

A Systematic Review Study On Interventions To Decrease Chemotherapy-Related Vomiting And Nausea

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Received Date: Dec 03, 2022

Accepted Date: Dec 16, 2022

Published Date: Jan 05, 2023

ABSTRACT

Introduction:

In recent years, investigations on the genesis of the disease have placed a greater emphasis on molecular studies due to the growing importance of evaluating changes in gene expression in the development of various types of malignancies and the availability of new biotechnological approaches. Given that chemotherapy is one of the frequent side effects of chemotherapy patients, nausea and vomiting are one of these chronic side effects. Cancer patients also have several chemotherapy treatments during their recovery phase. In order to identify the therapies for minimising chemotherapy-related nausea and vomiting, a systematic review was undertaken.

Materials and Methods:

The Broom Broome technique was used to conduct this systematic review. This approach was used to accomplish the study's goals and improve the study's in-depth comprehension and understanding. The approach is built on three steps: text search, data assessment, and data analysis. Post-retrospective studies are evaluated in four steps in terms of inclusion criteria when looking for texts. After acquiring the study's admission requirements, the study's content is assessed, and the data analysis is completed.

Results:

In this study, we looked into how interventions were affected by chemotherapy-related nausea and vomiting. In one of these experiments, the Negan point wrist massage was applied twice daily for 12 hours in the test group and employed ice mould in moist stomach. This resulted in a significant decrease in nausea and vomiting as well as a decrease in the

severity of the symptoms. Additionally, compared to the control group, the treatment group's mean number of nausea attacks was much lower.

Conclusion:

According to the studies, it can be said that the therapeutic use of cardamom aromas as an inhaled essential oil is advised to lessen the severity of chemotherapy-induced nausea in cancer patients, whereas chamomile extract taken orally only lessens chemo-induced nausea and has no effect on reducing vomiting. Additionally, studies have shown that while using muscles does not affect vomiting in children receiving chemotherapy for cancer, they do lessen nausea. Nurses are advised to employ ear acupuncture techniques as an additional treatment for nausea and vomiting brought on by chemotherapy.

Keywords:

Cancer patients, chemotherapy complications, cancer, nausea, vomiting

INTRODUCTION :

Studies on the aetiology of this disease have discovered that such molecular studies are of particular importance in recent years due to the growing importance of examining changes in the expression of genes in the development of various types of cancers and the emergence of new biotechnological methods (1). Despite recent advances in the management and prevention of communicable diseases, the prevalence of chronic illness has increased. The third most common cause of death for children is chronic disease, with cancer coming in third after accidents and unintentional fatalities (2,3). Varied populations have different patterns of cancer occurrence, and a number of factors are linked to these patterns (4). Diabetes is one of the primary causes of cancer. It A chronic, metabolic, and genetically diverse disease, it is characterised by elevated levels of protein, lipids, and blood sugar and carbohydrate metabolism.

And as a result of the growing number of those affected by the illness, it has emerged as a significant global public health issue, particularly in Asia, prompting the World Health Organization to referred to it as a "hidden plague" (5-19). According to figures made public by the health division of the Ministry of Health, this disease is more common in women than in males in Iran over the age of 30, with a frequency of at least 14%. Diabetes complications can raise a person's death rate, which is expensive for both the individual and society. Today, diabetes is one of the most significant health and socioeconomic issues in the world, and it has numerous complications, such as cardiovascular disease, blindness, nephropathy, and neuropathy (20-33). Diabetes patients frequently have complications. (5). Depression is one of the most prevalent psychological

conditions among diabetic people (34).

Today's civilizations have a significant frequency of depression, especially among young people and teenagers. has several problems (35,36). Daily stress from work and depression can lead to health problems in people (37). One of the most prevalent endocrine problems in thalassemic patients is diabetes (38).

