Proceeding of The 6st International Conference on Interprofessional
Health Collaboration and Community Empowerment

Bandung, 22-23 November 2023

EFFECT OF MUSIC THERAPY ON PAIN PERINEUM WOUNDS AND POSTPARTUM ANXIETY: EVIDENCE-BASED CASE REPORT

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Abstract, Introduction: The postpartum period is the period after childbirth, starting from the time of completion of labor until the womb is restored to its pre-pregnancy state and the length of the postpartum period is approximately 6 weeks. Perineal tears that exceed a first-degree tear must be stitched, resulting in perineal pain after giving birth. Pain is a very subjective feeling of discomfort and only the person who experiences it can explain and evaluate this feeling. Some mothers experience anxiety after giving birth as the biggest obstacle, such as fear of open stitches, embarrassment, or feelings of pressure. Anxiety itself can cause increased pain. The muscles become tense because of this, causing the perineal wound pain to become more pronounced.
Method: The method used is searching for evidence through databases from Google Scholar, PubMed, and Cochrane which were published in 2018-2023.
Objectives: To determine the effect of music therapy on pain and anxiety in postpartum mothers.
Result: The results of the case report show that music therapy reduces pain and anxiety during postpartum.
Conclusion: Music Therapy reduces pain and anxiety in postpartum mothers.

Keywords: Postpartum mothers, Music therapy, Perennial wound pain, Postpartum anxiety, Maternal health.

INTRODUCTION

The postpartum period is the period after childbirth, starting from the time the delivery is completed until the womb is restored to its pre-pregnancy state and the length of the postpartum period is approximately 6 weeks.(1) During this period the body will experience both physiological and psychological changes. The physiological adaptation process includes changes in vital signs, hematology, cardiovascular system, urination, digestion, musculoskeletal system, endocrine system, and reproductive organs, while the psychological adaptation process is a process that will go through three phases of the mother's adjustment to her role as a parent, namely the phase-dependent (taking in), independent-dependent phase (taking hold), and interdependent phase.(2)

Perineal pain is a manifestation of suture scars that the client feels due to rupture of the perineum during expulsion, that is, the leading part of the child is at the pelvic floor. Perineal tears that exceed first-degree tears, such as the perineal mucosa and muscle, must be sutured so that you experience a degree of perineal pain after giving birth. Pain is an uncomfortable feeling that is very subjective and only the person who experiences it can explain and evaluate this feeling. In general, it can be defined as a feeling of discomfort, either mild or severe.(1)

In a cohort study, 241 postpartum mothers experienced perineal pain, and 173 (92%) postpartum mothers reported perineal pain on the first day. In a study with a large-scale survey conducted two months on postpartum mothers, most of the results of the study said that they still felt pain in their perineum, 77% of whom were primiparas and 52% were multiparas.(3)

The experience of some mothers after giving birth is experiencing anxiety. This anxiety can become an obstacle during the postpartum period. These anxieties include fear of open stitches, embarrassment, or feelings of pressure. One of the worries that often arises in postpartum mothers is anxiety about eliminating. Continuous anxiety can cause elimination disorders. If this is left untreated and not treated, it will cause involution disorders because a full bladder will interfere with uterine contractions. Anxiety itself can cause increased pain. The muscles become tense because of this, causing the perineum wound pain to become more pronounced.(4)

Various efforts have been made to reduce pain, both pharmacologically and non-pharmacologically. Pharmacological pain management is more effective than non-pharmacological methods, but pharmacological methods are more expensive and have the potential to have less good effects. Meanwhile, non-pharmacological methods are cheaper, simpler, effective, and without adverse effects. One non-pharmacological method is music therapy.(1)

Music Therapy can reduce physiological pain, stress, and anxiety by diverting a person's attention from pain. Music has been proven to show effects, namely reducing heart rate, reducing anxiety and depression, eliminating pain, and lowering blood pressure.(1)

Smaller nerve fibers will produce stimulation from the music which will be able to eliminate pain signals and can stimulate the pituitary which works to release endorphin hormones so that pain in postpartum mothers can be reduced.(5) Music has several advantages, namely being able to provide peace of mind and having benefits as emotional control. Being aware of the tempo, rhythm, and high and low tones can produce alpha waves and beta wave fibers found in the eardrum so that it can provide a feeling of comfort to the brain and be able to receive stimulation and provide a relaxing

effect, and can lull you to sleep.(5)

CASE

The subject in this case study is a postpartum child who has given birth to her first child. The intervention given was music therapy to reduce perineal pain due to tearing during childbirth, as well as anxiety in postpartum mothers. The mother complained of pain in the stitched wound, aches, a little heartburn, fear of walking, and worry about cleaning the stitched wound when urinating. The results of the physical examination revealed that there was a grade II perennial suture wound. The caregiver measured the level of pain using the Visual Analog Scale (VAS) instrument, resulting in a score of 5, which means moderate pain. Meanwhile, anxiety was measured using the Visual Analog Scale Anxiety (VAS-A) instrument, a score of 5 was obtained, which means moderate anxiety. Based on the results of the assessment, the diagnosis made was P1A0 postpartum with grade 2 laceration with perennial pain and anxiety.

