



AROMATHERAPY FOR PAIN RELIEF DURING LABOR

AROMATERAPIA PARA ALÍVIO DA DOR DURANTE O TRABALHO DE PARTO

AROMATERAPIA PARA EL ALIVIO DEL DOLOR DURANTE EL TRABAJO DE PARTO

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ABSTRACT

Objective: to analyze the use of aromatherapy in pain relief during labor. **Method:** this is a bibliographic, descriptive, integrative review study in the period from 2000 to 2017, in databases MEDLINE, LILACS, and BDNF. The studies were analyzed from an exploratory reading of articles and the results were descriptively presented in figures. Thematic categories emerged from the Content Analysis Technique after analyzing the articles. **Results:** the studies selected showed that aromatherapy has a range of varieties with specific properties and is an excellent method for the pain relief and/or decreasing anxiety and fear, as well as aids in the contraction and reduction of labor time. **Conclusion:** there should be expansion of the knowledge concerning the benefits of aromatherapy by professionals related to obstetric care, especially the nursing professional, who is part of the continuous monitoring of the woman in labor. There is also need for further studies that recognize other types of non-pharmacological methods. **Descriptors:** Obstetric Nursing; Comprehensive Women's Health Care; Aromatherapy; Traditional Medicine; Labor Pain; Labor.

RESUMO

Objetivo: analisar a utilização da aromaterapia no alívio da dor durante o trabalho de parto. **Método:** trata-se de um estudo bibliográfico, descritivo, do tipo revisão integrativa no período de 2000 a 2017, nas bases de dados MEDLINE, LILACS e BDNF. Analisaram-se os estudos a partir de uma leitura exploratória dos artigos e apresentaram-se os resultados de forma descritiva em figuras. Consideraram-se as categorias temáticas que emergiram da Técnica de Análise de Conteúdo após a análise dos artigos. **Resultados:** observou-se nos estudos selecionados que a aromaterapia possui um leque de variedades com propriedades específicas e que é um método excelente para o alívio da dor e/ou diminuição da ansiedade e medo, como também no auxílio da contração e redução do tempo de trabalho de parto. **Conclusão:** recomenda-se a ampliação de conhecimento referente aos benefícios da aromaterapia por parte dos profissionais que estão ligados a assistência obstétrica, principalmente o profissional de enfermagem por está no acompanhamento contínuo da mulher em trabalho de parto. Destaca-se também, a necessidade de novos estudos que reconheçam outros tipos de métodos não farmacológicos. **Descritores:** Enfermagem Obstétrica; Atenção Integral à Saúde da Mulher; Aromaterapia; Medicina Tradicional; Dor do Parto; Trabalho de Parto.

RESUMEN

Objetivo: analizar el uso de la aromaterapia en el alivio del dolor durante el trabajo de parto. **Método:** este es un estudio bibliográfico, descriptivo, del tipo revisión integradora en el período de 2000 a 2017, en las bases de datos MEDLINE, LILACS y BDNF. Se analizaron los estudios desde una lectura exploratoria de los artículos y se presentaron los resultados de forma descriptiva en figuras. Se consideraron las categorías temáticas que surgieron a partir de la técnica de análisis de contenido, después del análisis de los artículos. **Resultados:** se observó en los estudios seleccionados que la aromaterapia tiene una amplia gama de variedades con propiedades específicas y que es un excelente método para el alivio del dolor y/o la disminución de la ansiedad y el temor, así como ayuda en la contracción y la reducción del tiempo de trabajo de parto. **Conclusión:** se recomienda la ampliación de los conocimientos acerca de los beneficios de la aromaterapia por los profesionales que están relacionados con la atención obstétrica, especialmente al profesional de enfermería por la continua vigilancia de la mujer en el trabajo. También se destaca la necesidad de más estudios que reconocen otros tipos de métodos no farmacológicos. **Descritores:** Enfermería Obstétrica; Atención Integral de Salud; Aromaterapia; Medicina Tradicional; Dolor de Parto; Trabajo de Parto.

