

# Women's experiences of pharmacological of Non-Pharmacological Pain Relief Therapy: Qualitative Systematic Review

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## ABSTRACT:

Most of the mother adopt non pharmacological pain reducing methods during their child birth. The reviews reveal that effective pain relief methods were associated with mother's satisfaction level. Mother's views and experience on non pharmacological pain reducing methods like music therapy, relaxation technique and massage were studied. Nearly 10 electronic data base were searched. Thematic and meta-ethnographic techniques for data analysis purposes and GRADE-CERQual approach to assess confidence in review findings were used. Among 48 research paper twenty-four studies provided findings for the synthesis: music (n =5), relaxation (n=3) and massage (n =5) all conducted and mothers in active stage of labour. Re-analysis of the review findings generated five key themes. 'Impact on pain' describes varying levels of effectiveness of non pharmacological methods used. Mothers possess different types of experiences in pain reduction methods. The non Pharmacological methods reduce pain with no negative side-effects. It facilitates bonding with professionals. Mothers need more information and benefits of all available pain reducing methods.

**Keywords:** parturient mothers, non pharmacological methods, CERQual,

## 1. INTRODUCTION

A wide range of non pharmacological interventions are easily available to reduce labour pain. As it is non invasive it is easy for mothers to adopt the same. Pain perceived during childbirth is a complex, multifaceted and subjective phenomenon. Widely it can result in some negative effects for the expectant mother, her family, healthcare providers and healthcare systems at large. Apart from maternal effects such as increased level of stress, fear, anxiety and unreduced labour pain can also accommodate placental perfusion leading to birth asphyxia, late decelerations and result in foetal distress. This creates

feelings of hopelessness and helplessness to the woman's family. There are several non-pharmacological methods such as, listening music, lower back massage, breathing techniques, meditation and partner or doula support which have no adverse effects on either mother or baby

Non-pharmacological method reduces labour pain, with no or minimal harm to the parturient mother and foetus. It enhances progress of labour and also simple and cost-effective. These have the capability to reduce analgesic consumption during labour and include massage, breathing techniques, positioning, hydrotherapy, music, guided imagery, acupuncture, and aromatherapy.

Non-pharmacological pain reduction methods associated with some relaxation technique and massage technique are referred to as mind-body. Relaxation methods such as yoga, music, meditation and breathing techniques, and different forms of massage induce calm and reduce the pain level during labour.

In some studies, trials of relaxation techniques during labour have reported reduction in the intensity of pain and increased satisfaction level. It facilitates child birth without any adverse effects. However, there was a wide variation in the methods of application of these relaxation techniques. A Cochrane systematic review found that the relaxation and massage methods are safe and non-invasive.

In conclusive result are however, when the effectiveness of such intervention in reducing labour pain is investigated. A systematic review including 24 studies have revealed that relaxation, music therapy and massage were associated with reduction in pain intensity

While Bohren 2017 concluded that giving continuous support to mother brought improvement in mother's birth experiences and clinical outcomes, implementation of this intervention remains substandard. The level of organisation and support required to reorganise the maternity services to allow the presence of companions is complex and requires a better understanding of the factors that may influence success and procurement. Understanding the values, preferences, and knowledge of key stakeholders, as well as the practicability and applicability of the intervention for various contexts and health systems are essential for successful execution.

## 2. Material and Methods

The review was taken from four separate non pharmacological interventions in the mothers experience by adopting music, breathing, meditation and massage. The design includes pre-designed search strategy, quality appraisal technique and GRADE-CERQual (Confidence in the Evidence form Review of Qualitative Research) tool. Data analysis was carried out by using thematic and Meta ethnographic technique

**Search strategy:** searched MEDLINE, CINHL, psycINFO, AMWD EMBASE, PUBMED, AJOL, GIM ERIC,BNI and also citation taking and reference checking

### Incisive criteria:

- Mothers who adopt non pharmacological intervention during the labour pain
- Papers concluded views and experiences of healthy mothers
- Studies published after 1995

**Study selection:** Searches were carried out before 2020. GT examined the initial hits (title and abstracts) in opposition to the inclusion criteria. Full texts were blind by GT and CF, and inclusion agreed by consensus. Where there was disagreement, a second author screened the text, after which final agreement was reached.

