Integrative Review

Scientific evidence on non-pharmacological methods for relief of labor pain

Evidências científicas sobre métodos não farmacológicos para alívio a dor do parto

Evidencias científicas sobre métodos no farmacológicos para aliviar el dolor de parto

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Abstract
Objective: To identify studies on the efficacy of non-pharmacological methods in reducing labor pain in the national and international literature.
Methods: Integrative review in the MEDLINE/PUBMED, SCOPUS, CINAHL, LILACS, and BDENF databases, limiting to studies published between 2013 and 2018, in Portuguese, English, and Spanish. The PICo methodology was used to build the research question and select the controlled and uncontrolled descriptors, which were combined with the "AND", "OR," and "NOT" Boolean operators.
Results: A total of 19 articles were selected. The non-pharmacological methods found were: acupuncture and its core variations (acupressure and auriculotherapy) (29.17%), hydrotherapy (25%), perineal exercises with the Swiss ball (16.67%), thermal therapies (8.33%), and other methods (20.83%).
Conclusion: Acupuncture and acupressure worked on both physiological aspects of pain and the subjective nature of pain. The warm bath, music therapy, aromatherapy, and breathing techniques promoted relaxation and decreased the levels of anxiety. Thermal therapies contributed to local analgesia in regions affected by pain. Exercises with the Swiss ball were important for pain relief, and the vertical position was important for labor.

Resumo
Objetivo: Identificar na literatura nacional e internacional, estudos sobre a eficácia de métodos não farmacológicos na redução da dor do parto.
Métodos: Revisão integrativa realizada nas bases de dados MEDLINE/PUBMED, SCOPUS, CINAHL, LILACS e BDENF, com recorte temporal entre os anos de 2013 a 2018, em português, inglês e espanhol. Utilizado a metodologia PICo para construir a pergunta de pesquisa e selecionar descritores controlados e não controlados, que foram combinados com os operadores booleanos "*AND*", "*OR*" e "*NOT*".
Resultados: Foram selecionados 19 artigos. Dentre os métodos não farmacológicos encontrados, destacam-se: a acupuntura e suas principais variações (acupressão e auriculoterapia) (29,17%), hidroterapia (25%), exercícios perineais com a bola suíça (16,67%), terapias térmicas (8,33%) e os demais métodos (20,83%).
Conclusão: A acupuntura e a acupressão agem tanto sobre aspectos fisiológicos da dor como sobre sua subjetividade. O banho quente de aspersão, a musicoterapia, a aromaterapia e as técnicas de respiração promovem o relaxamento e a diminuição dos níveis de ansiedade. As terapias térmicas contribuem para a analgesia local de regiões afetadas pela dor. Os exercícios na bola suíça são importantes para reduzir a dor e adotar a posição vertical, importante na progressão do trabalho de parto.

Resumen
Objetivo: Identificar en la literatura nacional e internacional estudios sobre la eficacia de métodos no farmacológicos para reducir el dolor de parto.
Métodos: Revisión integradora realizada en las bases de datos MEDLINE/PUBMED, SCOPUS, CINAHL, LILACS y BDENF, con un recorte temporal entre los años 2013 y 2018, en portugués, inglés y español. Se utilizó la metodología PICO para elaborar la pregunta de investigación y seleccionar descriptores controlados y no controlados, que fueron combinados con los operadores booleanos "*AND*", "*OR*" y "*NOT*".
Resultados: Se seleccionaron 19 artículos. Entre los métodos no farmacológicos encontrados, se destacan: la acupuntura y sus principales variantes (acupresión y auriculoterapia) (29,17%), hidroterapia (25%), ejercicios perineales con pelota suiza (16,67%), terapias térmicas (8,33%) y demás métodos (20,83%).
Conclusión: La acupuntura y la acupresión actúan tanto sobre aspectos fisiológicos del dolor, como sobre su subjetividad. La ducha caliente, la musicoterapia, la aromaterapia y las técnicas de respiración promueven la relajación y la reducción de los niveles de ansiedad. Las terapias térmicas contribuyen como analgésico local en regiones afectadas por el dolor. Los ejercicios con pelota suiza son importantes para reducir el dolor y adoptar la posición vertical, importante en la progresión del trabajo de parto.