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INTRODUCTION

In the Brazilian healthcare context, the assistance consists of practices related to the biomedical model, governed by biological variables that analyze the body as a machine, through the cause-effect relationship, generating serious implications in the context of women's health, especially during the pregnancy-puerperal cycle. Other models of approaches have been publicized in this context, such as Traditional Medicine (TM) whose focus is the quality of relations between women and professional, using appropriate technology in human and integrated view of the individual.¹

According to the World Health Organization (WHO), TM is a set of diverse health practices, approaches, knowledge and beliefs based on plants, animals or minerals, spiritual therapies, manual techniques that can be applied separately or combined, in order to maintain the well-being, treat, diagnose and prevent diseases. This term is used to refer to various therapies such as Complementary and Alternative Therapies (CAT), Complementary and Integrative Health Practices (CIHP) and Complementary and Alternative Medicine (CAM).²

In the CIHP context, the official effectuation regulated at national level occurred through Decree 971 of 03 May 2006, which approves the National Policy on Complementary and Integrative Therapies (PNPIC - *Política Nacional de Práticas Integrativas e Complementares*) in the Unified Health System (UHS).³ Resolution 197/1997 of COFEN supports nurses to perform the function provided that they complete the course of specialization in specific area, in recognized educational institution, with a minimum hourly load of 360 hours.⁴

Aromatherapy included in this context is the therapeutic application of Essential Oils (EO), by different routes of the body, with therapeutic purpose. It consists of organic compounds of plant origin, formed by complex chemical molecules that can be extracted through various parts of the plant by distillation and pressing process.⁵

EO can be absorbed through inhalation, topical use on the skin or by ingestion, with the purpose of promoting physical and mental well-being.⁶ Considering the relevance of these practices, the aromatherapy can represent a valuable tool in the professional practice of the obstetric nurses, acting as a Non-Pharmacological Method (NPM) for pain relief during Labor.

Despite its increased use, its majority is employed without using evidence-based protocols, because there is a lack of scientific studies about its use, especially when compared to studies that use drugs during the labor, requiring the elaboration of studies with methodological rigor which promote scientific basis supporting its use.⁴

This study becomes important from the approach in the effectiveness of aromatherapy as non-pharmacological strategy for pain relief of parturients, being of great usefulness to implement the quality of obstetric care for this population.

OBJECTIVE

- To analyze the use of aromatherapy in pain relief during labor.

METHOD

This is a bibliographic, descriptive, integrative-review study, which consists of a research method that uses evidence-based practice by allowing the inclusion of experimental and non-experimental studies, theoretical and empirical literature data. It is a valuable instrument in the health area, because it summarizes the available research about a topic, in addition to allow directing practices based on scientific knowledge through a comprehensive analysis and subsequently a discussion about the topic.⁷

The study was performed from the following steps: 1. Identification of the theme and selection of research question; 2. Establishment of inclusion and exclusion criteria of studies in the literature; 3. Definition of the information to be extracted from the selected studies; 4. Assessment of the included studies; 5. Interpretation of results and 6. Presentation of the review/summary of the knowledge.⁸

The guiding question of this study was: "What are the benefits of aromatherapy as a method for pain relief during labor?"

The used scientific databases were Latin American and Caribbean Literature on Health Sciences (LILACS), Medical Literature Analysis and Retrieval System Online (MEDLINE) and Nursing Database (BDENF) using the method of advanced search, categorized by title, abstract and subject in a temporal vision from 2000 to 2017.

The Health Sciences Descriptors (DeCS) used for the Portuguese language were the Boolean operator AND in the combination "aromaterapia AND trabalho de parto" and in English, the Medical Subject Headings (MeSH)

was used with the combination “aromatherapy and labor, obstetric”.

The inclusion criteria were: original studies in English and Portuguese published in 2000 through 2017 and that met the objective of this research. The exclusion criteria were productions addressing aromatherapy in other populations, as well as repeated articles, course and residency completion work, theses, dissertations, editorials, abstracts and letter of opinion.

The next step was the analysis of the titles of scientific articles found selecting those related to the objective of this research, subsequently submitted to critical and exploratory reading of abstracts, observing inclusion criteria. The full text of the articles that responded the guiding question were read.

Two researchers independently read the titles, abstracts and full texts, and the results were compared with the objective of verifying the adequacy of the criteria for eligibility. In case of disagreement between the researchers, a third person analyzed the publications, who decided on the inclusion or not of the study.

