

Chapter 95

The use of aromatherapy during labor: an integrative review

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ABSTRACT

Objective: To describe studies on the use of aromatherapy to relieve pain during labor. **Method:** An integrative literature review was carried out in the Nursing Database (BDENF), Medical Literature Analysis and Retrieval System Online (Medline/PubMed), National Institutes of Health (NIH) and Scientific Electronic Library Online (SciELO). Available full text, original article, published between 2017 and 2022, available in Portuguese and English and within the theme suggested in the research, and the exclusion criteria were abstracts published in conference proceedings, in vitro research and other related diseases. to the thematic axis. **Results:** The search and selection of scientific articles was established as follows: 80 publications were found and 103 were excluded for not meeting the previously defined eligibility criteria, thus leaving 12 publications. After carefully reading the titles and abstracts, 45 articles were excluded, leaving only 12 complete articles included in this integrative review. **Conclusion:** Non-pharmacological methods, such as aromatherapy, have been used to relieve pain, anxiety, stress and other uncomfortable symptoms inherent to labor. In the analyzed studies, the use of EO during labor had a minimal or null adverse effect for the mother-newborn binomial.

Keywords: Aromatherapy, Obstetric Nursing, Labor.

1 INTRODUCTION

60,000 years ago the people of antiquity used aromatic herbs for the purpose of treating diseases and used it for religious rituals. In 1853, nurse Florence Nightingale applied the essential oil of lavender to the soldiers' foreheads to calm them in the Crimean war, which caused aromatherapy to gain improvement in the scientific study to the basis of nursing theories (MOHAMMADI F et al., 2021). In 1961, Marguerite Maury published a book developing the application of Essential Oils (EO) through skin massage techniques. She researched the influences that EO have on the limbic system, opening the first aromatherapy clinic in London (CARLA; PRADE, 2020).

Aromatherapy is considered a therapeutic practice that is used to the properties of essential oils, to promote the physical and mental balance of the human organism. They are nonvolatile compounds extracted by medicinal plants, which has as a mechanism of physical-chemical action with the limbic system (HUGO et al., 2019). Its properties provide a lower risk of intoxication, and are used as: anti-inflammatory and antibacterial. Being a Traditional Medicine (TM), based on the use of medicinal herbs, in order to improve the quality of women's health, improve the holistic and integrated view of being (COSTA et al., 2021).

This makes him understand, the term to be referenced in Brazil, as Integrative and Complementary Practices (PIC), which was inserted in the Unified Health System (SUS) through Gate No. 702, of March 21, 2018, aromatherapy composes the list of 29 therapeutic modalities institutionalized by the National Policy of Integrative and Complementary Practices - PNPIC (BRASIL.MINISTÉRIO DA SAÚDE., 2018). And there is resolution 197 of 1997 of COFEN that supports the nursing professional to perform the function provided that he completes the specialization course in a specific area, in a recognized educational institution, with a minimum workload of 360 hours (COSTA et al., 2021).

The World Organization of Saúde (WHO) encourages the integration of therapeutic techniques in the SUS and recognizes PIC as low-cost alternatives for the care of various diseases, acting in an adjunct way or as the main treatment (LEHUGEUR; STRAPASSON; FRONZA, 2017). In these practices, the cohort study was perceived that more than 50% of the 8,058 pregnant women have used aromatherapy to relieve pain during labor, as a way to facilitate access to control of contraction at the time of delivery. In a study, it showed that TM has been seeking cheap pharmacological methods to control the pain of pregnant women, knowing that some of them have presented side effects for both the mother and the fetus (PAVIANI; TRIGUEIRO; GESSNER, 2019).

The use of EO during pregnancy serves to ensure the well-being and safety of the mother and baby, so that there are no complications in the development of the newborn, and in Labor (PT), which is associated with the development of painful and rhythmic contractions, which result in dilation of the cervix, and it is necessary to assist the health professional in knowing which non-pharmacological methods should be used in the PT. Proof of this are the essential oils that should be used for each situation and the correct amount for administration in pain relief at the time of delivery (HUGO et al., 2019).

