



The Effectiveness Of Complementary/Alternative Medicine For Pain Management In Postpartum Women: A Systematic Review

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OBJECTIVES



Attendees will understand that the various CAM treatments available as defined by the National Center for Complementary and Integrative Health.



Attendees will understand the various categories of post-partum related pain and what types of CAM treatments are effective in managing pain.



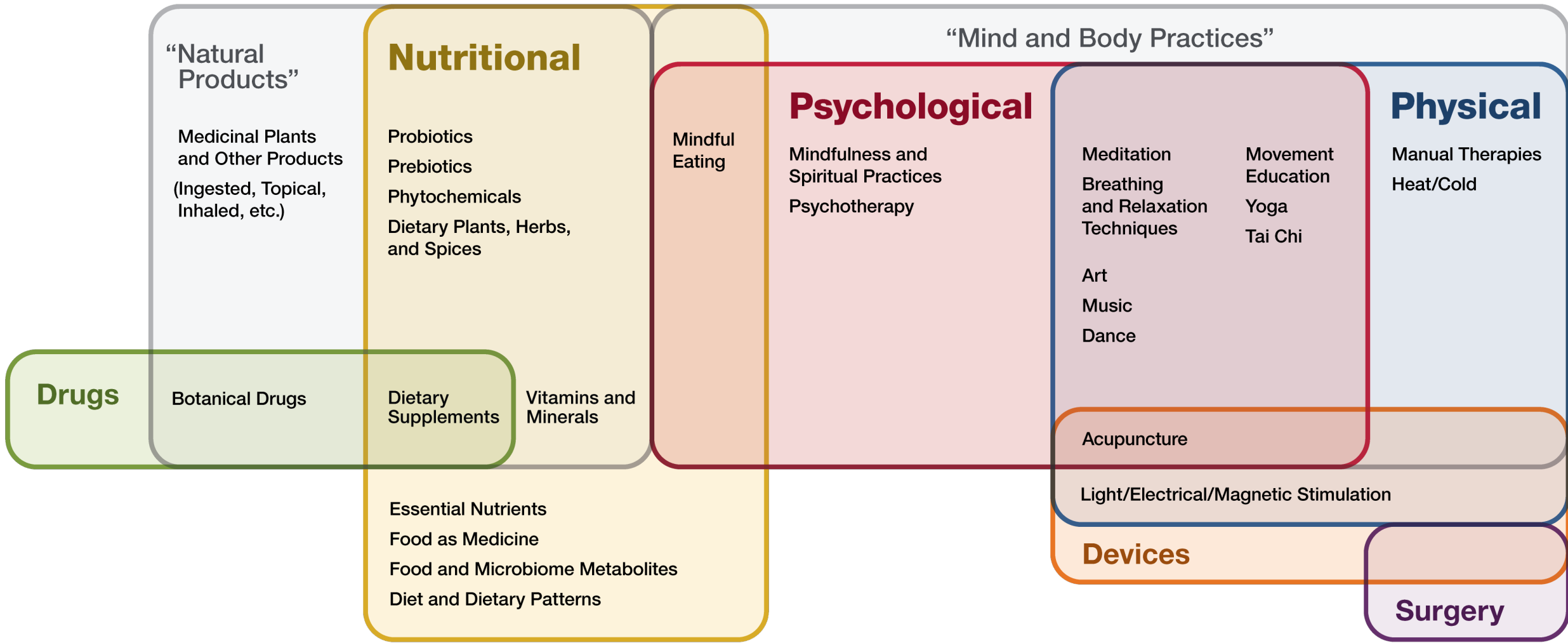
Attendees will understand the relevance of CAM treatments which are safe, effective, and included under the PT scope of practice.