The studies were selected considering the hierarchy of evidence for intervention studies in: Level I - systematic review or meta-analysis; Level II - controlled studies and trials; Level III - non-randomized controlled studies; Level IV - Case-control and cohort studies; Level V - systematic review of qualitative or descriptive studies; Level VI - qualitative or descriptive studies and Level VII - opinions or consensus.¹⁸

Publications include in the study were selected using the recommendations of PRISMA, represented in figure 1

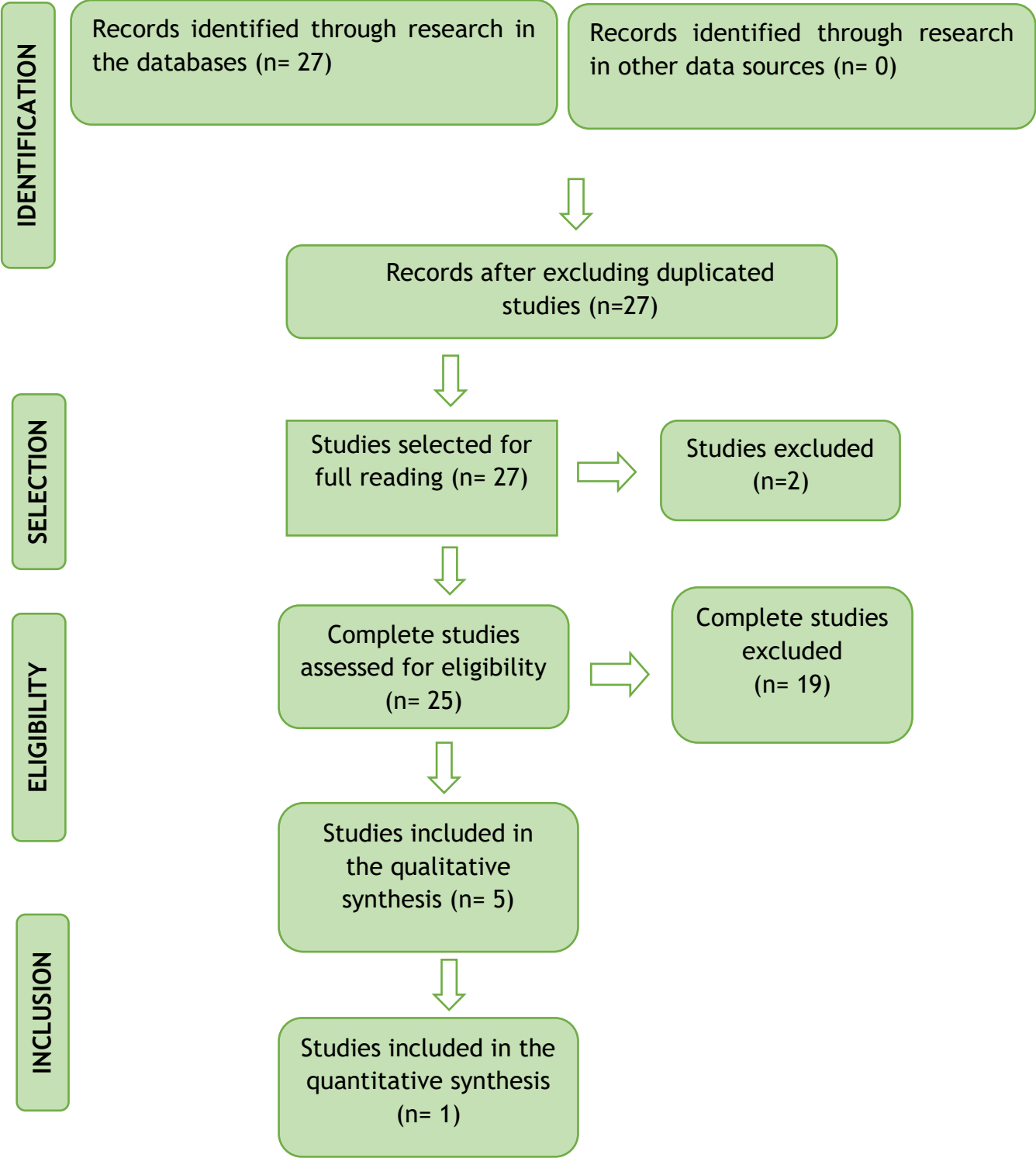


Figure 1. Flowchart adapted from the PRISMA 2009 model used to select studies. Caruaru, PE, Brazil, 2018.

Data were grouped using the Content Analysis technique, Thematic modality, which aimed to verify the relevance of scientific material. The next step was the selective reading to compound a theoretical framework answering the question and the objective of the present study. It allowed grouping the articles into two categories: physical and emotional effects of Aromatherapy in labor and Essential oils and their specific properties in labor.

The synthesis of results occurred through the discussion of the relevant findings in the literature. Information of the selected studies was structured in an instrument that included authors, title, objective, year and journal, as shown in figure 2. Another instrument included title, type of study, level of evidence and synthesis of results, as shown in figure 3.

