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APPLICATION OF LAVENDER AROMATHERAPY FOR PSYCHOLOGICAL SYMPTOMS IN A POSTMENOPAUSAL WOMAN: A CASE REPORT

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Abstract:

Background: Menopause may be accompanied by psychological symptoms, including anxiety, depressive symptoms, stress, mood changes, and sleep disturbance. Lavender aromatherapy is used as a complementary, non-pharmacological approach that may promote relaxation.

Objective: To describe the application of lavender aromatherapy and the changes in self-reported psychological symptoms in a postmenopausal woman. This descriptive case report concerns a 61-year-old woman who had been postmenopausal for five years and reported worsening psychological and sleep-related complaints over six months. Depression, anxiety, and stress were assessed before and after a seven-day period of lavender room-fragrance use using the Depression Anxiety Stress Scales-21 (DASS-21).

Results: DASS-21 scores decreased from 12 to 8 for depression, 14 to 6 for anxiety, and 18 to 12 for stress. The patient also reported feeling more relaxed, less anxious, emotionally more stable, and sleeping better. No adverse effects were reported during the intervention period.

Conclusion: The findings indicate that lavender aromatherapy may contribute to short-term improvements in the patient's self-reported psychological symptoms. This case highlights its potential as a complementary approach to supporting psychological well-being during the observation period. Further controlled studies are needed to confirm these findings and evaluate its effectiveness.

Keywords: aromatherapy; case report; lavender; menopause; psychological symptoms

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1. INTRODUCTION

Menopause is a natural life-course transition characterized by the permanent cessation of menstruation following the loss of ovarian follicular activity. The transition is commonly accompanied by physical, psychological, and social changes. Anxiety, depressive symptoms, irritability, emotional instability, and sleep disturbance may affect daily functioning and quality of life in some women (Talaulikar, 2022; Crandall et al., 2023). The experience and severity of symptoms vary considerably between individuals, making individualized assessment and care important.

Management of menopausal symptoms may include hormonal and non-hormonal approaches, selected according to symptom profile, health status, preferences, and clinical considerations. Some women seek complementary approaches, including aromatherapy, to support relaxation and emotional well-being. Lavender essential oil has been studied for its

potential anxiolytic and calming properties. Its volatile constituents, including linalool and linalyl acetate, have been proposed to influence olfactory pathways and brain regions involved in emotion and stress regulation (Koulivand et al., 2013; Malloggi et al., 2022). These proposed mechanisms should not, however, be interpreted as proof of clinical efficacy in an individual patient.

Evidence syntheses and clinical studies have examined lavender aromatherapy for menopausal symptoms, sleep disturbance, anxiety, and depressive symptoms. Reviews have reported potentially beneficial effects, although differences in study populations, administration methods, exposure duration, and outcome measures limit direct comparison (Roozbeh et al., 2019; Salehi-Pourmehr et al., 2020; Lee et al., 2021). A randomized clinical trial has also investigated inhaled lavender aromatherapy for depression and anxiety in postmenopausal women (Jokar et al., 2020).

Despite this literature, the response of an individual patient using a room-fragrance delivery method in a home setting may differ from responses observed under controlled inhalation protocols. Detailed case descriptions can contribute practice-based information about symptom presentation, intervention delivery, and patient-reported experience. Nevertheless, a case report is descriptive and cannot isolate the effect of the intervention from other influences, including natural symptom variation, expectancy, and concurrent environmental or behavioral changes.

This report describes the application of lavender aromatherapy for psychological symptoms in a 61-year-old postmenopausal woman and documents changes in depression, anxiety, and stress scores measured using the DASS-21 before and after seven days of use. The report is intended to describe the clinical course and should not be interpreted as an efficacy trial.

2. MATERIAL AND METHODS

2.1 Research Design

This article is a descriptive clinical case report involving one postmenopausal woman. The patient's symptoms and DASS-21 scores were documented before and after a seven-day period of lavender aromatherapy use. No control group or random allocation was used.