METHOD

The formulation of the clinical question in this case is: Is there an effect of music therapy on perineal wound pain and anxiety in postpartum mothers?
P: Postpartum Anxiety and Pain
I: music therapy
C: There is no comparison or other intervention
O: The success of music therapy for postpartum anxiety and pain

Search for articles using the Google Scholar, PubMed, and Cochrane Library databases. The keywords used are words that represent the population, namely music therapy, Anxiety, Pain, and Postpartum.

Relevant journal articles then selected based on inclusion criteria which included a publication limit of 5 years. The last time was in 2018 to 2023, full-text, research design is a systematic review and RCT in English. The final result of the selection is 1 article which is shown in the following scheme:

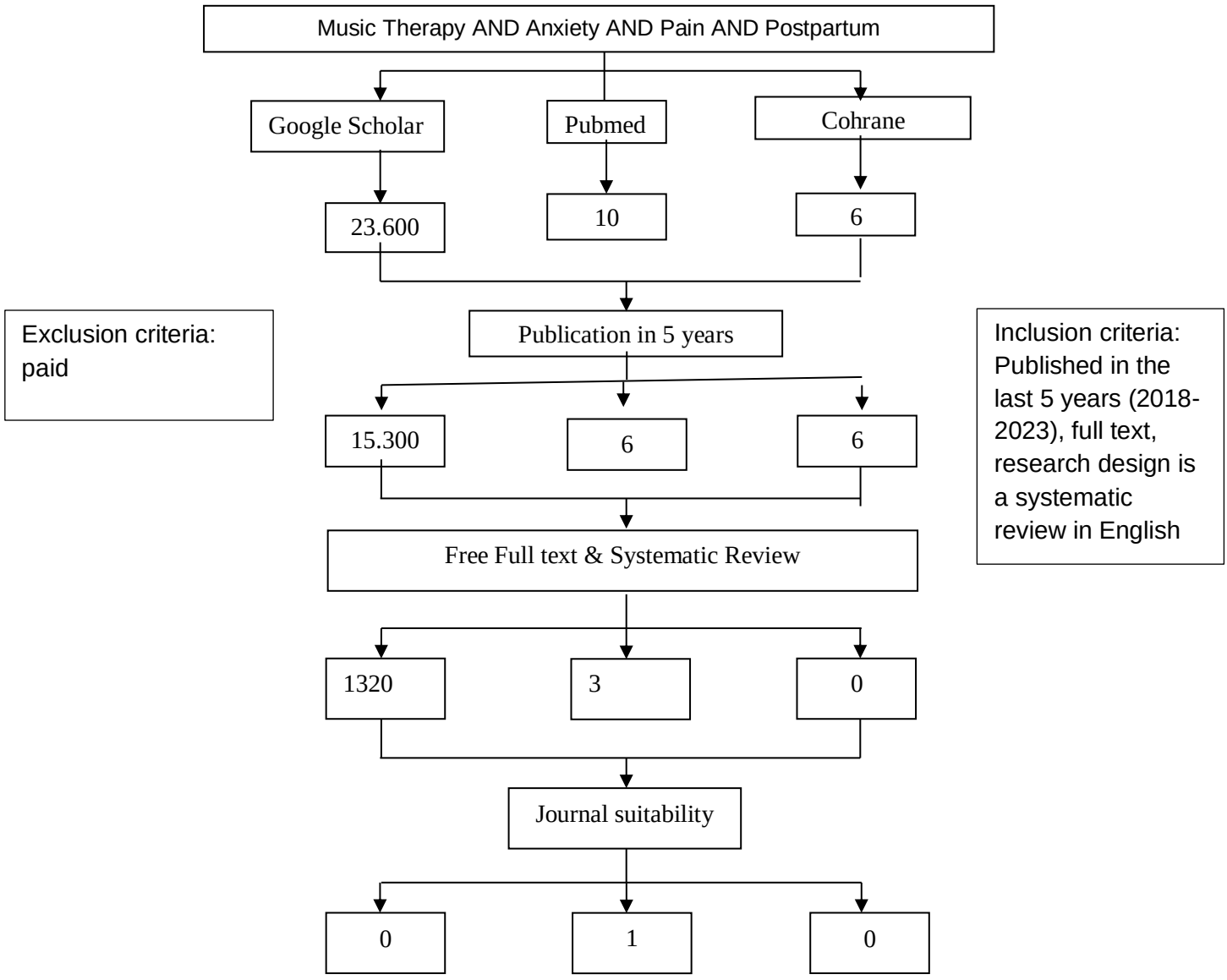

Figure 1. Flowchart of literature selection

Based on the screening results, one article was obtained which was used in the literature review of this research. One such article was then identified as being related to design research, validity, importance, and applicability as shown in Table 1.

