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The Effectiveness of Woolwich Massage and Relaxation Music on Increasing Breast Milk Production: A Literature Review

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Background: Breast milk is a fluid produced by mothers as the best nutritional source for infants. A common problem faced by postpartum mothers is low milk production, and it is not uncommon for mothers to complain that they are unable to produce milk. One method to increase breast milk production is through Woolwich massage and music therapy. Woolwich massage and music therapy are effective non-pharmacological interventions for increasing breast milk production in postpartum mothers. Objective: to examine the effectiveness of Woolwich massage and relaxation music in increasing breast milk production in accordance with previous studies by reviewing several studies. Methods: this review used several sources, including a systematic search of computerized databases (Google Scholar) conducted over the last 5 years (2020-2025). Sixteen journals were obtained during the search, but after reviewing them according to the criteria and title suitability, only eight articles were used, consisting of seven national journals and one international journal. The keywords used in the search included "effectiveness of Woolwich massage", "effectiveness of relaxation music", and "increased breast milk production.". Results: All studies show that Woolwich massage and music therapy are effective non-pharmacological interventions in increasing milk production in postpartum mothers. Conclusion: Woolwich massage and relaxation music have been proven effective in increasing milk production in postpartum mothers. Woolwich massage consistently shows a significant increase in milk volume and flow through the stimulation of prolactin and oxytocin, which strengthen the milk ejection reflex. Relaxation music helps reduce stress and increase comfort in mothers, thereby supporting an increase in the hormone oxytocin, which plays a role in the lactation process.
Keywords: Exclusive Breastfeeding, Audio Visual, Booklet, Knowledge, Breastfeeding Mother

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1. Introduction

Breast milk (ASI) is a biological fluid produced by mothers and serves as the ideal source of nutrition for infants because it contains complete nutrients that meet the needs of infant growth and development (Hang et al., 2021). According to the World Health Organization (WHO), breast milk contains a perfect combination of carbohydrates, proteins, fats, vitamins, minerals, and antibodies that cannot be replaced by other foods or drinks. Roesli (2018) emphasized that breast milk not only serves as food but also as immunological protection that can reduce infant morbidity and mortality.

Exclusive breastfeeding is the provision of breast milk from birth to six months of age without any additional food or drink, except for medications, vitamins, and minerals as medically indicated (Parapat et al., 2022). UNICEF (2020) stated that the practice of exclusive breastfeeding during the first six months of a baby's life is one of the most effective interventions in improving child survival and long-term health. Similarly, Soetjiningsih (2019) explained that exclusive breastfeeding contributes significantly to the development of the digestive system, intelligence, and the emotional bond between mother and baby.

Lack of exclusive breastfeeding can harm a child's growth and development and impact the overall quality of human resources. The Indonesian Ministry of Health (2021) states that low coverage of exclusive breastfeeding is closely related to an increased risk of stunting, infection, and impaired cognitive development in children. One of the main causes of failure in exclusive breastfeeding is inadequate or suboptimal milk production, particularly in the early postpartum period (Zufri et al., 2024). Ambarwati (2017) states that breast milk production is influenced by hormonal and psychological factors, maternal nutrition, and adequate breast stimulation.

A common problem faced by postpartum mothers is low or no breast milk production, forcing mothers to resort to formula as an alternative. Proverawati and Rahmawati (2019) note that this condition often causes anxiety in mothers, which can inhibit the oxytocin reflex and worsen breast milk production. Babies who are not breastfed are more susceptible to infectious diseases, such as diarrhea and respiratory infections, which can ultimately hinder physical growth and intellectual development because they lack the immune system and quality nutrients contained in breast milk (Sembiring et al., 2022).

Mothers' failure to provide exclusive breastfeeding is influenced by various factors, including a lack of knowledge about the benefits of exclusive breastfeeding, parity, minimal family support, the suboptimal role of health workers, and the influence of the social and cultural environment (Yuliawati et al., 2022). Notoatmodjo (2018) stated that knowledge is an important predisposing factor in shaping health behaviors, including breastfeeding behavior. Family support, especially the husband's, also plays a significant role in increasing a mother's confidence in breastfeeding, as noted by Hidayat and Uliyah (2020).

One non-pharmacological effort that can be implemented to increase breast milk production is through Woolwich massage and music therapy. Woolwich massage is a massage technique applied to the lactiferous sinus area, approximately 1–1.5 cm above the areola, to stimulate milk release. Farida (2022) states that Woolwich massage can stimulate the prolactin and oxytocin reflexes, thereby helping to increase milk production, prevent blocked milk ducts, and reduce the risk of breast engorgement. Maryunani (2018) also emphasized that mechanical stimulation of the breasts through massage can accelerate milk release and increase subsequent production.

