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Acupressure Therapy as a Complementary Method to Enhance Breast Milk Production in Postpartum Mothers: A Study Supporting the Success of Exclusive Breastfeeding

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Abstract

Stunting is a problem that must be addressed immediately. One of the key interventions is to promote the success of exclusive breastfeeding. Insufficient breast milk production is one of the obstacles to achieving successful exclusive breastfeeding. This study examines research findings on the effects of complementary therapies, particularly acupuncture and acupressure, on increasing breast milk production. Research articles were collected from various online databases, including Google Scholar, PubMed, and ScienceDirect. Inclusion and exclusion criteria were applied to obtain original clinical research articles relevant to the desired topic, published within the last five years, and whose research methods and results were well explained and valid. In total, only five articles met the criteria for discussion. Accurate acupuncture interventions can enhance milk production in both postpartum mothers with a history of vaginal delivery and those who have undergone cesarean sections. Acupressure also increases milk production, particularly at points CV 18, ST 17, SI 1, ST 15, ST 16, and LI 4. Acupressure has the potential to serve as a complementary treatment for postpartum mothers to help improve breast milk production. However, acupuncture and acupressure therapies have not gained widespread popularity, especially at the international level, which presents significant opportunities for further research.

Keywords: Breast Milk Production, Acupressure

INTRODUCTION

Optimal growth and development in children are influenced by adequate nutritional intake. One of the most crucial initial efforts during the early stages of life is the provision of exclusive breast milk (ASI) without any additional food or drink for the first six months. The World Health Organization (WHO) recommends that mothers exclusively breastfeed their babies, providing only breast milk for the first six months (1). Exclusive breastfeeding offers extraordinary benefits for infants, and mothers can also experience positive effects.

The advantages of breast milk for babies include enhancing their immune system, thereby protecting them from the risk of disease. Along with boosting immunity, breast milk supports and aids in the brain and physical development of infants. Currently, exclusive breastfeeding is also a key strategy in preventing stunting, particularly in children under five years of age. Stunting, often referred to as short stature in toddlers, is a chronic malnutrition issue caused by inadequate nutritional intake over an extended period (2,3).

From 2020 to 2022, the coverage of exclusive breastfeeding in Indonesia has increased. In 2022, the exclusive breastfeeding rate in Indonesia reached 72.4%. However, when examining the coverage across provinces, many still fall below the national average. Gorontalo Province, for instance, has one of the lowest rates of exclusive breastfeeding coverage at 67.22% (4).

A mother's success in providing exclusive breastfeeding is influenced by several factors, one of which is insufficient breast milk production. Various factors can contribute to low breast milk production, including maternal nutrition, psychological state, contraceptive history, breast anatomy, medication use, suction stimulation, and adequate rest. The lactation process is

closely related to the production of the hormones prolactin and oxytocin (5).

Efforts to increase breast milk production include maintaining adequate maternal nutrition, managing stress, and practicing Early Initiation of Breastfeeding (IMD). IMD involves providing breast milk to newborns within the first hour after birth, stimulating the release of prolactin, which allows mothers to produce more milk and positively impacts both milk production and the breastfeeding process. The baby's suckling is also a response that prompts the hypothalamus to release oxytocin and prolactin. The more frequently the baby breastfeeds, the more milk will be produced (6).

Currently, various strategies are in place to enhance breast milk production. A holistic approach can significantly contribute to increasing production and ensuring the success of exclusive breastfeeding. Complementary therapy serves as an alternative, and the standards for complementary medicine practices have been established in the Regulation of the Minister of Health of the Republic of Indonesia (7).

Based on this context, the author is interested in further exploring which complementary therapies can assist in increasing breast milk production and evaluating their effectiveness. Specifically, the author will examine the effectiveness of acupressure techniques as a complementary therapy to enhance both the production and quality of breast milk.