## 3. Result and Discussion

The data analysis was accomplished by general thematic approach and meta-ethnography and CERQual (Confidence in the Evidence form Review of Qualitative Research). All the data shared and discussed with guide and the data was logged on excel sheet. undertaken the reading of research journal and each paper identify and grouped into relevant section, this process done by using meta-ethinographic technique and conclusion of study were assessed for CERQual approach. Each review finding was caregorised for confidence on a scale of very low, low, moderate and high.

Screening and qualitative apparaisal carried out, the studies under taken in various places in the world. 8 studies were included in the music (n=99), 4 studies were included in massage (n=94) the included studies were from various desing such as phenomological and qualitative methods.

The summary of conclusion and CERQual rating for each pain reducing methods are detail in table 2

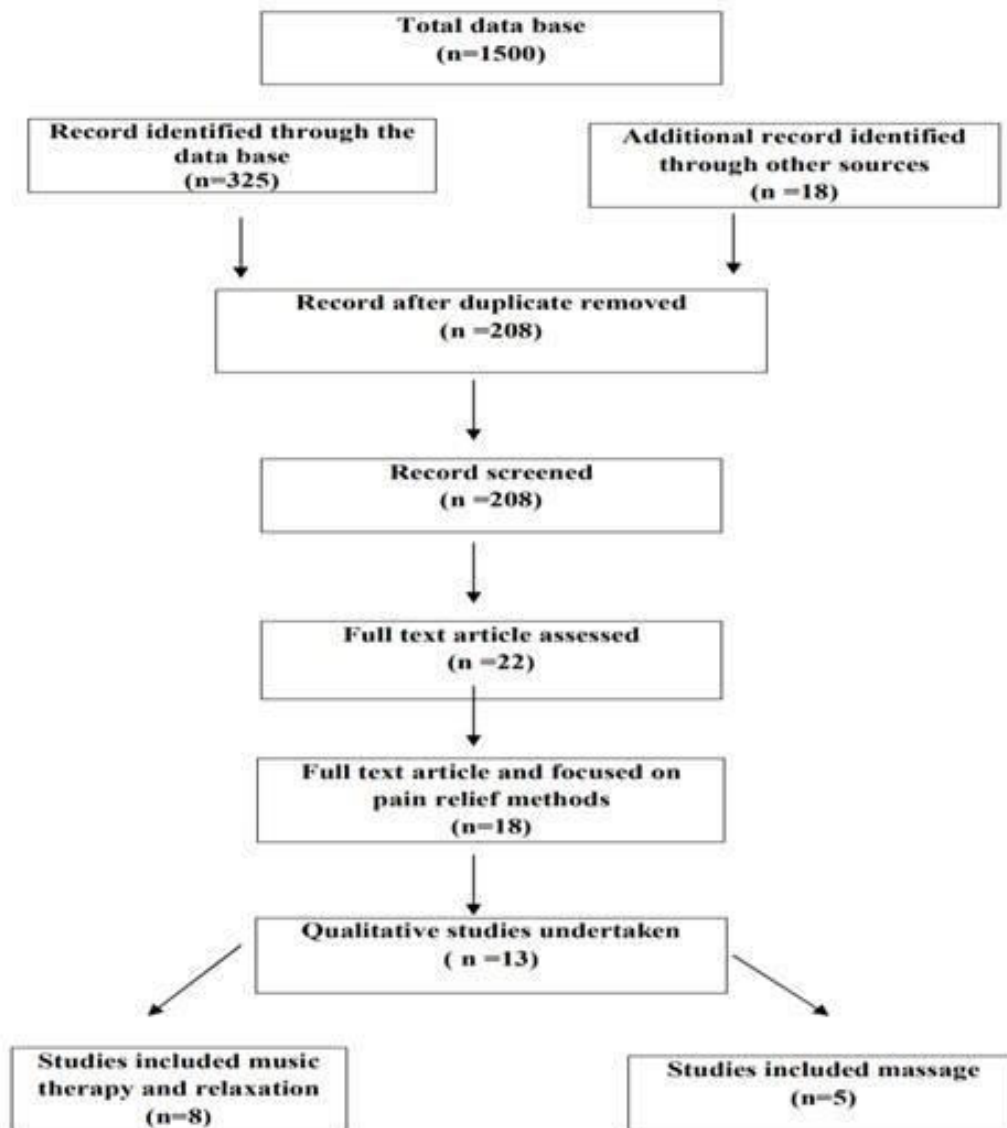
**Table1 Characteristic of Included Study**

