

Lavender aromatherapy on anxiety and depression in patients with Acute Coronary Syndrome: a single-blind randomized clinical trial



Original Article

Mohammad Nategh^a, Mohammad Reza Heidari^{b,*}, Abbas Ebadi^c, Reza Norouzadeh^d, Zahra Mohebbinia^e, Bahman Aghaie^f

^aDepartment of Intensive Care Nursing, Nursing and Midwifery Faculty, Shahed University, Tehran 3319118651, Iran

^bDepartment of Nursing, Nursing and Midwifery Faculty, Shahed University, Tehran, Tehran 3319118651, Iran

^cNursing Faculty, Baqiyatallah University of Medical Sciences, Tehran 3319118651, Iran

^dDepartment of Nursing, Nursing and Midwifery Faculty, Shahed University, Tehran 3319118651, Iran

^eSchool of Nursing, Shiraz University of Medical Sciences, Shiraz 3616493458, Iran

^fDepartment of Medical-Surgical Nursing, School of Nursing and Midwifery, Qom University of Medical Sciences, Qom 3716993456, Iran

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Abstract: **Objective:** In cardiovascular disease, a patient's anxiety and depression can increase cardiac rehabilitation duration and recovery. Lavender aromatherapy as a non-pharmacological intervention effective in other contexts may be an efficient intervention to alleviating anxiety and depression in patients with Acute Coronary Syndrome (ACS).

Methods: In this study, 110 ACS patients were randomly assigned to two intervention and control groups. Inhalation of the lavender fragrance was prescribed for the intervention group and the drop of aromatic almond for the control group for 3 days.

Results: The first-day anxiety and depression were significantly different in the two groups at 1 h and 9 h after the intervention. The 'morning's difference before the intervention was not significant, but it was substantial 1 h after the intervention. On the third morning of the intervention, this difference was confirmed.

Conclusions: This study confirmed the effectiveness of lavender aromatherapy in reducing anxiety and depression in ACS patients. This 'study's results enable intensive care nurses to use aromatherapy with lavender oil as a non-pharmacological and cost-effective intervention to reduce their psychological tensions and increase patient satisfaction during hospitalization in the cardiac care units (CCU).

Keywords: anxiety • aromatherapy • Acute Coronary Syndrome • depression • lavender • randomized clinical trial

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* Corresponding author.

E-mail: mheidari@shahed.ac.ir (M. -R. Heidari).

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5. Conclusions

This study confirms the effectiveness of lavender aromatherapy in reducing anxiety and depression in ACS patients. This study's results enable intensive care nurses to use aromatherapy with lavender oil as a non-pharmacological and cost-effective intervention to reduce their psychological tensions and increase patient satisfaction during hospitalization in the CCU.

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Ethical approval

This study was approved by the Medical Ethics Committee of Shahed University (No. 41/175283) in Tehran, Iran.

Conflicts of interest

All contributing authors declare no conflicts of interest.

References

1. Frasure-Smith N, Lesperance F. Depression and anxiety as predictors of 2-year cardiac events in patients with stable coronary artery disease. *Arch Gen Psychiatry*. 2008;65:62–71.
2. Park JH, Tahk SJ, Bae SH. Depression and anxiety as predictors of recurrent cardiac events 12 months after percutaneous coronary interventions. *J Cardiovasc Nurs*. 2015;30:351–359.
3. Shah AJ, Ghasemzadeh N, Zaragoza-Macias E, et al. Sex and age differences in the association of depression with obstructive coronary artery disease and adverse cardiovascular events. *J Am Heart Assoc*. 2014;3:e000741.
4. Shimizu Y, Suzuki M, Okumura H, Yamada S. Risk factors for onset of depression after heart failure hospitalization. *J Cardiol*. 2014;64:37–42.
5. Fayazi S, Babashahi M, Rezaei M. The effect of inhalation aromatherapy on anxiety level of the patients in preoperative period. *Iran J Nurs Midwifery Res*. 2011;16:278–283.
6. Huffman JC, Beach SR, Suarez L, et al. Design and baseline data from the Management of Sadness and Anxiety in Cardiology (MOSAIC) randomized controlled trial. *Contemp Clin Trials*. 2013;36:488–501.
7. Keegan L. Therapies to reduce stress and anxiety. *Crit Care Nurs Clin North Am*. 2003;15:321–327.
8. Huffman JC, Celano CM, Januzzi JL. The relationship between depression, anxiety, and cardiovascular outcomes in patients with acute coronary syndromes. *Neuropsychiatr Dis Treat*. 2010;6:123–136.
9. Darrouj J, Karma L, Arora R. Cardiovascular manifestations of sedatives and analgesics in the critical care unit. *Am J Ther*. 2009;16:339–353.
10. Tillett J, Ames D. The uses of aromatherapy in women's health. *J Perinat Neonatal Nurs*. 2010;24:238–245.
11. Walsh ME, Reis D, Jones T. Integrating complementary and alternative medicine: Use of essential oils in hypertension management. *J Vasc Nurs*. 2011;29:87–88.
12. Tayarani-Najaran Z, Amiri A, Karimi G, Emami SA, Asili J, Mousavi SH. Comparative studies of cytotoxic and apoptotic properties of different extracts and the essential oil of *Lavandula angustifolia* on malignant and normal cells. *Nutr Cancer*. 2014;66:424–434.
13. Szafranski T. Herbal remedies in depression – state of the art. *Psychiatr Pol*. 2014;48:59–73 (in Polish).
14. Fontaine DK, Briggs LP, Pope-Smith B. Designing humanistic critical care environments. *Crit Care Nurs Q*. 2001;24:21–34.
15. Keegan L. Alternative and complementary modalities for managing stress and anxiety. *Crit Care Nurse*. 2000;20:93–96.
16. Sheikhan F, Jahdi F, Khoei EM, Shamsalizadeh N, Sheikhan M, Haghani H. Episiotomy pain relief: use of lavender oil essence in primiparous Iranian women. *Complement Ther Clin Pract*. 2012;18:66–70.
17. Shirreffs CM. Aromatherapy massage for joint pain and constipation in a patient with Guillian Barre. *Complement Ther Nurs Midwifery*. 2001;7:78–83.