Table 1. Critical Study

No	Jurnal	Validity	Important	Applicable
1	**Title:** A Systematic Review and Meta-analysis of the Effects of Music Therapy on Postpartum Anxiety and Pain Levels.(6) **Writer:** Sevil Hakimi1 ID , Khadije Hajizadeh2* ID , Robab Hasanzade3 ID , Minoo Ranjbar3 ID Journal Name: J Caring Sci, 2021, 10(4), 230-237 doi: 10.34172/jcs.2021.033 https://jcs.tbzmed.ac.ir **Publication Year:** 2021 **Databases:** PubMed	This research uses a Systematic Review design. The literature search used the Cochrane, Medline, Embase, Web of Science, Scopus, PubMed, and Persian databases including the Scientific Information Database (SID) and the Iranian Registry of Clinical Trials (IRCT). searched using the keywords postpartum, postnatal, after childbirth, postnatal, after delivery, after birth, puerperium, puerperal, anxiety, randomized controlled trial, randomized trial, randomized clinical trial, and randomized controlled The keywords used to search for journals on Pubmed are 1. anxiety; 2. after childbirth OR puerperal OR puerperium OR after birth OR after delivery OR post birth OR postpartum OR postnatal; 3. randomized controlled OR randomized controlled trial OR randomized trial OR randomized clinical trial; 4. #1 AND #2 AND #3	From a total of 60 articles taken, four articles were selected that met the requirements and entered the meta-analysis process. According to the results, the levels of anxiety (MD=-0.68, 95% CI=-1.90 to -0.54, P <0.001) and pain (MD=-1.85, 95% CI=-3.96 to 0.26, P <0.001) of patients in the therapy group music decreased more significantly than in the control group. So it can be concluded that music therapy has a beneficial effect on reducing the intensity of pain and anxiety in post-partum mothers.	In some of these journals, the music used as therapy varies, including soft music, Spanish guitar music, music of your own choice, and therapy music. These kinds of music are easy to find on YouTube or other music platforms so that journal interventions can be easily applied to postpartum mothers to reduce the pain and anxiety they feel.

		The year of publication of the journal is from March 2019 without a time limit., with criteria based on randomized clinical trials; quasi-experimental in English. The inclusion criteria were postpartum mothers Postpartum anxiety and pain levels were measured using the Visual Analog Scale (VAS).		

RESULTS AND DISCUSSION

The results of journal searches found 1 article that was used in the application of EBCR music therapy in reducing pain and anxiety in postpartum mothers. Based on the article A Systematic Review and Meta-analysis of the Effects of Music Therapy on Postpartum Anxiety and Pain Levels (Sevil Hakimi, DKK 2021) Reveals significant changes in postpartum pain level scores using VAS (Visual Analog Scale) and postpartum anxiety using VAS-A (Visual Analog Scale Anxiety). VAS is considered the most efficient measurement tool for pain intensity and anxiety that has been used in research and clinical settings. VAS is generally presented in the form of horizontal lines. In its development, the VAS resembles the NRS in that the presentation method is given numbers from 0-10, each number can indicate the intensity of pain and anxiety felt by the patient.(7,8) The music used as therapy varies, including soft music, Spanish guitar music, music of your own choice, and music therapy. These kinds of music are easy to find on YouTube or other music platforms so that journal interventions can be easily applied to postpartum mothers to reduce the pain and anxiety they feel.(6)

The postpartum or postpartum period is six weeks from the time the baby is born until the reproductive organs return to their normal state before pregnancy. Postpartum period the body experiences physiological and psychological changes. Psychological adaptation is necessary for the achievement of the new role as a mother. The transition to becoming a mother can be challenging for a woman. Postpartum mothers' experiences usually present significant challenges. The challenge of being a mother lies in the act of childbirth itself which can be a source of stress, anxiety, and pain. Many problems often arise in postpartum mothers, such as anxiety, lateral pain, perineal wounds or lacerations, breast swelling, mood changes, and postpartum depression.