Study code /Year and contrary	participant	Pain relief method	Outcome measure	Design data collection method
Levett, smith Bensoussan 2016, Australia	13 mother 7 partner	Message and relaxation	To gain insight into experience of mother	RCT /Interview
Andren&Lundgrem 2005,UK	50 mother with partner	Massage	It describe mother's experience during latent phase of labour	RCT / Interview
Rubneid Barreto silva gallo 2013 ,Australia	46 mother with single foetus	Lumbar message	The primary outcome was reduce the severity of pain and participants satisfaction with massage duringlabour	RCT/Open ended survey question
Miquelutti&cecatti 2013,brazil	21 mothers	Relaxation and massage technique	Explain the experience of labour and delivery as reported by mother whose participated	RCT /Interview
Kmber 1998,UK	50 mother with partner	Massage	To undertaken evaluation of massage service	Evaluation survey/ Open ended survey question
B cwning 2000,canada	11 mothers	Music therapy	Describe the experience of music group intervention	qualitative with unspecified/ Interview method
Kimi et al 2011,turkey	13 mother	Music therapy	To evaluate to music acan affect the experience of child birth	qualitative with unspecified/ Interview

Browning, CarylAnn 2001,USA	20 mother	Music therapy	Effectiveness of musicin assisting relaxation during child birth	qualitative with unspecified/ Interview
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Tabarro,de campos Galli ,Novc&peeira 2010,Brazil	12 mother	Music therapy	Describe the effect of persons selected song during labour	qualitative with unspecified/ Interview
Fisher Hauck ,Bayes&Byrne 2012.Australia	12 mothers	Mindfulnes s interventio n (relaxation )	Describe mothers experience of mindfulness intervention	Focus group
Duncan & Bardacke, 2010,US A	27 mother	Mindfulnes s interventio n (relaxation)	Describe the changes in the dimensions of the stress and coping process observed in pregnant mother participating in the intervention with their partners during their third trimester of pregnancy.	qualitative with unspecified/ Interviews
Pierce 2001,USA	76% return rate - but no denominato r provided	Toning (relaxation)	To undertake an evaluation of the therapist's music/toning service	Evaluation \survey

Identified 14 papers from 51 studies published on or before 9 September 2020 that fulfilled the inclusion criteria were included in this synthesis. Figure 1 depicts the flow of studies



**Table 2 Review finding and CERQual assessment**

S. No.	Review finding	CERQual assessment
1	The mother were taught method of techniques during the pregnancy period; mother valued the different methods to adapt to their changing need throughout labour.	low
2	Ability way to 'work with the pain': The use of massage techniques gave mother an alternative method to deal with labour pain - mother reported that massage techniques modified their approach of managing pain through the right concept of 'working with the pain	low
3	Affirmative collision upon sense of relaxation and control: Mother reported that massage techniques improved relaxation and provided inner resources to remain calm and maintain self-control	low
4	Mother reported that massage techniques were helpful to their welfare, including finding massage comforting, positive, a means to overcome anxieties and it gives a sense of safety during the birth.	low
5	Massage techniques facilitated labour coping skills: Mother found that massage techniques were useful to enable them to cope and manage the labour process	Moderate
6	Improved wellbeing during the birth and postnatal period: The relaxation techniques provided mother with positive feelings of safety, strength, joy and connection. The mother reported ongoing benefits throughout the postnatal period such as peaceful	low
7	Relaxation techniques facilitated labour coping skills: Mother reported that the multiplicity of techniques formerly taught enhanced their ability to cope, concentration, sense of calm as well as facilitating other coping methods such as breathing and visualization	low
8	Augmented confidence approaching childbirth: Mother valued being taught relaxation techniques during the antenatal period in willingness for labour. For some, this was considered effective in reconstructing fears of labour, for others it increased their feelings of confidence approaching childbirth	low

9	Relaxation techniques facilitated labour coping skills: Mother reported that the range of techniques formerly taught enhanced their ability to cope, concentration, sense of calm as well as facilitating other coping methods such as breathing and visualization	low
10	Relaxation techniques facilitated a positive labour and birth with effectiveness as a pain relief: Relaxation techniques had several positive purposes such as creating a peaceful birthing environment. The techniques were an effective pain relief method, either by lessening the perceived levels of pain or by making the contractions more tolerable. Additionally, the mother reported feelings of relaxation and an comfortable sense of control. Together, this facilitated affirmative feelings regarding the labour and birth	Moderate
11	Better participation of birth companions and caregivers: Mother reported that taught massage techniques provided their birth companions with the tools to participate in labour preparation and during the birth and improved their relationships with caregivers	low
12	Superior wellbeing during the birth and postnatal period: The relaxation techniques provided mother with positive feelings of safety, strength, joy and connection. The mother reported ongoing benefits throughout the postnatal period such as comforting.	Moderate
13	Not always effective: For a minority of mother, the taught techniques were not always as effective as they predictable in alleviating pain.	Very low