One illness and issue facing modern society is thalassemia syndrome, which lowers the quality of life for those who have diabetes and generally leads to a number of issues (39-44). According to epidemiological data, type 2 diabetes is linked to an increased risk of developing certain types of cancer, including breast, colorectal, liver, and pancreatic cancer (45). The sense of approaching death is one of the worst psychological reactions that patients experience after receiving a cancer diagnosis (46, 47) because cancer patients nausea and vomiting are one of the chronic side effects of chemotherapy patients, who frequently undergo chemotherapy during their recovery time. Additionally, chemotherapy itself can be extremely harmful to the patient and negatively impact their quality of life. The worst side effects of chemotherapy include nausea and vomiting, which are both extremely uncomfortable and dreadful. In order to identify the therapies for minimising chemotherapy-related nausea and vomiting, a systematic review was undertaken.

RESULTS:

One intervention group in a study had two groups with comparable demographic data and nausea severity at the beginning of the study. Results from the Cardamom aromatherapy intervention were compared to those from the placebo interview in the other group. At the conclusion of the procedures, the severity of nausea in the cardiopulmonary bypasses was statistically significant lower than the placebo.

At the start of the study, the numbers of patients with nausea, vomiting, and vomiting in the acute phase were comparable in the two groups; however, there was no difference in the numbers of patients with nausea and vomiting between the groups based on patient gender or the degree of nausea in the acute phase.

chemotherapy medications (48). In a different study, there was no discernible difference between the two groups' mean scores for nausea and vomiting. The nausea scores of the two groups rose two hours after chemotherapy. In comparison to the intervention group, the increase in the control group was noticeably higher.

Both groups' nausea scores decreased around the halfway point of chemotherapy, but the control group's score was consistently higher than the intervention group's. Vomiting prevalence did not significantly differ between the two groups (49). According to the findings of one study, the mean nausea score in the control group rose from 2.97 on the first day to 3.26 and in the intervention group from 3.44 to 1.52, but there was no

discernible difference between the two groups on the first, second, or third day in the fourth group. Consequently, the massage trial did lessen nausea, but the reduction was not substantial (50).

Two groups of chemotherapy patients who received the Vomiting and nausea at the start of the research were both of the same degree. The intervention group took four oral ginger capsules containing 250 mg at six-hour intervals throughout the day. According to the study's results, the ginger group had significantly fewer incidences of acute vomiting (1.2 2.7) than the placebo group (52.5 3.7). Additionally, when compared to placebo, taking ginger pills did not result in a specific issue (51).

Another study examined the stage of nausea and vomiting in patients receiving chemotherapy. Without any intervention in the first stage, patients listened to music using headphones in the second stage. Measurements with numerical criteria at 16 and 24 hours in the case of nausea Some descriptive metrics only revealed a discernible difference 24 hours after chemotherapy. But there was no discernible change in vomiting between the two chemotherapy stages (52).

Patients were split into two intervention and control groups in one trial. Compared to the control group, which only received standard regimens every twelve hours, the intervention group received 500 milligrammes of ginger capsules starting an hour before chemotherapy and continuing for five days. At the conclusion of the intervention, the results showed that ginger was beneficial in lowering the frequency of nausea and vomiting but had no influence on how severe the nausea was (53).

In a another trial, the Negan point wrist massage was performed twice daily for 7 minutes in the test group. nausea and vomiting, and it also lessened how bad the symptoms were. as opposed to the treatment group's mean number of nausea cases was considerably lower than that of the control group (54). There was no discernible difference between the intervention and control groups in a different trial that looked at how massage therapy affected vomiting in patients receiving chemotherapy for breast cancer. Massage thereby lessens vomiting, however this reduction is not substantial (55).

One study's findings demonstrated a statistically significant decrease in the severity and frequency of nausea during the acute phase when acupressure was applied to the ears (56). According to the findings of a different study, the mean level of nausea in the intervention group was 1.96, whereas the mean level of nausea in the nauseous group in the control group was 2.9, which stands for significance. However, the intervention group had 0.233 cases while the control group had 0.233 cases of vomiting.