METHOD

1. **Search and Identification Stage**
   The article search process was carried out from June to July 2022. Article searches and introductions were carried out in several online databases, including Google Scholar, PubMed, Science Direct, and] Medline databases. The search keywords used were "breast milk production", "acupressure", and words in the English version.
2. **Eligibility Criteria**
   The initial stage involves identifying relevant studies. The author sought articles focused on complementary therapies aimed at enhancing breast milk production and flow. This led to a literature review on acupressure therapy as a potential method for increasing milk production. Online searches were conducted using the predefined keywords. The titles and abstracts of the articles were reviewed to ensure they matched the keywords. In the second step, abstracts that met the eligibility criteria were screened. Only those abstracts that fulfilled the set criteria were downloaded in full for the third stage, which involved assessing the content for eligibility.
3. **Inclusion Criteria**
   The inclusion criteria for this research encompass original studies published within the last 10 years. The full text must be accessible, and the studies must involve patients who received acupressure therapy alone, without any combination therapy, aimed at increasing breast milk production.
4. **Data Extraction and Synthesis**
   Data is extracted into categories: year of publication, Journal Name, Research Title, Methods, and results. Data is presented in table form.
5. **Data Analysis**
   The data obtained is presented descriptively.

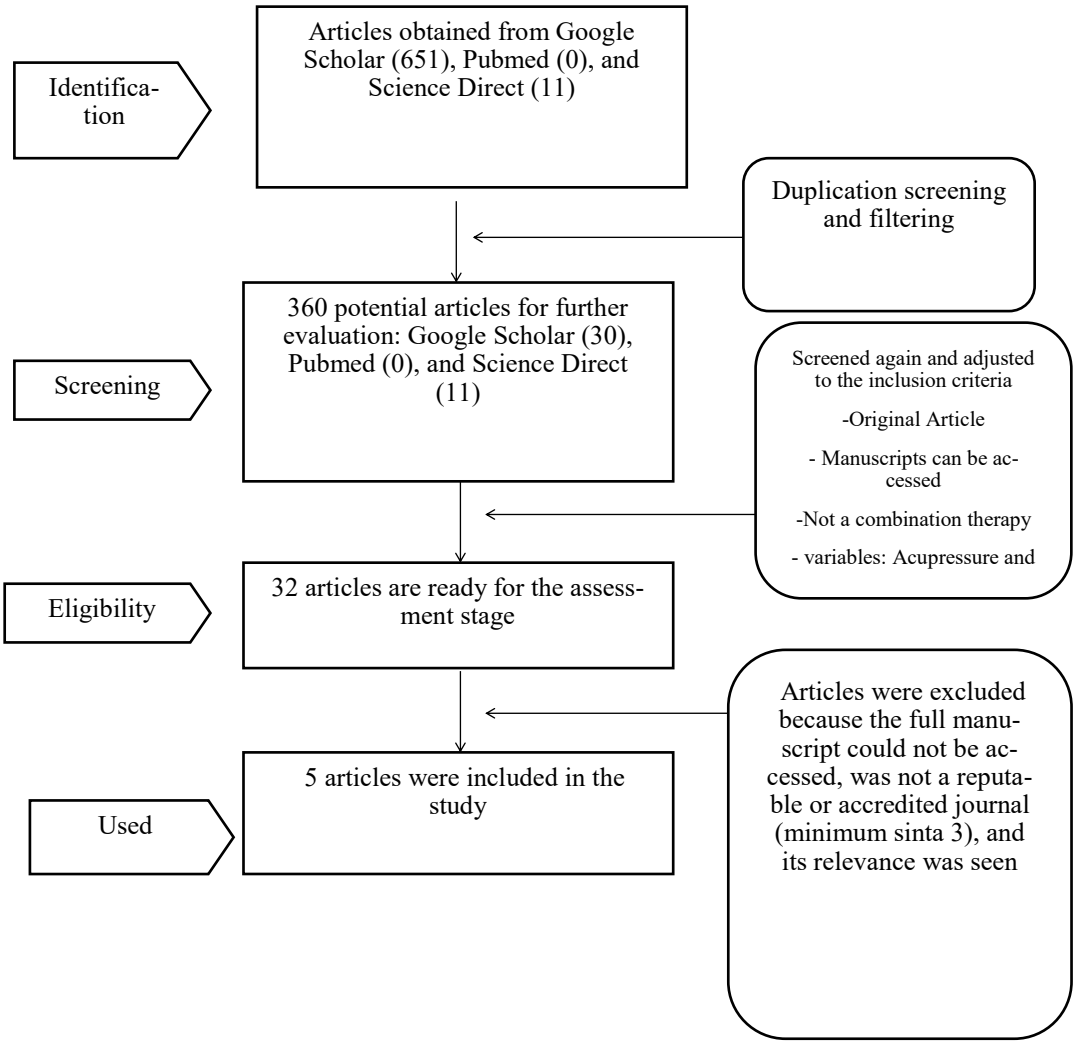

Figure 1. Article search and selection scheme

RESULT

No.	Year	Journal	Title	Therapy	Design	Result
1.	2020	Enfermería Clínica	The effect of acupressure therapy on the improvement of breast milk production in postpartum mothers	Acupressure	The study employed a quasi-experimental design with a post-test involving a control group. Acupressure was applied at specific points: CV18, ST17, and SI1, with a frequency of three times per week. The acupressure treatment was administered within 24 hours after childbirth for a duration of 5 to 10 minutes. In contrast, the control group received standard midwifery care, which included postpartum exercises. Observations of breast milk production were conducted on postpartum days 2, 4, and 7.	Mothers who received acupressure therapy and those who participated in postpartum exercises both showed improvements on the second, fourth, and seventh days following childbirth. However, the increase observed in the acupressure group was greater than that in the postpartum exercise group. This indicates that acupressure may serve as a beneficial complementary treatment for midwives to support postpartum mothers in enhancing breast milk production.
