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Assessment of non-pharmacological methods for puerperal women: A narrative review

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ABSTRACT

During the postpartum period, many women experience perineal pain, often caused by perineal trauma such as tears or episiotomies. While pharmacological treatments like non-steroidal anti-inflammatory drugs (NSAIDs) and analgesics are commonly used, their use requires caution, especially in breastfeeding mothers. Non-pharmacological methods, such as herbal remedies, cold therapy, sitz baths, and heat therapy, are considered safer and are generally well accepted by mothers because they have fewer side effects. The aim of this narrative review is to examine the effectiveness of non-pharmacological methods in reducing perineal pain and promoting wound healing. A search was conducted in electronic databases, including CINAHL and PubMed, to identify relevant studies. After screening the results, twelve studies were selected. These included mostly randomized controlled trials, quasi-experimental, and experimental studies conducted in various countries between 2021 and 2025. This review emphasizes the potential benefits of including non-pharmacological therapies in postpartum care to support recovery and reduce reliance on medications. The findings offer useful evidence on the safety and effectiveness of these methods in managing perineal pain.

1. Introduction

Puerperal women experience perineal discomfort in the postpartum period as the reproductive organs and their maternal physiology adjust to their original pre-pregnant states. Perineal discomfort occurs due to the perineal trauma during or after vaginal delivery, which causes episiotomies or tears (Brito and Salvetti, 2022). The perineal trauma leads to pain, bruises, and swelling within the perineal area. The performance of episiotomy during childbirth through a small incision on a woman's perineum exposes them to pain or discomfort in the postpartum period, despite assisting the baby to move in the birth canal. Consequently, the perineal discomfort in puerperal women can interfere with their effective postpartum recovery (Choudhari et al., 2022). Proper intervention is necessary since the tears affect the muscles within or beneath the perineum, which can further affect the urinary bladder or the anal sphincter.

The perineal discomfort interferes with the quality of life of puerperal women in their postpartum recovery. The pain can interfere with the physical functioning and psychological well-being of mothers. The painful incidences from the tears or episiotomies complicate mobility, sleep patterns, and proper infant care through either breastfeeding or bonding (Gondim et al., 2025). The high likelihood of perineal discomfort interfering with the postpartum recovery necessitates healthcare visits and maternal interventions. Puerperal women should seek medical interventions when the perineal discomfort becomes extreme, including pain. Primarily, current approaches to alleviating perineal discomfort include the conventional pharmacological approaches and non-pharmacological interventions. According to Khajehei et al. (2024), the application or preference of the interventions varies with the settings, culture, and geographical background of the women seeking smooth postpartum recovery.

The pharmacological approaches used to treat perineal discomfort or pain and enhance wound healing in the puerperal women include analgesics or non-steroidal anti-inflammatory drugs (NSAIDs). Analgesics or NSAIDs such as acetaminophen and

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ibuprofen are among the drugs used in the first-line intervention against postpartum pain. However, the pharmacological interventions require careful introduction in the postpartum recovery regimen since they may provide relief to mothers at the expense of the neonates' health (White and Atchan, 2022). The medications pose health effects, limited efficacy, and potential interference with breastfeeding patterns. Consequently, practitioners or new mothers may prefer non-pharmacological interventions for perineal pain management and would heal.

Current studies consider non-pharmacological methods as complementary or alternative to perineal discomfort in puerperal women. Found from their findings that the interventions provide holistic relief with limited side effects on the women and neonates while enhancing their postpartum recovery. Girsang and Elfira (2023) conducted a literature review and noted that mothers preferred non-pharmacological care for their perineal pain and wound healing due to the minimal effect on their breastfeeding and bonding with their newborns. The methods include sit baths, herbal remedies, and cold therapy. The non-pharmacological alleviation may incorporate myrrh, tea leaves, salt, pomegranate peel, honey, olive oil, and ice or cryotherapy. However, findings from the studies differ on the exact non-pharmacological methods used by puerperal women to eliminate perineal discomfort. The purpose of this article is to review the literature on the use of non-pharmacological methods by puerperal women and their effectiveness in eliminating perineal discomfort.

The review addresses a common but overlooked postpartum issue of perineal discomfort in puerperal women. The women experience the pain and require wound healing interventions without relying on medications entirely. The common experiences of pain or discomfort in the postpartum period are under-discussed and under-researched when compared to other postpartum issues. The review emphasises the need for alternative and cost-effective ways of addressing a valuable aspect of shaping new mothers by focusing on non-pharmacological interventions for eliminating perineal discomfort (Khusniyati et al., 2023).