Research studies on music, relaxation and massage did not describe the reason for the selection of these methods of pain relief by the mothers. This was often because participating mothers used were taught these methods as part of their involvement in a research study. However, a woman from Klimi et al's music therapy study offered a different perspective than those who planned to use an EA. She described how music made her desire for a tranquil, intervention-free birth comes true.



**‘I wanted a friendly environment with my own people, music, tranquillity....Let my baby come to life calmly, without medication and, of course, with vaginal birth’.**

As a whole there were resemblance and differences in adoption of different methods of pain reduction and influenced mother in the pre-birth period. For some mother, knowing an EA was available helped to eliminate fears and gave a sense of reassurance

**‘A good thing [in New Zealand] is that an epidural is right there as an alternative. In Japan, there was nowhere and no hospital to do such a thing. I was thinking that I really did not want to give birth in Japan because I was sensitive to pain’.**

Similarly, mother who received antenatal training in massage and/or relaxation methods described the knowledge of these pain-relief methods which provided a sense of pain reduction

**‘I think for me it was the acupressure, knowing that there was something that could help without drugs or an epidural’**

Training in the use of non-pharmacological techniques facilitated mother to feel ‘prepared’, ‘calm’ and ‘empowered’ for childbirth

**‘So I found that this education empowered me with knowledge and provided lot of information about alternate courses of action and different scenarios**

Some mothers used the relaxation techniques in the antenatal period to reduce childbirth panic: ‘When I got really anxious about the birth, I would just breathe to stop my mind from going all sorts of bad places’

Whereas mother who had made a decision for an EA worried about needle placement, ineffectiveness and negative implications

**‘I remember worrying because of what I heard about the use of a big needle, and the risks and complications’**

Overall, the findings revealed that the mixed experiences of the non-pharmacological (music, massage, relaxation) methods of pain relief were included in the review. This sometimes related to the unexpected intensity of labour pains, but it was remarkable that the mother who use these methods were more likely to narrate negative experiences of health provider aid.

Many of the mother this who used non-pharmacological methods were more likely to express beliefs aligned with a natural physiological approach, and their narration recommended that they felt prepared for childbirth. Those who used non-pharmacological techniques referred the effectiveness of these methods in encouraging and facilitating positive support from health care providers and birth supporters. The mother who used relaxation/massage techniques described them to be less effective than expected, but others who had been taught relaxation methods continued their use in the postnatal period gave an account of positive effects for themselves, their babies and/or their families. Overall, the findings offer some support to the recent effectiveness systematic review of methods for labour pain reduction

However this study has some limitations. First, the review concentrated on specific pain relief techniques, and others e.g. acupuncture, sterile water injections were not included. There is no assurance that we examined all published studies in our search strategy. We found few studies that related to mother's experiences of opioids or massage techniques were not undertaken in low-middle income countries.

On the other hand, Relaxation and massage techniques facilitated meaningful and connected mother- provider relationships. This approach aligns with a midwifery philosophy of continuous, woman-centered care to enhance the bio-psychosocial physiology of child birth with maternity professionals who use complementary therapy approaches referring to how they advanced confidence and pride in their carrie.

## 5. CONCLUSION

Mother have mixed incidents of various non-pharmacological pain relief methods. Mother observed in their opinion as to whether the different pain relief methods were fruitful in reducing their labour pain. The different pain relief methods could enable mother to feel and relax in control. However, mother who adopted non-pharmacological methods did not necessarily facilitate a vaginal birth or reduce labour pain, they could allow mother to effectively work with their physiological responses and facilitate a 'team' approach with their birth enhancers. Continued use of relaxation techniques in the post-natal period by some mother also provided benefits for them, their babies, and their families, suggest that learning these techniques furnished long term basis for self-Aid. As this was seen as valuable by mother from both groups, the value of social support in labour should be recognized by founders and providers and prior it is end in service provision and staffing arrangements.

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