

BENEFITS OF THE USE OF AROMATHERAPY IN LABOR: INTEGRATIVE LITERATURE REVIEW**BENEFICIOS DEL USO DE LA AROMATERAPIA EN EL TRABAJO DE PARTO: REVISIÓN INTEGRADORA DE LA LITERATURA****BENEFÍCIOS DO USO DA AROMATERAPIA NO TRABALHO DE PARTO: REVISÃO INTEGRATIVA DA LITERATURA**¹Maria Eduarda de Abreu Velozo²Suyane Silvestre da Silva³Lais Magalhães Lima⁴Iracema Silva Meireles Suzano⁵Marielly Victória Mendes

Ferreira

⁶Eliane Maria Ribeiro de

Vasconcelos

⁷Analucia de Lucena Torres

¹Graduanda em Enfermagem na Universidade Federal de Pernambuco. Recife - PE, Brazil. Orcid: 0000-0003-0265-9987

²Graduanda em Enfermagem na Universidade Federal de Pernambuco. Recife - PE, Brazil. Orcid: 0000-0002-6898-243X

³Graduanda em Enfermagem na Universidade Federal de Pernambuco. Recife - PE, Brazil. Orcid: 0000-0003-3046-487X

⁴Pós-graduanda em Enfermagem na Universidade Federal de Pernambuco. Recife - PE, Brazil. Orcid: 0000-0002-3694-0841

⁵Graduanda em Enfermagem na Universidade Federal de Pernambuco. Recife - PE, Brazil. Orcid: 0000-0003-4376-6877

⁶Docente do Departamento de Enfermagem da Universidade Federal de Pernambuco. Recife - PE, Brazil. Orcid: 0000-0003-3711-4194

⁷Docente do Departamento de Enfermagem Universidade Federal de Pernambuco. Recife - PE, Brazil. Orcid: 0000-0003-2835-160

Corresponding author:**Maria Eduarda de Abreu Velozo**

Endereço: Departamento de Enfermagem da UFPE. Av. Prof. Moraes Rego, 844-900 - Cidade Universitária, Recife - PE, Brasil. 50670-420. +55 (81) 99999-4027
E-mail: eduarda.velozo@ufpe.br

Submission: 01-02-2023**Approval:** 15-05-2023**ABSTRACT**

Objective: to identify the benefits of using aromatherapy in labor. Methodology: this is an integrative literature review, carried out between February and March 2022 in the following databases: BDNF, CINAHL, LILACS, PubMed, SCOPUS and SciELO. Without time frame, articles were included, available in full in original Portuguese, English and Spanish. Results: 11 articles were included in the final sample. Aromatherapy has been identified as an ineffective pharmacological resource to increase pain and concern associated with labor. Conclusion the appropriate integrative and complementary practice to be used for health practice, in the practical management for the practice of childbirth for women.

Keywords: Aromatherapy; Labor; Nursing.

RESUMEN

Objetivo: identificar los beneficios del uso de la aromaterapia en el trabajo de parto. Metodología: se trata de una revisión integrativa de la literatura, realizada entre febrero y marzo de 2022 en las siguientes bases de datos: BDNF, CINAHL, LILACS, PubMed, SCOPUS y SciELO. Sin marco de tiempo, se incluyeron artículos, disponibles en su totalidad en los originales portugués, inglés y español. Resultados: 11 artículos fueron incluidos en la muestra final. La aromaterapia se ha identificado como un recurso farmacológico ineficaz para aumentar el dolor y la preocupación asociados con el trabajo de parto. Conclusión la adecuada práctica integradora y complementaria a ser utilizada para la práctica en salud, en el manejo práctico para la práctica del parto de la mujer.

Palabras clave: Aromaterapia; Parto; Enfermería.

RESUMO

Objetivo: identificar os benefícios do uso da aromaterapia no trabalho de parto. Metodologia: trata-se de uma revisão integrativa da literatura, realizada entre os meses de fevereiro e março de 2022 nas bases: BDNF, CINAHL, LILACS, PubMed, SCOPUS e SciELO. Sem recorte temporal foram incluídos artigos originais, disponibilizados na íntegra em português, inglês e espanhol. Resultados: foram incluídos 11 artigos na amostra final. Identificou-se que a aromaterapia é um recurso não farmacológico eficaz para a diminuição da dor e da ansiedade associada ao trabalho de parto. Conclusão: a aromaterapia é uma prática integrativa e complementar apropriada para ser utilizada pelos profissionais de saúde, no manejo clínico do parto, proporcionando uma experiência benéfica para a mulher durante o trabalho de parto.

