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Original Research

The Effect of Breast Care Intervention on the Incidence of Breast Engorgement among Postpartum Women

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Abstract

Background: After childbirth, the problem that is often experienced by postpartum mothers is breast milk (engorgement), This may be caused by an anomaly of the mamma's papillae, limited lactoferous ducts, or insufficient emptying of the glands.
Objective: To determine the relationship between postpartum breast care interventions and the prevalence of breastfeeding dams at the Baruga Health Center, Bantaeng Regency.
Methods: This study used a cross-sectional descriptive survey methodology. Looking for an overview of breast care interventions in postpartum mothers with breastfeeding dams at the Baruga Health Center, Bantaeng Regency.
Results: It showed that 13 respondents (86.0%) did not do breast care and experienced breast clotting, 1 respondent (7.0%) had done breast care and experienced breast clotting, 2 respondents (14.0%) did not do breast care and did not experience breast clotting. froze breast milk, and 14 respondents (94.0%) did not do breast care and froze breast milk.
Conclusion: For the breastfeeding process to be successful, the breasts must receive frequent attention. Ensuring adequate milk production throughout the breastfeeding period, preventing breast abnormalities, and maintaining breast health during the breastfeeding process are the goals of breast care.

Keywords: Breast care; breast milk dam; postpartum mother

Introduction

The postpartum period refers to the time from delivery until approximately six weeks to three months after the birth of the fetus and placenta, during which the reproductive organs and breasts gradually return to their pre-pregnancy condition. The breasts undergo various physiological changes in this period due to hormonal fluctuations. Mothers who initiate breastfeeding immediately after childbirth will experience an increase in breast development as a result of hormonal concentration. Both mothers and newborns benefit greatly from breastfeeding, particularly when exclusive breastfeeding is maintained for up to six months (Yulis et al., 2022). The process of breastfeeding includes both the production of breast milk and the act of the baby sucking and consuming it. Breast milk provides all the essential nutrients required for the baby's growth and development in optimal amounts and composition, particularly during the first six months of life. Therefore, breast milk is considered the most ideal food for infants (Ignasensia D, 2023). According to WHO data (2023), the global prevalence of breastfeeding-related complications, particularly breast milk stasis or engorgement, remains high. In the United States, an estimated 87.05% of breastfeeding mothers experience breast milk freezing problems, compared to 66.87% of 10,674 postpartum mothers in 2022 and 66.34% of 9,862 postpartum mothers in 2021 (Khatimah et al., 2023). Based on ASEAN data in 2022, there were 107,654 reported cases of breast milk blockage, 95,698 cases of breast milk freezing in 2022, and 76,543 cases the previous year. One of the main contributing factors is a lack of public awareness and insufficient promotion of effective breastfeeding practices (Ministry of Health, 2024).

At the national and regional levels, the issue of breast milk engorgement is also significant. According to the 2022 Indonesian Demographic and Health Survey, in South Sulawesi Province there

were 35,985 postpartum mothers (15.60%) who reported experiencing breast milk freezing, and in 2022 the number increased to 77,231 mothers (37.12%). Furthermore, in 2023, data from the Bantaeng Regency Health Office showed that 204 postpartum mothers suffered from breast milk dams (South Sulawesi Provincial Health Office, 2022). The findings of Sri Aryati's research (2023) demonstrated that among 21 participants who underwent breast therapy, 16 mothers (76%) experienced increased milk production exceeding 15 cc, while 5 mothers (24%) had milk production below 15 cc (Hanubun et al., 2023). This suggests that appropriate breast care interventions can support milk flow and reduce the risk of breast engorgement.

Breastfeeding mothers can overcome breastfeeding difficulties by identifying them early and taking appropriate steps to facilitate milk flow and nipple comfort. Maintaining personal hygiene is also essential. One of the most common problems experienced by postpartum mothers is breast milk dams (engorgement), which can result from nipple anomalies, obstruction of lactiferous ducts, or incomplete emptying of the mammary glands. The increasing incidence of breast milk engorgement due to inconsistent milk production remains a concern within communities (Taqiyah, 2019). Based on this background, the researcher is interested in studying breast care interventions for postpartum mothers experiencing breast milk dams at the Baruga Bantaeng Health Center. This study is expected to provide evidence on the effectiveness of breast care as a preventive and therapeutic measure to reduce the incidence of breast milk engorgement and improve maternal comfort during breastfeeding.

Methods

Study Design

This study employed a cross-sectional descriptive survey design aimed at providing an overview of breast care interventions among postpartum mothers who experienced complaints of breast milk dams.

