



## Effect of Oxytocin Massage on Breast Milk Production in Postpartum Mothers: A Case Study

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### ABSTRACT

**Introductions:** Oxytocin massage is one of the non-pharmacological ways that can be done so that milk production increases and runs smoothly. Oxytocin massage aims to stimulate the postpartum mother's oxytocin hormone, which is carried out on the head, neck, back, and along the spine.

**Aims:** This study aims to describe care with oxytocin massage interventions to facilitate breastfeeding in postpartum patients.

**Methods:** The research used is a descriptive approach through the nursing care process method which consists of the first assessment carried out by observing and interviewing patients to obtain data and information for data analysis, the second is establishing diagnoses that appear to clients after the data collection process, the third is intervention or planning actions that will be carried out, the fourth is the implementation, namely the implementation of the planned actions, and finally the evaluation by documenting the nursing care process from start to finish. The intervention was carried out in the inpatient room of the Banjar City Hospital for 1 postpartum person by giving oxytocin massage.

**Results:** From the effects of the oxytocin massage intervention there was a change in milk production, and milk expenditure became more, whereas from the anamnesis results obtained subjective data, the client said it was difficult to express milk.

**Conclusions:** Oxytocin massage can be a nursing intervention in promoting breastfeeding in postpartum mothers who are constrained about breastfeeding, with nursing diagnoses that breastfeeding is ineffective.

**Keywords:** Exclusive Breastfeeding, Oxytocin Massage, Post-Partum

## Introduction

In the stages of child development, a mother plays a very important role from the stage of pregnancy to delivery. In the process of delivery, the fetus and placenta that are full-term will experience a process of expulsion with normal delivery and artificial delivery / Sectio Caesarea (Akuntansi, 2022). Babies who are born must be given breast milk in the process of growth and development. Exclusive breastfeeding, namely direct breast milk from the mother which is of course sterile which has the benefit of reducing digestive disorders compared to other foods (Doko et al., 2019). The content contained in breast milk is useful as immunity, growth factors, hormones, nutrition, anti allergies, antibodies, and anti inflammation for infections in infants (Nurainun & Susilowati, 2021).

However, exclusive breastfeeding often creates many obstacles. Because in the first 6 months of newborns there are often obstacles in efforts to give exclusive breastfeeding (Saputri et al., 2019). The cause of the lack of stimulation of the hormones prolactin and oxytocin in post partum mothers results in a decrease in exclusive breast milk production. Within half an hour if the baby's mother does not breastfeed immediately it can cause a decrease in the hormone prolactin but after three days of delivery or more the hormone prolactin increases so that breast milk can be produced (Suryani & Astuti, 2013). As a result of non-smooth milk production for both mother and baby, it can cause various problems, namely swelling of the breast (engorgement), mastitis, breast abscess, blocked milk flow (clogged duct), jaundice, baby syndrome and crying (Yeni et al., 2022).

According to the World Health Organization (WHO) and UNICEF, babies aged 6 months need exclusive breastfeeding with a total of 41% and will increase to 70% in 2030 (Exploration et al., 2017). In Indonesia, exclusive breastfeeding was only 45.55% in 2014, which should have been the target of the Ministry of Health (KemKes) of 80%. Especially in Riau Province, 51.2% of exclusive breastfeeding was obtained in 2013. This is evidenced by a survey conducted in December by researchers at BPM Ernita, Amd.Keb, there were 35 post partum mothers who complained that breast milk did not come out. consisting of 16 primiparas and 19 multiparas (Maita, 2016). The cause of the disruption to the smooth process of expressing breast milk is due to bad habits so to overcome this, babies who are not yet 6 months old must be given complementary foods and introduce ways to expedite the release of breast milk.

Non-pharmacological methods that can be used to increase milk production are by doing oxytocin massage which can facilitate milk production. Oxytocin massage aims to stimulate the post partum mother's oxytocin hormone which is along the spine (vertebrae) (Litasari et al., 2020). The release of oxytocin starts from a neurotransmitter that triggers the medulla oblongata then sends a signal to the hypothalamus in the posterior pituitary through touch or massage (Pijat et al., 2022). Breast milk production can be caused by 2 factors, namely the production/hormone prolactin and the release/hormone ochritosin. How to remove the oxytocin hormone can be done by sucking the baby's mouth or oxytocin massage on the mother's spine which will release milk (Setyawati, 2022). Doing a good oxytocin massage should be done before breastfeeding which is done 2 times with a period of 3-5 minutes (Fara et al., 2022).