In addition to massage, music therapy also plays a crucial role in supporting successful breastfeeding. Music therapy can create a sense of calm, reduce stress, and promote relaxation in postpartum mothers. Arisdiani et al. (2021) explain that music can influence the central nervous system by producing alpha waves that have a calming effect. Campbell (2017) states that relaxation can increase the release of the hormone oxytocin, which plays a key role in the milk let-down reflex. Therefore, the combination of Woolwich massage and music therapy is expected to be an effective intervention in increasing milk production in postpartum mothers.

2. Method

The method used in this paper is a literature review, which contains various information related to the effectiveness of Woolwich massage and relaxation music on increasing breast milk production. A literature review is a research method that aims to systematically identify, evaluate, and synthesize the results of previous studies relevant to a specific topic. According to Snyder (2019), a literature review serves to provide a comprehensive overview of research developments, identify research gaps, and strengthen the theoretical basis of a study.

This literature review relies on data collection from various library sources as its research object. Creswell and Creswell (2018) state that literature review-based research is highly effective for assessing the effectiveness of an intervention because it allows researchers to compare research findings from different

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contexts and methods. The sources used in this study included a systematic search of computerized databases such as PubMed and Google Scholar, with publications spanning the last five years (2020–2025).

Article searches were conducted using the keywords "effectiveness of Woolwich massage," "effectiveness of relaxation music," and "increasing breast milk production." According to Machmud (2016), the use of specific and relevant keywords is crucial in a literature review to obtain articles that align with the research objectives and avoid information bias. The search yielded 16 articles, but after a selection process based on the suitability of the title, abstract, and inclusion criteria, only 6 articles were used in this study, consisting of national and international journals relevant to the research topic.

3. Results and Discussion

Result

Many postpartum mothers experience low breast milk production, and some even complain of no milk production, leading them to choose to give their babies formula. This condition negatively impacts infant health, as babies who are not breastfed are more susceptible to illness. Lack of exposure to immune-boosting substances and inadequate intake of the quality nutrients found in breast milk can potentially hinder a child's physical growth and intellectual development. Eight articles were obtained examining the effectiveness of Woolwich massage and relaxation music on increasing breast milk supply. The following is a review of the articles used.

No	Title	Method	Sample	Data Analysis	Result
1.	Efektivitas *Woolwich Massage* Terhadap Produksi Asi Pada Ibu Post Partum	Quasi-experimental posttest-only design with control group.	60 postpartum mothers	Data analysis used univariate and bivariate analysis using the unpaired t-test.	The bivariate analysis yielded a mean of 6.0, a median of 6, and a standard deviation of 0.952. The statistical test using the independent T-test yielded a p-value of 0.019, indicating that Woolwich massage had a statistically significant effect on breast milk production in the intervention group. (Tinggi Ilmu Kesehatan Bakti Utama Pati et al., 2025)
2.	Efektifitas Woolwich Massage Terhadap Kelancaran Pengeluaran Asi Pada Ibu Nifas Di Klinik Pratama	Quasi-experimental study with pre-experimental method.	30 postpartum mothers	Data analysis used bivariate and univariate analysis using SPSS with the Wilcoxon test.	The analysis results obtained a Z value of -4.344b and a p-value of 0.000 with a significance level of p<0.05, so it can be concluded that Woolwich Massage therapy given to

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No	Title	Method	Sample	Data Analysis	Result
	Sunggal Tahun 2021				postpartum mothers at the Sunggal Primary Clinic has significant results in increasing the smoothness of breast milk production. (Nababan et al., n.d.)
3.	Efektivitas *Pijat Woolwich* Terhadap Produksi Asi Pada Ibu Postpartum Di Pmb "N" Kabupaten Bandung	Descriptive study	31 postpartum mothers	Data analysis used univariate analysis.	The analysis revealed an average breast milk output of 41.76 ml over three days after Woolwich massage, compared to the standard breast milk output according to the Ministry of Health (2022) of 36.23 ml per day. (Maryati et al., n.d.)
4.	Pengaruh Pijat *Woolwich* Terhadap Produksi Asi	Quasi-experimental with one-group pretest-posttest design.	16 postpartum mothers	The analysis in this study used the Wilcoxon statistical test.	The results of the analysis were obtained before the woolwich massage intervention, the average breast milk production was 0.26 cc, after the woolwich massage intervention, the average breast milk production was 1.3 cc. Data analysis was carried out by testing the hypothesis from the results of the Wilcoxon Signed Rank Test calculation, with a large Z value obtained Z score = -3.572 with a p-value (Asymp. Sig 2 tailed of 0.003 with the provision of a critical research limit of 0.05 so that the decision of the hypothesis Ha was accepted and Ho was rejected, meaning there was an effect of giving woolwich massage on breast milk production. (zufri et al., 2024)