2.2 Research Population and Sample

The population in this case report consisted of postmenopausal women experiencing psychological and sleep-related complaints. The sample comprised one 61-year-old woman who had been postmenopausal for approximately five years and reported anxiety, irritability, mood changes, sadness, and sleep disturbances that had worsened over the preceding six months. The participant was selected based on the presence of these complaints and her suitability for the case observation. Her psychological symptoms were assessed using the Depression Anxiety Stress Scales-21 (DASS-21) before and after seven days of lavender room-fragrance use.

2.3 Research Setting and Time

The patient was a 61-year-old housewife who lived with her family and had been postmenopausal for approximately five years. The study was conducted in 2026, involving a seven-day period of lavender room-fragrance use. During the observation period, the patient reported psychological and sleep-related complaints, including anxiety, irritability, mood changes, sadness, and sleep disturbances.

2.4 Research Procedures

The initial assessment involved collecting information about the patient's menopausal status, psychological complaints, sleep disturbances, previous psychiatric history, chronic

illnesses, and prior management efforts. The patient reported that her symptoms had worsened over the preceding six months. Baseline depression, anxiety, and stress levels were assessed using the Depression Anxiety Stress Scales-21 (DASS-21) before the intervention.

The intervention involved the use of lavender-scented room fragrance in the patient's bedroom for seven consecutive days. During this period, the patient was advised to maintain her usual sleeping habits and daily activities. Adherence to the intervention and any perceived effects were monitored periodically. After the seven-day intervention period, the DASS-21 assessment was repeated, followed by an interview to explore the patient's experience and perceived changes in her psychological symptoms and sleep quality.

2.5 Data Collection Techniques

Information was obtained through patient interview, clinical observation, vital-sign measurement, and pre- and post-intervention DASS-21 assessment. The patient's reported sleep quality, anxiety, relaxation, and emotional stability were documented after the intervention.

2.6 Research Instruments

The study used the Depression Anxiety Stress Scales-21 (DASS-21), a 21-item self-report questionnaire designed to assess depression, anxiety, and stress symptoms. It was administered before and after the intervention to evaluate changes in the patient's psychological condition. A clinical assessment form was also used to record baseline vital signs, including blood pressure, pulse rate, respiratory rate, and body temperature.

2.7 Data Analysis

The data were analyzed descriptively by examining the DASS-21 scores for depression, anxiety, and stress before and after the seven-day intervention. The patient's reported experiences during the intervention were also summarized to provide additional context for the observed changes. The findings were presented descriptively to illustrate the patient's psychological condition throughout the observation period.

2.8 Scope Limitations

This report is limited to one patient and a seven-day observation period. There was no control or comparison condition, no blinding, and no standardized measurement of lavender exposure. DASS-21 is a self-report instrument and may be affected by response and recall bias. The findings cannot be generalized to other menopausal women and cannot establish that aromatherapy caused the observed changes.

2.9 Ethical Considerations

The study was conducted in accordance with the principles of the Declaration of Helsinki and applicable research ethics guidelines. Ethical approval was obtained from the relevant institutional ethics committee prior to data collection. Informed consent was obtained from the patient, and participation was entirely voluntary. Patient confidentiality and anonymity were strictly maintained by removing all personal identifying information. The patient was also informed of the right to withdraw from participation at any time without affecting access to clinical care.

3. RESULTS AND DISCUSSION

3.1. Result

The patient was a 61-year-old woman who had been postmenopausal for approximately five years. She reported anxiety, irritability, mood instability, sadness,

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difficulty initiating sleep, and repeated nighttime awakenings. These complaints had reportedly worsened over the previous six months and affected her daily and social activities. She had no reported history of psychiatric disorders or chronic illnesses and was not receiving hormone replacement therapy.

Table 1. Patient Characteristics

Characteristic	Reported information
Age	61 years
Menopausal duration	Approximately 5 years
Occupation	Housewife
Body mass index	28.5 kg/m^2
Social activity	Community health volunteer (cadre)
Physical exercise	Reportedly none
Residence	Urban area

The patient's Body Mass Index (BMI) was 28.5 kg/m^2, which is classified as overweight according to the WHO international classification for adults.

