



BACK MESSAGE TO PROVIDE COMFORT FOR POST PARTUM

Rika Resmana ^{1*}, Ida Widiawati², Salwa Athiyah ³, Athiyah Fauziyyah ⁴

^{1,2,3,4} Departement of Midwifery Poltekkes Ministry Health Bandung.

*Corresponding rika_resmana@yahoo.com

Abstract, Background: *The postpartum period is an important time in maternal care after delivery, where postpartum often experience physical and emotional discomfort. Back massage has been known as an effective method of relieving muscle tension, increasing blood circulation, and providing relaxation to the body. This systematic review aims to collect and analyze studies related to back massage on the comfort of postpartum.*

Methods : *This study uses a systematic review approach to research results related to the period 2018 to 2023. A literature search was carried out through databases of scientific journals and other reliable sources of information. The JBI critical assessment tool is used to assess the quality of the journal. This means that there are only selected articles that meet the requirements, with details of PubMed: 1, Google Scholar: 3. Garuda 1. Through the screening results of abstracts and full texts of 370 research articles.*

Result : *There are 2,180 selected journals from seven major database sources, which are classified as follows: PubMed: 354 articles, Science Direct: 540 articles, Garuda 2 articles, and Google Scholar: 11,500 articles based on predetermined keywords.*

Conclusion : *The results showed that the back massage position provides comfort for postpartum . The JBI critical assessment tool is used to assess the quality of the journal*

Key words: *back massage, postpartum , comfort, back massage*

Background

The postpartum period is a critical period in a woman's life after giving birth(1). Postpartum experience significant physical, emotional, and psychological changes. Although this period is a happy time, it can be a big challenge for the woman in adapting to these changes(2).

One of the problems that is often experienced by postpartum is physical discomfort, especially in the back area. In a study conducted by Mafikasari and Kartiksari, it was stated that in Indonesia more than 50% of postpartum complained of pain in the lower back area. After delivery, the back muscles are often tense from changing positions during labor and handling the newborn. This muscle tension can cause pain and discomfort in

postpartum (3).

In addition, postpartum usually experience fatigue caused by pain experienced by throughout the body, from toe to head due to the delivery process. One of the problems that is often experienced by postpartum is physical discomfort, especially in the back area. After giving birth, the back muscles are often tense due to changing positions during labor and handling the newborn. This muscle tension can cause pain and discomfort in postpartum (4).

Pain that arises as a result of childbirth is not felt during the birth process itself, but is only felt after giving birth. Physical fatigue can cause a woman to feel stressed, which in turn can affect optimal milk production(3).

As many as 70.3% of postpartum had difficulty breastfeeding in the first month after delivery. Half of with breastfeeding problems feel good support from health workers(5).

Postpartum need proper care to restore their bodies and adjust to their new role as in order to overcome their discomfort problems, so that the 's health and comfort can be facilitated in the recovery process.(6). Back massage has been known as an effective method for relieving muscle tension, increasing blood circulation, reducing pain intensity, reducing anxiety levels, reducing stress, improving sleep quality, and breast milk production. and relaxes the body(7). Therefore, the back massage can be a relevant strategy to provide comfort to postpartum . However, even though back massage has been widely used in postpartum care practices, there is still a lack of in-depth research on the effect of back massage on postpartum comfort. Therefore, this study aims to conduct a systematic analysis of the effect of back massage that can provide optimal comfort for postpartum.

Method

The literature review procedure was used in this study. Several steps must be taken, including formulating research questions, identifying relevant studies, evaluating the quality of the selected articles, summarizing the research findings, and interpreting the findings in the form of a literature review. The research question is "the effect of back massage on the comfort of postpartum?" This is based on research objectives.

The purpose of this study is to systematically review the literature regarding the effect of back massage on the comfort of postpartum . A systematic literature search was carried out in accordance with PRISMA's statement with the aim of summarizing existing research on the effect of massage on comfort for postpartum .

Selection Of Studies And Eligibility

Data were obtained from several databases such as Pubmed, Scopus, Science Direct, Garuda, and Google Scholar from 2018 to June 2023. In searching for journals, the keywords used were back massage, postpartum, back massage, massage. This article uses two inclusion and exclusion criteria. The inclusion criteria involved that the article was categorized as original experimental research. Meanwhile, the exclusion criteria included unoriginal publications such as letters to the editor, only abstracts, and books.