This review emphasizes the need for presenting and discussing evidence supporting non-pharmacological interventions in maternal care. The discussion diverts excessive focus on the unnecessary or risky medical interventions that might have maternal and paediatric implications. The review seeks to offer a comprehensive evaluation of the non-pharmacological methods so that healthcare providers and relevant policymakers can have a solid evidence base to support perineal care. The perineal and postpartum care for puerperal women might reduce reliance on pharmaceuticals (Kang et al., 2025).

The findings of the review will emphasise the value and effectiveness of non-pharmacological interventions to reduce dependence on medications by mothers in their postpartum period. Women prefer minimal medication use in their postpartum recovery, particularly when they are breastfeeding, due to concerns about the side effects. Therefore, the review highlights the non-pharmacological methods that provide safe and effective relief while enabling new mothers to avoid or minimise dependence on the pharmacological interventions (Trahan et al., 2025).

The review strengthens the evidence base for non-pharmacological methods for perineal care and promotes holistic care in the postpartum recovery of puerperal women. Healthcare providers will generate detailed knowledge on the non-pharmacological options for treating perineal discomfort. The review is a valuable resource for clinicians seeking low-risk treatments and the integration of safe and patient-preferred interventions in their routine care. The narrative review will assess the use of non-pharmacological approaches as holistic and natural methods empowering puerperal women to adopt an active role in their postpartum recovery (Sendas and Freitas, 2024).

The review will fill the existing gaps in the current literature on the non-pharmacological interventions for eliminating perineal discomfort in puerperal women. The discussion will assist in identifying future research since the current body of knowledge shows limited synthesis of evidence on the effectiveness of non-pharmacological interventions in the puerperal phase. The review will consolidate the evidence in the existing gaps through the identification of gaps or inconsistencies in the current evidence base. Consequently, the process will outline the primary areas where researchers can conduct further studies to serve the postpartum or perineal care of mothers or women (Smith et al., 2022).

1.1. Research question

As outlined in Table 1 PICOT (Population, Intervention, Outcome, and Time) mnemonic was used to develop and formulate the main research question for the narrative review. PICOT assisted in defining the scoping of the research question, which reduced ambiguity and ensured the review was focused as well as well-defined (Hosseini et al., 2024). Table 1 specifies each component used in the review that ensures clarity of what the narrative review aimed to investigate.

2. Search strategy

The search strategy and subsequent process relied on different search terms or keywords compiled from the PICOT research question presented in Table 1. The search was conducted in electronic databases that recommended different search terms or keyword combinations. Table 2 outlines the keyword combination used in the search process.

Table 1: Formulating research question with PICOT framework

PICOT	Component	Revised content	Research question
P	Population	Puerperal women	What are the non-pharmacological methods for alleviating perineal discomfort in puerperal women?
I	Intervention	Non-pharmacological methods (herbal, thermal, etc.)	
C	Comparison	Pharmacological interventions or no intervention	
O	Outcome	Reduction of perineal pain and enhancement of wound healing	
T	Time	Postpartum recovery period (within 10 days of delivery)	

Table 2: Different keyword combinations for the search process

Puerperal women OR postpartum women OR new mothers
AND
Non-pharmacological methods OR non-drug methods OR myrrh OR tea leaves OR salt OR pomegranate peel OR olive oil OR ice application
AND
Perineal discomfort OR perineal pain OR perineal trauma OR pain relief OR discomfort alleviation OR recovery OR postpartum healing OR comfort

Boolean operators, "AND" and "OR," were used to combine the keywords as illustrated in Table 2. The Boolean Operators assisted in producing the intended outcomes from the electronic databases in line with the research question (Alharbi and Stevenson, 2020). The operators created a focused search since the research question contained multiple search terms and their synonyms.

The search was conducted in CINAHL and PubMed, which are reliable search engines containing titles and full-text journals on diverse healthcare, medical, or nursing topics. The two electronic databases helped to produce the appropriate primary studies in readiness for the screening based on the inclusion and exclusion criteria in Table 3. The narrative review used PubMed due to its reliability and influential role in archiving and availing medical and health sources with basic and advanced searches with the specified keyword (Gusenbauer and Haddaway, 2020). The search on the electronic database utilized different keyword combinations outlined in Table 2. On the other hand, CINAHL was consulted and used in the search process because it stores authoritative nursing studies and allied health literature. The database allows superior subject indexing and allows focused search of cited literature. The predetermined eligibility criteria in Table 3 helped in defining the search limits in CINAHL and PubMed and screening the relevant journal articles retrieved from the research process.