One of the benefits of oxytocin massage that can be felt is that it releases the oxytocin hormone so that the muscle cells in the milk-producing ducts contract which causes the milk to come out and the mother's body relaxes and reduces postpartum fatigue. so that the release of oxytocin and breast milk becomes smooth (Sukmawati & Prasetyorini, 2022; Roslianti et al., 2022). The benefits of oxytocin massage affect the feelings, thoughts and emotions of the mother. But often there are obstacles from the mother's feelings that make it difficult for breast milk to come out (Erwhani et al., 2022). If decreased milk production can

be caused by strong feelings, thoughts, and emotions (Delima et al., 2016). Based on the description above, the authors are interested in conducting research on "the effect of oxytocin massage on milk production in post partum mothers".

### Objective

The purpose of this research is to describe how oxytocin massage can accelerate milk production, as well as to gain practical experience in childbirth, so that it can provide good nursing care directly.

### Method

This study used a qualitative descriptive method with data collection techniques using pre-test and post-test breast milk production observation sheets. This research was conducted for 3 days from 26 October to 30 October 2022 at Dr. Soekardjo Tasikmalaya. The subjects involved in this study were Mrs.W, a 27 year old post partum patient who came from Ds. sambong jaya rt/rw 01/01 Kec. Mangkubumi Regency. Tasikmalaya. The patient complains of difficulty in expressing milk.

The type of intervention carried out was by doing oxytocin massage. This intervention is in accordance with the journal in the meta-analysis that has been carried out by other researchers (Fara, et al 2022) which explains that the intervention of oxytocin massage in patients with complaints of difficulties in the process of expressing milk, evidence does. the intervention of doing good oxytocin massage should be done before breastfeeding which is done 2 times with a period of 3-5 minutes. The tools and materials needed are 1 large towel, 2 basins for warm and cold water, 2 handkerchiefs and baby oil. For its application, rub both palms with baby oil and rub it on the sides of the spine while massaging it with your hands clenched into fists then press gently in small circular motions. do the massage 3-5 times until the fifth to sixth coesta bone

### Result and Discussion

#### Assesment

The research results obtained client data Ny. W., 27 years old, a Muslim woman, has a junior high school education and lives in Sambong Jaya Village, RT 01 RW 01, Mangkubumi District, Tasikmalaya Regency, with complaints of difficulty expressing breast milk. New client has 1 child and type of spontaneous delivery. All information is obtained from clients and families.

The results of the physical examination, namely vital signs obtained respiratory rate 20x/minute, blood pressure 130/80 mmHg, temperature 36.5oC, pulse 80x/minute. other examination results the client has difficulty expressing milk, the nipples do not protrude, and the baby looks crying when feeding. Anamnesis, the client has no history of comorbidities, the client also says there is no family history of hereditary disorders such as high blood pressure and diabetes.

**Table 1.** Glasgow Coma Scale

GCS	Reaction	Score
E: Eye	Opens eyes spontaneously	4
M: Motorik	Follow the orders	6
V: Verbal	Well oriented	5
	Total	<b>15</b>

## Nursing diagnoses

From the research data, it can be concluded that the nursing problem that arises is ineffective breastfeeding related to inadequate milk supply according to the Indonesian Nursing Diagnostic Standard (IDHS) diagnosis number D.0029 page 75.

**Table 2.** Nursing Diagnoses

Data analysis	Etiology	Diagnosis	Number Diagnostics	Page
<p><b>Subjective:</b> The client says it is difficult to express milk</p> <p><b>Objective:</b></p> <ul style="list-style-type: none"> <li>➤ The milk hasn't come out yet</li> <li>➤ Nipples do not protrude</li> <li>➤ The baby is seen crying while feeding</li> <li>➤ The client seems unable to breastfeed properly</li> <li>➤ BP : 130/80 mmHg</li> <li>HR : 80 x/mnt</li> <li>RR : 20 x/mnt</li> <li>T : 36,°C</li> </ul>	Breastfeeding is not effective	Ineffective breastfeeding related to inadequate milk supply	D.0077	75

## Intervention, Implementation and Evaluation of Nursing

After analyzing the data from these diagnoses, an intervention was then carried out which was given in the 2018 edition of the Indonesian Nursing Intervention Standards book, print II, 2018.

**Table 3.** Nursing Interventions in Post Partum Patients

No	Diagnosis	Results and Objectives Criteria	Intervention	Doing/Not Doing
1.	<p><b>Breastfeeding is not effective (D.0029)</b> Ineffective breastfeeding related to inadequate milk supply.</p> <p><b>Subjective:</b> The client says it is difficult to express milk</p> <p><b>Objective:</b></p> <ul style="list-style-type: none"> <li>➤ The milk hasn't come out yet</li> </ul>	<p><b>Breastfeeding status (L.03029)</b> After nursing actions for 2x24 hours, it is hoped that breastfeeding problems will not be resolved effectively with the following criteria:</p> <ul style="list-style-type: none"> <li>• Increased droplet/radiation of breast milk</li> </ul>	<p><b>Observation</b></p> <ol style="list-style-type: none"> <li>1. Identify readiness and ability to receive informationIdentifikasi tujuan dan keinginan menyusui</li> </ol> <p><b>Therapeutic</b></p> <ol style="list-style-type: none"> <li>1. Schedule health education as agreed</li> </ol>	<p>Do</p> <p>Do</p> <p>Do</p>