Search Strategy And Screening

The first is the selection of journals, namely the researcher makes a logic grid through inner PICOS determine keywords based on inclusion criteria. PICOS means as population, intervention, compare, outcome and study design. Next, the selected keywords are entered P (Population or Problem): Postpartum , I (Intervention): Back massage position, C (Compare): administration of other therapies, O (Results): Comfort for postpartum. S (Study Design): Randomized Controlled Trial (RCT). Data were selected using the "Mendeley" application by entering each literature database file. In addition, eligible journals will be put in a folder labeled "as appropriate" once the title and abstract have been determined. The articles in the "according" folder will be reviewed by researchers by selecting the complete contents of the journal, after which they are put into the folder ("Include"). Data was reviewed manually by reviewers based on each qualified journal. The data reviewed included several study characteristics consisting of first author, year of publication, location, language, research design, participant characteristics consisting of sample size, age, and intervention, intervention consisting of massage, duration, and results.

Data Extraction And Analysis

The process of data extraction is carried out through systematic results regarding the comfort of postpartum and studies that are relevant to the study questions. Researchers describe the results of the main research with back massage. This shows that heterogeneity is presented in the review data with different criteria to see the effect of back massage for comfort for postpartum . Based on the journals that have been reviewed, the researchers also found several variations of the massage given.

Evaluating Quality

After data extraction and analysis, the selected articles will be evaluated to determine the quality of the selected journals. The critical JBI RCT was used to assess bias in all selected journals.

Results

There are 2,180 selected journals from seven major database sources, which are classified as follows: PubMed: 354 articles, Science Direct: 540 articles, Garuda 2 articles, and Google Scholar: 11,500 articles based on predetermined keywords. The results of the title

screening revealed that there were published articles that were not relevant to the research topic. Those irrelevant articles were removed from the inclusion criteria. This means that there are only selected articles that meet the requirements, with details of PubMed: 1, Google Scholar: 3. Garuda 1. Through the

screening results of abstracts and full texts of 370 research articles, articles that are not considered to follow the title of Literature Review are removed from the list. That is, there were only 14 articles that met the inclusion criteria. The procedure for searching and reviewing literature can be seen in Figure 1.