It is noteworthy that the use of aromatherapy in PT are evidence-based protocols, because there is a lack of scientific studies on its use of the practice, especially when compared to studies that use drugs during PT, and it is necessary to elaborate studies with methodological rigor that favor scientific basis that support its use. This study is an effective approach of aromatherapy for PT, being a great utility to implement the quality of obstetric care to this population, aiming to describe the studies on the use of aromatherapy in pain relief during the delivery process. Divided into specific objectives to expose the physical and emotional effects of aromatherapy during labor; present the immunological action of aromatherapy in pain relief; discuss essential oils and their specific properties in labor;

2 METHODOLOGY

This is an integrative literature review, which consists of several expanded and complete scientific studies in the health area. The type of qualitative and descriptive study, carried out through scientific materials indexed in academic health research, in various national and international journals (CHERUBINI et al., 2019).

In this perspective, the study had the following steps: the choice of the theme; the definition of objectives; the right question "What are the advantages and advantages about essential oil in pain relief during labor?"; the choices of the descriptors; the determination of inclusion and exclusion criteria; the application of the instrument; the analysis of the results and the discussion on the approach of the theme, based on the evaluation of the included studies.

The materials were used to search for articles in the following databases: Nursing Database (BDENF), *Medical Literature Analysis and Retrieval System Online* (Medline/PubMed), *National Institutes of Health* (NIH) and *Scientific Electronic Library Online* (SciELO), with the following Descriptors in Health Sciences (DECS) in Portuguese "Romatherapy And Obstetric Nursing AND Labor" and English "*aromatherapy AND midwifery AND labor*"

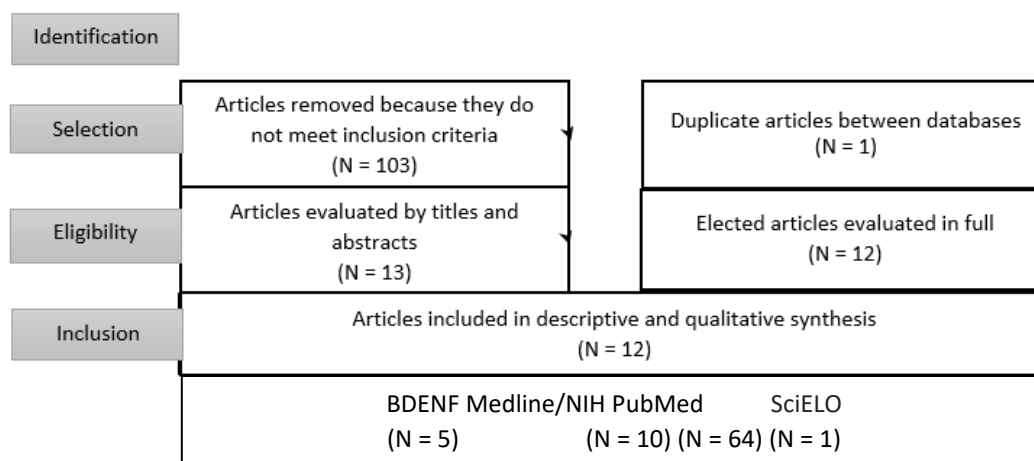
Being found 12 articles, considering the inclusion criteria: full text available, original article, of the publication between 2017 and 2022, available in Portuguese and English and within the theme suggested in the research, and exclusion criteria: abstracts published in congress annals, in vitro research and other diseases related to the thematic axis.

Analysis of scientific articles, in relation to the objective of the theme, had a careful and complete reading, in order to have an answer to the guide question established in the research. The reading was given through the title, abstract and full text of each article selected by the databases indexed in the health area, and the comparison by the general objective is appropriate to the established criteria and the discussion of the researchers after analysis of the study based on the results found.

Studies were selected considering the hierarchy of evidence for intervention studies at: Level I - systematic review or meta-analysis; Level II - controlled and random studies; Level III - controlled studies without randomization; Level IV - case-control or cohort studies; Level V - systematic review of qualitative

or descriptive studies; Level VI - qualitative or descriptive studies and Level VII - opinions or consensus (CHERUBINI et al., 2019). The articles selected for the study present the appropriate recommendations of PRISMA, represented in Figure 1.

Figure 1 - Flowchart of the selection of studies according to preferred reporting items for systematic reviews and meta-analyses (PRISMA 2015), Recife, PE, Brazil, 2022.



3 RESULTS AND DISCUSSION

The search and selection of scientific articles was established as follows: 80 publications were found and 103 were excluded because they did not meet the previously defined eligibility criteria, thus leaving 12 publications. After careful reading of the titles and abstracts, 45 articles were excluded, leaving only 12 complete articles and included in this integrative review.