Table 3: Inclusion and exclusion criteria

Inclusion criteria	Exclusion criteria
Research focusing on non-pharmacological interventions for alleviating perineal pain and wound healing (myrrh, tea leaves, salt, pomegranate peel, olive oil, and ice application).	Studies utilizing solely pharmacological interventions for alleviating perineal pain and wound healing (myrrh, tea leaves, salt, pomegranate peel, olive oil, and ice application).
Studies utilizing experimental, quasi-experimental, or randomized controlled trial (RCT) designs.	Articles that are not available in full text or outside the specified publication period.
Full-text articles available in English.	Studies using research designs other than experimental, RCTs, or quasi-experimental studies, qualitative, cohort, cross-sectional studies, and secondary studies.
Studies published within the last five years (between 2021 and 2025).	Journal articles published in languages other than English.

The studies retrieved from CINAHL and PubMed were 161 and 423, respectively. The search process did not generate or use any grey literature. The 584 studies were the results of the differentiated search based on the keywords or search terms in Table 3. The total studies generated from the two electronic databases selected for the search process were screened for relevance, duplication, and appropriateness for addressing the research question for the final qualitative synthesis.

The screening and selection process utilized the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) flow diagram in Fig. 1, which guided in selecting studies for the narrative review (Page et al., 2021). The records identified through CINAHL and PubMed underwent the preliminary evaluation before the screening process, and as shown in Fig. 1, no registers were consulted. The process then involved the removal of 202 duplicate records before the screening. There were no ineligible records from the remaining 383 records. Consequently, 181 records were also excluded since they were not full text, which led to 201 undergoing further screening, and a further 89 records were excluded for lacking overall relevance to the topic. The application of the inclusion and exclusion criteria in Table 3 led to the exclusion of 43, 29, 20, and 8 articles for reasons of exceeding the publication date, published in languages other than English, research designs as opposed to RCTs, experimental, or quasi-experimental, and failure to stipulate the non-pharmacological interventions.

3. Findings/results

The 12 studies included in the qualitative synthesis comprised different forms of RCTs, quasi-experimental, and experimental studies. The different RCTs utilized by the 12 studies were standard RCTs in three studies (Augustino et al., 2023; Gerosa et al., 2022; Torkashvand et al., 2021), two studies conducted parallel RCTs (Firdaus et al., 2023; Karim et al., 2024), while two studies adopted and implemented double-blind RCTs (Kazemi et al., 2021; Sarbaz et al., 2019). One study used a randomised prospective parallel arm study (Ramesh et al., 2024). On the other hand, there were different experimental studies from the list of included

studies. The experimental or quasi-experimental studies were one quasi-experimental study (Hables, 2021), another one was a quasi-experimental study with a two-group, pre-post-test research design (Roma et al., 2023), one true experimental pre- and post-test control group design (Sandhya, 2024), and another study used a comparative experimental study design (Shaban et al., 2024). The authors in the 12 studies used the RCTs, experimental, and quasi-experimental research designs to investigate and present the different standpoints on the non-pharmacological methods used by puerperal women to alleviate perineal discomfort. The methods helped to gather data and expedite analysis to ascertain the effectiveness and efficacy of the non-pharmacological methods in addressing perineal pain and ensuring wound healing.