Quality Evaluation

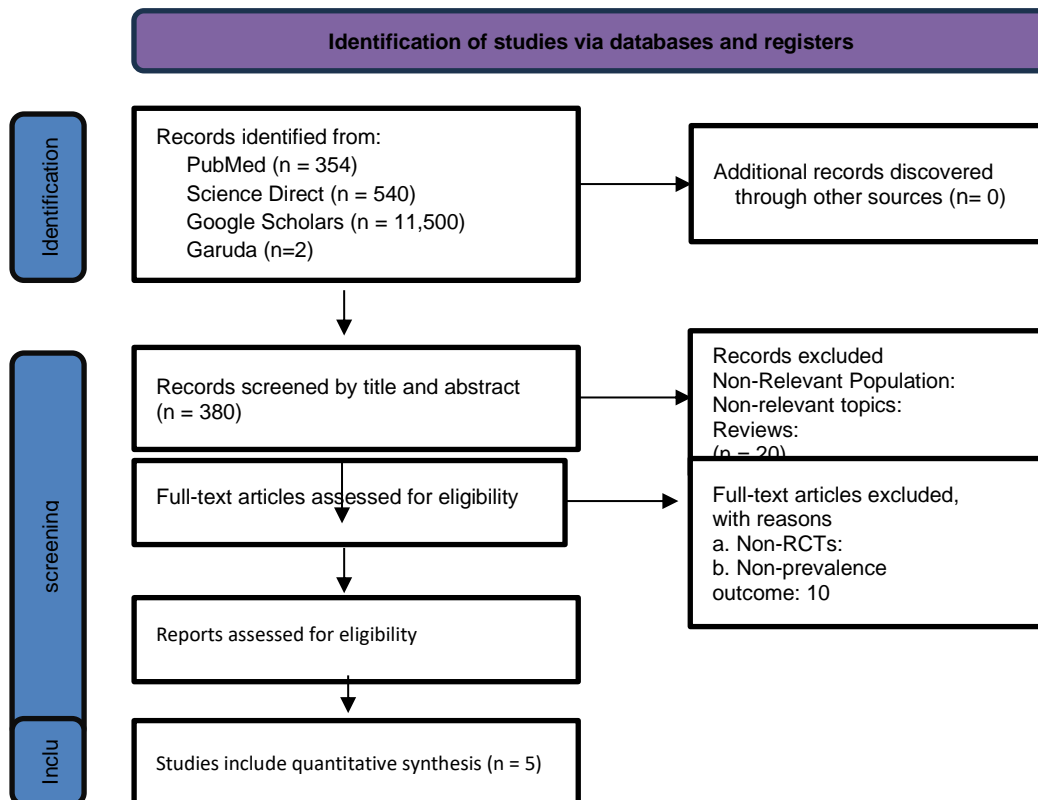


Table 1. Characteristics of Studies

Author	Country, Language, Research Design	Respondents	Intervention Group	Control Group	Duration	Research Results
(Rahmayanti and Yolanda, 2019)	Indonesia, English, Quasi Experiment method with the design of One Group Pretest-Posttest	The sample consisted of 20 postpartum as the intervention group	The intervention group was given effluerage massage therapy on the back using clove oil. Intervention is given to postpartum a maximum of 7 days after delivery	-	2 times a day in the morning and evening for 30 minutes (Performed for 7 days)	Based on the results of the study there was a decrease in the intensity of pain in the lower back by giving effluerage massage using clove oil. In the statistical test results of the paired sample T-test, a p value of 0.005 ($p \leq 0.05$) was obtained with a standard deviation before massage was given of 0.826 and a standard deviation after massage was 0.681. The intervention given to 20 respondents obtained an average value of pain intensity before being given effluerage massage using clove oil was 6.05 and after being given therapy it was 2.06 with an average difference of 3.450.
(Widiastuti and Widiani, 2020)	Indonesia. English, quasi-experimental design with a time series design and a control time series design	The sample consisted of 30 postpartum (15 intervention groups and 15 control groups).	Massage intervention was given along the spine (vertebrae) to the sixth rib at 3 hours after delivery.	No intervention was given but the final score was assessed and a home visit was carried out every two days for 2 weeks.	Every 2 days for 2 weeks.	Based on research on increasing breastfeeding by massage on the back to the sixth rib provides a comforting effect, the results of the Repeated Anova statistical test obtained a value of $F = 17.15$, $p = 0.000$ ($p < 0.005$) meaning that there is an effect of back massage on milk production in postpartum, because increased comfort and relaxation in the which is stimulated by the release of the reflex hormone oxytocin endorphins(8).

Bandung, 16-17 November 2022

(Anita et al., 2020)	Indonesian, English, quasi-experiment with one group of pre and post-test designs.	This study consisted of 30 postpartum (15 in the intervention group and 15 in the control group).	The intervention group was given back massage at LU1, CV17, and SI1 points on the body 1 time a day every morning with a duration of 30 minutes for 3 consecutive days thereafter blood collection was carried out on day 4, namely the median cubital vein on the anterior arm for measure prolactin hormone levels using the ELISA KIT and compare prolactin hormones before and after the intervention	The intervention group was given acupressure at LU1, CV17, and SI1 points on the body 1 time a day every morning with a duration of 30 minutes for 3 consecutive days thereafter blood collection was carried out on day 4, namely the median cubital vein on the anterior arm for measure prolactin hormone levels using the ELISA KIT and compare prolactin hormones before and after the intervention	30 minutes	The results showed that the average prolactin level in the in the back massage group was higher than the acupressure group in the same position, with the measurement results of the hormone prolactin 98.33 nm/dL and acupressure 96.13 nm/dL, which means that there was an increase in the amount of the hormone prolactin after back massage. at the higher point LU1, CV17, and SI1 positions. The average in the back massage intervention group was 98.33 and the acupressure control group was 96.13. This is because the who is given a back massage becomes more relaxed and feels more comfortable(9).
(Guney and Ucar, 2021)	Türkiye, England, single blinded randomized controlled	sample consisted of 162 postpartum (81 experimental group and 81 control group).	The intervention group was given massage therapy at 10 and 22 hours post-cesarean section, then measured using the PPCQ questionnaire and the vas scale.	This study uses the personal information form, PPCQ, VAS scale. In the control group it was measured 4 times, then the scores on the PPCQ and the VAS scale were seen.	20 minutes	Based on the results of the study, massage was given to the upper back lying on its side and legs bent, the results of measurements using the Likert scale on the PPCQ (Postpartum Comfort Questionnaire) questionnaire obtained the highest score of 170 and the lowest score of 34 (Mean = 54.28, SD = 8.09). Differences between groups in terms of comfort level were found to be statistically significant for the experimental group (physical sub-dimensional; psycho-spiritual sub-dimensional; sociocultural sub-dimensional and total PPCQ $p < 0.001$)(10).
(Dagli. E., & Çelik, N, 2021)	Türkiye, UK, self-controlled study design	The study consisted of 73 who had	The intervention group consisted of postpartum who	The control group consisted of postpartum on the	3 minutes	Based on the results of the study, it was found that there were differences in the control group and the oxytocin

