determined that the aromatherapy massage applied with lavender oil before the operation of patients undergoing colorectal surgery reduces the level of anxiety and increases the quality of sleep via massage application |
| The effect of aromatherapy on pain level and plasma beta endorphin level in cancer patients receiving palliative care | Gizem Gürakan 2016 | Ege University Institute of Health Sciences’ Department of Internal Diseases Nursing-Experimental | 31 cancer patients receiving palliative care | Determining the effect of aromatherapy massage on pain and plasma beta-endorphin level in cancer patients receiving palliative care | It is found that the aromatherapy back massage reduces the pain level and increases plasma beta-endorphin level of cancer patients receiving palliative care via massage application |
| The effect of aromatherapy on the pain, comfort, and satisfaction during childbirth | Zehra Çiviçi (Limited Access) 2017 | Çukurova University Institute of Medical Sciences’ Department of Nursing-Semi-experimental | 60 pregnant | Determining the effect of aromatherapy on the pain, comfort and satisfaction during the first level of childbirth | It is found that aromatherapy reduces the pain perception, increases the comfort and satisfaction level during the first level of childbirth |
| The effect of aromatherapy on the sleep and life quality of menopausal women | Meryem Gürler (Limited Access) 2017 | Nevşehir Hacı Bektaş Veli University Institute of Science and Technology/Department of Nursing-Experimental | 57 women menopausal period | Determining the effect of aromatherapy on sleep and quality of life in menopausal women | It is determined that the aromatherapy applied to women in the menopausal period increases the sleep quality via Inhalation |
| Effect of lavender oil on vital signs and anxiety levels of patients with hyperplasia of prostate preoperatively | Hasan Genç (Limited Access) 2017 | İndir University Institute of Medical Sciences‘Department of Nursing Nursing of surgical diseases-Experimental | 110 patients with hyperplasia of prostate | Determining the effect of lavender oil on vital signs and anxiety levels of patients with benign prostatic hyperplasia in preoperative period | It is determined that the lavender oil inhalation reduces the level of anxiety and has effects on vital signs-inhalation |

**TABLE 1:** Master’s Thesis and Their Features on Aromatherapy Applications in Turkey.
## TABLE 2: Doctoral Theses and Their Features on Aromatherapy Applications in Turkey.