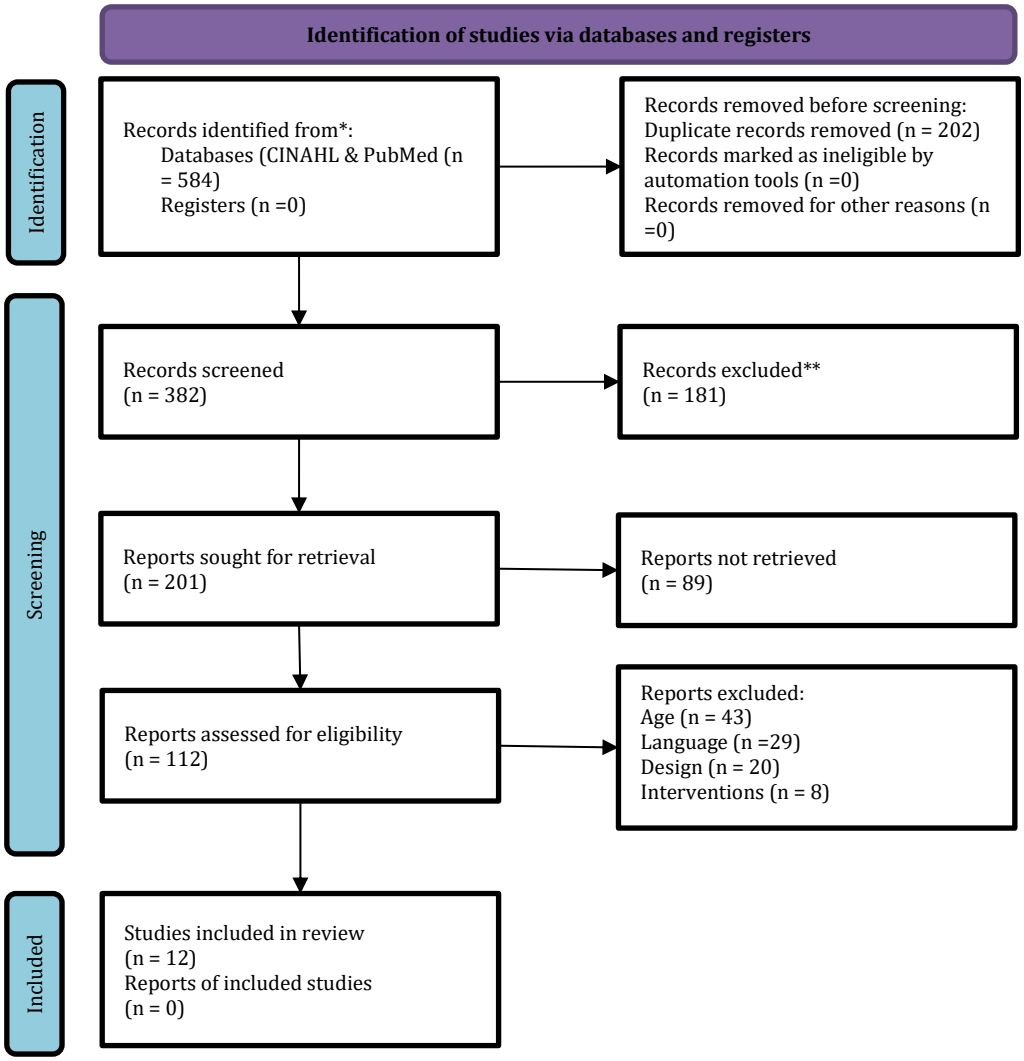

Fig. 1: PRISMA flow diagram

Table 4 outlines the studies conducted in different geographical locations between 2021 and 2025. One study was conducted in Tanzania (Augustino et al., 2023) while four studies were undertaken in Iran (Firdaus et al., 2023; Kazemi et al., 2021; Sarbaz et al., 2019; Torkashvand et al., 2021). One study setting was in Switzerland (Gerosa et al., 2022), three were conducted in Egypt (Hables, 2021; Roma et al., 2023; Shaban et al., 2024), one in Malaysia (Karim et al., 2024), and two studies were undertaken in India (Ramesh et al., 2024; Sandhya, 2024). The inclusion of studies conducted in different geographical regions across the world meant the findings were gathered in different settings with varied populations of puerperal women. The distribution of the outcomes enhanced the overall representativeness of the outcomes for the puerperal women. The findings also ensured high generalizability to the population of women in other similar settings using non-pharmacological interventions to address perineal discomfort, pain, or wound healing.

Table 4 outlines other key elements of the 12 studies, such as the study design, sampling method or sample size, type of participants, intervention group, control or placebo or comparison groups, duration of the intervention, follow-up process, outcome measures, main findings, and additional comments. Primarily, the main findings in Table 4 assisted in identifying the primary themes addressing the main concept on the efficacy of herbal and natural remedies for the perineal discomfort or wound healing among different demographics of women in their postpartum recovery phase. The

primary concepts include efficacy of herbal and natural remedies, thermal interventions, effectiveness of non-pharmacological interventions, cultural or traditional practices, safety or side effects, accessibility or feasibility, psychological and emotional benefits, and interdisciplinary approaches.