Bandung, 16-17 November 2022

		premature babies in the NICU of a university hospital located in southern Turkey. The study used an experimental group and a control group consisting of the same participants	were given oxytocin massage on day 2 and on day 3 who were given music therapy. During the therapy session, the will express milk for 15 minutes and then measure the volume of milk in mL. At the end of the therapy session the respondent filled out the STAI and the procedure was ended.	1st day who filled out the personal information form after which the volume of milk was measured in mL by expressing for 15 minutes. At the end of the control session, the respondent filled out the STAI and the procedure was ended.		massage intervention group with a p value = 0.021. In the calculation of statistical analysis using the Pearson correlation test, the average value in the control group was 38.3 and the SD was 10.8, while the oxytocin massage intervention group had an average value of 37.3 and the SD was 11.0. It can be seen that there is a decrease in the average anxiety experienced by . Oxytocin massage was effective in increasing breast milk volume as seen from the mean difference of 1 and SD difference of 0.9. By reducing anxiety, it provides comfort for the during postpartum with the release of the hormone oxytocin by suppressing the release of stress-causing cortisol and making it easier for to breastfeed their babies.(11).
--	--	--	---	---	--	--

Evaluation Quality

Table 2. Quality of Assessment Results with JBI (Joanna Briggs Institute)

Author	Point 1	Point 2	Point 3	Point 4	Point 5	Point 6	Point 7	Point 8	Point 9	Point 10	Point 11
(Rahmayanti and Yolanda, 2019)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No
(Widiastuti and Widiani, 2020)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No
(Guney and Ucar, 2021)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
(Dagli. E., & Çelik, N, 2021)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
(Anita et al., 2020)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No

Based on Table 2, it can be seen that there were 5 articles with "very good" qualifications and met the inclusion criteria for this literature review.

Study Characteristics

Participant

The participants were five journals related to postpartum. The journals were selected through the cluster method to limit broad discussion. Found 5 articles consisting of 3 articles from Indonesia and 2 articles from Turkey.

Results

Based on the five journals that have been reviewed by researchers, one journal provides effluerage massage intervention, one journal provides oxytocin massage intervention, and three back massage intervention journals. Effluerage massage combined with clove essential oil therapy, it was found that there was a decrease in pain intensity in the postpartum's lower back(12) and journals regarding back massage combined with acupressure explained that there was an increase in prolactin levels in the back massage group compared to the acupressure group with the same massage position(9).

Then, in a study conducted by Dagli and Celik (2021), said that there was a decrease in anxiety and an increase in milk production in postpartum who were given oxytocin massage(11). In the back massage intervention, it was found that postpartum became more relaxed and increased comfort for (8)(10).

All journals that have been reviewed show a positive relationship between massage and comfort for postpartum and provide tangible results in increasing milk production, reducing anxiety, and reducing pain intensity, as well as increasing relaxation.

Discussion

Back pain in postpartum is something that is often experienced. One of the factors causing discomfort in postpartum is related to pregnancy and pre-pregnancy, where there is the influence of excess body weight as a strong risk factor for back pain after pregnancy.(13). Other factors that can cause discomfort in postpartum are caused by postpartum fatigue and adaptation to breastfeeding. For who have just given birth, they must take care of themselves and their babies as well as other things that can make it difficult for to care for their babies so that they can have a negative impact on the's quality of life.(14)(15).

In the research that has been done, it was found that there is a relationship

between postpartum anxiety and the period of exclusive breastfeeding which tends to be shorter, the rate of initiation of breastfeeding is lower, and the duration of breastfeeding is short. The stress experienced by the can have a disruptive effect on the release of oxytocin and reflexes from expressing breast milk(16). So postpartum care is needed by giving massage to the.

Various massage techniques are available in postpartum care. One of them is back massage which is a postpartum care approach to provide comfort and support the recovery of after giving birth. Back massage is given with gentle pressure and a therapeutic touch on the back area with the aim of relieving muscle tension, increasing blood circulation, promoting breastfeeding, and providing overall relaxation so that it will provide the end result of comfort in the postpartum(17)(18).

The right position in giving back massage must be applied in order to provide comfort for the postpartum. Research conducted by Kenyon (2015), states that back massage in a sitting position is an effective treatment method for psychological relaxation that can be given to the puerperium in the early postpartum period.(18). Supported by the research of Jahdi et al, (2016) which explains that back massage in a sitting position can reduce anxiety in first day postpartum (19). Back massage in a sitting position can be applied when the feels comfortable and does not experience tension in the back. Back massage in a sitting position for postpartum facilitates access for the therapist to do back massage and can feel comfortable and relaxed while sitting. However, there are drawbacks in that the sitting position may not provide sufficient support to certain body parts, such as the lower back(20).