Palavras-chave: Aromaterapia; Trabalho de parto; Enfermagem.

INTRODUCTION

Integrative and Complementary Practices (ICP) are treatments that use therapeutic resources and seek to stimulate the natural mechanisms of disease prevention and health recovery, with emphasis on receptive listening, and can prevent disease and be used in the treatment of chronic diseases ⁽¹⁾. The professionals' knowledge about integrative practices is related to understanding the situation, planning and optimizing the application of health actions, and they must be qualified to use them. The PICs build a new understanding of the health-disease process and the promotion of care by seeing the patient in his or her entirety ⁽²⁾.

In May 2006, through Ordinance n° 971, ⁽³⁾ the Ministry of Health approved the National Policy for Integrative and Complementary Practices in the Unified Health System (SUS), which initially contemplated only 5 practices. On March 27, 2017, Ordinance No. 849⁽⁴⁾ made 14 more new practices official within the scope of the SUS and, in 2018, 10 more with Ordinance No. 702, among them Aromatherapy ⁽⁵⁾.

The term "aromatherapy" was first published by Maurice René de Gattefossé, a French chemist, in 1920 ⁽⁶⁾. Aromatherapy is the art and science that aims to promote the health and well-being of the body, mind, and emotions through the therapeutic use of the natural aroma of plants through their essential oils. The substances give off their aromas through particles that are disseminated in the atmosphere, inhaled by the nose, which will stimulate the

olfactory nerve cells, acting in the limbic system. When stimulated, the olfactory cells put into practice the transduction process, whose objective is to transform olfactory information into messages, nerve impulses that will be interpreted by the brain ⁽⁷⁾.

The main methods used in aromatherapy are inhalation, aromatic bath and application. Inhalation is a method that can be used in innumerable ways, among them, with a diffuser, aromatizer, nebulizer, or application of oils diluted in water, where direct olfactory inhalation will be done in the environment. The aromatic bath, on the other hand, consists in dripping drops of essential oil on the floor of the bathroom box while taking a bath, so that the aroma rises and spreads. And the aromatic application, the oil can be administered on the skin or specific place, such as the footbath, bed, or pillow ⁽⁷⁾.

Birth is a unique moment in women's lives, but it is permeated by the pain of labor and anxiety. It is a particular and unique process, regardless of whether these women are in their first pregnancy (nulliparous or primiparous) or have already experienced one or more pregnancies (multiparous). The labor is divided into four stages: the first stage begins with regular uterine contractility; the erasure of the cervix; the beginning of the descent of the presentation and ends with the complete dilatation of the cervix; the second stage begins with the complete dilatation and ends with the expulsion of the fetus; the third stage runs from fetal expulsion until the expulsion of the placenta

and membranes (dehiscitation); the fourth stage runs in the two hours after dehiscitation, also called immediate puerperium ⁽⁸⁾.

A natural and non-invasive way to promote better comfort for women in labor is the use of non-pharmacological methods, including aromatherapy. Therefore, this integrative review aims to investigate in the literature the benefits of the use of aromatherapy by health professionals in labor.

METHODS

This is an integrative literature review, developed from six stages, as follows: 1st stage: elaboration of the research question; 2nd stage: literature search or sampling; 3rd stage: data collection; 4th stage: critical analysis of the included studies; 5th stage: discussion of the results; 6th stage: presentation of the integrative review ⁽⁹⁾.

The research question was defined from the PICO strategy, ⁽¹⁰⁾ being P (Population): health professionals; I (Interest): benefits of aromatherapy use; Co (Context): labor, resulting in the following question: what are the benefits of the use of aromatherapy by health professionals in labor?

The search for the articles occurred through two independent researchers between the months of February and March 2022. The following databases were used: Database in Nursing (BDENF), Cumulative Index to Nursing and Allied Health Literature (CINAHL), Latin American and Caribbean Literature on Health Sciences (LILACS), PubMed and SCOPUS and

the electronic library: Scientific Electronic Library Online (SciELO). To search for articles, the following Health Sciences Descriptors (DeCS) were used: "aromatherapy", "labor" and "nursing" and their equivalents in English and Spanish, crossed with the Boolean operator AND.

After locating the articles, the results were exported to the Zotero bibliographic manager software to identify and exclude duplicates. The articles were then transferred to the Rayyan QCRI ⁽¹¹⁾ to read the titles and abstracts, and the articles that indicated a relationship with the objective of this review were selected for reading in their entirety. After the comparison between the articles listed by the two researchers, the cases in which there was disagreement were resolved by a third researcher.