Specific CAM Therapies as defined by the NCCIH¹

Multivitamin or multimineral
Vitamin
Mineral
Nonvitamin or herbal therapies
Mind–body therapy
Chiropractic or osteopathic manipulation
Massage
Movement therapy
Special diets
Homeopathy
Acupuncture
Naturopathy
Traditional healing
Craniosacral therapy
Ayurvedic medicine

BACKGROUND

- Research on postpartum pain is limited.
- There are no current systematic reviews encompassing recent literature focusing on all types of CAM and its ability to manage pain in postpartum women after childbirth.
- The National Center for Complementary and Integrative Health (NCCIH) defines a list of 15 specific CAM therapies.



CAM TREATMENTS¹

BACKGROUND CONTINUED

- Percentage of women, ages of 19-49 years, reported CAM usage in the last 12 months²:
 - 37% of pregnant women
 - 28% of postpartum women
 - 40% of nonpregnant/non-postpartum women
- Physical therapists play a major role in the pain management of postpartum women.
 - PT's will be able to understand various methods used to manage pain to accurately educate patients and refer out as needed.

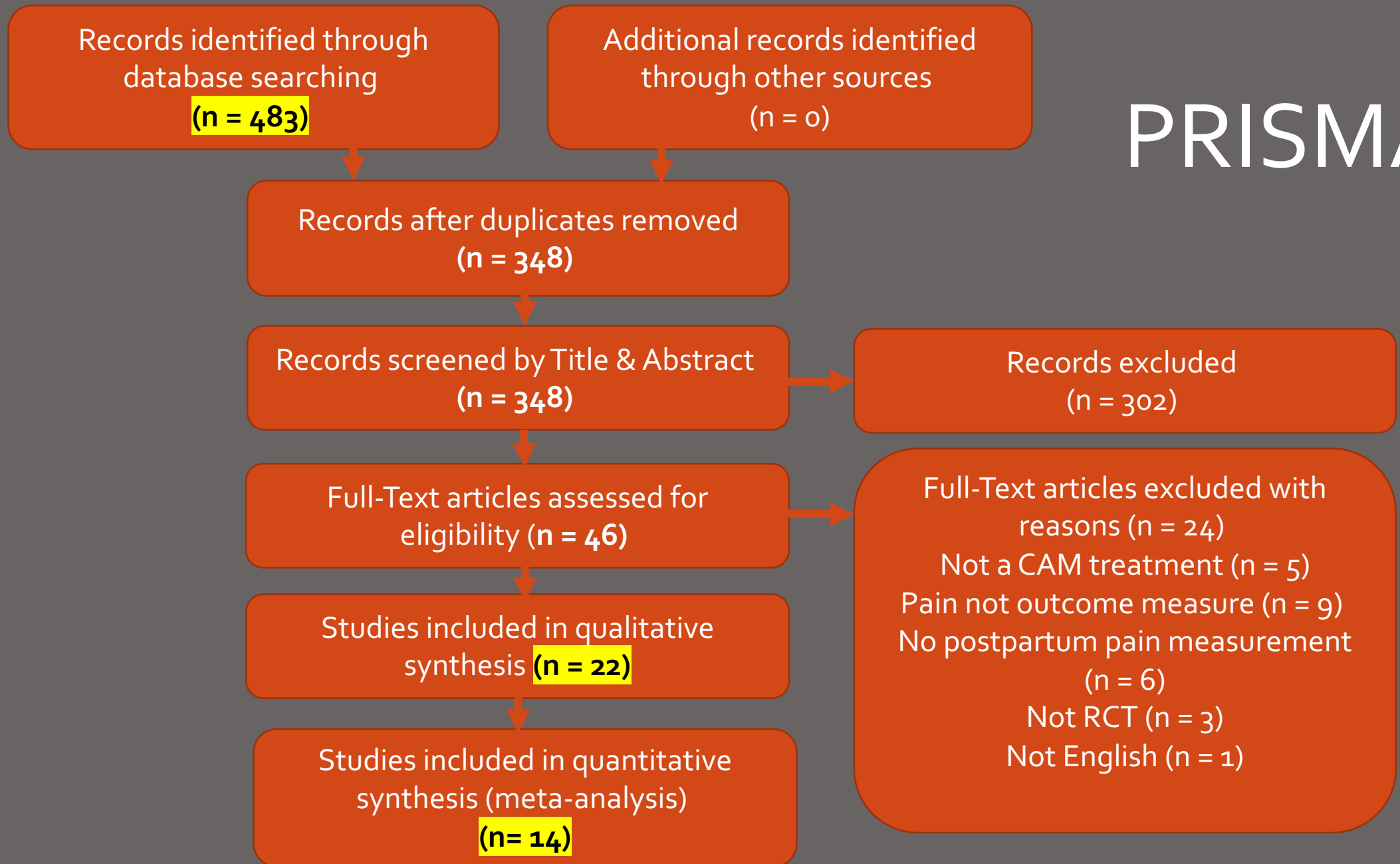
PURPOSE

The purpose of this systematic review was to determine the impact of complementary/alternative medicine (CAM) on pain in postpartum women.

METHODS

- **Search Terms:**
 - ("postpartum" OR "postnatal") AND ("pain") AND ("RCT" OR "random* control* trial" OR "random* clinical trial")
- **Databases:**
 - ProQuest, PubMed, Cochrane, & CINAHL
- **Selection criteria**
 - RCT
 - Women (≥ 18 years) with postpartum pain up to three years
 - CAM as defined by the NCCIH
 - At least one pain outcome measure
- **Search Limits:**
 - English language
 - Peer-Reviewed
 - RCTs
 - Studies from 2011-2021

PRISMA