Table 4: Summary of included studies evaluating non-pharmacological interventions for postpartum perineal pain and wound healing

Reference	Design	N	Intervention	Control/Comparison	Outcomes (measures)	Main findings
Augustino et al. (2023)	RCT	228	Perineal cold pack	Paracetamol 1000 mg	Pain rating scale (20-min intervals up to 60 min)	Cold packs were more effective than paracetamol for postpartum pain relief.
Firdaus et al. (2023)	Parallel RCT	90	Sitz bath with myrrh (twice daily, 1 week)	Betadine sitz bath	REEDA scores (2 and 7 days postpartum)	Myrrh sitz baths improved wound healing more than betadine or frankincense.
Gerosa et al. (2022)	RCT	68	Honey application + standard care	Standard care only	Pain intensity (Visual Analog Scale), patient satisfaction	No significant difference in pain, but high satisfaction with honey use.
Hables (2021)	Quasi-experimental	120	Lavender and olive oil application	Vegetable oil	VAS, REEDA scores (1st, 5th, 9th, 14th day)	Lavender and olive oil reduced pain intensity more effectively than vegetable oil.
Karim et al. (2024)	Parallel RCT	224	Frozen gel pack	Room temperature gel pack	Pain scores (VNRS at 12 and 24 hours), maternal satisfaction	Cold gel packs improved pain relief and satisfaction compared to room temperature packs.
Kazemi et al. (2021)	Double-blind RCT	130	Green tea ointment	Vaseline/Eucerin placebo	REEDA, VAS (6 hours, 5 and 10 days postpartum)	Reduced discomfort but no significant improvement in wound healing.
Ramesh et al. (2024)	Parallel RCT	208	Far infrared radiation (FIR)	Sitz bath	VAS, REEDA (2nd day, 6th week)	FIR is more effective than sitz bath for pain relief and wound healing.
Roma et al. (2023)	Quasi-experimental (pre-post)	100	Dry heat application	Moist heat application	VAS, REEDA (5th and 10th day)	Dry heat provided better pain relief and wound healing than moist heat.
Sandhya (2024)	RCT	20	Sodium chloride application	Usual care	REEDA scores (5th and 10th day)	Sodium chloride improved wound healing compared to usual care.
Sarbaz et al. (2019)	Double-blind RCT	60	Sitz bath with myrrh gum extract (7 days)	Normal saline sitz bath (7 days)	REEDA (7th and 10th day postpartum)	Myrrh gum sitz bath reduced discharge and improved wound healing.
Torkashvand et al. (2021)	RCT	73	Olea herbal ointment	Usual care	REEDA (2 hours, 5th, 10th day postpartum)	Olea ointment enhanced episiotomy wound healing more than usual care.

N: Sample number

4. Discussion

4.1. Efficacy of herbal remedies

The studies highlighted the effectiveness of various herbal and natural remedies. They examined different levels of efficacy and effectiveness of these non-pharmacological interventions in relieving perineal discomfort among puerperal women. Firdaus et al. (2023) reported that *Commiphora myrrha* (Nees) Engl. was more effective than *Boswellia carteri* Birdw. (frankincense or betadine) in promoting episiotomy wound healing within seven days postpartum among primiparous women following normal delivery. Similarly, Gerosa et al. (2022) found that honey was more effective than standard care in reducing perineal laceration pain among Swiss women within four days of treatment. These findings suggest that natural remedies can outperform standard care in relieving perineal pain during the early postpartum period.

Various natural and herbal remedies have shown notable effectiveness in alleviating different forms of perineal discomfort experienced by women after childbirth. Hables (2021) reported that Egyptian women who received perineal care with olive and lavender oils experienced greater reductions in pain intensity and frequency 14 days after episiotomy compared to those who used vegetable oil as a placebo. The reduction in perineal discomfort also contributed to improved wound healing, with lavender oil proving more effective than olive oil. In contrast, Kazemi et al. (2021) investigated the use of green tea ointment for perineal pain and wound healing following episiotomy. Their findings indicated that while the ointment was effective in relieving pain, it did not significantly enhance the wound healing process.