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Introduction

Vaginal birth is a natural birth method. When compared to cesarean surgery, it can be considered a safer process, with a shorter length of hospital stay for mothers. However, pain and anxiety discourage many pregnant women from choosing vaginal birth. The fear regarding complications and maternal desire are important factors to consider when confronting increased rates of elective cesarean section. According to the World Health Organization, the best rate of acceptable cesarean surgeries is between 10% and 15%, aiming for optimal maternal and perinatal outcomes.[1]

The cesarean section rates in the world are higher than those recommended and they show an upward movement. Among the three million births occurring annually in Brazil, 55.5% are by cesarean surgery, despite the growing construction of Birth Centers and programs for vaginal birth. The rise in cesarean rates occurred in many European countries, from the last decade of the 20th century, which demonstrates the need to reevaluate childbirth delivery options and their influence on maternal health.[2]

Labor and delivery consists of a complex interaction between the mother and the fetus. Physiologically, the pains caused by labor are related to the intensity and increasing frequency of uterine contractions, which are the most important component of the pain, and result in progressive dilation of the cervix, and fetal descent. Additional factors exist, such as contraction and stretching of the uterine fibers, relaxation of the birth canal, compression on the bladder, and pressure on the root of the lumbosacral plexus.[3,4]

Although physiology has an influence on labor, the experience of women in labor in relation to pain results from several aspects that are beyond the cervical dilatation, such as the delivery environment, her previous experiences, psychosocial aspects, and the conditions in which the pregnant woman situates herself. All these factors demonstrate the complexity and subjectivity in the fifth vital sign, which can often be managed by sensory stimuli, especially when it is not the result of pathological processes.[5]

Non-pharmacological methods (NPM) are an option to replace analgesia during labor/delivery, and to support the parturient in dealing with her pain complaints. These methods include: breathing techniques, hydrotherapy (bath, water delivery and immersion bath), massage, acupuncture/acupressure, transcutaneous electrical nerve stimulation, and hypnosis.[3,6]

Based on the hypothesis that anxiety and pain are the major factors responsible for increasing the number of elective cesareans, this study is justified as an instrument to empower patients and professionals in the use of non-pharmacological techniques and, thus, facilitate their application in the practice setting, as a contribution to Brazilian public and collective health. In this context, the present study aims to identify studies, in the national and international literature, on the efficacy of non-pharmacological methods in the reduction of labor pain.

Methods

This was an integrative review that rigorously followed the steps of the method proposed by Whittemore and Knafl,[7] listed below: formulation of the research question; development of strategies for data collection; selection of papers, by two reviewers, that constitute the final sample; evaluation of and comparison of the findings of the selected articles; synthesis and development of the results of the review, and synthesis of the integrative review, with a critical analysis of the academic literature. [8]

The question of research "What scientific evidence exists that non-pharmacological techniques promote pain relief of parturients in labor?" was elaborated using the PICo[9] strategy, acronym of the words P-Population, I-Interest, Co-Context, important in the formulation of the guiding question.

In the process of seeking and selecting articles, the following databases were consulted: Medical Literature and Retrieval System onLine (MEDLINE/PubMed®) via National Library of Medicine, Cumulative Index to Nursing & Allied Health Literature (CINAHL); SCOPUS (Elsevier); Latin American and Caribbean Literature in Health Sciences (LILACS), and Nursing

Database (BDENF), accessed by the Virtual Health Library (VHL).

The controlled descriptors used in the search strategy were selected using Medical Subject Headings (MESH), Health Sciences Descriptors (DeCs) and the CINAHL Terminology, as well as the use of uncontrolled descriptors to increase the number of related searches. The search strategy was adapted for each database searched, following its individual search criteria. The Boolean operators, "AND" and "OR", were used to combine the terms; the term, "NOT", was used to exclude articles on pharmacological therapy. Table 1 shows the application of the PICo methodology, and the search strategy for the databases.