STUDY ³⁻¹²	Eligibility Criteria	Random Allocation	Concealed Allocation	Baseline Comparison	Blind Subjects	Blind Therapist	Blind Assessor	Adequate Follow-Up	Intention to Treat	Between Group Comparisons	Point Estimate Variability	PEDro Score
Sukwadee K et al. (2018)	Y	Y	Y	N	Y	N	Y	Y	Y	Y	Y	8/10
Sailo ML et al. (2018)	Y	Y	N	N	N	N	N	Y	Y	Y	Y	5/10
Wong BB et al. (2018)	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	7/10
Malekuti J et al. (2019)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	10/10
Mohammadi A et al. (2014)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	10/10
Vaziri F et al. (2017)	Y	Y	N	Y	Y	N	Y	Y	Y	Y	Y	8/10
Solt KA et al. (2020)	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	7/10
Akbarzade M et al. (2015)	Y	N	N	Y	N	N	N	Y	Y	Y	Y	5/10
Gausel et al. (2019)	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	7/10
Kamel DM e al. (2016)	Y	Y	N	Y	Y	N	Y	Y	Y	Y	Y	8/10
Schwerla F et al. (2015)	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	7/10
Lee HG (2015).	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	7/10

STUDY ¹³⁻²⁴	Eligibility Criteria	Random Allocation	Concealed Allocation	Baseline Comparison	Blind Subjects	Blind Therapist	Blind Assessor	Adequate Follow-Up	Intention to Treat	Between Group Comparisons	Point Estimate Variability	PEDro Score
Afravi S et al. (2019)	Y	Y	N	Y	Y	N	N	Y	Y	Y	Y	7/10
Toker E et al. (2021)	Y	Y	N	Y	N	N	N	Y	Y	Y	Y	6/10
Ghana S et al. (2017)	Y	Y	Y	Y	N	Y	N	Y	Y	Y	Y	8/10
Saatsaz S et al. (2016)	Y	Y	Y	Y	N	N	Y	Y	Y	Y	Y	8/10
Jackson K et al. (2016)	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	9/10
Kim M et al. (2019)	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	7/10
Jaic KK et al. (2018).	Y	Y	N	Y	N	N	N	Y	Y	Y	Y	6/10
Dennis CL et al. (2012)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	10/10
Kwan WS et al. (2014)	Y	Y	Y	Y	Y	N	Y	N	Y	Y	Y	8/10
Vieira F et al. (2017)	Y	Y	N	Y	N	N	Y	Y	Y	Y	Y	7/10