DISCUSSION:

Examining variations in gene expression in the environment is becoming more and more important. Investigations on the aetiology of this disease have discovered that such molecular studies are of special importance in recent years due to the growth of numerous forms of cancers and

the advent of new biotechnological technologies (1). Despite recent advances in the management and prevention of communicable diseases, the prevalence of chronic illness has increased. The third most common cause of death for children is chronic disease, with cancer coming in third after accidents and unintentional fatalities (2,3). Given that chemotherapy is administered numerous times to cancer patients during their recovery period, that chemotherapy harms patients severely and adversely impacts their quality of life, and One of the ongoing side effects of chemotherapy for patients is nausea and vomiting. The worst and most severe side effects of chemotherapy are nausea and vomiting. In order to identify the strategies for minimising the nausea and vomiting brought on by chemotherapy, this systematic review was carried out.

It can be concluded from study (48) that aromatherapy with cardamom essential oil is advised to lessen the intensity of chemotherapy-induced nausea in cancer patients. The ginger family, which is referred to as the “queen of spices,” includes cardamom. It is typically used to treat and prevent gastrointestinal diseases, throat pains, lung congestion, and oral infections, as well as to reduce indigestion, coughing, and itching. To reduce nausea and vomiting is one of its applications (58). The goal of this study was to lessen the degree of nausea brought on by chemotherapy. According to study (49), chamomile extract can be used to lessen chemotherapy-induced nausea but is ineffective in lowering vomiting. The chamomile herb has anti-inflammatory and nauseating effects (59). pharmaceutical industry According to the study (52), which sought to assess the impact of music on reducing chemotherapy-induced nausea and vomiting in kids with cancer, using music lessens the amount of nausea in kids with cancer who are receiving chemotherapy but has no effect on their vomiting.

According to study (53), the findings of the study demonstrate that consuming one gramme of ginger during the first five days of chemotherapy does not have an impact on the degree of nausea but does lessen the incidence of nausea and vomiting during the acute phase. Ice massage at the Negan point is useful in lowering the frequency and severity of pain, claims study (54) research (56), the use of acupressure to the heart, stomach, and central nervous. Acute nausea and vomiting can be relieved by addressing the nervous system, the nerve source, and the anti-nausea and vomiting regimen.

CONCLUSION:

According to the studies, it can be said that the therapeutic use of cardamom aromas as an inhaled essential oil is advised to lessen the severity of chemotherapy-induced nausea in cancer patients, whereas chamomile extract taken orally only lessens chemo-induced nausea and has no effect on reducing vomiting. Additionally, studies have shown that while using muscles does not affect vomiting in children receiving chemotherapy for cancer, they do lessen nausea. Nurses are advised to employ ear acupuncture techniques as an additional treatment for nausea and vomiting brought on by chemotherapy.

REFERENCES:

- Hadi Aghayari, Majid Hassanpuor-Ezatti, Hamid Reza Navidi, Said Barjesteh. Determination of priority and contribution rate of genes involved in breast stromal cells cancer on the basis of microarray analysis by mathematical modeling. *pajoohande*. 2012;17 (5): 228-233.
- Etemadi A, Sagadi A, Semnani S, Nouraei SM, Khademi H, Bahadori M. Cancer registry in Iran: a brief overview. *Arch Iran Med*. 2008;11(5):577-807. Farahmand M, Almasi Hashiani A, Hassanzade J, Moghadami M. Child hood cancer epidemiology based on cancer registry data of Fars province of Iran. *Koomesh*. 2011;13(1):8-13.
- Are the number of cancer cases increasing or decreasing in the world? [Online]. 2008 [cited 2008 Apr 1]; Available from: URL: <http://www.who.int/features/qa/15/en/index.html/>
- Ramesht M, Pourfarzi F, Entezari M, Karamati H. An Epidemiologic Study of Spatial and Temporal Patterns of Gastric Cancer in Ardabil) Years 2006- 2012(. *j.health*. 2015; 6 (3):345-354.
- Moslemirad M, Madmoli M, Madmoli Y, Niksefat M. Prevalence of type 1 and type 2 diabetes and its related factors in diabetic patients hospitalized in Khatam-ol-Anbia hospital in Shoushtar, 2014-15: A retrospective study. *Journal of Research in Medical and Dental Science*. 2018;6(3):421-6
- Madmoli M, Eilami O, Rezaie K, Aliabad MA, Moslemirad M. Diabetes and the risk of suffering cardiovascular Diseases: A two-year retrospective study. *International Journal of Ecosystems and Ecology Science (IJEES)*. 2018 Jun;8(3): 649-56.
- Madmoli M Rostami F, Mirsami Yazdi N, Mosavi A, Baraz Sh. Evaluation of Prevalence of Diabetic Foot Ulcer and Its Related Factors in Diabetic Patients Admitted to KHatam-olAnbia Hospital in Shoushtar During 2015-2016: A Retrospective Study. *International Journal of Ecosystems and Ecology Science (IJEES)*. 2018 June; 8 (3): 545-52.
- Rostami F, Madmoli M, Mirsami Yazdi N, Baraz Sh. Evaluation of The Prevalence of Lower Limb Amputation and Its Related Factors in Diabetic Patients Admitted to KHatam-ol-Anbia Hospital in Shoushtar During The 2015-2016: A Retrospective Study. *International Journal of Ecosystems and Ecology Science (IJEES)*. 2018 June; 8 (3):553-60.
- Raisifar Z, Afshar Nia A, Madmoli M, Madmoli Y. The Relationship between Using Insulin and Suffering Alzheimer's Disease in Patients with Diabetes: A Two-Year Study. *International Journal of Ecosystems and Ecology Science (IJEES)*. 2018 June; 8 (3):623-28.