Table 1. PICo methodology and search strategy used for the research question

Methodology	Variables	Descriptors type	Selected descriptors
P (Population)	Parturient	CD	*"Pregnant women"; "Expectant Mothers"; "Women, Pregnant"*
I (Interest)	Non-pharmacological methods of relief	CD	(NOT) *"drug therapy"; "Complementary Therapies"*; (NOT) *pharmacotherapy*
		UD	*"Non-medicational"; "Nonpharmacological"*
Co (Context)	Labor pain	CD	*"Labor Pain"; "Labor Stage, First*
		UD	*" Obstetric Pain"; "Labor, Obstetric"*
MEDLINE/PubMed®		*(((("Pregnant women" OR Pregnant OR Pregnan*))) NOT (("Pharmacotherapy" OR "drug therapy"))) AND (("Labor pain" OR "Obstetric Pain" OR "Pain Management"))) AND (("Non-medicational" OR "Nonpharmacological" OR "Complementary Therapies"))*	
CINAHL		*(("Expectant Mothers" OR "Women, Pregnant" OR "Pregnant Women" OR Pregna n*)) NOT (("drug therapy" or pharmacotherapy or medications or drugs)) AND (("Labor Stage, First" OR "Labor, Obstetric" OR "Labor Pain" OR "Obstetric Pain")) Limiters: Academic journals Restrict by Language: - Portuguese Restrict by Language: - Spanish Restrict by Language: - English Search Modes - Boolean /phrase*	
SCOPUS		*(TITLE-ABS-KEY (("Pregnant women" OR "Pregnant Woman" OR pregnant OR pregnan*)) AND TITLE-ABS-KEY (("Non-medicational" OR "Non-pharmacological")) AND TITLE-ABS-KEY (("Labor pain" OR "Obstetric Pain"))) AND (LIMIT-TO (LANGUAGE , "English") OR LIMIT-TO (LANGUAGE , "Portuguese") OR LIMIT-TO (LANGUAGE , "Spanish")) AND (LIMIT-TO (DOCTYPE , "ar"))*	
LILACS e BDENF		*(tw:(("pregnant women" OR Pregnant OR pregnan*))) AND (tw:(("Labor, Obstetric" OR "labor pain"))) AND (tw:(("Non-medicational" OR "Non-pharmacological" OR "Complementary Therapies"))) AND (instance:"regional") AND (db:("LILACS" OR "BDENF"))*	

CD - controlled descriptor; UD - uncontrolled descriptor

The inclusion criteria were: full text original articles, available online in the databases, in Portuguese, English or Spanish languages, with assessment of non-pharmacological methods of pain relief at delivery, limit of publication years between 2013 and 2018, in order to analyze the scientific evidence of the last five years. Review articles, theses, dissertations, or articles without any relationship to the research objectives, after reading the title and abstract, were excluded.

The reference manager, "Endnote Web", was used to store and organize the studies, and duplicate articles were removed. After the identification, screening, and eligibility steps, the final sample consisted of 19 articles. Figure 1 presents a flowchart of the process of seeking and selecting articles, by database.