PEDRO Average of 22 Studies: 7.5/10



RESULTS

RESULTS: Pain Categories

Breast/nipple pain
(3/5 statistically
significant)

Perineal pain (5/7)

Pelvic girdle pain
(0/1)

Low Back Pain
(LBP, 3/3)

General
postpartum pain
(2/3)

Post-Cesarean
Pain (PCP, 2/2)

TYPES OF CAM USED IN SELECTED STUDIES³⁻²⁴

- Lanolin
- Herbal compresses/ ointment
- Cabbage leaves
- Cinnamon
- Lavender
- Acupressure/ Acupuncture
- Dry cupping
- Mobilization/ Massage
- Turkish classical music
- Abdominal binders

Results: Breast/Nipple Pain

TABLE 1: Results for Breast/Nipple Pain Pre- & Post-Treatment using the VAS

	Mean VAS			Mean VAS post-		
	Pre-treatment	SD	N	treatment	SD	N
Sukwadee, et al. ³	6.9 pts	1.6	250	1.0 pts	1	250
Sailo et al. ⁴	6.5 pts	7.7	40	0.8 pts	3.5	40

TABLE 2: Results for Breast/Nipple Pain Pre- & Post-Treatment using the NPRS

	Mean NPRS			Mean NPRS		
	Pre-treatment	SD	N	post-treatment	SD	N
Wong et al. ⁵	7.6 pts	1.9	76	4.5 pts	1.4	76

- Statistically significant between-group reductions in **breast & nipple pain** when treated with:

- Herbal Compresses³
- Cabbage Leaves⁴
- Peppermint water⁵

*Visual Analog Scale (VAS): 11-point pain scale

*Numeric Rating Scale (NRS): 11-point pain scale

Results: Perineal Pain

- Statistically significant between-group reductions in Perineal Pain when treated with:
 - Myrtus Communis Flower⁶
 - Cinnamon Water⁷
 - Lavender Oil⁸
 - Acupressure⁹
 - Acupuncture¹⁰



TABLE 3A: Results for Perineal Pre- & Post-Treatment using the VAS/NPRS

	Mean VAS/NPRS Pre-treatment	SD	N	Mean VAS/NPRS Post-treatment	SD	N
Malekuti, et al. ⁶	7.3 pts	2.4	65	1.8 pts	1.9	65
Mohammadi et al. ⁷	5.0 pts	1.8	72	1.2 pts	1.6	72
Vaziri et al. ⁸	7.0 pts	1.9	29	4.6 pts	2.0	29
Solt et al. ⁹	5.0 pts	1.8	40	2.6 pts	1.4	40
Jaic et al.	4.0 pts	2.2	29	2.5 pts	3.2	29

TABLE 3B: Results for Perineal Pre- & Post-Treatment using SMPO

	Mean Pre-treatment	SD	N	Mean Post-treatment	SD	N
Akbarzade et al. ¹⁰	3.6 pts	1.0	50	1.0 pts	0.5	50

Perineal area: between the thighs that marks the approximate lower boundary of the pelvis and is occupied by the urinary and genital ducts and rectum

*Visual Analog Scale (VAS): 11-point pain scale
 *Numeric Rating Scale (NRS): 11-point pain scale
 *Short-Form McGill Pain Questionnaire (SMPO): 6-points scale

Results: Pelvic Girdle Pain

- Gausel et al.¹¹
 - Improvements were noted with use of chiropractic treatment in intervention groups.
 - **No significant difference was found between or within groups.**

TABLE 4: Results for lumbar mobilization for postpartum PGP (Gausel, et al.¹¹)

	Mean VAS Pre-treatment	Mean VAS Post- treatment
Gausel et al.	4.5 pts	2.3 pts

*Visual Analog Scale (VAS): 11-point pain scale

Results: Low Back Pain

- Group A: posterior-anterior lumbar mobilizations with traditional treatment.
- Group B: placebo/tactile mobilizations with traditional treatment.
- Group C: traditional treatment (infrared and ultrasound) only.
- *All statistically significant findings