Samples

This study used a total sampling technique, in which all postpartum mothers during the study period were included as respondents. The population and sample size were therefore the same, totaling 30 postpartum mothers in the working area of the Baruga Health Center. Inclusion criteria included postpartum mothers within the first 1–14 days after delivery, mothers who performed or did not perform breast care, and mothers who were willing to participate and provide informed consent. Exclusion criteria included mothers with breast abnormalities (such as mastitis or nipple deformities), mothers receiving pharmacological lactation therapy, or those who were not present during the data collection process.

Instruments

The main instruments used in this study were observation sheets and structured questionnaires, which were designed to document breast care practices and record the incidence of breast milk dams among postpartum mothers. Primary data were obtained through direct observation of breast care procedures performed by the respondents and through structured interviews related to breastfeeding conditions (presence or absence of breast milk blockage). These instruments allowed the researcher to identify patterns between the breast care interventions conducted and the occurrence of breast milk dams.

Data Collection

The research was conducted in the working area of the Baruga Health Center. The total sampling method was applied so that all postpartum mothers who met the inclusion criteria were included as respondents (n = 30). Data collection was carried out through direct observation, structured interviews, and documentation of breast care activities and incidences of breast milk engorgement. Researchers observed the implementation of breast care practices and recorded the condition of the breasts (normal or engorged) during the postpartum period.

Data Analysis

Data were analyzed using descriptive quantitative techniques, presented in the form of frequency distributions and percentages. The analysis aimed to describe the relationship between breast care practices and the incidence of breast milk dams. For example, among 15 respondents who performed breast care, 93% did not experience breast milk dams, whereas among the 15 respondents who did not perform breast care, 86% experienced breast milk dams. The data were tabulated and presented in tables and narrative form to provide both visual and textual interpretation. Although this study primarily employed descriptive analysis, the addition of inferential statistical tests such as the Chi-Square test is recommended in future studies to determine the significance of relationships between breast care and breast milk engorgement.

Ethical Considerations

This study obtained ethical approval from the Tanawali Takalar Stikes Ethics Committee. Prior to data collection, each respondent was provided with a clear explanation of the study's objectives, procedures, and potential benefits. Written informed consent was obtained from all participants before their inclusion in the study. The confidentiality and anonymity of respondent data were strictly maintained throughout the research process.

Results

Table 1 can be seen that out of 30 respondents, the most age category with the age of 21-35 years is 13 respondents (43.3%), at least the age of ≤ 20 years is 2 respondents (6.7%), and there are 15 respondents with the age category of > 35 years old as many as 15 respondents (50.0%).

Table 1 Frequency Distribution of Respondents by Mother's Age

Age (Years)	n	%
≤ 20	2	6,7
21-35	13	43,3
> 35	15	50,0
Sum	30	100%

Source: SPSS Processed Data, 2024

Table 2 can be seen that of the 30 respondents with the highest high school education category, 15 respondents (50%), at least 2 respondents with S1 education (6.7%), there were 10 respondents with the junior high school education category, 10 respondents (33.3%) and 3 respondents (10.0%) with elementary education.

Table 2 Distribution of Frequency of Responses by Education

Education	n	%
SD	3	10,0
JUNIOR	10	33,3
SMA	15	50,0
S1	2	6,7
Sum	30	100

Source: SPSS Processed Data, 2024

Table 3 can be seen that out of 30 respondents, a total of 15 (50%) respondents are IRTs, 8 respondents (26.7%) work as civil servants, and at least 7 respondents (23.3%) work in the private sector and there are 8 respondents (26.7%) working as civil servants.

Table 3 Relsponden Work

Work	n	%
IRT	15	50,0
Private	7	23,3
PNS	8	26,7
Sum	30	100%

Source: SPSS Processed Data, 2024

Based on table 4, it is stated that of the 30 respondents who came to the Baruga Health Center, 14 respondents (48.0%) did breast treatment, 16 respondents (52%) did not do breast treatment.

Table 4 Dilstrilbusil Breast Care By Number Of Respondents

Breast Care	n	%
Do	14	48,0
Not doing	16	52,0
Sum	30	100

Source: SPSS Processed Data, 2024

Of the thirty respondents who had breast care but did not experience breast clotting, fourteen (94.0%) had breast care and one person (7.0%) had both. This information can be seen in Table 5. Two (14.0%) of the respondents did not practice breast care and did not experience breast clotting, while thirteen (86.0%) of the respondents did not practice breast care and experienced breast clotting.