Herbal and natural remedies vary in their effectiveness in relieving perineal discomfort. Sarbaz et al. (2019) demonstrated that a sitz bath containing a hydroalcoholic extract of myrrh gum significantly improved wound healing after episiotomy in nulliparous women. This treatment was more effective than a sitz bath with normal saline in reducing wound discharge, despite both being natural remedies. Similarly, Shaban et al. (2024) found that a combination of olive oil and aloe vera was superior to normal saline in promoting wound healing among Egyptian women. The use of aloe vera and olive oil not only alleviated pain but also facilitated wound healing in primiparous

women. Sandhya (2024) reported that sodium chloride treatment was more effective in promoting episiotomy wound healing compared to standard care, although the study highlighted the need for a larger sample size and longer follow-up to strengthen its conclusions. Similarly, Torkashvand et al. (2021) found that an oleo herbal ointment enhanced wound healing within 5–10 days postpartum more effectively than standard care. However, they also emphasized the necessity for further research to validate these findings.

4.2. Thermal interventions

The studies also highlighted thermal interventions as effective non-pharmacological approaches for managing postpartum perineal pain. Abdullah et al. (2024) compared the effectiveness of cold pack application with 1000 mg of paracetamol in relieving perineal pain among Tanzanian women following spontaneous vaginal delivery. Their results indicated that cold pack application provided greater pain relief than paracetamol, suggesting its potential as a superior natural intervention. Similarly, Roma et al. (2023) investigated the use of dry heat applications for episiotomy wound healing and pain reduction in primiparous women. The findings revealed that the dry heat group experienced significantly better outcomes than the moist heat group, including reduced perineal redness, minimal wound discharge, decreased oedema, and improved wound edge approximation within 10 days postpartum. Both pain relief and wound healing were more effective with dry heat than with moist heat in primiparous women.

Karim et al. (2024) compared the effectiveness of cold compresses with room temperature compresses in primiparous women who had sustained perineal injuries following normal vaginal delivery. The study found that cold compresses were more effective in reducing pain during movement within the first 12 hours postpartum. Additionally, women in the cold compress group reported higher maternal satisfaction and more positive perceptions of perineal healing. Similarly, Ramesh et al. (2024) compared the effects of far infrared radiation (FIR) with sitz baths in primiparous women after episiotomy. Their findings showed that FIR was more effective in reducing pain and improving perineal muscle tone and wound healing. Despite both interventions being safe, FIR appeared to be more beneficial than sitz baths for postpartum perineal care.

4.3. Cultural and traditional practices

The studies demonstrate how cultural beliefs and traditions shape the choice of non-pharmacological interventions among puerperal women. However, the use and application of the remedies vary with the community and cultural context. Four studies in Iran described the use of herbs and natural remedies as a preserve for the local midwives in Iran, who rely on the traditional Persian medicine to initiate wound healing and reduce perineal pain (Firdaus et al., 2023; Kazemi et al., 2021; Torkashvand et al., 2021). Comparatively, three studies also noted a unique tradition in Egypt (Hables, 2021; Roma et al., 2023; Shaban et al., 2024). The midwives and healthcare professionals in Egypt incorporate herbs such as lavender and olive oil due to their healing and antiseptic properties. However, the studies did not focus comprehensively on the specific procedures of applying and using the remedies.

4.4. Safety and side effects

The reviewed studies acknowledged that most herbal and natural remedies are generally safer than conventional medications for postpartum perineal care. However, four studies reported some side effects, though they lacked detailed analyses of their impact on the puerperal women involved. For example, Firdaus et al. (2023) emphasized the need for proper preparation of myrrh and frankincense due to the risk of allergic reactions. Similarly, Gerosa et al. (2022) noted a burning sensation as a secondary outcome associated with the use of honey for reducing perineal pain. Despite these minor effects, lavender and olive oil were preferred over NSAIDs for pain management and episiotomy wound healing, largely due to their minimal side effects. Sarbaz et al. (2019) also highlighted the importance of careful preparation of hydroalcoholic myrrh extract to minimize potential adverse effects, even though it was effective in promoting wound healing.

4.5. Accessibility and feasibility

The reviewed studies highlighted varying levels of accessibility and feasibility of herbal and natural remedies for alleviating perineal discomfort. Shaban et al. (2024) attributed the use of aloe vera and olive oil to their widespread availability within communities and the traditional practices of using these substances for pain relief and episiotomy wound healing. Augustino et al. (2023) reported that cold pack applications were commonly used among Tanzanian women due to their ease of use and ready availability. They also noted the practicality of using myrrh and frankincense prepared through hydroalcoholic extraction in the Iranian community. Similarly, Gerosa et al. (2022) described honey as an easily accessible remedy with minimal reported side effects for puerperal women. However, while these studies confirmed the community-level availability of such remedies, they did not address other critical aspects such as cost-effectiveness or broader implementation in healthcare settings.