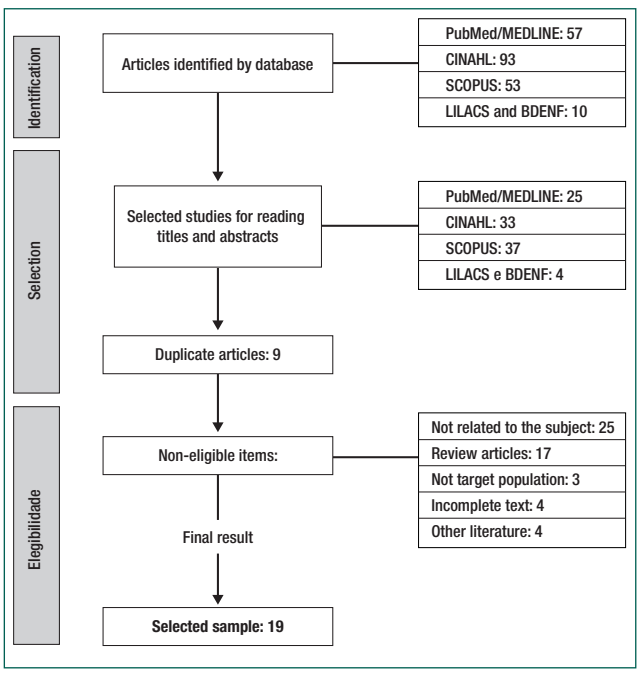

Figure 1. Flowchart of the identification process, screening and eligibility for the research

The authors used an instrument adapted from the literature for documentation of findings, which included: characteristics of article identification (title, authors, year of publication, database, and non-pharmacological method used), methodological description (approach, design, and interventions), and the results found.[10] The findings were organized into tables and grouped into categories according to the non-pharmacological method studied. The analysis of articles was prepared in a descriptive way, with the synthesis of the evidence of each publication.

Results

Among the selected articles, most (73.68%) presented as randomized controlled trials (RCT). This strategy is quite adequate in assessing the effect and effectiveness of certain interventions. Even with different research methods, the same pattern was followed, including using only normal-risk parturients without comorbidities, and those in the active phase of labor. The Visual Analogue Scale (VAS) for pain was used as a measurement instrument, which is also important to assess the evolution of pain complaints over time.

Acupuncture and its main variations (acupressure and auriculotherapy) were highlighted among other types of NPM used because it was the most frequent intervention studied (29.17%), followed by hydrotherapy (25%), and perineal exercises with the Swiss ball (16.67%). Table 2 describes the NPMs, the methodologies used, and their respective outcomes.

Considering the type of intervention studied, five general categories were identified: acupuncture and acupressure, thermal therapies, hydrotherapy, Swiss ball, and other NPMs. Some selected studies slotted into more than one category, so it was possible to establish comparisons.