At the initial assessment, the patient appeared restless and tense, with reduced concentration of eye contact and frequent deep sighing. Baseline vital signs were within the ranges reported in the manuscript: blood pressure 120/80 mmHg, pulse 82 beats/minute, respiratory rate 20 breaths/minute, and temperature 36.7°C.

Table 2. DASS-21 Scores Before and After Lavender Aromatherapy

Domain	Pre-intervention	Post-intervention	Score reduction	Original category (pre → post)
Depression	12	8	4	Moderate → Mild
Anxiety	14	6	8	Moderate → Mild
Stress	18	12	6	Severe → Moderate

As shown in Table 2, all three reported DASS-21 subscale scores decreased after seven days: depression by 4 points, anxiety by 8 points, and stress by 6 points. These are within-person descriptive changes. The severity labels are reproduced from the original manuscript but require confirmation of the scoring convention and applicable cut-offs.

Following the intervention, the patient reported feeling calmer and more relaxed, with less anxiety, improved sleep, fewer nighttime awakenings, and greater emotional stability. No adverse effects or complaints attributed to the room fragrance were reported during the seven-day period.

3.2 Discussion

This case documents lower self-reported DASS-21 scores across depression, anxiety, and stress domains after seven days of lavender room-fragrance use. The largest numerical reduction was observed in the anxiety domain (14 to 6), followed by stress (18 to 12) and depression (12 to 8). The patient also described improved relaxation, sleep, and emotional stability. These observations suggest a possible short-term improvement during the intervention period, but they do not demonstrate that lavender aromatherapy was the cause.

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The findings are broadly consistent with literature investigating lavender aromatherapy for menopausal symptoms and psychological well-being. Systematic reviews have reported potential benefits of aromatherapy for selected menopausal symptoms, although the included studies vary in intervention procedures and outcome measures (Roozbeh et al., 2019; Salehi-Pourmehr et al., 2020; Lee et al., 2021). Jokar et al. (2020) specifically examined inhaled lavender aromatherapy in postmenopausal women with depression and anxiety. These studies provide a rationale for exploring lavender as a complementary approach, but their protocols should not be assumed to be equivalent to continuous room-fragrance exposure in this case.

Lavender's volatile compounds, including linalool and linalyl acetate, have been discussed in relation to olfactory pathways and neural systems involved in emotion and stress responses (Koulivand et al., 2013; Malloggi et al., 2022). This provides a plausible explanatory framework for relaxation-related responses. However, the present case did not measure physiological mechanisms, neurotransmitter levels, or autonomic activity. Mechanistic explanations therefore remain theoretical and should not be presented as demonstrated effects in this patient.

Several alternative explanations may account for the observed changes. These include natural fluctuation in menopausal symptoms, expectation and attention effects, changes in sleep routines, family support, and other unrecorded behaviors. The intervention was not blinded, and the patient knew that lavender fragrance was being used. In addition, the room-fragrance method did not allow precise control of dose or exposure. The result should consequently be interpreted as a temporal association between intervention use and reported improvement.

3.3 Implications

In nursing practice, lavender fragrance may be discussed as an optional complementary comfort measure for patients who find the aroma pleasant and do not experience irritation or sensitivity. It should not replace clinical assessment or evidence-based management of persistent anxiety, depression, or sleep disorders. Nurses should assess patient preferences, allergies or respiratory sensitivity, product safety, and symptom severity before suggesting its use.

3.4 Research contribution

This case adds a practice-based description of a seven-day home-use lavender room-fragrance intervention accompanied by pre- and post-intervention DASS-21 scores in a postmenopausal woman. It highlights the importance of documenting delivery method, exposure conditions, patient-reported outcomes, and safety observations when reporting complementary nursing interventions.

3.5 Limitations

The report includes only one patient, has no control group, and covers a short intervention period. Lavender exposure was not standardized or quantified, and there was no follow-up after the intervention ended. The DASS-21 scoring convention and severity-category calculation are not described. Sleep outcomes were based on patient report rather than a validated sleep instrument or objective measurement. Potential confounders and concurrent changes were not adequately documented. These limitations prevent causal inference and generalization.