TABLE 4: Results for lumbar mobilization for postpartum LBP (Kamel, et al.¹²)

	Mean VAS Pre-treatment	SD	N	Mean VAS Post- treatment	SD	N
Group A	7.2 pts	1.08	15	2.4 pts	0.98	15
Group B	7.3 pts	0.96	15	3.6 pts	0.88	15
Group C	7.5 pts	1.06	15	4.9 pts	1.27	15



https://www.physio-pedia.com/Manual_Therapy_Techniques_For_The_Lumbar_Spine

<https://www.researchgate.net/figure/Lumbar-Posterior-to-Anterior-Central-and-Unilateral-Graded->

*Visual Analog Scale (VAS): 11-point pain scale ¹⁷

Results: Low Back Pain

TABLE 5: Results for osteopathic manipulative therapy (OMTh) in women with postpartum LBP (Schwerla, et al.¹³)

	Mean VAS Pre-treatment	SD	N	Mean VAS Post-treatment	SD	N
OMTh Group	7.3 pts	0.9	40	2.0 pts	1.6	38
Control Group	7.0 pts	1.0	40	4.2 pts	3.1	39



<https://www.nccih.nih.gov/health/spinal-manipulation-what-you-need-to-know>



<https://theconversation.com/osteopathy-can-be-used-to-treat-mental-health-issues-related-to-back-pain-new-study-94845>

*Visual Analog Scale (VAS): 11-point pain scale ¹⁸

Results: Low Back Pain

- Intervention group statistically significant lower pain scores at 14 days post-partum after 5 days of massage.¹⁴

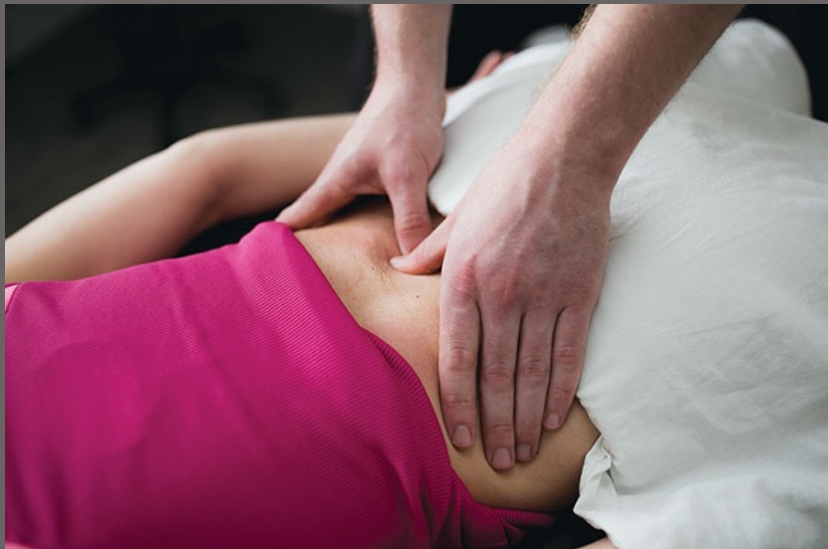


TABLE 6: Results for back massage interventions for LBP in puerperal women (Lee, et al.¹⁴)

	Mean VAS Pre-treatment	SD	N	Mean VAS Post-treatment	SD	N
BM Group	5.0 pts	1.97	30	2.9 pts	1.71	30
Control Group	4.7 pts	1.80	30	4.4 pts	1.77	30