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No	Title	Method	Sample	Data Analysis	Result
'/ 5.	Implementasi pijat Woolwich dengan terapi music dalam peningkatan produksi ASI ibu post partum di puskesmas Tegal Selatan.	Descriptive study	1 postpartum mother	Descriptive analysis used the SOAP approach.	Research shows that the combination of these two interventions significantly increases breast milk production, with the breast milk sufficiency score increasing from 3 (insufficient production) to 10 (smooth production) after five days of intervention (Nurfazri et al., 2025).
6.	The Effect of Woolwich Massage on Breast Milk Production in Postpartum Mothers at the Marbau Health Center, Marbau District, Labuhan Batu Utara Regency in 2021	Pre-experimental design, one-group pre-test and post-test design.	15 postpartum mothers	The analysis in this study used the Wilcoxon test.	Research shows that breast milk production before Woolwich massage was performed on postpartum mothers was less than 11 respondents (73.3%). The majority of breast milk production after Woolwich massage was sufficient in 10 respondents (66.7%). (Bachelor, 2022)
7.	Efektivitas Pijat Effleurage Dan Terapi Musik Terhadap Produksiasi Pada Ibu Post Partum Di Bpm Siti Zubaidah Medan Tahun 2022	Quasi-experimental with two-group pretest-posttest design.	16 postpartum mothers	Data collection in this study was conducted using observation sheets evaluated using the Wilcoxon test.	The research results showed a p-value of 0.015 for the intervention group and a p-value of 0.023 for the control group. (Saragi et al., 2023)
8.	Pengaruh Kombinasi Pijat Oksitosin Dengan Terapi Musik Klasik (Beethoven) Terhadap Produksi ASI Pada Ibu Nifas Primipara Di RS Panti Wilasa Citarum Tahun 2022	Quasi-experimental with one-group pre-test and post-test design.	41 postpartum mothers	The analysis in this study used the Shapiro-Wilk and Wilcoxon tests.	The research results obtained a p-value of 0.000, meaning $p < 0.05$ (Arum et al., 2023)

Discussion

Based on an analysis of eight reviewed articles, it was found that both Woolwich massage and relaxation music therapy have been shown to have a positive effect on increasing breast milk production in postpartum mothers. All articles analyzed showed an increase in breast milk volume and flow after the intervention, either using Woolwich massage alone or in combination with music therapy.

The results of the first study showed a significant difference in breast milk production between the intervention and control groups, with a p-value of 0.019, indicating that Woolwich massage effectively increased breast milk production. The second study also showed a significant result with a p-value of 0.000 based on the Wilcoxon test, indicating an increase in breast milk flow after the Woolwich massage intervention. The third study showed that the average breast milk production over three days after Woolwich massage reached 41.76 ml, which is higher than the Ministry of Health standard (36.23 ml per day). The fourth study also showed a significant increase, with the average breast milk production changing from 0.26 cc to 1.3 cc (p-value 0.003). In the fifth study, the combination of Woolwich massage and classical music therapy produced optimal results. Breast milk sufficiency scores increased from 3 (inadequate) to 10 (smooth) after five days of intervention, and mothers reported increased comfort and confidence in breastfeeding. The sixth study showed that breast milk production increased from insufficient in 73.3% of respondents to sufficient in 66.7% of respondents after Woolwich massage. Overall, all studies demonstrate that Woolwich massage and music therapy are effective non-pharmacological interventions in increasing breast milk production in postpartum mothers.

4. Conclusion

Based on the results of a review of six articles on the effectiveness of Woolwich massage and relaxation music therapy on increasing breast milk production, it can be concluded that both interventions are proven effective in increasing breast milk production in postpartum mothers. Woolwich massage consistently shows a significant increase in breast milk volume and flow through the mechanism of prolactin and oxytocin stimulation, which strengthens the milk ejection reflex. Relaxation music helps reduce stress and increase maternal comfort, thus supporting the increase in the hormone oxytocin, which plays a role in the lactation process.

5. Reference

Ambarwati, E. R. (2017). *Asuhan kebidanan nifas*. Yogyakarta: Nuha Medika.