2.	2019	Jurnal Kesehatan	Effect of Acupressure Point for Lactation on Breast Milk Production for Breastfeeding Mothers	Acupressure	The study utilized a quasi-experimental design featuring a one-group pretest-posttest approach, which was divided into two groups: an intervention group consisting of 8 participants and a control group also comprising 8 participants.	The average breast milk production among breastfeeding mothers before the acupressure intervention for lactation was 67.9 ml, while it increased to 85.7 ml after the intervention. Bivariate analysis indicated a significant effect of the acupressure intervention on breast milk production, with a p-value of 0.0005.

3.	2019	Jurnal Ners Indo-nesia	Effect of Acupressure on Breast Milk Produc-tion	Acupres-sure	The study em-ployed a quasi-experimental de-sign featuring a non-randomized control group with a pretest-posttest approach. A total of 34 respondents were selected through purposive sampling, with 17 participants as-signed to the ex-perimental group and 17 to the con-trol group. The experimental group received acupressure treat-ment for three days, with two sessions of 15 minutes each con-ducted on a single day. Acupressure was applied at the points ST 15, ST 16, and LI 4.	Acupressure enhances breast milk production by an average of 3.00 points. The findings of this study suggest that applying acupressure at the points ST 15, ST 16, and LI 4 is advisable for breastfeeding mothers seeking to boost their breast milk production
4	2022	Jurnal Keper awatan	The Effect of Acupressu re on Breast Milk Produc-tion in Post-Partum Mothers	Acupres-sure	The study utilized a quasi-experimental de-sign featuring a pre-test and post-test approach with a control group. The population consisted of all postpartum moth-ers who were three days post-partum, totaling 42 participants. These participants were divided into two groups, with 21 individuals in the experimental group and 21 in the control group.	he average breast milk production in the experi-mental group prior to acupressure was 119.05, while it increased to 213.33 after the acupres-sure treatment. In con-trast, the average breast milk production in the control group was 129.52 before the inter-vention and rose to 168.57 afterward. The bivariate analysis yield-ed a p-value of 0.000, which is less than 0.05.