RESULTS

The process of selection of scientific articles occurred as follows: the initial search returned 27 publications. There was exclusion of two studies because they did not meet the eligibility criteria previously defined, thus remaining 25 publications. After a selective reading of the titles and abstracts, 19 articles were excluded, leaving only six articles analyzed by reading the full text, which were included in this integrative review.

The chronological period of publications was 2000, 2006, 2007, 2010, 2013 and 2016. Four articles were published in English and two, in Portuguese. Only one article was published by nurses and in relation to the place of origin of the publications were obtained articles from Iran, Italy, England and Brazil.

ID	Authors	Title	Objective	Year	Journal	
01	Gayeski ME; Brüggemann OM ⁹	Non-pharmacological approach to pain relief during labor as hard-light care technology: a systematic review	To evaluate the maternal and neo-natal results generated from the utilization of non-pharmacological methods for pain alleviation concerning the strains of delivery, classified as light-to-hard technology	2010	Texto Enferm	Contexto
02	Smith CT; Collins CT; Cyna AM; Crowther CA ¹⁰	Complementary and alternative therapies for pain management in labour	To examine the effects of complementary and alternative therapies for pain management in labour on maternal and perinatal morbidity.	2006	Cochrane Syst Rev	Database
03	Burns EE; Blamey C; Ersser SJ; Barnettson L; Lloyd AJ ¹¹	An Investigation into the Use of Aromatherapy in Intrapartum Midwifery Practice	To examine the contribution of aromatherapy to the promotion of maternal comfort during labor and as a tool to improve the quality of midwifery care.	2000	J Altern Med	Complement
04	Burns E; Zobbi V; Panzeri D; Oskrochi R; Regalia A ¹²	Aromatherapy in childbirth: a pilot randomised controlled trial	To compare the effect of aromatherapy on the incidence of intrapartum interventions to the standard care during delivery.	2007	BJOG	
05	Osório SMB; Júnior LGS; Nicolau AIO ¹³	Assessment of the effectiveness of non-pharmacological methods in pain relief during labor	To evaluate the effectiveness of non pharmacological methods for pain relief during labor.	2014	Rev Rene	
06	Yazdkhasti M; Pirak A ¹⁴	The effect of aromatherapy with lavender essence on severity of labor pain and duration of labor in primiparous women	To investigate the effect of Lavender essence inhalation on severity of labor pain and duration of labor	2016	Complement Ther Clin Pract	

Figure 2. Synthesis of the studies on the use of aromatherapy as a method for pain relief during labor, Caruaru (PE), Brazil, 2018.

ID	Title	Research Modality	Level of Evidence	Synthesis of the Results
01	Non-pharmacological approach to pain relief during labor as hard-light care technology: a systematic review ⁹	Systematic review	Level I	As for aromatherapy, multiparous and primiparous women were analyzed, who received the Essential Oil <i>L. Augustifoliu</i> by obstetric nurses through acupressure, massage, foot bath, dilution in water for immersion bath and inhalation, the latter being the most used. The companion participated in the intervention throughout the study. The outcome showed a significant decrease in pain intensity.
02	Complementary and alternative therapies for pain management in labour ¹⁰	Meta-analysis study	Level I	The study of 22 women evaluated the role of aromatherapy as a non-pharmacological method for pain relief using essential ginger oils compared to lemon balm (There was no difference in pain relief among pregnant women).
03	An Investigation into the Use of Aromatherapy in Intrapartum Midwifery Practice ¹¹	Descriptive quantitative study	Level VI	This study did not specify which Essential Oil was used. More than 50% of pregnant women classified aromatherapy as helpful and 14% as unhelpful. This study did not include only low-risk pregnant women; 66% were high-risk pregnant women. The study showed that 33% had their labor reduced and reported the potential of increasing delivery contractions.
04	Aromatherapy in childbirth: a pilot randomised controlled trial ¹²	Controlled and randomized study	Level II	The included 513 primiparous and multiparous women, 251 in the Experimental Group (EG) and 262 in the Control Group (CG), at a hospital in Italy. The Essential Oils used were chamaemelum nobile; salvia sclarea; boswellia; corderi; lavandula augustifolium and citrus reticulata. There was difference for the delivery outcome, but CG babies were transferred for the ICU. The pain perception was smaller in the aromatherapy group for primiparous.
05	Assessment of the effectiveness of non-pharmacological methods in pain relief during labor ¹³	Systematic review	Level I	The parturients were able to choose one of five Essential Oils available: chamomile, Roman chamomile, sage, lavender and frankincense. Each oil had certificate of analysis and gas chromatography before use. Almond oil was used as a carrier in the massage. There was no significant difference between the types of delivery. Nulliparous women reported reduction of pain 30-40 minutes after the intervention, while multiparous women reported no differences.
06	The effect of aromatherapy with lavender essence on severity of labor pain and duration of labor in primiparous women ¹⁴	Randomized clinical trial	Level IV	In this study, pregnant women were divided into two groups with 66 in the EG and 66 in the CG. In the dilation between 3 and 4 cm, there was no significant difference between the two groups, and for dilation between 5 and 10 cm, the pain intensity decreased in the group treated with Lavender oil after 30 minutes of intervention.