| Research Name | Authors and Year Released | Location and Type of Research | Sample Number and Features | Research Objective | Effect-Result and Route of Application |
|---------------|---------------------------|-------------------------------|----------------------------|-------------------|----------------------------------------|
| Effects of Music Therapy and Aromatherapy on Physiological Conditions of Intensive Care Patients | Sadik Ansari 2017 | Ataturk University/Institute of Medical Sciences/Department of Intensive Care Nursing-Experimental | 73 patients | Examining the effects of music therapy and aromatherapy on the physiological status of intensive care patients. | Pulse, Average Full After Aromatherapy-Via Inhalation |
| Analyzing the Effect of Aromatherapy Massage on Removing the Cholic in Babies | Bengü Çetinkaya 2007 | Ege University/Institute of Medical Sciences/Department of Pediatric Nursing Experimental | 40 babies with cholic | Analyzing the Effect of Aromatherapy massage to remove the colic in babies | It is determined that Aromatherapy Massage Creates a Positive Change in Points of State Anxiety Status in Babies-Via massage |
| The Effect of Aromatherapy on Symptoms and Life Quality of Women Breast Cancer Patients | Özlem Ovayolu 2011 | Erciyes University/Institute of Cancer Medical Sciences/Nursing Department/Department of Breast Diseases Nursing-Experimental | 280 women with breast cancer | Evaluating the effect of aromatherapy massage on the symptoms and the quality of life of women with breast cancer and receiving chemotherapy | It is determined that the aromatherapy massage and the aromatherapy made with essential oils applied to women do not create any negative effect-Inhalation massage |
| The Effect of Sleep and Touching with Music and Aromatherapy on the Impact of Fibromyalgia and Tiredness and the Sleep Quality in Fibromyalgia Patients | Bülent Çelik 2011 | Atatürk University/Faculty of Health Sciences/Department of Public Health Nursing-Experimental | 162 women with fibromyalgia | Determining the effect of touching with music and aromatherapy on the symptoms of fibromyalgia and tiredness. | It is found that this method is effective in affecting the course of the disease and increasing the sleep quality in fibromyalgia patients-Via Inhilation方式 |
| The Effect of Aromatherapy on the Impact of Intensive Care Patients on Complains of Pruritus | Mehriç Gürcan 2012 | Ataturk University/Institute of Medical Sciences/Department of Intensive Care Nursing-Experimental | 40 patients who received hemodialysis treatment | Determining the effect of aromatherapy massage on the complaints of pruritus of patients receiving hemodialysis treatment. | It is found that aromatherapy reduces the complaints of pruritus of hemodialysis patients and also provides positive changes in some laboratory parameters related to pruritus-Via inhalation |
| Effect of aminothiol applied by inhalation on arterial blood pressure, pulse and anxiety levels in women with essential hypertension | Hatice Özen 2012 | Ege University/Institute of Medical Sciences/Department of Internal Diseases Nursing-Experimental | 40 Women with Essential Hypertension | Investigating the effect of aromatherapy massage on the arterial blood pressure, pulse and anxiety level in women with essential hypertension. | It is monitored that aromatherapy has positive effects on arterial blood pressure, pulse and anxiety levels in women with essential hypertension-Via Inhalation |
| Relaxation Techniques, Aromatherapy And The Effect Of Applying Both Method On The Pain After Surgery | Nurten Taşdemir 2012 | Ege University/Institute of Medical Sciences/Department of Surgical Diseases Nursing-Experimental | 100 patients | It is planned to analyze the effect of aromatherapy massage on reducing the pain after operation. | It is seen that the method reduces the amount of analgesic used applied to decrease the pain after surgery-Via inhalation |
| The Impact of Aromatherapy, Musicotherapy, and Vibration on Stress and Behavior of the Newborn | Öznur Tosun 2013 | Ege University/Institute of Medical Sciences/Department of Pediatrics-Nursing-Experimental | 80 preterm infants | Evaluating the effect of aromatherapy massage on the stress and behavior of preterm infants. | It is found that aromatherapy reduces the stressors of preterm newborns and affects their behavior positively-Massage |
| Effect of Aromatherapy Massage on Constipation in Elders | Dilşat Lajis 2014 | Ataturk University/Institute of Medical Sciences/Department of Nursing Principles-Experimental | 48 elders | The purpose was to analyze the effect of aromatherapy massage on constipation in elders. | It is found that aroma massage practice increases the number of stools, stool volume and the amount of stool and also reduces the feeling of pushing during the stool and not to defecating completely. |
| The Effects of Aromatherapy Massage and Reflexology on Pain and Tiredness in Patients with Rheumatoid Arthritis | Zehra Gök 2015 | Hacettepe University/Institute of Medical Sciences/Department of Internal Diseases Nursing-Experimental | 51 Patients with Rheumatoid Arthritis | Analyzing the effects of aromatherapy massage and reflexology on pain and tiredness of patients with rheumatoid arthritis. | It is seen that aromatherapy massage and reflexology are effective in reducing pain and tiredness and increasing the health perception in patients with rheumatoid arthritis-Via Massage |
| Effects of inhaled aromatherapy on sleep quality and tiredness level in patients receive hemodialysis treatment | Gaziye Ermis 2015 | Ege University/Institute of Medical Sciences/Department of Internal Diseases Nursing-Experimental | 62 patients receive hemodialysis treatment | Determining the effect of aromatherapy applied by inhalation on sleep quality and tiredness level in people receiving hemodialysis treatment. | The use of aromatherapy made with essential oils and lavender oil may be recommended to increase the sleep quality and reduce the tiredness level of hemodialysis patients by way of inhalation. |
decreases the level of anxiety of patients with benign prostatic hyperplasia (BPH) before surgery and also affects vital signs. Additionally, it is effective in decreasing tiredness, the speed of disease development and increases the sleep quality in patients with fibromyalgia. According to other findings, aromatherapy has positive impacts on pulse level, anxiety and arterial blood pressure in women with hypertension. Aromatherapy is positively effectual on the anxiety levels of patients before mastectomy. Aromatherapy hand massage and inhalation practices reduce the agitation of patients with dementia and the care-load of the care providers.

### CONCLUSION

We can conclude that aromatherapy has been a significant point of interest in nursing studies. The TAT methods used to avoid symptoms and support medical treatment, have aroused nurses’ interests and have encouraged postgraduate research and nurses to use TAT methods during
TABLE 3: Examples and Characteristics of Research Examples on Aromatherapy Applications in Turkey.