Table 2. Description of selected articles

Author (year)	NPM	Type of study	Findings
Gallo et al. (2018)[11]	Swiss ball/ Hydrotherapy (aspersion bath)	Randomized trial	The EG had significantly lower pain intensity immediately after the Swiss ball, massage, and aspersion bath, enabling delay and reduction of the use of pharmacological analgesia.
Henrique et al. (2018)[12]	Hydrotherapy (aspersion bath)/ Swiss ball	Randomized trial	The pain, anxiety, and release of epinephrine decreased in the group using perineal exercises with the ball (ball group). The levels of β - endorphins increased in the ball group after the intervention, and it showed a significant difference in the capacity to cause these effects.
Koyucu et al. (2018)[13]	Hydrotherapy (sterile water injections)	Randomized trial	Mean pain scores at 30 minutes after the injections were significantly lower in the EG. The mean decrease in pain scores after 30 min was significantly higher in the EG.
Surucu et al. (2018)[14]	Music therapy	Randomized trial	After the first hour, a significant reduction in pain was reported in the EG, and the mean anxiety scores became lower in favor of the EG; the correlation was statistically significant.
Valiani et al. (2018)[15]	Auriculotherapy	Randomized trial	Statistical analysis showed that the severity of labor pain in the EG (auriculotherapy) was lower than that of the CG.
Yildirim, et al. (2018)[16]	Acupressure	Randomized trial	The results show that application of ice in the LI4 region was effective at 80 minutes. There was a reduction in labor time of approximately one hour with the EG parturients as compared to those in the CG.
Hamlacı et al. (2017)[17]	Acupressure	Randomized trial	Applying acupressure to point LI4 was considered effective in reducing the perception of labor pain and shortening the labor time ($p < 0.05$). The mothers were satisfied with the treatment but found it insufficient to control the pain.
Lee, et al. (2017)[18]	Hydrotherapy (sterile water injections)	Qualitative Study with semi-structured interviews	The women in this study considered sterile water injections to be an effective analgesia with few side effects. Parturients used the analgesia period to support their goals, either of rest during labor, or to increase their ability to focus on the childbirth itself.
Yuksel et al. (2017)[19]	Breathing exercises	Randomized trial	The time in the expulsive period and the pain scores of those in the EG presented a statistically significant decrease ($p<0.05$) when compared to the CG.
Taavoni et al. (2016)[20]	Swiss ball / Thermotherapy	Randomized trial	The mean value in pain scores in the thermotherapy group was lower than that in the CG, at 60 and 90 min post-intervention ($p<0.05$). There were significant differences between pain scores in the Swiss ball group throughout the study when compared to the CG.
Cherobin, et al. (2016)[21]	Auriculotherapy	Qualitative study Convergent methodology	In the first 30 minutes, 15 (79%) of the treated women felt some pain relief. After one hour, six (46%) remained with the same degree of pain, and four (31%) had greater relief.
Mafetoni et al. (2016)[22]	Acupressure	Randomized trial	Pain scores were lower in the acupressure group immediately after (value=<0.0001) and one hour after treatment (p-value=0.0001), as compared to CG and PG.
Mathew et al. (2016)[23]	Reflexology	Quasi-experimental study	The mean pain score (6.81) was significantly higher in the CG when compared to the score (4.67) of the EG.
Dehcheshmeh et al. (2015)[24]	Music Therapy/ Acupressure	Randomized trial	Pain scores were significantly lower in the music therapy group and cryotherapy groups when compared to the CG ($p<0.05$), without significant differences between them.
Dabiri et al. (2014)[25]	Acupressure	Randomized trial	The difference in pain scores between the EG and CG was significant ($p<0.001$), but there was no significant difference ($p=0.942$) in the dilation time period of both groups as well as compared to the PG.
Kaviani et al. (2014)[26]	Aromatherapy	Randomized trial	The mean perception of pain intensity in the EG was lower than that in the CG at 30 and 60 minutes post-intervention ($p < 0.001$).
Barbieri et al. (2013)[27]	Hydrotherapy (aspersion bath)/ Swiss ball	Randomized trial	There was a reduction in the pain of the two EGs, but no significant differences between the results of the hydrotherapy and the Swiss ball when compared to each other. However, significant results were obtained when both methods were used.
Shirvani et al. (2013)[28]	Cryotherapy	Randomized trial	The degree of pain was lower in the EG during periods of dilation and expulsion. The duration of these periods was significantly lower in the EG when compared to the CG.
Lee et al. (2013)[29]	Hydrotherapy (sterile water injections)	Randomized, quasi-experimental study	Four sterile water injections caused smaller pain scores when compared to only one injection.

EG – experimental group; CG – control group; PG – placebo group

Discussion

Next, different NPMs will be discussed, comparing different studies and their results. In the first category, the studies on auriculotherapy and acupressure, subareas of acupuncture are presented. The second category focused on the aspersion bath and sterile water injections as intervention potentials. The third includes the use of temperature in analgesia: thermotherapy, and cryotherapy. The fourth type refers to exercises in the perineal region using the Swiss ball. Finally, the fifth category refers to other methods, such as music therapy, reflexology, aromatherapy, and breathing techniques.

Acupuncture and acupressure

Auriculotherapy is a specific area that associates acupuncture and reflexology, two complementary practices that contemplate the body in its entirety using specific points.