The final sample was composed of original articles made available in full through access to the Virtual Private Network (VPN) of the Federal University of Pernambuco, which were in Portuguese, English and Spanish, and without a time cut, aiming to follow the advance of childbirth care with non-pharmacological methods for pain, focusing on aromatherapy. Repeated articles, review articles, and those that did not answer the research question, as well as gray literature were excluded.

The level of evidence was evaluated according to the Agency for Healthcare Research and Quality (AHRQ) categories: Level I - Systematic reviews or meta-analyses of relevant clinical trials; Level II - Well-designed

randomized controlled trial; Level III - Well-designed clinical trials without randomization; Level IV - Well-designed cohort and case-control studies; Level V - Systematic review of descriptive and qualitative studies; Level VI - Evidence derived from a single descriptive or qualitative study; Level VII - Opinion of authorities or expert committee report.⁽¹²⁾ It should be noted that the recommendations of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses flowchart were followed for the screening, selection of articles, and presentation of results.⁽¹³⁾

RESULTS

The initial search found 289 articles for reading of the title and abstract, 21 articles were selected for reading in full, and 11 were included in the final sample. The articles that make up the final sample were divided between the databases Scopus, with 5 articles, and Pubmed, with 6 articles, all of them being research from the Asian continent, one from Thailand, one from India, and nine from Iran, distributed by the years 2012 to 2020. The studies were done with women during labor, and the most used essential oil in the studies were: lavender, appearing in 5 articles, followed by Rose with 3 appearances, while the essences of Rosa Damascena, Citrus aurantium Flower, Jasmin and Salvia, Orange and Chamomile, appeared once in each study.

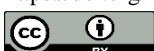
Table 1 – Corpus of analysis of the selected articles. Recife, PE, Brazil, 2022.

| Title, authors, basis, country of study and year | Objective | Method and level of evidence | Main results |
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| - Comparison of the efficacy of aromatherapy and foot spa bath on labor pain in primiparous women: A randomized controlled trial. ⁽¹⁴⁾ - Valipour NS, Kheirkha M, Amirkhanzade-Barandouzi Z, Samani LM. - Scopus. - Iran. - 2020. | - Compare the effects of warm foot scalding with rose essence inhalation and warm foot scalding alone on labor pain in primiparous women. | - Randomized Controlled Trial. - Level II. | - They have positive effects on the reduction of labor pain. Pain intensity was significantly lower in the aromatherapy intervention group at the beginning of the active phase of labor. |
| - Comparison the effects of aromatherapy with rose extract and lavender on the pain | - To compare the effect of aromatherapy with rose and lavender extracts on pain in | - Clinical Trial. - Level III. | - Pain severity decreased in the lavender and rose groups compared to the control group after the intervention. Lavender |

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| <p>of the active phase of labor in primipara women.⁽¹⁵⁾ - Nehbandani Z, Galeh MRK, Bordbari M, Koochakzai M. - Scopus. - Iran. -2018.</p> | <p>the active phase of labor in primiparous women.</p> | | <p>resulted in a more significant reduction in labor pain compared to rose oil.</p> |
| <p>- Efficacy of aromatherapy for reducing pain during labor: a randomized controlled trial.⁽¹⁶⁾ - Tanvisut R, Traisrisilp K, Tongsong T. - Scopus. - Thailand. - 2018.</p> | <p>- Determine the effectiveness of aromatherapy to reduce pain during labor.</p> | <p>- Randomized Controlled Trial. - Level II.</p> | <p>- The pain scores in the aromatherapy groups were better compared to the control group after the intervention. Decreased pain and anxiety in the early stages of labor.</p> |
| <p>- Effects of aromatherapy with Rosa damascena on nulliparous women's pain and anxiety of labor during first stage of labor.⁽¹⁷⁾ - Hamdamian S, Nazarpour S, Simbar M, Hajian S, Mojab F, Talebi A. - Scopus. -Iran. -2018.</p> | <p>- To evaluate the effects of aromatherapy with Rosa damascena on pain and anxiety in the first stage of labor in nulliparous women.</p> | <p>- Randomized Clinical Trial. - Level II.</p> | <p>- Aromatherapy reduced the severity of pain and anxiety in the first stage of labor after aromatherapy treatment with Rosa damascena at each pain assessment.</p> |
| <p>- Effect of massage aromatherapy with Lavender oil on pain intensity of active phase of labor in nulliparous women.⁽¹⁸⁾ - Mohamadkhani-Shari L, Abbaspoor Z, Aghel N, Mohamadkhani-Shari H. - Scopus. - Iran. - 2012.</p> | <p>- To evaluate the effect of aromatherapy with lavender oil on the pain intensity of the active phase of labor in nulliparous women.</p> | <p>- Randomized Clinical Trial. - Level II.</p> | <p>- Aromatherapy massage with lavender significantly decreased the intensity of pain in the active phase of labor before and after the intervention, and can be used in labor pain relief.</p> |
| <p>- Effectiveness of aromatherapy and</p> | <p>- To evaluate the effect of Lavender</p> | <p>- Randomized Clinical Trial.</p> | <p>- The results of the present study indicated</p> |