The use of the Content Analysis technique in relation to the approach of the theme presented in this research was aligned with the response of the guide question and the objective of this study, as training for the structure of the results articles, based on the information selected by authors, title, objective, year and journal, according to table 1.

Table 1 - Distribution of papers by authors, titles, objectives, years and journals, established through the databases. Recife (PE), Brazil, 2022

ID	Authors	Title	Goal	Findings	Year	Journals
1	Costa, et al. (2021)	Aromatherapy for pain relief during labor.	Analyze the use of aromatherapy in pain relief during labor.	It was observed in the studies that aromatherapy has specific varieties for pain relief and in the aid of contraction and reduction of labor time.	2019	Rev aie ufpe on line
2	Paviani, et al. (2019)	The use of essential oils in labor and delivery: Scope review.	Describe the current state of knowledge about the use of essential oils in labor and delivery.	From the analysis of the studies found, lavender was one of the main essential oils for pain reduction, improvement of maternal satisfaction and decreased duration of labor.	2019	Rev Min Sick.

3	Lehugur, et al. (2017)	Non-pharmacological management of pain relief in deliveries assisted by an obstetric nurse.	To characterize the deliveries assisted by an obstetric nurse regarding the non-pharmacological methods of pain relief in the process of parturition.	It was noticed that 98.3% used some non-pharmacological method of pain relief, including: ambulation (79.2%), bathing (73.1%), massage (60.0%), variety of position (58.8%), aromatherapy (46.9%), ball (42%), among others.	2017	Rev aie ufpe on line
4	Zamani Far, et al. (2020)	<i>The effect of chamomile odor on contractions of the first stage of delivery in primipara women: A clinical trial.</i>	In this study, the effect of chamomile odor on some pregnancy parameters was examined.	The findings showed that in aromatherapy, the essential oils of camomila and lavender were the most used (37.82) and (40.03), for pain relief at the time of delivery.	2018	<i>Complement Ther Clin Pract.</i>
5	Tanvisut, et al. (2018)	<i>Efficacy of aromatherapy for reducing pain during labor: a randomized controlled trial.</i>	Determine the efficacy of aromatherapy via diffusion in the relief of labor pain.	A total of 104 women were recruited, 52 in each group. Baseline characteristics and baseline pain scores were comparable. The median pain score of the active latente and initial phase was lower in the group that had the use of aromatherapy.	2018	<i>Arch Gynecol Obstet.</i>

Source: Prepared by the author.

It is considered that during childbirth, it should offer women's health care and provide a pleasant environment to provide support and psychological balance for women and the newborn. The main method to be used is non-pharmacological, being one of the options to replace anesthetics and analgesics during labor (LEHUGEUR; STRAPASSON; FRONZA, 2017).

- The physical and emotional effects of aromatherapy on labor

Aromatherapy is a non-pharmacological method, used in pathological and psychological determinants, as complementary treatment, applied from the senses of touch and theol act. The herbaceous aromatic essence is instilled, and impulses are transferred to the brain by olfactory receptors, leading to the release of neurotransmitters capable of stimulating , suppressing, calming or intoxicating and, finally, resulting in physical andpsychological changes (COSTA et al., 2021).

It was evidenced in one of the studies that the use of aromatherapy can be performed by acupressure, massage, scalding feet, dilution in water for immersion bath and inhalation. In this research, the OE that wasapplied by obstetric nurses was *Lavandula angustifolia* in pregnant women through inhalation. And he noticed that in the technique used in nulliotic women, there was a reduction in pain, fear and anxiety during labor (PAVIANI; TRIGUEIRO; GESSNER, 2019).

The present research and the other ones noted that the greatest benefit of the use of essential oil during labor was the relief of pain and anxiety. And highlighting the participation of obstetric nurses, may be related to their educationin assisting women in their respective reproductive, physiological, emotional and sociocultural ways (DA SILVA CLEMENTE ARAÚJO et al., 2018).

- Present the immunological action of aromatherapy in pain relief

In the immune system cells act on the phospholipid cell membrane to cause an ionic imbalance inside the cell. *The essential oil of tea tree* inhibits the replication of influenza virus H1N1, the eugenol present in the essential oils of cinnamon of ceylon and clove has great potential for binding with proteins responsible for the penetration and multiplication of the virus, as well as the laurel and eucalyptus globules (PRATA et al., 2022).