<https://www.massagetherapycanada.com/the-down-low-of-lower-back-pain/>

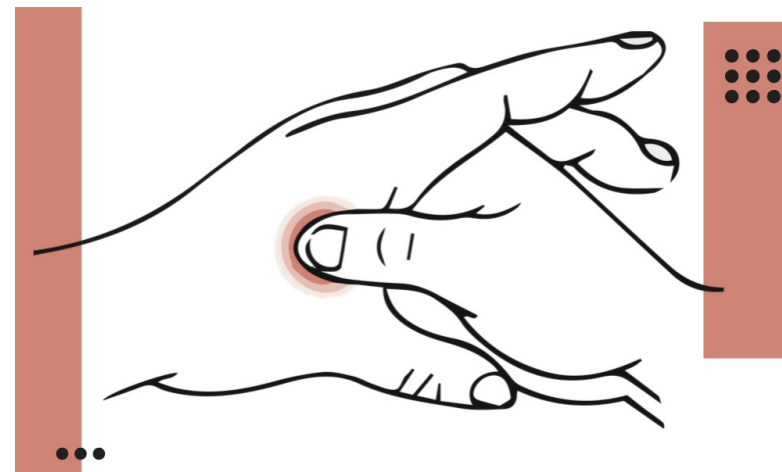
*Visual Analog Scale (VAS): 11-point pain scale

Results: General Post-Partum Pain

- **Acupressure:** Afravi et al.¹⁵
 - Labor pain reduction is made by reduction of anxiety level, and probably acupressure can cause release of internal opiates and as a result, pain reduction.
- **Turkish Classical Music:** Toker et al.¹⁶

TABLE 7: Results for General Post-Partum Pain Pre- & Post-Treatment using the VAS

	Mean VAS Pre-treatment	SD	N	Mean VAS Post-treatment	SD	N
Afravi et al. ¹⁵	4.3 pts	2.53	31	4.1 pts	2.33	31
Toker et al. ¹⁶	6.5 pts	2.63	42	2.2 pts	1.17	42



Results: Post-Cesarean Pain

Abdominal Binders: Ghana et al.¹⁷

- Pain scores of pts in abdominal binders' group was lower compared with control group for all subsequent time points.

Massage: Saatsaz et al.¹⁸

- Pain scores of pts who received massage in hands/feet & feet were lower compared to control group for all subsequent time points.

TABLE 8: Results for Post-Cesarean Pain Pre- & Post-Treatment using the VAS

	Mean VAS Pre- treatment	SD	N	Mean VAS Post- treatment	SD	N
Ghana et al. ¹⁷	9.0 pts	3.07	89	2.0 pts	0.74	89
Saatsaz et al. ¹⁸	5.1 pts	0.89	52	3.2 pts	0.64	52