Figure 3. Synthesis of studies on the use of aromatherapy as a method for pain relief during labor, Caruaru (PE), Brazil, 2018.

DISCUSSION

In the natural process of childbirth, there should be the offer of care focused on the balance of environmental factors, aiming to provide the woman conservation of her energy to cope with the pain and its association with pleasant events for a less aggressive and painful labor. Non-pharmacological interventions are options to substitute, as much as possible, anesthetics and analgesics during labor and delivery.¹⁸

♦ Physical and emotional effects of Aromatherapy in labor

The selected studies were performed after 2000, which may have been due to the Conference on Appropriate Technology for Birth and Labor in 1985, in which the WHO recommended using NPMs carefully, because they needed more evidence for their use.¹⁵

The aromatherapy as a NPM has helped women during pregnancy and labor. It consists of using EO, which are biochemically unstable and evaporate quickly, stimulating the olfactory nerve cells, activating via the limbic system (brain area responsible for olfaction, memory and emotion) the receptors that can influence the heart rate, breathing, and in stress response. They present several specific characteristics; thus, the aromas need to be carefully chosen according to the different periods of labor.¹⁶

One of the studies showed that the use of aromatherapy can be accomplished through techniques such as: acupressure, massage, foot baths, dilution in water for baths and inhalation, and the most used EO was *L. augustifolium*, whose application was performed by obstetric nurses. Most pregnant women chose the inhalation technique in this study, whose outcome was the significant reduction of pain in nulliparous women, as well as the reduction of fear and anxiety. In this sense, the participation of obstetric nurses stands out, which may relate to their training focused on the practice for the “caring”, respecting physiological, emotional and socio-cultural aspects that involve the reproductive process.⁹

♦ Essential oils and their specific properties in labor

In the first labor stage, soothing and sedative oils like lavender and chamomile are recommended; frankincense oil has relaxing action, assists in breathing, and should be used in the phase of transition of the first period of childbirth; *Salvia sclarea* is indicated for pain relief, favors contractions and is an alternative to using non-pharmacological analgesia.

Regarding the second phase, stronger and peppery aromas can promote a feeling of strength and anticipation of labor, such as jasmin, once they increase uterine contractions and accelerates the labor. The prolonged inhalation of EO can cause headaches, nausea, allergies and skin irritation, thus respecting the limits of each woman is important.¹⁷

Pregnant women have been using the lavender essential oil in recent years because of its soothing, relaxing, anti-stress and stimulating properties. However, this oil is not indicated for pregnant women during the first trimester of pregnancy.⁶

The studies show that, although aromatherapy is a method of easy application and low cost, more studies should be developed, mainly at national level, with appropriate design, to examine their effects on pain management during labor. Furthermore, the use of these complementary therapies by Nursing is fundamental for establishing the professional autonomy, because the knowledge and dissemination of these methods are the basis for dynamizing their scientific character and contribute to the planning of clinical researches.¹⁹

CONCLUSION

Using non-pharmacological methods is extremely important, such as aromatherapy for relieving pain, anxiety, stress, among other uncomfortable symptoms inherent to labor. Aromatherapy can be applied alone or combined with other therapies such as massage, considering the individuality of each parturient and, thus, essential oils should be judiciously selected, as well as their application.

The use of aromatherapy presents a vast suitable field, due to its low cost; however, the implementation of this practice by Nursing is still little spread, despite its growing expansion. Therefore, this professional should be empowered and encouraged to adopt aromatherapy and other CIP, since they are essential for their professional autonomy and rescue of their scientific bases.

There should be more studies about this theme, as well as the information about its efficacy and benefits should be disseminated for the professionals who provide assistance to the parturient, encouraging the adoption of non-pharmacological methods in clinical practice by health professionals, as well as the institutions that offer obstetric services should support and adopt this practice into their routine.

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