| Research Name | Authors and Year Released | Location and Type of Research | Sample Number and Features | Effect-Result and Research Objective | Route of Application |
|---------------|----------------------------|--------------------------------|---------------------------|--------------------------------------|---------------------|
| The Effect of Aromatherapy on Anxiety and Vital Signs of Elders Living in Everlasting Harmony | Eda Ergin, Gümüş Guvenc Akın, Yılmaz Çağlar, Nihal Aytemiz | Sultan Uz Volume 1/1 | 50 Elders | Examining the Effect of Aromatherapy on Anxiety and Vital Signs | Inhalation |
| Effect of Aromatherapy Massage on Dysmenorrhea in Turkish Students | Serap Eroğlu Apay, Sevcan Akın, Reva Balı Akpinar, Ayda Çelebi | Pain Management Nursing, Vol 13, No 4 (December), 2012; p 236-240 | 44 Students | The purpose of this study was to investigate the effect of aromatherapy massage on dysmenorrhea | Inhalation |
| Effects of Aroma Inhalation on Anxiety and Vital Signs of Nursing Students during Their First Blood Drawing Practice | Kerem Çevik, Serhat Ince, Nihal Aytemiz, Fikri Ergin | International Journal of Health Sciences and Research - Denizli | 72 nursing students | Examining the level of anxiety and vital signs of nursing students who have experienced their first donation experience | Inhalation |
| Imagery practicing with music and aromatherapy in a woman who is diagnosed with over cancer: a case report | Gamze Tekkarcı, Hatice Balı Yangın | Spatula DD. 5(2):79-82; 2015. | Case Report | It is aimed to apply an imagination practice with a relaxing music and aromatherapy inhalation for making relaxed a woman who is diagnosed with over cancer | Inhalation |
| Effects Of Aromatherapy Massage On The Sleep Quality And Physiological Parameters Of Patients In A Surgical Intensive Care Unit | Zeynep Karaman Özoğlu, and Firat Bilek | African Journal of Traditional, Complementary, and Alternative Medicines, 2017; 14(9); 83-88 - Experimental study | 60 patients | To determine the effect of aromatherapy massage on quality of sleep and physiological parameters in surgical intensive care patients | Inhalation |
| Effects of aroma inhalation on examining the anxiety | Adile Koca Kutlu, Emel Yılmaz, Dilşen Çeçen | Teaching and Learning in Nursing (2008) 3, 125-130 | 95 students | Determining the effect of aromatherapy on anxiety | Inhalation |
| Aromatherapy Massage for Neuropathic Pain and Quality of Life in Diabetic Patients. | Öksüz Mehter Z., Arifcan Demiröz A., Igni N. Olsenler L., Akın IE | Journal Of Nursing Scholarship, 2017 Jul; 4(4); 379-389. | 40 patients | The study aimed to examine the effects of aromatherapy massage on neuropathic pain severity and quality of life (QoL) in patients suffering from painful diabetic neuropathy | Inhalation |
| Effects of aromatherapy on sleep quality and anxiety of patients. | Kaan Çağatay E., Samancioglu S, Ozden D., Bakir E. | Nursing Critical Care. 2017 Mar 22(2):105-112. | 60 patients | Investigating the effect of lavender essential oil on the sleep quality and anxiety level of patients in coronary intensive care units | Inhalation |

Recent years. The use of aromatherapy in the health sector has gradually increased due to its beneficial effects and because it is an inexpensive and easy method to use. Therefore, nurses need to be taught these therapies by professionals, take an application certificate, apply the therapy correctly and include evidence-based studies in nursing care.

**Source of Finance**

During this study, no financial or spiritual support was received neither from any pharmaceutical company that has a direct connection with the research subject, nor from a company that provides or produces medical instruments and materials which may negatively affect the evaluation process of this study.

**Conflict of Interest**

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

**Authorship Contributions:** This study is entirely author's own work and no other author contribution.
REFERENCES

1. Cooke B, Ernst E. Aromatherapy: a systematic review. Brit J Gen Pract 2000;50(455):493-6.
2. Diego MA, Jones NA, Field T, Hernandez-Reif M, Schanberg S, Kuhn C, et al. Aromatherapy positively affects mood, EEG patterns of alertness and math computations. Int J Neurosci 1998;96(3-4):217-24.
3. Ayceman N. [Aromateraphy]. The Healing Touch of Nature. 1. baskı. Konya: İnci Ofset; 2008.
4. Buckle J. Evidence-based aromatherapy in nursing practice. Clinical Aromatherapy. 2nd ed. New York: Churchill Livingstone; 2003. p.10-33.
5. Özdemir H. [Aromatherapy]. Başer M, Taşçı S, editörler. Kanıta Dayalı Rehberleriyle Tamamlayıcı ve Destekleyici Uygulamalar. 1. Baskı. Ankara: Akademişyen Kitabevi; 2015. p.39-44.
6. Maddocks-Jennings W, Wilkinson JM. Aromatherapy practice in nursing: literature review. J Adv Nurs 2004;48(1):93-103.
7. Bastard J, Tiran D. Reprint of: aromatherapy and massage for antenatal anxiety: its effect on the fetus. Complement Ther Clin Pract 2009;15(1):235-3.
8. Steffitsch W, Steffitsch M. Clinical aromatherapy. Journal of Men’s Health 2006;5(1):7485.
9. Ha HC. Effect of aromatherapy on skin xerosis and pruritus in patients undergoing maintenance hemodialysis. J Korean Acad Nurs 1999;29(6):1284-93.
10. Buckle J. Evidence-based aromatherapy in nursing practice. Clinical Aromatherapy. 2nd ed. New York: Churchill Livingstone; 2003. p.116-32.
11. Buckle J. The role of aromatherapy in nursing care. Nurs Clin North Am 2001;36(1):57-72.
12. Smith MC, Kyle L. Holistic foundations of aromatherapy for nursing. Holist Nurs Pract 2006;22(1):3-9.
13. Kyle L, Temmen M. Nursing assessment applied to clinical aromatherapy. Sensitivity 1996;8(3):12-3.