In addition to back massage in a sitting position, a side position with legs bent and supported by pillows can be given at 10 hours after caesarean section because it will increase relaxation and comfort. Back massage in an oblique position helps reduce pressure on the back and is suitable for postpartum after cesarean delivery. Support pillows provide extra comfort for postpartum(10).

Conclusion

Based on the results of the literature review, it can be seen that there are five journals, where two journals show that the back massage combined with other therapies

is not only effective in increasing comfort but also increasing prolactin levels and decreasing pain intensity. Meanwhile, the other three journals stated that there is a positive relationship between massage position and comfort for postpartum.

Acknowledgments

Acknowledgments to the Institute of Health Polytechnic, Ministry of Health, Bandung for the support.

Conflict Of Interest

The author declares that there is no conflict of interest and cooperation regarding the publication of this journal.

References

1. Kusbandiyah J, Puspawati YES. The Effect of Postnatal Massage on the Involution and Lactation Processes in the Puerperal Period in Malang. *J Nurses and Midwifery (Journal Nurses Midwifery)*. 2020;7(1):065–72.
2. WHO. *Counseling for maternal and newborn health care: a handbook for building skills*. Switzerland: WHO press; 2013. 244 p.
3. Chaput KH, Nettel-Aguirre A, Musto R, Adair CE, Tough SC. Breastfeeding difficulties and supports and risk of postpartum depression in a cohort of women who have given birth in Calgary: a prospective cohort study. *C Open*. 2016;4(1):E103–9.
4. Dagla M, Dagla C, Theodoropoulou I, Kontiza E, Tsolaridou E, Antoniou E. The Association of Breastfeeding Difficulties at the 6th week Postpartum with Maternal Psychological Well-being and Other Perinatal Factors: a Greek Retrospective Longitudinal Study. *Mater Socio Medica*. 2021;33(2):109.
5. Gianni Lorella Maria, Bettinelli Enrica Maria, Manfra Priscilla, Sorentino Gabriele, Bezzee Elena, Plevani Laura, et al. Breastfeeding Difficulties and Risk for Early Breastfeeding Cessation. *Nutrients* [Internet]. 2019;11(2266):1–10. Available from: <http://doi.org/10.3390/nu11102266>
6. Forde R, Peters S, Wittkowski A. Recovery from postpartum psychosis: a systematic review and metasynthesis of women's and families' experiences. *Arch Women's Ment Health*. 2020;23(5):597–612.
7. Rachmah D, Arsita RP, Sari W. The Effect of Back Massage For Health: Literature Review. 2021;10(1):779–82.
8. Widiastuti NMR, Widiani NNA. Improved breastfeeding with back massage among postnatal. *Int J Res Med Sci*. 2020;8(2):580.
9. Anita N, Ahmad M, Usman AN, Sinrang AW, Alasiry E, Bahar B. Potency of back massage and acupressure on increasing of prolactin hormone levels in primipara postpartum; consideration for midwifery care. *Enferm Clin* [Internet]. 2020;30:577–80. Available from: <https://doi.org/10.1016/j.enfcli.2019.07.165>
10. Guney E, Ucar T. Effects of deep tissue massage on pain and comfort after cesarean: A randomized controlled trial. *Complement Ther Clin Practice* [Internet]. 2021;43(101320):2–7. Available from: <https://doi.org/10.1016/j.ctcp.2021.101320>
11. Dagli E, Celik N. The effect of oxytocin massage and music on breast milk production and anxiety levels of premature infants who are in the neonatal intensive care unit: A self-controlled trial. *Health Care Women Int* [Internet]. 2022;43(5):465–78. Available from: <https://doi.org/10.1080/07399332.2021.1947286>
12. Rahmayanti R, Yolanda Y. Effectiveness of Back Effluerage Massage Therapy Using Clove Oil on Under Back Pain in Postpartum. *Nurse Heal J Nursing*. 2019;8(2):72–7.
13. Komatsu R, Ando K, Flood PD. Factors associated with persistent pain after childbirth: a narrative review. *Br J Anaesth* [Internet]. 2020;124(3):e117–30. Available from: <https://doi.org/10.1016/j.bja.2019.12.037>
14. Bager S, Altuntug K. Problems experienced by in the postpartum period and their associations with quality of life Annelerin doğum sonunda yaşadıkları sorunlar ve yaşam kalitesi ile ilişkisi. *J Hum Sci*. 2016;13(2):3266.
15. Blair S, Edwards G, Yu K, Jovel E, Powell LJ, Renwick K, et al. What is a school farm? Results of a scoping review. *J Hunger Environ Nutr*. 2022;(revise an).