5	2023	Health Care for Women International	The effect of acupressure on lactation in non-breastfeeding mothers after preterm cesarean delivery	Acupressure	The study employed a randomized controlled experimental design with a sample of 64 primiparous mothers who delivered premature infants via cesarean section in a hospital setting. Three days post-surgery, the case group received 15 minutes of acupressure in the morning and evening. The case group also expressed breast milk to assess the volume produced, while monitoring for tension, heat, and pain in their breasts.	The volume of breast milk in the case group that received acupressure was greater compared to the control group. Additionally, the case group reported higher levels of tension, heat, and pain in their breasts

DISCUSSION

Over the past five years, there has been a noticeable lack of research published in reputable international journals regarding the effects of acupressure on breast milk production. The findings related to acupressure and breast milk production were sourced from esteemed international journals as well as accredited SINTA journals 1, 2, and 3. This discussion will cover a total of five articles that examine how acupressure influences breast milk production.

Hypogalactia is a significant issue that can hinder the successful provision of exclusive breastfeeding, often leading to mothers eventually ceasing to breastfeed their infants. In this context, hypogalactia refers specifically to inadequate breast milk volume or production. The hormones prolactin and oxytocin are crucial for successful breastfeeding, as they play key roles in stimulating both the production and release of breast milk. Prolactin, produced by the pituitary gland, is responsible for regulating lactation after childbirth. Additionally, oxytocin, which is synthesized in the hypothalamus, must be sufficiently released into the bloodstream to stimulate the breasts to produce milk. Oxytocin also plays a role in the birthing process (13).

One approach to stimulate the production of prolactin and oxytocin is through complementary therapies, such as acupressure (14). Acupressure is a traditional treatment technique that involves applying pressure to specific points on the body using fingers or tools like blunt sticks. These acupressure points are referred to as meridians. Generally, the purpose of acupressure is to enhance overall health, including reproductive health, and to increase breast milk production (15).

Research has shown the effects of acupressure therapy on improving breast milk production in postpartum mothers compared to those who engaged in postpartum exercises. Both groups of mothers experienced positive outcomes (16). The intervention conducted on mothers with infants aged three days demonstrated an increase in breast milk quantity before and after the acupressure treatment (17).

In addition to the aforementioned

points, acupressure points ST 15, ST 16, and LI 4 were also associated with increased breast milk production, showing an enhancement of 3 points following the intervention. The results indicated that breastfeeding mothers with infants aged 0-2 months experienced an increase in breast milk volume, from 67.9 ml before the intervention to 85.7 ml afterward (19).

Furthermore, acupressure interventions in mothers who delivered premature babies via caesarean section revealed significant differences between those who received acupressure and those who did not. The group that underwent acupressure exhibited a higher volume of breast milk. In addition to the increase in milk production, noticeable changes were observed in the mothers' breasts. Mothers who received acupressure reported their breasts feeling more tense, warm, full, and painful. These symptoms of tension and pain are indicative of breasts that are full of milk (20).

Acupressure stimulation transmits signals to the spinal cord and brain through axon nerves, activating the central nervous system (CNS). This activation leads to changes in neurotransmitters, hormones (including prolactin and oxytocin), the immune system, and various biochemical substances (such as endorphins and cytokines). Consequently, this results in a normalization of modulation and balancing effects on Qi energy (21). The researcher suggests that acupressure positively affects breast milk production in postpartum mothers by alleviating tension and promoting muscle relaxation. This state of relaxation can help mothers who are experiencing psychological stress to feel more comfortable, thereby fostering positive emotional states. Increased comfort enhances the let-down reflex and raises levels of prolactin and oxytocin. Acupressure points for lactation can also stimulate the production of prolactin from the brain, thereby influencing the quantity of breast milk produced.

CONCLUSION

Based on the reviewed articles, it is evident that targeted acupressure interventions can enhance breast milk production in postpartum mothers. Acupressure functions as a complementary treatment to assist postpartum mothers in improving their breast milk production.

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