Studies [15,21] suggest that auriculotherapy is effective in the duration and severity of labor pain, by releasing endorphins that are important for muscle relaxation. The experience of labor pain is physiologically real, but it is influenced by other emotional factors, such as anguish, fear, and anxiety. Thus, acupuncture promotes an improvement in these conditions not only in terms of physical suffering; therefore, its use provides a holistic approach to women in labor.[21]

Acupressure is part of traditional Chinese medicine, which consists of stimulating the acupuncture points using the hands and/or fingers. This technique results from the "gate theory," in which it is believed that stimulation by massage and touch can stimulate fibers that transmit impulses to the spinal cord.[22,24]

The Hegu/Hugo/Hoku point, termed Acupressure Point LI4, is located in the region between the first and second metacarpal bones on the radial side of the hand. This stimulus demonstrated a reduction in and stabilization of the perceptions of pain, obtained by pressure [25] or intense cold.[16,17,24]

Acupressure with cold compresses promoted a shortening of the labor time, with a mean of one hour less when compared to the CG.[16] These results corroborate the findings of another study, [17] in which its use on both hands of the parturient obtained a reduction in the expulsion period of the EG. In addition, the mothers were satisfied with the results, although it was not sufficient for the total control of the pain.

On the other hand, an RCT [25] showed that acupressure does not interfere in the duration of labor time. This RCT used greater methodological rigor as the authors also separated a placebo group (PG), important to differentiate the action of the NPM and the presence of the professional. "Physical presence" and "indoctrination" were subjective factors identified that can modify the sensation of pain and impede the determination of the isolated efficiency of acupressure.

The *Sanyinjiao* point (BP6) was also investigated. This point is located in the leg, five centimeters above the upper region of the internal malleolus, acting on the reproductive organs. Using a method with two control groups, PG and EG presented a smaller increase in the VAS score, which can be explained by continuous support to women in labor, as well as the fact that palpation of other points and body paths promotes the flow of energy. This treatment was effective only in situations with cervical dilatation up to 8 cm and/or at a high head. [22]

Hydrotherapy

Hydrotherapy consists of techniques that use water as the main source of treatment, such as an aspersion bath and sterile water injection, described below.

The aspersion bath promotes relaxation and control of stress levels, decreasing the sensation of pain. Analyzing the neuroendocrine parameters, this technique decreases the release of cortisol and β-endorphins, and it increases the secretion of noradrenaline, factors closely linked to stress relief and stressor conditions. Research found used the aspersion bath associated with other techniques, making it difficult to draw conclusions about the principal effects of this technique, individually. [12,27]

Sterile water injection in the lower back can be used in the home environment, without hospital rigor, and acts strongly on the symptoms of low

back pain that are frequent in prodromal labor; it is an important technique to delay the admission of the pregnant woman to the maternity unit. Although there were controversies regarding the use of this method, the participants reported improvement soon after their application.[13,18,29]

Such a method usually occurs in protocols with only one or four injections. One RCT compared both cases, and their findings demonstrated that the use of four injections led to a greater sensation of analgesia for patients, but, due to the intense pain during administration, there is still uncertainty if this method would be actually worthy.[29]

To investigate the effect of sterile water injections, a study[13] compared the administration of four "dry" syringes (without any contents) to four water-filled syringes. The findings demonstrated that there was a significant decrease in pain intensity in the EG. The method of comparison, with placebo, was important to understand that sterile water actually acts to relieve the low back pain. However, cesarean surgery referral was not reduced, and there was no reduction in the use of epidural analgesia. Therefore, although it is a reality in many countries, the Ministry of Health[30,31]does not recommend the use of sterile water injection for labor pain relief.

Thermal therapies

Known as millennial care, the use of heat or cold has always remained a non-pharmacological therapeutic source for pain relief.

Cryotherapy alleviates pain throughout the active phase and the expulsive period, promotes a decrease in labor time, without changes in the degree of laceration, fetal heart rates, or Apgar scores. It can be administered to the back and lower abdomen during the period of dilatation; continuity in the perineal region is also recommended during the expulsive period. [28]

Thermotherapy can also be used in the lumbar region, as well as in the perineum during the expulsive period, and presents a great decrease in the pain scores related to low back pain. Heat promotes the release of endorphins, along with stimulation of cutaneous and temperature receptors, soothing the sensation of pain. Although good outcomes have been found, the method has more effect when used in association with others, such as the Swiss ball.[20]

Swiss ball and perineal exercises

When compared with other NPMs, the Swiss ball use alone showed similar pain reduction outcomes as did the hot aspersion bath [27] and thermotherapy.[20] Contrasting such findings in an RCT,[12] the Swiss ball showed a greater effect on the reduction of pain compared to the aspersion bath, associated to the increase in the release of β-endorphins and reduction of epinephrine secretion, which were superior to the neuroendocrine results of the hydrotherapy. The first study [27] did not have a CG, and the sample size was very small (n=15), which hampers deductions and generalizations.