➤ Nipples do not protrude	• Adequate milk supply	2. Support mothers to increase confidence in breastfeeding	Do
➤ The baby is seen crying while feeding	• The mother's ability to position the baby increases	<b>Education</b>	
➤ The client seems unable to breastfeed properly	• The baby's weight is increasing	1. Provide breastfeeding counseling	Do
➤ BP : 130/80 mmHg HR : 80 x/mnt RR : 20 x/mnt T : 36,0C		2. Teach post partum breast care (oxytocin massage)	Do

**Table 4.** Implementation in post partum patients

Day, Date and time	Nursing diagnoses	nursing implementation	Result	executor
Wednesday, 26 October 2022 13.00-15.00	<b>Breastfeeding is not effective (D.0029)</b> Ineffective breastfeeding related to inadequate milk supply.	<b>13.00</b> 1. Identify readiness and ability to receive information	1. Clients are ready and in dire need of information about breastfeeding. 2. The client knows that the purpose of breastfeeding is to provide nutrition to the child for good growth and development and the client also really wants to breastfeed but is hampered because the milk does not come out.	Rini F
	<b>Subjective:</b> The client says it is difficult to express milk	<b>13.20</b> 2. Identify breastfeeding goals and desires	3. The client is willing to attend Penkes and the schedule is determined on Thursday according to the agreement.	Rini F
	<b>Objective:</b>	<b>13.30</b> 3. Schedule health education as agreed	4. The client after being given counseling the client's confidence increases and is encouraged by the client's family so that her confidence in breastfeeding is better.	Rini F
	➤ The milk hasn't come out yet	<b>13.50</b> 4. Support mothers to increase confidence in breastfeeding	5. After being given counseling the client gains insight and has a major impact on the client.	Rini F
	➤ Nipples do not protrude	<b>14.20</b> 5. Provide breastfeeding counseling	6. The client enjoys this oxytocin massage and feels the benefits provided so that the milk comes out,	Rini F
	➤ The baby is seen crying while feeding	<b>15.00</b> 6. Teach post partum breast care		Rini F

RR : 20 (oxytocin although not much, but  
 x/mnt massage) gives its own satisfaction.  
 T : 36,5°C

**Table 5.** Nursing Evaluation in Post Partum Patients

Nursing diagnoses	Day, date and time	Nursing evaluation	Initials
<b>Breastfeeding is not effective (D.0029)</b> Ineffective breastfeeding related to inadequate milk supply	Wednesday, 26 October 2022, 15.00	Subjective: The client says it is still difficult to express milk Objective: <ul style="list-style-type: none"> <li>• The milk hasn't come out yet</li> <li>• Nipples do not protrude</li> <li>• BP: 130/80 mmHg</li> <li>• RR: 20 x/minute</li> <li>• HR: 88 x/minute</li> <li>• T: 36,5°C</li> </ul> Assesment: The problem of ineffective nursing nursing is partially resolved Planning: Continue intervention 1, 2, 3, 4, 5, 6 <ul style="list-style-type: none"> <li>• Identify readiness and ability to receive information</li> <li>• Identify breastfeeding goals and desires</li> <li>• Schedule health education as agreed</li> <li>• Support mothers to increase confidence in breastfeeding</li> <li>• Provide breastfeeding counseling</li> <li>• Teach post partum breast care (oxytocin massage)</li> </ul>	

After the nursing care process was carried out for Mrs. N aged 27 with post partum in the Melati 2 room Dr. Soekardjo Tasikmalaya from October 26-30 2022. During the implementation of care the client and family were very cooperative making it easier to take action. The process consists of assessment, determination of nursing diagnoses, interventions, implementation and evaluation.

The first stage is assessment which is the initial stage of the nursing care process, where the author collects data with an approach to clients and families along with the aims and objectives to be carried out. This data will later be submitted for the enforcement of nursing diagnoses. The results of the assessment on December 26, 2022 at 09.00 the client said it was difficult to express milk with the results of vital signs blood pressure 130/80 mmHg, respiration 20 x/minute, pulse 88 x/minute, body temperature 36.5 oC also found breast milk had not come out, nipples does not stand out, the baby looks crying when feeding, the client seems unable to breastfeed properly.