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| <p>biofeedback in promotion of labor outcome during childbirth among primigravidas.⁽¹⁹⁾ - Janula R, Mahipal S. - Scopus. - India. - 2015.</p> | <p>and biofeedback in promoting labor outcome during labor among primigravidae.</p> | <p>- Level II.</p> | <p>that the use of Aromatherapy and Biofeedback were effective methods for reducing pain perception and labor duration among women during labor.</p> |
| <p>- The effect of aromatherapy with lavender essence on severity of labor pain and duration of labor in primiparous women.⁽²⁰⁾ - Yazdkhasti M, Pirak A. - Pubmed. - Iran. - 2016.</p> | <p>- To investigate the effect of inhaling lavender essence on the severity of labor pain and duration of labor.</p> | <p>- Clinical Trial. - Level III.</p> | <p>- Aromatherapy with lavender essence may be an effective therapeutic option in pain management for women in labor. The results showed that the difference in labor pain before and after the intervention in two groups was significant.</p> |
| <p>- Aromatherapy with citrus aurantium oil and anxiety during the first stage of labor.⁽²¹⁾ - Namazi M, Akbari SAA, Mojab F, Talebi A, Majd HA, Jannesari S. - Pubmed. -Iran. -2014.</p> | <p>- To determine the effectiveness of aromatherapy with Citrus aurantium oil in reducing anxiety during the first stage of labor.</p> | <p>- Randomized Clinical Trial. - Level II.</p> | <p>- The results of this study confirmed that aromatherapy with C. aurantium flower oil as a simple, inexpensive, non-invasive and effective intervention to reduce anxiety during labor.</p> |
| <p>- Comparison of the effect of aromatherapy with Jasminum officinale and Salvia officinale on pain severity and labor outcome in nulliparous women.⁽²²⁾ - Kaviani M, Maghbool S, Azima S, Tabaei MH. - Pubmed. -Iran. - 2014.</p> | <p>- Compare the effects of aromatherapy with jasmine and sage on pain severity and labor outcome in nulliparous women.</p> | <p>- Randomized Clinical Trial. - Level II.</p> | <p>- Salvia aromatherapy had beneficial effects on pain relief, shortened the first and second stages of labor, and had no negative impact on the baby's APGAR score.</p> |
| <p>- The effect of aromatherapy by essential oil of</p> | <p>- To investigate the effect of aromatherapy with</p> | <p>- Randomized Clinical Trial. - Level II.</p> | <p>- The orange scent can be useful in birthing units to help women who are</p> |



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| <p>orange on anxiety during labor: A randomized clinical trial.⁽²³⁾ - Rashidi-Fakari F, Tabatabaeichehr M, Mortazavi H. - Pubmed. - Iran. - 2015.</p> | <p>orange essential oil on women's anxiety during labor.</p> | | <p>experiencing stress in labor, the women's anxiety level decreased.</p> |
| <p>- The effect of chamomile odor on contractions of the first stage of delivery in primipara women: A clinical trial.⁽²⁴⁾ - Heidari-Fard S, Mohammadi M, Fallah S. - Pubmed. - Iran. -2018.</p> | <p>- Evaluating the effect of chamomile odor on some pregnancy parameters was examined.</p> | <p>- Randomized Clinical Trial. - Level II.</p> | <p>- The results show greater satisfaction in women who received chamomile intervention, and decreased intensity of contractions at dilation.</p> |

Source: Own authorship (2022)

DISCUSSION

Fear of pain in childbirth is one of the main reasons why women prefer C-sections ⁽²⁵⁾. During hospitalization for labor, pharmacological drugs are used for the purpose of inducing labor and decreasing pain, but the use of these drugs can have consequences on the health of the newborn. Aromatherapy can help provide a labor experience with relaxation, reduced pain, shorter duration, and greater satisfaction ⁽²⁶⁾.