10. Raisifar Z, Afshar Nia A, Maghamesi Moarrefi H, Madmoli M. Evaluation of Gi Bleeding Prevalence and Its Related Factors in Diabetic Patients Hospitalized in KHatam-ol-Anbia Hospital During 2015-16: A Retrospective Study. *International Journal of Ecosystems and Ecology Science (IJEES)*. 2018 June; 8 (3):609-14.
11. Madmoli M, Kord Z, Bandani A, Sedighi N, Rezaei Shandiz M, Darabiyan P, AfsharNia A. Epidemiological and clinical study of patients with Alzheimer's in Five Cities of Khuzestan Province in 2016-2018. *Medical Science*, 2019;23(95), 1-5
12. Mashali H, Toleideh F, Rahmani R, Darabiyan P, Madmoli M. The predictive role of Hyperlipidemia in the incidence of ACS in patients referring to Shahidzadeh Hospital in Behbahan in 2016 -2017. *Medical Science*, 2018; 22(94), 566-570
13. Madmoli M, Modheji Y, Rafi A, Feyzi R, Darabiyan P, AfsharNia A. Diabetes and its predictive role in the incidence of Alzheimer's disease. *Medical Science*, 2019; 23(95), 30-34
14. Madmoli M, Abbaszade Aliabad M, Madmoli M, Khodadadi M, Papi Ahmadi F. The Effect of Some Factors on Self-Care in Diabetic Patients: A Systematic Review. *Journal of Genetics and Genetic Engineering*. 2019; 3(1):21-25
15. Madmoli M. A Systematic Review Study on the Changer Factors of the Quality of life in Cancer Patients. *Int. Res. Med. Health Sci.*, 2019; 2(1):8-15.
16. Madmoli M. A systematic Review Study on the Results of Empowerment-Based Interventions in Diabetic Patients. *Int. Res. Med. Health Sci.*, 2019; 2(1):1-7.
17. Madmoli M, Fallah bagher shaidaei M, Rohani A, Darabiyan P, Mobarez F. The correlation between alcohol consumption and reducing the age of cancer incidence in patients with this disease. *Medical Science*, 2019, 23(95), 48-53
18. Madmoli M, Mahmoudi Dehcheshmeh Z, Rafi A, Zahra Kord, Fariba Mobarez, Pouriya Darabiyan. The rate of some complications and risk factors of diabetes in diabetic patients: Study on cases of 3218 diabetic patients. *Medical Science*, 2019; 23(95), 63-68
19. Mostafa Madmoli, Mehran Yarbig, Negin Sedighi, Pouriya Darabiyan, Fariba Mobarez. Communication between body mass index and the risk of obesity-related cancer: A 5-year study on patients with cancer. *Medical Science*, 2019; 23(95), 69-74
20. Madmoli M. Clinical and Laboratory Finding in Children with Leukemia: a Systematic Review. *International Journal of Research Studies in Science, Engineering and Technology*, vol. 5, no. 10, pp .2018; 1-6
21. Madmoli M. Evaluation of Chemotherapy Complications in Patients with Cancer: A systematic Review. *International Journal of Research Studies in Science, Engineering and Technology*, vol. 5, no. 12, 2018; 59-64.
22. Madmoli M, Madmoli Y, Khodadadi M, Samsamipour M. Study of Some Effective Treatments for Accelerating Diabetic Foot Ulcer Healing: A Systematic Review. *International Journal of Research Studies in Science, Engineering and Technology*. 6(2), 2019; 34-39
23. Madmoli M, Madmoli Y, Khodadadi M, Samsamipour M. Factors Affecting the Level of Glycosylated Hemoglobin in Patients with Diabetes: A Systematic Review. *Annals of Microbiology and Infectious Diseases* 2(1), 2019; 43-47.
24. Madmoli, M. A Systematic Review Study on the Communication between Diabetes and Cancer: The Serious Risk of Cancer in Diabetic Patients. *International Research in Medical and Health Science*. 2019; 2(2), 1-7.
25. Madmoli M. Quality of Life in Patients with Cancer and Some Factors Affecting it: A 19 Journal of Biotechnology and Bioengineering V3 • II • 2019 Systematic Review. *International Journal of Research Studies in Science, Engineering and Technology*. 6(1), 2019; 1-7
26. Madmoli M, Madmoli Y, Khodadadi M, Samsamipour M. Study of Some Effective Treatments for Accelerating Diabetic Foot Ulcer Healing: A Systematic Review. *International Journal of Research Studies in Science, Engineering and Technology*, 6(2), 2019; 34-39
27. Madmoli M, Madmoli Y, Khodadadi M, Samsamipour M. Factors Affecting the Level of Glycosylated Hemoglobin in Patients with Diabetes: A Systematic Review. *Annals of Microbiology and Infectious Diseases* 2(1), 2019; 43-47.
28. Madmoli M, Madmoli Y, Khodadadi M, Samsamipour M. Some Factors Affecting Quality of Life in Patients with Diabetes: A systematic Review", *Annals of Microbiology and Infectious Diseases*, 2(1), 2019; 26-30.
29. Madmoli M, Saeidilandi M, Latifinasab R, Fatehimoghaddam SH, Mobarez F, Darabiyan P. Hypertension and Risk of Acute Coronary Syndrome (ACS) in Patients with ACS: A Study on 926 patients with ACS. *International Journal of Ayurvedic Medicine*. 2019; 10(1).
30. Madmoli M, Fallah bagher shaidaei M, Rohani M, Madmoli M, Khodadadi M. Some predisposing factors and affecting cancer under the age of 35: A 6-year study on 2721 cancer patients. *International Journal of Ayurvedic Medicine*. 2019; 10(1).