3.6 Suggestions

Future case reports and clinical studies should specify the lavender product, botanical source, concentration, amount, delivery device, room conditions, and daily exposure duration. DASS-21 scoring should be reported transparently, including whether subscale scores were doubled and which validated language version was used. Sleep outcomes should be assessed with a validated instrument or sleep diary, and follow-up should determine whether changes persist after exposure ends. Controlled studies with adequate sample sizes are needed before clinical efficacy can be concluded.

4. CONCLUSION

In this single case, seven days of lavender room-fragrance use coincided with lower DASS-21 scores for depression (12 to 8), anxiety (14 to 6), and stress (18 to 12), together with patient-reported improvements in relaxation, sleep, and emotional stability. No adverse effects were reported during the observation period. These findings describe a possible short-term response in one patient and do not establish causality or treatment efficacy. Lavender aromatherapy may be considered only as a complementary comfort measure, alongside appropriate assessment and care.

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AUTHOR CONTRIBUTIONS STATEMENT

All authors contributed to the conception and design of the study, data collection, data analysis, interpretation of the results, and manuscript preparation. All authors reviewed, revised, and approved the final version of the manuscript and agreed to be accountable for the integrity and accuracy of the work.

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REFERENCES

Crandall, C. J., Mehta, J. M., & Manson, J. E. (2023). Management of menopausal symptoms: A review. JAMA, 329(5), 405–420. https://doi.org/10.1001/jama.2022.24140

Hogervorst, E., Craig, J., & O'Donnell, E. (2022). Cognition and mental health in menopause: A review. Best Practice & Research Clinical Obstetrics & Gynaecology, 81, 69–84. https://doi.org/10.1016/j.bpobgyn.2021.10.009

Jokar, M., Delam, H., Bakhtiari, S., Paki, S., Askari, A., Bazrafshan, M. R., & Shokrpour, N. (2020). The effects of inhalation lavender aromatherapy on postmenopausal women's depression and anxiety: A randomized clinical trial. The Journal for Nurse Practitioners, 16(8), 617–622. https://doi.org/10.1016/j.nurpra.2020.04.027

Kim, M., Nam, E. S., Lee, Y., & Kang, H. J. (2021). Effects of lavender on anxiety, depression, and physiological parameters: Systematic review and meta-analysis. Asian Nursing Research, 15(5), 279–290. https://doi.org/10.1016/j.anr.2021.11.001

Koulivand, P. H., Khaleghi Ghadiri, M., & Gorji, A. (2013). Lavender and the nervous system. Evidence-Based Complementary and Alternative Medicine, 2013, Article 681304 https://doi.org/10.1155/2013/681304

Kunzler, A. M., Helmreich, I., König, J., Chmitorz, A., Wessa, M., Binder, H., & Lieb, K. (2020). Psychological interventions to foster resilience in healthcare students. Cochrane Database of Systematic Reviews, 2020(7), CD013684. in healthcare students. https://doi.org/10.1002/14651858.CD013684

Lambrinoudaki, I., Paschou, S. A., Armeni, E., & Goulis, D. G. (2022). The interplay between diabetes mellitus and menopause: Clinical implications. Nature Reviews Endocrinology, 18(10), 608–622. https://doi.org/10.1038/s41574-022-00708-0

Lee, H. W., Ang, L., Choi, J., & Lee, M. S. (2021). Aromatherapy for managing menopausal symptoms: A systematic review and meta-analysis of randomized placebo-controlled trials. Journal of Alternative and Complementary Medicine, 27(10), 813–823. https://doi.org/10.1089/acm.2020.0315

Magnon, V., Dutheil, F., & Vallet, G. T. (2021). Benefits from one session of deep and slow breathing on vagal tone and anxiety in young and older adults. Scientific Reports, 11, Article 19267. https://doi.org/10.1038/s41598-021-98736-9