Table 5 Distribution of Respondents by Breast to
Dam of ASI Baruga Health Center Bantaeng Regency

Breast Care	Milking Dam	n	%

	Yes		Not			
	n	%	n	%		
Do	1	7,0	14	93,0	15	100
Not Doing	13	86,0	2	14,0	15	100
Sum	14	48,0	16	52,0	30	100

Source: SPSS Processed Data, 2024

Discussion

Respondent Catharsis

Based on the most age is > 35 years, the age > 35 years is usually the range of breast milk dams, this is because the age of > 35 years is a risky age for childbirth so that it will increase anxiety in postpartum mothers, where anxiety is one of the factors for breast milk dams. Mothers with high school diplomas made up the majority of respondents (15, or 50.0%). Breast cancer treatment is also influenced by the mother's level of education. Efforts to increase breast milk supply are influenced by maternal awareness of the benefits of breast milk for baby nutrition. In addition, breast care is one of the strategies to increase breast milk production. Based on the work, it was stated that of the 30 respondents who came to the Baruga Health Center, Bantaeng Regency, the most were unemployed mothers (IRT) as many as 15 (50.0%) respondents and the second respondent who had civil servant jobs as many as 8 (22.8%) respondents and the lowest was respondents who had a self-employed job as many as 7 (20.0%) respondents.

Breast Care against Breast Milk Dam

Breast engorgement is one of the common problems that often occur in postpartum mothers, especially in the early stages of breastfeeding. This condition occurs due to overfilling of blood vessels and milk ducts that are not emptied effectively. Breast care interventions are one of the important methods in preventing and overcoming this condition (Saifudin, 2019). These findings show that of the 15 respondents who received breast treatment, the majority did not experience breast milk. Of these, 14 (93%) and 1 (7.0%) respondents did. Of the 15 respondents who did not receive breast care, 13 people (86%) reported experiencing breast dams, while 2 people (14%) did not experience breast dams. In line with the research of Taqiah (2019) entitled The effect of breast mass on breast milk dams in postpartum mothers at RSIA Khadijah I Makassar with research findings showing that postpartum mothers received breast care after childbirth, as many as 81.3% of mothers who did not experience breast milk dams and 18.3% of people who experienced it. This is the advantage of the breastfeeding movement, which helps in initiating the milk production response and usually requires emptying by pumping or massaging. In addition, it is a useful strategy to increase milk production and, most importantly, avoid milk dams (Yusrah & Rais, 2019)

In accordance with the theory of Hartono (2020), Breast care is a technique to maintain breast health to ensure smooth breast milk production. By stimulating the mammary glands through massage, breast care physiologically affects the pituitary gland to release more of the hormones progesterone, estrogen, and oxytocin. The breast milk production reflex is facilitated by the movements made during breast care (Saifudin, 2019). Breasts need to be cared for regularly for breastfeeding to be successful. The purpose of breast care is to ensure adequate milk production during breastfeeding, breast health, and breast shape are maintained during the breastfeeding process. Breast enlargement usually occurs in women between weeks 6 and 8. Breasts will feel tighter, denser, and painful, and swollen and dilated blood vessels will be clearly visible on the surface of the skin. In the areola area, the Montgomery gland is more visible and conspicuous (Murniati, 2023).

To increase breast milk production and maintain the natural shape of the breast while breastfeeding, the breast support muscles must contract. For example, to develop the pectoralis muscles, cross your arms in front of your chest, close your elbows, and pull until the base of the breast muscles begin to tense. It is also important to think about breast hygiene, especially in the area of papillae and areola. Avoid soaping the papillae and areolas while bathing to avoid dryness and stiffness caused by the loss of lubricating mucus produced by the Montgomery glands. If the areola and papillae are dry, there is a high chance of abrasions and infection (Mustikasari et al., 2023). If necessary, prepare it so that it is soft and does not cause milk blockage. Every day, preparations are carried out twice a day. Using an oiled cotton swab, press each nipple for two to three minutes. Then, pull and rotate the nipple 20 times inward and 20 times out. To open the milk duct, massage the areola area. Apply it to the papillae and surrounding area if fluid is visible. After that, a soft towel is used to clean the breasts. Fixing inverted or flat breasts is necessary for the breasts to stand out and be ready for breastfeeding by the baby. An effective solution to this problem is a nipple pump (Bahiyatun, 2009). Effective breastfeeding depends on

several aspects, including the mother's physical and mental health, which are influenced by nutritional levels, adequate sleep, and a host of other factors (Lubis, 2016)

Conclusion

From the results of the study by examining 30 respondents, 15 respondents were given interventions, most of whom did not experience breast milk dams, 14 respondents (93%), while 15 respondents who were not given interventions mostly experienced breast milk dams as many as 13 respondents (86%). It can be an additional scientific insight about breast care interventions against breast milk dams, as concerns about breast care interventions against breast milk dams. And for the next researcher, it can consider the factors that affect breast care interventions against breast milk dams.

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