

Research Paper**Assessment Effect of Rosa Damascena Juice Aromatherapy on Elderly Chronic Musculoskeletal Pain in Sabzevar Retirement Clubs**Somayyeh Anbari¹, *Zahra Estaji², Seddiqeh Rastaqhi³

1. Department of Nursing, School of Nursing & Midwifery, Iranian Research Center on Healthy Aging, Sabzevar University of Medical Sciences, Sabzevar, Iran.
2. Department of Nursing, School of Nursing & Midwifery, Sabzevar University of Medical Sciences, Sabzevar, Iran.
3. Department of Biostatistics & Epidemiology, School of Health, Sabzevar University of Medical Sciences, Sabzevar, Iran.

**Citation:** Anbari S, Estaji Z, Rastaqhi S. [Assessment Effect of Rosa Damascena Juice Aromatherapy on Elderly Chronic Musculoskeletal Pain in Sabzevar Retirement Clubs (Persian)]. Iranian Journal of Ageing. 2018; 13(2):250-261.Received: 30 Dec 2017
Accepted: 05 May 2018**ABSTRACT****Objectives** Chronic pain is one of the major health issues during older age. Aromatherapy is a method to reduce such pain. The present study investigated the effects of inhaling rose extract on chronic musculoskeletal pain in elderly.**Methods & Materials** The clinical trial consisted of 60 elderly individuals with chronic musculoskeletal pain, who were members of the retirement centers of Sabzevar city in 1395. The subjects were randomly allocated to two groups: intervention (31 people) and control (29 people). In the intervention group, the pain was measured using a McGill Pain Questionnaire. Before the intervention, interviews were conducted once a week on Thursdays by telephone for both groups. In the intervention group, the rose extract was inhaled using a linen handkerchief with a three-drop dip of the extract on it daily for three weeks. In the control group, sweet almond oil was used similarly. Data were analyzed using SPSS.**Results** The present study showed that the inhalation of Rose extract did not affect the sensory and emotional aspect of pain in individuals; however, a statistically significant difference was noted in the sensory aspect between men and women ($P < 0.05$) but not in the emotional dimension.**Conclusion** The present study showed that the inhalation of rose extract reduces the sensory dimension of chronic pain between men and women. Although additional investigation is imperative, these findings can be used for effective pain management interventions.**Key words:**

Rose extract, Chronic musculoskeletal pain, Elderly

Extended Abstract**1. Objectives**

Old age is a critical period of human life [1]. One of the major health problems of aging is chronic pain. Thus, the most common issue posed to the medical

staff is chronic pain in the elderly [2]. Musculoskeletal pain is the primary cause of disability in the elderly [3]. Pain control is considered such a critical component of care, such that the American Pain Society has devised the phrase "pain as the fifth vital sign" to emphasize its importance and increase the awareness of the health team members about pain control [4].

*** Corresponding Author:****Zahra Estaji, MSc.****Address:** Department of Nursing, School of Nursing & Midwifery, Sabzevar University of Medical Sciences, Sabzevar, Iran.**Tel:** +98 (915) 5722382**E-mail:** z.estaji@yahoo.com

Some methods with minimal complications are used as nursing for pain relief [5]. Aromatherapy is one of the ways to reduce the pain during this period; it is the second method of complementary medicine, and along with other health care, it is an opportunity for nurses to resolve the patient complaints [6]. The present study investigated the effect of the inhaled rose extract on chronic musculoskeletal pain in the elderly.

2. Methods and Materials

This study is a clinical trial. The sampling method was random assignment of 60 elderly individuals with chronic musculoskeletal pain. The subjects were members of Retirement Centers of Sabzevar City in 2016.

The subjects were randomly divided into two groups: intervention (n=31) and control group (n=29). The pain was measured in both groups by telephone. The McGill Pain Questionnaire has been valid and reliable in previous studies and was utilized before intervention with an interview and once a week on Thursday during the intervention. Moreover, the questionnaire was completed by the interview method at the subject's home by obtaining the permission of the individual by phone and in advance coordination. In addition, the strategy of the study was explained to the elderly. Three copies of the questionnaire and an extract with a dropper, a piece of linen, and an explanation card were provided to each participant, explaining the study procedure and its starting date in order to complete the questionnaire by themselves and the researcher during phone calls. A specific day and one subject were considered for starting the intervention for simultaneous use of extracts, and the elderly were asked to start the aromatherapy technique on the same day. Follow-ups were accomplished via phone calls.