The use of lavender essential oil, of the species *Lavandula angustifolia*, which were applied two drops of this oil at 10%, diluted with distilled water at the concentration of 1:10 and dripped in the palm of the parturient hand, rubbing the hands and inhaling for three minutes while the hands were 2.5 centimeters away that of the nose. The intervention was performed in three phases (dilation between 5 and 6 centimeters, between 7 and 8 centimeters and between 9 and 10 centimeters), there was a significant reduction in pain during labor (TANVISUT; TRAISRISILP; TONGSONG, 2018).

Aromatherapy provides the balance of emotions, tranquility, mental clarity, reduces stress, anxiety and elevates the vibrational pattern of the environment. The use of essential oil causes a psychic effect in women during labor, and its direct connection with olfactory receptors to the Central Nervous System (CNS) (CARLA) should be made; PRADE, 2020). According to a randomized clinical trial conducted in 130 primiparous women, it demonstrated that after smelling chamomile herb, it showed a decrease in contractions during labor. It is believed that the odor of the herb has activated the olfactory receptor and boosted the olfactory bulb, reaching the limbic region and increasing the release of endorphins, encephalins and serotonin that result in a feeling of comfort and relaxation in women (ZAMANIFAR et al., 2020).

Another immunological action that is linked to the main organ of the body, is the skin. Through its lipid layer it performs absorption of essential oils, through the sebaceous glands and hair follicles, enabling the second therapeutic action in the woman. In the articles analyzed in this review, vegetable oils (walnuts, soybeans, almonds and sesame) were applied through massages, to provide comfort, analgesia and the pain relief of the parturient. Another technique used was through the Swiss ball to contribute to the dilation and relaxation of the uterus, associated with massage (PAVIANI; TRIGUEIRO; GESSNER, 2019).

In inhalation, dilution is not performed, unlike the logical dermato pathway, in which care should be taken with the use of pure and natural essential oils, because they can cause skin irritation. The dilution of essential oils depends on age, therapeutic purpose and vegetable oils that will be applied to the skin and mucosa. This shows that aromatherapy serves as self-care, due to its efficacy, its broad spectrum of action, from the physical dimension to mental health, and the various possibilities of therapeutic techniques (ZAMANIFAR et al., 2020).

- Essential oils and their specific characteristics in labor

Lavender essential oil was the most used by the studies analyzed here by the authors, because they describe it as the main most traditional oil to be used in the world and because it demonstrates these results if it has adverse effects in nullipara used women (PAVIANI; TRIGUEIRO; GESSNER, 2019). Its main

properties are: combat stress and anxiety, aid insomnia, promote cell tissue regeneration and relax pelvic muscles. For its ester-rich composition, lavender also has other effects, such as: relief in the symptoms of torticollis, menstrual and stomach cramps, muscle spasms, tendinitis, pain in the feet and back and as a sedative (LEHUGEUR; STRAPASSON; FRONZA, 2017).

It is noted that the role of nurses in women's health during childbirth, there is positive feedback generating greater receptivity, understanding, trust and patience. Due to the use of aroma as a calming power in labor, it has served as an aid to the physical and emotional well-being of women, besides reducing risks and complications, ensures female empowerment, by granting greater autonomy to the parturient and consequently contributes to the realization of a humanized delivery. These bean scents but in turn are more velvety, delicate and sweet; which are captured through the brain sensory receptors and are capable of generating positive effects, due to their substances that harmonize and provide psychological and physical changes that thus decrease the parturient's anxiety and consequently the pain caused by the process (SANTOS et al., 2021).

4 FINAL CONSIDERATIONS

Non-pharmacological methods such as aromatherapy have served to relieve pain, anxiety, stress and within other uncomfortable symptoms inherent in labor. In the studies analyzed, the use of EO during part-time labor had a minimal or zero adverse effect on the newborn mother binomial. Since it is low cost, however, the implementation of this practice by nursing is still little applied and studied, despite the publication of the PIC in which nurses can re-align aromatherapy in health services, as professional autonomy based on scientific research. It is necessary to expand the studies on this theme, as well as disseminate information about its efficacy and benefits with the professionals who provide care to the parturient, encouraging the use of non-pharmacological methods in the clinical practices of private and public institutions, and add in the grid of graduate teaching in Obstetric Nursing, contents that are related to the OEs as care for women's health.

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