Arisdiani, D. R., Anggorowati, A., & Naviati, E. (2021). Music therapy as nursing intervention in improving postpartum mothers' comfort. *Media Keperawatan Indonesia, 4*(1), 72–82. https://doi.org/10.26714/mki.4.1.2021.72-82

Arum, N. D. (2023). *Pengaruh kombinasi pijat oksitosin dengan terapi musik klasik (Beethoven) terhadap produksi ASI pada ibu nifas primipara di Rumah Sakit Panti Wilasa Citarum tahun 2022*.

Bachelor, S. (2022). The effect of Woolwich massage on breast milk production in postpartum mothers at the Marbau Health Center, Marbau District, Labuhan Batu Utara Regency in 2021. *Science Midwifery, 10*(5). https://www.midwifery.iocspublisher.org

Campbell, D. (2017). *The Mozart effect for children*. New York: HarperCollins.

Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). Thousand Oaks, CA: SAGE Publications.

Farida, S., Setyorini, C., & Retno, Z. M. (2022). Pijat Woolwich untuk meningkatkan produksi ASI pada ibu menyusui tahun pertama.

Hang, S., & Tanjungpinang, T. (2021). Teknik Marmet terhadap kelancaran ASI pada ibu postpartum. *Wiraraja Medika: Jurnal Kesehatan, 11*(2). https://www.ejournalwiraraja.com/index.php/FIK

Hidayat, A. A. A., & Uliyah, M. (2020). *Pengantar kebutuhan dasar manusia*. Jakarta: Salemba Medika.

Kementerian Kesehatan Republik Indonesia. (2021). *Profil kesehatan Indonesia*. Jakarta: Kemenkes RI.

Machmud, M. (2016). *Tuntunan penulisan tugas akhir berdasarkan prinsip ilmiah*. Malang: UM Press.

Maryati, S., Nursifa, N., Amelia, R., & Yulianti, V. (n.d.). Efektivitas pijat Woolwich terhadap produksi ASI pada ibu postpartum di PMB "N" Kabupaten Bandung.

Maryunani, A. (2018). *Inisiasi menyusu dini, ASI eksklusif dan manajemen laktasi*. Jakarta: Trans Info Media.

Nababan, T., Solin, V. L., Ritonga, R., Lestari, I., Zai, P., & Buulolo, J. (2021). Efektivitas Woolwich massage terhadap kelancaran pengeluaran ASI pada ibu nifas di Klinik Pratama Sunggal. *Indonesia Midwifery Journal, 4*(2).

Notoatmodjo, S. (2018). *Promosi kesehatan dan perilaku kesehatan*. Jakarta: Rineka Cipta.

Nurfazri, A. (2025). *Implementasi pijat Woolwich dengan terapi musik dalam peningkatan produksi ASI ibu postpartum di Puskesmas Tegal Selatan* (Disertasi doktoral). Politeknik Harapan Bersama.

Parapat, F. M., Haslin, S., & Siregar, R. N. (2022). Hubungan pengetahuan ibu dengan pemberian ASI eksklusif. *Jurnal Kesehatan Tambusai, 3*(2), 16–25.

Roesli, U. (2018). *Mengenal ASI eksklusif*. Jakarta: Trubus Agriwidya.

Saragi, I., Sarumaha, C. H., & Siregar, D. (2023). Efektivitas pijat effleurage dan terapi musik terhadap produksi ASI pada ibu postpartum. *Jurnal Health Reproductive, 8*(1), 14–21. https://doi.org/10.51544/jrh.v8i1.5279

Shinta, A. R., Etika, K., & Zufri. (2024). Pengaruh pijat Woolwich terhadap produksi ASI. *Jurnal Cakrawala Kesehatan, 15*.

Sinaga, R., & Sembiring, N. M. P. (2022). Pengaruh pijat Woolwich terhadap produksi ASI pada ibu postpartum. *Jurnal Medika Husada, 2*(2).

Soetjiningsih. (2019). *Tumbuh kembang anak*. Jakarta: EGC.

Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research, 104*, 333–339.

UNICEF. (2020). *Breastfeeding: A mother's gift, for every child*. New York: UNICEF.

World Health Organization. (2020). *Infant and young child feeding*. Geneva: WHO.

Yuliawati, Y., Widiyanti, S., & Anisa, L. (2022). Faktor-faktor yang berhubungan dengan ketidakberhasilan ASI eksklusif. *JOEL: Journal of Educational and Language Research, 2*(4), 563–574.