In the case of Mrs. S, subjective data was obtained, namely complaining of pain in the stitched wound, aches, a little heartburn, fear of walking, and fear of cleaning the stitched wound when urinating later. Then objective data was assessed to show that there was a grade 2 laceration with perennial pain and anxiety

The results of the music therapy intervention showed the influence of post-partum anxiety and pain, this can be seen from the difference in scores on the VAS and VAS-A before and after the intervention. Before the intervention was given, the author assessed the mother's pain level first using VAS (Visual Analog Scale) and the results showed that the mother's pain level was at number 5, namely moderate pain, then VAS-A was given to assess the mother's anxiety and the results showed that the mother's anxiety level was at number 5. 5, namely moderate anxiety, then the author provides intervention to the mother in the form of music therapy by asking the mother to listen to music provided by the author for 30 minutes. When given music therapy, mothers feel more comfortable and calm. After the intervention was carried out, the author reassessed the level of pain felt by the mother using VAS and obtained the result that the mother's pain level was at number 3, namely mild pain and assessing anxiety using VAS-A, the result was that the mother's anxiety level was at number 3, namely mild anxiety.

This is in line with research conducted by Sevil Hakimi1, et al (2021) that music therapy has a beneficial effect on reducing the intensity of pain and anxiety in post-partum mothers. Using the VAS scale. Music was used as a therapeutic intervention in advanced human civilizations in the 20th century. Listening to beautiful music can enhance the work experience, and due to the effects of this cheap, easy and effective method on levels of anxiety and perceived pain, can also minimize the dose of relevant painkillers. Music has been shown to significantly reduce stress and aid recovery from critical illness or surgery. In addition to its direct effects on emotions, behavior and neurotransmitter systems, music can also influence steroid production. endocrine glands and gonads.(6)

Postpartum mothers who listen to music during the postpartum period can reduce a person's anxiety and stress levels. While listening to music in a relaxed manner can provide comfort, the duration of time needed to obtain a therapeutic effect is 30 minutes per day.(9)

This music will stimulate the release of brain waves known as α waves which have a frequency of 8-12 cps (cycles per second) which helps maintain feelings of happiness and helps maintain mood, helps sleep, feeling calm and relieves depression and makes a person feel comfortable and calm. Music is widely used to improve well-being, reduce stress, and distract patients from unpleasant symptoms, so it is clear that music therapy has an effect on a person's emotional state. Listening to classical and self-selected relaxing music, resulted in a significant reduction in anxiety, anger, and increased relaxation compared to those who sat quietly or listened to mentally heavy music. Music therapy is often used because it is very easy to do and affordable, but its effect shows how big music can be in influencing tension or a relaxed state in a person.(2)

The relationship between music and pain remains a broad and open area of study with questions about the role of dopamine and pain processing when listening to music. Pain and music are thought to meet in the thalamus and limbic areas. The potential of music to influence dopamine, serotonin and oxytocin levels can cause positive emotional reactions that are directly related to strengthening psychological status. It has been confirmed as a safe and enjoyable non-pharmacological method for pregnancy and obstetrics, and the therapeutic effect of listening to music on maternal and child health

has been proven in many studies that did not specify the type of music used in the methodology.

A systematic review found that listening to classical music during the remainder of pregnancy carried out over four meetings lasting one hour can also show the influence of midwifery education and listening to classical music on the perception of labor pain and mental health in the postpartum period. Can prevent significantly fewer psychological symptoms 6 weeks after delivery. The brain plays a role in changing the physical condition of the body in response to music. Music can help the body relax, thereby creating a calm atmosphere. Apart from that, the heart rhythm can also respond to the music that is being listened to. The influence of music on emotions will further influence human psychology and can make the body move further after giving birth. Music has been known to activate the brain involved in regulating emotions and can trigger a pleasant response.(10)

The benefit of music therapy is that it can have a relaxing effect on the body. Musical rhythms with slow beats are believed to slow the heart rate, slow breathing and stabilize body temperature. Music also has the ability to stimulate the brain so that it can reduce hormone levels that can cause stress or depression. In other words, music therapy can stimulate the sympathetic and parasympathetic nerves to produce a relaxation response. Apart from that, music can also stimulate the brain to produce the hormone serotonin which plays a role in maintaining feelings of happiness and maintaining mood.(11)

So music therapy can be applied effectively to reduce postpartum pain and anxiety, music therapy has no risks or dangerous effects, music therapy can also be found on any music platform easily.

CONCLUSION

Music therapy has an effect on reducing pain (perineal wounds) and postpartum anxiety. This method is a non-pharmacological method which is considered safe, practical and easy to apply.

Music therapy can be used as an alternative for postpartum mothers to reduce pain and anxiety. Music therapy can be provided by family or health workers, to improve quality care and provision of care optimal.

ACKNOWLEDGEMENTS

Thank you to the Garuda Community Health Center and all parties who have helped the author in completing the results of the application of music therapy in completing the Evidence Based Case Report (EBCR).

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