The second study reviewed [20] demonstrated that results can be related to the distraction of parturient consciousness, an important factor for the decrease in the identification of pain. However, the use of the ball reduced labor time, closely linked to the adoption of the vertical position and to pelvic balance. The thermotherapy group remained in a reclined position for application of warm compresses.

Another RCT that found positive outcomes was based on a sequenced intervention of exercises with the Swiss ball, lumbosacral massage, and aspersion bath (in that order) performed in parturients with cervical dilatation of four to seven cm, which evidenced a minor need for interventions and analgesics. Such methodology does not serve to demonstrate this NPM's potential in isolation but works as a protocol that can be followed by institutions with beneficial maternal-fetal outcomes.[11]

Other non-pharmacological methods

The comparison between music therapy and acupressure, at the *Hoku* point, suggested that both have the same analgesic effect in primigravidas during labor. In order to induce relaxation, piano music and the sound of ocean waves are played to calm the patients. The effectiveness of such a method proves that part of labor pain is based on subjective principles, such as fear and anxiety.[24]

A Turkish RCT also questioned members of the EG about their experience, an important method-

ology for assessing the subjectivity of the NPM. The mothers believed that using music helped them to relax, adjust to the environment, and feel confident. Ultimately, music reduced the level of pain. Lively and religious songs are among the main choices of parturients during labor. Data analysis showed that reproducing music in a specific Turkish style (Acemasiran mode) was associated with a lower level of pain and anxiety, more effective contractions, and a rapid labor progression.[14]

A study based on another RCT used the lavender aromatherapy administration with the EG; the parturients received a combination of 0.1 ml of lavender oil and 1 ml of distilled water in tissues placed near their nostrils. Although the perception of pain decreased in the aroma group, it did not influence labor time. Such an outcome occurs because the oil reduces the stress hormones and induces the secretion of β-endorphins, important in the control of pain.[26]

The implementation of breathing techniques promoted the reduction of labor time and decreased perceptions of pain. It must be performed during the expulsive period, using deep inspiration and exhalation; this exercise promotes both relaxation and is a personal method of recognition of control over the body.[19]

Finally, reflexology is configured as an NPM, in which it is possible to access the entire structure of the body by means of massage in specific areas of the feet. The study achieved the goal of reducing pain sensation with significantly positive aspects. Although it was performed with a small sample (n=30), which may compromise generalizations, it supports other studies, such as those related to acupressure, previously explained.[23]

Conclusion

The methods analyzed contribute to support and control of pain in parturients. The NPM discussed presented a reduction in pain scores, with very similar results recorded for the VAS score, so it was not possible to establish hierarchies; all of these contributed without great differences in efficacy. Acupuncture and acupressure acted on both the physiological and subjective aspects of pain. The warm aspersion bath, music therapy, aromatherapy, and breathing techniques promoted relaxation and decreased the levels of anxiety. Thermal therapies contributed to local analgesia in regions affected by pain. Exercises with the Swiss ball were important for reducing pain and encouraging the adoption of vertical positions, which is important for labor progression. The method should be chosen according to the parturient needs, care objectives, and service availability. Detailed NPM must be planned, implemented, and evaluated by nurses, always maintaining professional competence issues; especially in acupuncture and reflexology, qualified professionals are needed. Among the limitations, the lack of studies that investigate more precise factors in the administration of the methods, such as the ideal time to perform them, and the most favorable obstetric conditions for their use. As an implication for Brazilian public health, the results of this review can be synthesized and incorporated into educational activities in basic care, in order to make the labor/childbirth process a much more humanized experience.

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