In the intervention group, the rose extract was inhaled using linen stuffed with three drops of extracts from 9:00 pm to 6:00 am at 25 cm, one time daily for three weeks. In the control group, sweet almond oil was used similarly. The contact number of the researcher was provided to the subjects in case of any queries and or putative complications and allergies. Data were analyzed using the SPSS 20 software with a significance level of $P < 0.05$.

3. Results

The distribution frequency of age and gender did not reveal any difference between the two groups and were homogeneous. The mean of chronic pain in the elderly

was based on the knee pain that was most frequent, approximately 70%. Inhaling the rose extract was not effective on the sensory and emotional side of the chronic pain in men and women. However, a statistically significant difference between men and women was noted in the sensory dimension of chronic pain ($P < 0.05$) but not in terms of the emotional dimension.

The results of repeated measures analysis of variance (RM-ANOVA) for the emotional and emotional dimension of chronic pain revealed that the passage of time exerted a significant effect on pain. However, the interactive effect was observed between the passage of time (before intervention, first week, second week, and third week) and the studied groups (control and intervention groups) on the sensational and emotional sides of chronic pain. Furthermore, the inhalation of the rose extract on the Present Pain Intensity (PPI) and continued chronic pain in women and men was not effective. Moreover, the inhalation effect on PPI and continuity of chronic pain was statistically significant in the comparison between men and women ($P < 0.05$). Also, the results of RM-ANOVA for PPI and the persistence of chronic pain showed that the passage of time had a statistically significant effect on pain. However, the interactive effect between the passage of time (before the intervention, first week, second week, and third week), and the groups were examined (control and intervention groups), and no significant effect was observed on the severity of PPI and the continuation of chronic pain.

In the sensory dimension of chronic pain, i.e., the most frequent type of pain, slight pain and feeling hot and burning in the control group was 51.7% and 41.4%, respectively and that in the intervention group was 67.7% and 58.1%, respectively. In the emotional dimension, the most frequent type of pain type, tired and boring in the control group was 96.6% and 62.1%, respectively, and that in the intervention group was 96.8% and 58.1%, respectively. The second most chronic pain site in the elderly was back pain with 36.7%. In addition, 70% of the elderly reported pain in more than one area. The comparison of the pain score between two genders in chi-square test showed that pain in women (74.2%) was more than that in men (44.8%).

4. Conclusion

The present study showed that the aromatherapy using rose extract reduces the sensory dimension of musculoskeletal pain among men and women, although additional studies are essential. Interestingly, aromatherapy of rose extract can be used as a non-pharma-

ceutical strategy along with other therapies in order to reduce pain and promote a sense of peace and satisfaction in the elderly as it is a simple, safe, affordable, and economical, and hence, recommended.

The current findings can be valuable in planning with effective management of chronic pain by researchers, officials, and custodians. In addition, due to the increasing inclination of the individuals and healthcare systems to complementary medicine, managers can organize training courses regarding the therapeutic effects of complementary and alternative therapies, such as aromatherapy and inhalation of rose extract, and provide training to the personnel.

Ethical Considerations

Compliance with ethical guidelines

This research was approved by the Ethics Committee of Sabzevar University of Medical Sciences with the code of IR.MEDSAB.REC.1395.77. The elderly filled the informed consent and then they were categorized into two groups of intervention and control.

Funding

This research was extracted from the MSc. thesis of Somayyeh Anbari on Department of Nursing, School of Nursing & Midwifery, Iranian Research Center on Healthy Aging, Sabzevar University of Medical Science.

Conflict of interest

The authors declared no conflict of interest.

Acknowledgements

The researcher appreciates all the elderly who have been able to do the study by expanding their research conditions. He is also appreciated by the deputy research director of Sabzevar University of Medical Sciences and respected professors who have facilitated the study with their spiritual support.