31. Madmoli M, Madmoli Y, Mobarez F, Taqvaenasab H, Darabiyani P, Rafi A. Drugs abuse and increase in referral to hospital to prevent Recurrence of diabetic foot ulcer infection. *International Journal of Ayurvedic Medicine*. 2019; 10(1).
32. Madmoli M, Madmoli Y, Taqvaenasab H, Khodadadi M, Darabiyani P, Rafi A. Some influential factors on severity of diabetic foot ulcers and predisposing of limb amputation: A 7-year study on diabetic patients. *International Journal of Ayurvedic Medicine*. 2019;10(1).
33. Rafiee E, Khaledi M, Madmoli M, Zafari M, Lotfizadeh M. The correlation between Blood Pressure and BMI in Students of Shahrekord University of Medical Sciences in 2013-14. *International Journal of Ayurvedic Medicine*. 2019;10(1).
34. Madmoli Y, Madmoli M, Qashqaei nezhad N, Bosak S. Prevalence of depression and associated factors in adolescents of masjedsoleyman. *JPEN*. 2016; 2(4):31-40.
35. Madmoli M, Madmoli Y, Bigdeli Shamloo MB, Etebari A, Mahmoodi Kouhi A, Azami M. The Relationship Between Depression and Religiousness in Female High School Students of Masjed Soleyman in 2015. *Journal of Pediatric Nursing*. 2017 Jun 15;3(4):15-22.
36. Madmoli M, Nikpay S. An Investigation of the Relationship between Spiritual Health and Depression, Anxiety, and Stress among Students of Ilam University of Medical Sciences. *Journal of Research in Medical and Dental Science*. 2018 May 17;6(3):294-300.
37. Gheisari Z, Beiranvand R, Karimi A, Ghalavandi S, Soleymani A, Madmoli M, Bavarsad AH. Relationship between Occupational Stress and Cardiovascular Risk Factors Determination: A Case-control Study. *Journal of Research in Medical and Dental Science*. 2018 May 17;6(3):287-93.
38. Madmoli Y, Akhaghi Dezfuli SM, Adavi A, Maraaghi E, Heidari Soureshjani R, Madmoli M. The Effect of Orem Self-Care on Mental Health of Patients with Thalassemia Major. *Journal of Clinical Nursing and Midwifery*. 2018 Jul 1; 7(2):108-15.
39. Madmoli M, Madmoli Y, Rahmati P, Adavi A, Yousefi N, Gheisari Z, Abbaszade Aliabad M. Quality of Life and Some Related Factors in Patients with Beta Thalassemia Major in Southwest Iran. *Journal of Client-centered Nursing Care (JCCNC)*. 2017; 3(2).
40. Madmoli Y, Beiranvand R, Korkini N, Mashalchi H, Karimi H. [Comparison of health related quality of life in beta thalassemia major and healthy people in Dezful in 2015. *Iran J Nurs Res*. 2016; 11(1):9-16.
41. Madmoli Y, Akhaghi Dezfuli SM, Beiranvand R, Saberi Pour B, Azami M, Madmoli M. [An epidemiological and clinical survey of patients with β -thalassemia in dezful in 2015 (Persian)]. *Iran J Epidemiol*. 2017; 13(2):145-52.
42. Maraghi E, Adavi A, Madmoli Y, HeidariSoureshjani R, Madmoli M. The Effect of Orem Self-Care on Mental Health of Patients with Thalassemia Major. *Journal of Clinical Nursing and Midwifery*. 2018; 4(3).
43. Madmoli M, Madmoli Y, Rahmati P, Adavi A, Yousefi N, Gheisari Z, Abbaszade Aliabad M. Quality of Life and Some Related Factors in Patients with Beta Thalassemia Major in Southwest Iran. *Journal of Client-centered Nursing Care (JCCNC)*. 2017; 3(2).
44. Madmoli Y, Akhaghi Dezfuli SM, Adavi A, Maraaghi E, Heidari Soureshjani R, Madmoli M. The Effect of Orem Self-Care on Mental Health of Patients with Thalassemia Major. *Journal of Clinical Nursing and Midwifery*. 2018 Jul 1; 7(2):108-15.
45. Sona MF, Myung SK, Park K, Jargalsaikhan G. Type 1 diabetes mellitus and risk of cancer: a meta-analysis of observational studies. *Japanese journal of clinical oncology*. 2018 Apr 9; 48(5):426-33
46. Salehi F, Mohsenzade F, Arefi M. Prevalence of Death Anxiety in Patients with Breast Cancer in Kermanshah, Iranian Journal of Breast Diseases. 2015.40-34:)4(8 ;2016 .
47. 29. Degi CL. Non-disclosure of cancer diagnosis: an examination of personal, medical, and psychosocial factors. *Support Care Cancer* 2009; 17(8): 1101-7.
48. Khalili Z, Khatiban M, Faradmal J, Abbasi M, Zeraati F, Khazaei A. Effect of Cardamom aromas on the Chemotherapy-induced Nausea and Vomiting in Cancer Patients. *Avicenna J Nurs Midwifery care*. 2014; 22 (3):64-73.
49. borhan F, naji A, Molavi Vardanjnai M, Sasani L. Effects of Matricaria Chamomilla on the Severity of Nausea and Vomiting Due to Chemotherapy. *Avicenna J Nurs Midwifery care*. 2017; 25 (4) :140-146
50. Bosak S, Dashtbozorgi B, Hoseini M, Laifi M, Rezaei AR. The Effect of Massage Therapy on Nausea in Patients Who Undergo Chemotherapy for Breast Cancer. *Jundishapur Journal of Chronic Disease Care* 2012 ; 1(1).63-70.
51. Parsa-Yekta Z, Ebrahimi SM, Hosseini M, Nasrabadi AN, Sedighi S, Salehi-Surmaghi MH. Appeal of herbal plants as a mechanism for the relief of acute vomiting induced by chemotherapy. *Razi Journal of Medical Sciences*. 2012 Mar 15; 18(93):33-9.
52. Sadat Hoseini AS. Effect of music therapy on chemotherapy nausea and vomiting in children with malignancy. *Journal of hayat*. 2009