4.6. Psychological and emotional benefits

The studies did not address the psychological and emotional benefits of using the non-pharmacological interventions for pain relief and episiotomy wound

healing. For instance, only alluded to the possibility of minimising psychological vulnerability in the perinatal period rather than confirming a direct effect on the psychological or emotional benefits of using honey for reducing perineal laceration pain. Similarly, Hables (2021) also implied an indirect effect of olive and lavender oils in reducing pain intensity as well as episiotomy wound healing through aromatherapy only but without concrete data.

4.7. Comparison between non-pharmacological interventions

The reviewed studies also highlighted qualitative insights from puerperal women regarding their experiences with non-pharmacological pain management strategies during labor and postpartum recovery. Many women reported using techniques such as controlled breathing, diversionary activities, and emotional reassurance, which they learned during antenatal clinic visits. These strategies provided psychological comfort and helped them manage labor pain effectively.

Support from family members and healthcare providers was another commonly mentioned intervention. The presence of a loved one, particularly a spouse, during labor was described as offering significant emotional support, reinforcing the role of interpersonal relationships in non-pharmacological pain relief.

However, the findings also revealed variability in the application and perceived effectiveness of these methods. Some women indicated that they received little or no pain management support and viewed labor as an inherently painful process. Others reported delayed interventions, which diminished their effectiveness. In certain cases, non-pharmacological approaches were complemented by pharmacological methods, but these were often administered late in labor when women were already experiencing severe pain.

These insights underscore the importance of early education on non-pharmacological methods during antenatal care and timely implementation during labor. They also highlight cultural beliefs that influence women's expectations and acceptance of pain management interventions. Overall, the findings suggest that while non-pharmacological methods are widely valued for their minimal side effects and psychological benefits, their effectiveness is enhanced when combined with consistent support from healthcare providers.

5. Conclusion

The qualitative synthesis of the 11 studies of the 12 reviewed studies showed the efficacy of the non-pharmacological interventions for eliminating perineal discomfort among puerperal women. The included research supports the safe and effective use of thermal interventions such as cold packs, dry heat, and far infrared radiation in expediting episiotomy wound healing and pain relief among puerperal women. The non-pharmacological interventions used for alleviating pain and facilitating fast wound healing after episiotomy in puerperal women include myrrh, green tea, olive and lavender oil, Haney, and salt. The effectiveness may vary with the puerperal women's condition in the postpartum despite being safe and with minimal side effects such as inconsequential allergic reactions. The review of the different studies revealed the easy accessibility and feasibility of eliminating pain and promoting fast wound healing after episiotomy. However, the studies have not addressed the role of healthcare professionals in educating and supporting puerperal women in using non-pharmacological methods such as myrrh in their right dosage. Therefore, futures studies can examine interprofessional education and support for the adoption of non-pharmacological interventions for perineal care in puerperal women or cost-effectiveness in cultures with prevalent use of herbal and natural remedies. Moreover, additional studies are needed to validate the use of certain non-pharmacological intervention types for postpartum care of women.

5.1. Recommendations

Healthcare providers should educate puerperal women about the benefits and use of non-pharmacological methods, as these approaches can help improve comfort and recovery. These methods should also be incorporated into postpartum care protocols to ensure comprehensive support for women during their recovery period. Furthermore, further research is needed to standardize and optimize the use of non-pharmacological methods, which will enhance their effectiveness and accessibility in postpartum care.

5.2. Limitations

The limitations of the studies include heterogeneity in study designs and outcome measures, which makes it difficult to compare results across different studies. Additionally, the generalizability of the findings is limited due to variations in population demographics and settings, which may not represent the broader population. Furthermore, there is a potential for bias in the included studies, which could affect the reliability and validity of the results.

5.3. Future research directions

Future research should focus on the standardization of non-pharmacological methods to ensure consistency and reliability across studies. Additionally, there is a need to optimize these methods for specific populations to enhance their effectiveness. Another important area for investigation is the long-term effects of non-pharmacological methods on the health of puerperal

women, as understanding these effects could provide valuable insights for improving postpartum care.

Compliance with ethical standards

Conflict of interest

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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