Studies highlight aromatherapy as a non-pharmacological method for pain relief that has assisted women during labor. Valipour's study ⁽¹⁴⁾ indicates that aromatherapy by inhalation and foot scalding with rose oil are effective in reducing pain during early and active labor in nulliparous women and have no influence on

late-stage pain. In a similar study, the author ⁽¹⁷⁾ observed the effectiveness of the use of Rosa damascena in the first phase of labor by inhalation, since there was a measurement of pain and anxiety in three ranges of dilation. With this, it is highlighted that the use of Rosa damascena reduced the severity of pain and anxiety in nulliparous women.

The author ⁽¹⁶⁾ in her study used four essential oils (lavender, geranium, citrus, and jasmine) through inhalation, chosen among the 52 participants of the test group according to their respective preferences. Of the participants in the aromatherapy test group, 9.7% chose lavender, 17.30% geranium, 23% citrus, and 50% jasmine. The pain stage was scored in three phases and the aromatherapy group compared to the control group showed better results in all



three. All essences were able to reduce pain and anxiety in the first two stages of labor except in the final stage (8-10 cm). Having no information in the study about which essential oil was more effective and recognizing aromatherapy as beneficial, but inconclusive in case of replacing medications.

The authors ^(15,16) brought in their studies the essential oils of lavender and rose by inhalation. Three groups were compared, lavender group, rose group and control group, using distilled water, where the groups that used aromatherapy had better results in reducing pain in PT. Lavender oil showed better results in reducing pain compared to rose oil due to a component of lavender, called linalool, which is a local sedative anesthetic that can reduce the perception of labor pain.

The author in study ⁽¹⁸⁾ attests that back massage in primiparous women, measured at 5-7 and 8-10 cm during PT with lavender essential oil, decreased levels of pain, anxiety, and the duration of labor after the intervention compared to the control group. In contrast, in the study by author, ⁽¹⁹⁾ the lavender oil massage on the back and abdomen brought sedative and anesthetic results that resulted in a better benefit when compared to the biofeedback group, with the monitoring of the mother's contractions and the baby's heartbeat. There was then a greater efficacy of lavender essence compared to biofeedback and the control group, in the active, latent and transitional phases, but there was no dominance over the duration of labor. The author ⁽²⁰⁾ brought in her study that lavender essential

oil, inhaled by primiparous women, does not decrease the duration of labor but agrees in the decrease of pain by its analgesic effects, because compared to the placebo group the pain was significantly lower.

Kaviani⁽²²⁾ found the aromatic effects of Jasmine and Salvia inhaled by incense, in nulliparous women, between 18 and 30 years old. There was a pain measurement twice, 30 and 60 minutes after aromatherapy use, at the first appointment, 30 minutes, there was a greater difference in pain relief in the sage aromatherapy groups and at the second appointment, 60 minutes, there was no significant difference in the three groups, showing that after one hour aromatherapy does not have the same result. The sage extract was full of camphor, a component that acted in the context of labor promoting calming and sedative effect, bringing better results for labor.

The author ⁽²¹⁾ observed citrus aurantium, or sour orange, inhaled every 30 minutes in the first stage of labor. Before the intervention, the levels of the control and aromatherapy group were the same, after the intervention the anxiety levels decreased, and aromatherapy had the best outcome. As well as the author, ⁽²³⁾ which used inhaled orange essential oil to analyze anxiety levels in nulliparous women during labor, compared to the control group of distilled water, and the results after the intervention were lower in both groups but the orange essential oil had a more satisfactory result. In their study, the author ⁽²⁴⁾ observed that nulliparous women had benefits in reducing the intensity of contractions by

inhaling chamomile essence in 3 phases, 3-4, 5-7, 8-10 cm, but noted that aromatherapy has no influence on the amount of labor contractions.

CONCLUSION

It was observed in studies that the use of aromatherapy with essential oils has important effects in helping pain and reducing anxiety during labor when used correctly, mainly due to its sedative, relaxing and effects on the limbic system, activating the emotional, which vary according to the form administered and the type of oil. Thus, aromatherapy shows itself as a possible non-invasive integrative and complementary practice to help the use of clinical management by professionals, as an alternative to have a better experience during the labor. For this, it is essential to develop new studies in a controlled and randomized manner with various types of essences in other parts of the world, especially in Brazil, which has aromatherapy as an Integrative and Complementary Practice in SUS that enables and gives access to health professionals and the population.

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Scientific Editor: Francisco Mayron Morais Soares. Orcid: <https://orcid.org/0000-0001-7316-2519>