- Oct15; 15(2):5-14.
53. Najafi S. Ginger effects on control of chemotherapy induced nausea and vomiting. *ijbd*. 2014; 7 (1) :7-14
54. Sadeghi Shermeh M, Ebadi A, Sirati Nir M, Azadian M. Ice massage on chemotherapy induced nausea and vomiting. *J Birjand Univ Med Sci*. 2012; 19 (1) :1-11
55. The Influence of Massage Therapy On Vomiting in Under Chemotherapy Patient with Breast Cancer. *ijbd*. 2010; 3 (1 and 2) :14-18
56. Eghbali M, Varaei S, Jalalinia SF, Aalam Samimi M, Sa'atchi K, Yekaninejad MS. Effect of auricular acupressure on acute nausea and vomiting induced by chemotherapy among breast cancer patients. *Journal of hayat*. 2015 Sep 15; 21(2):29-39.
57. Haddadi M, Ganjloo J, Hashemifard HR, Tabarraie Y. The Effect of Sucking Bits of Ice containing mint (mentha) Extract on Nausea and Vomiting Resulted of Chemotherapy in Patients Suffering from Malignant Cancer. *Iranian Quarterly Journal of Breast Disease*. 2017 Mar 15; 9(4):7-14.
58. Warriar P, Nambiar V, Ramankutty C. *Indian medicinal plants: A compendium of 500 species*: Orient Blackswan; 1996.
59. Modares M, Besharat S, Mahmoudi M. Effect of Ginger and Chamomile capsules on nausea and vomiting in pregnancy. *Journal of Gorgan University of Medical Sciences*. 2012;14(1):46-51.
60. Ebrahimi S, Pormohammadi A. comprehension effective bittween Mtricaria and black tea redused instabilityintants when grow their thooth. *Dena Quarterly periodical*, 2010;4(1):23-3