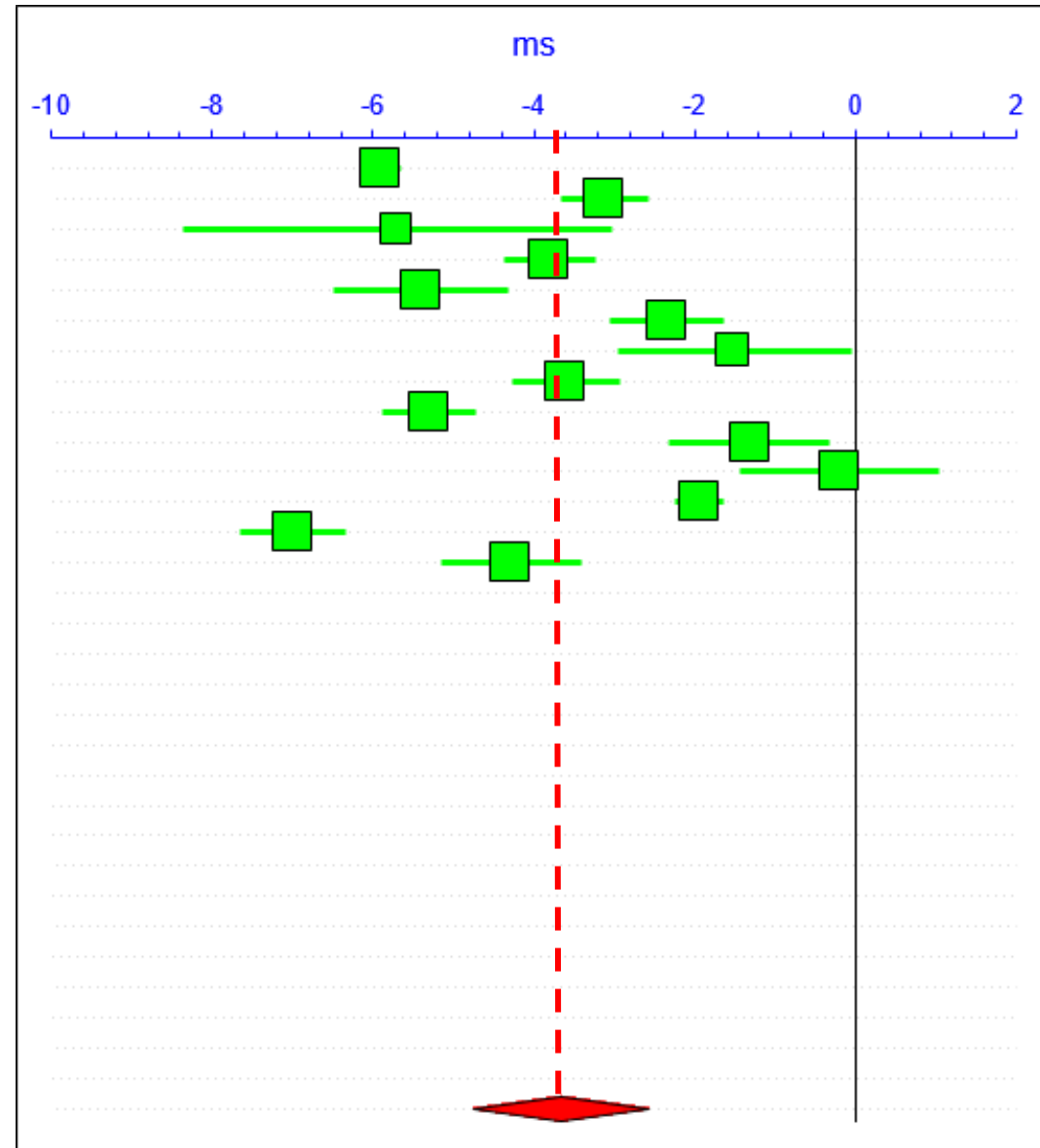


<https://www.massagemag.com/what-is-reflexology-its-not-the-same-as-foot-massage-129865/>

<https://www.nyorthousa.com/product/nyortho-universal-abdominal-binder/>

Results: Meta-Analysis

- 14 Studies
- Seven pain categories emerged with **statistically significant between-group reduction of pain** in CAM groups vs controls.
- VAS/NRS for 14 CAM groups
- Mean Difference = **-3.66pts**
- 95% Confidence Interval (CI) [-4.75, -2.57]



CONCLUSIONS

Strong evidence exists supporting the use of various CAM treatments to decrease pain in Postpartum women.

Results displayed greater pain reduction than usual care.

LIMITATIONS

Small sample sizes

Lack of blinding

Lack of long-term follow-up

Lack of adherence to protocols

FUTURE RESEARCH

1

Determine optimal treatment parameters for CAM use

2

Long term CAM interventions for postpartum pain

3

Use of co-interventions with CAM and usual care for postpartum pain

CLINICAL RELEVANCE

- Meaningful clinical improvements were found for **abdominal binders, lumbar mobilization, cabbage leaves, and herbal compresses** which exceeded the NRS MCID value (-3.0pts).
- PTs should review evidence on the use of CAM treatments.
- Clinicians should understand that CAM treatments can be effective in treating postpartum pain.

TAKE HOME MESSAGE

- Clinicians should be prepared to provide patient education and referrals as needed for pain in postpartum women.
 - Especially in those considering or already using CAM as holistic management.

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QUESTIONS?

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