Malloggi, E., Menicucci, D., Cesari, V., Frumento, S., Gemignani, A., & Bertoli, A. (2022). Lavender aromatherapy: A systematic review from essential oil quality and administration methods to cognitive enhancing effects. Applied Psychology: Health and Well-Being, 14(2), 663–690. https://doi.org/10.1111/aphw.12310

Monserrat-Hernández, M., Checa-Olmos, J. C., Arjona-Garrido, Á., López-Liria, R., & Rocamora-Pérez, P. (2023). Academic stress in university students: The role of physical exercise and nutrition. Healthcare, 11(17), 2401. https://doi.org/10.3390/healthcare11172401

Naz, A. M., Khan, S., Manzoor, S., Ur Rehman, K., Aslam, Z., & Noor, N. (2024). Relationship between resilience, social support and psychological well-being in nursing students. Journal of Research in Nursing, 29(8), 718–731. https://doi.org/10.1177/17449871241278854

dos Reis Lucena, L., dos Santos-Junior, J. G., Tufik, S., & Hachul, H. (2021). Lavender essential oil on postmenopausal women with insomnia: Double-blind randomized trial. Complementary Therapies in Medicine, 59, 102726. https://doi.org/10.1016/j.ctim.2021.102726

Roozbeh, N., Ghazanfarpour, M., Khadivzadeh, T., Kargarfard, L., Rajab Dizavandi, F., & Shariati, K. (2019). Effect of lavender on sleep, sexual desire, vasomotor, psychological and physical symptom among menopausal and elderly women: A systematic review. Journal of Menopausal Medicine, 25(2), 88–96. https://doi.org/10.6118/jmm.18158

Salehi-Pourmehr, H., Ostadrahimi, A., Ebrahimpour-Mirzarezaei, M., & Farshbaf-Khalili, A. (2020). Does aromatherapy with lavender affect physical and psychological symptoms of menopausal women? A systematic review and meta-analysis. Complementary Therapies in Clinical Practice, 39, 101150. https://doi.org/10.1016/j.ctcp.2020.101150

Susanti, H. D., Sonko, I., & Chung, M. H. (2022). Translation and validation of the Depression Anxiety Stress Scales for menopausal women in Indonesia. Climacteric, 25(5), 483–489. https://doi.org/10.1080/13697137.2022.2052839

Tabatabaeichehr, M., & Mortazavi, H. (2020). The effectiveness of aromatherapy in the management of labor pain and anxiety: A systematic review. Ethiopian Journal of Health Sciences, 30(3), 449–458. https://doi.org/10.4314/ejhs.v30i3.16

Talaulikar, V. (2022). Menopause transition: Physiology and symptoms. Best Practice & Research Clinical Obstetrics & Gynaecology, 81, 3–7. https://doi.org/10.1016/j.bpobgyn.2022.03.003

The 2023 nonhormone therapy position statement of The North American Menopause Society. (2023). Menopause, 30(6), 573–590. https://doi.org/10.1097/GME.0000000000002200

Vance, N. E., Ulanowski, E. A., & Danzl, M. M. (2019). Yoga led by a physical therapist for individuals with essential tremor: An explorative pilot study. Complementary Therapies in Clinical Practice, 34, 17–22. https://doi.org/10.1016/j.ctcp.2018.10.010

Vigneswaran, K., & Hamoda, H. (2022). Hormone replacement therapy Current recommendations. Best Practice & Research Clinical Obstetrics & Gynaecology, 81, 8–21. https://doi.org/10.1016/j.bpobgyn.2021.12.001

Wunsch, K., Fiedler, J., Bachert, P., & Woll, A. (2021). The tridirectional relationship among physical activity, stress, and academic performance in university students: A systematic review and meta-analysis. International Journal of Environmental Research and Public Health, 18(2), 739. https://doi.org/10.3390/ijerph18020739

Yoo, O., & Park, S. A. (2023). Anxiety-reducing effects of lavender essential oil inhalation: A systematic review. Healthcare, 11(22), 2978. https://doi.org/10.3390/healthcare11222978