The second stage is the determination of nursing diagnoses which is carried out after collecting assessment data on Ny. N based on the analysis of the data obtained, the diagnosis that emerged was ineffective breastfeeding related to inadequate milk supply. Which is characterized by subjective data, namely the client says it is difficult to express milk, while the

objective data obtained is that the milk has not come out, the nipples do not stand out, the baby looks crying while breastfeeding, the client seems unable to breastfeed properly.

Based on the facts in the field and the existing theory has relevance in determining nursing diagnoses in ineffective post partum breastfeeding. Facts in the field state that post partum can lead to an ineffective diagnosis of breastfeeding.

The third stage is nursing planning which is carried out after collecting data and establishing a diagnosis, then the authors plan the actions to be taken. At this stage the authors found many obstacles which were supported by information from room nurses, available resource books, and support from the client's family. The interventions carried out in accordance with the Nursing Intervention Standards book (PPNI, 2016) are as follows:

**Table 6.** Nursing intervention

Intervensi	Rasional
<p><b>Observation</b></p> <ol style="list-style-type: none"> <li>1. Identify readiness and ability to receive information</li> <li>2. Identify breastfeeding goals and desires</li> </ol> <p><b>Therapeutic</b></p> <ol style="list-style-type: none"> <li>1. Schedule health education as agreed</li> <li>2. Support mothers to increase confidence in breastfeeding</li> </ol> <p><b>Education</b></p> <ol style="list-style-type: none"> <li>1. Provide breastfeeding counseling</li> <li>2. Teach post partum breast care (eg oxytocin massage)</li> </ol>	<p><b>Observation</b></p> <ol style="list-style-type: none"> <li>1. To determine readiness for the information to be obtained</li> <li>2. To know the goals and desires of breastfeeding</li> </ol> <p><b>Therapeutic</b></p> <ol style="list-style-type: none"> <li>1. Set the schedule between nurse and client</li> <li>2. For clients can gain confidence</li> </ol> <p><b>Education</b></p> <ol style="list-style-type: none"> <li>1. To provide insight or information about breastfeeding</li> <li>2. To accelerate milk production</li> </ol>

From the diagnosis that appears and the symptoms that appear above, breastfeeding is not effective as indicated by the milk not coming out, the nipples are not protruding, the baby looks crying while breastfeeding, and the client seems unable to breastfeed properly, the intervention is to do oxytocin massage. This intervention can increase and facilitate the flow of the client's milk and can also provide a sense of comfort so that the client can do oxytocin massage. Management of ineffective breastfeeding with the oxytocin massage technique is one of the nursing tools to expedite breastfeeding. Management of ineffective breastfeeding with oxytocin massage must first prepare the tools and materials needed, namely 1 large towel, 2 basins for warm water and cold water, 2 handkerchiefs and baby oil. For its application, rub both palms with baby oil then rub it on the sides of the spine while massaging it with your hands clenched into fists then press gently in a small circular motion. do the massage 3-5 times until the fifth to sixth coesta bone. Several researchers have shown that oxytocin massage is very effective in promoting breastfeeding (Sehono, 2010). Oxytocin massage is a massage that is done on the back, precisely on the spine as an effort to increase breast milk in nursing mothers (Rsup et al., 2013). This can be proven from the study of Delima, et al (2016) that doing oxytocin massage can produce more breast milk compared to those who don't do oxytocin massage with a p value = 0.000 ( $p \leq 0.05$ ).

Implementation is the fourth step where the authors carry out nursing care carried out according to plans that have been made before. In this regard, there were several unexpected steps, one of which was the inability to fully monitor the patient 24 hours a day during treatment.

As for some of the actions taken by the author after previously planned, including identifying readiness and ability to receive information, identifying goals and desires for breastfeeding, scheduling health education according to the agreement, providing support to mothers to increase confidence in breastfeeding, providing breastfeeding counseling and teaching post partum breast care.

The fifth stage is an evaluation carried out to monitor the follow-up care process and assess the impact of care interventions on clients. The formative evaluation did not encounter any obstacles, but the inability of the authors to fully monitor the client's condition hampered the summative evaluation.

In the formative evaluation conducted on December 25, 2022 the results have not been resolved because the client still says that the milk has not come out and the client's nipples have not come out. Meanwhile, a summative evaluation by monitoring the patient's progress notes which was carried out on 26-30 December 2022 showed quite good results. On December 27, 2022, on the first day of progress notes, the results obtained after the oxytocin massage procedure were that breast milk had not come out. Then on May 28, 2022, the second day of the progress note, the results obtained came out a little and the client also said it was difficult for breast milk to come out. Whereas on the third day of progress notes on May 29 2022 there was a development, namely the client secreted a lot of milk after an oxytocin massage. The client also said that her milk came out a lot and the client also looked more relaxed and calm.

## Conclusion

From the results obtained that oxytocin massage affects milk production every day, previously breast milk did not come out now it comes out a little, this suggests that oxytocin massage is expected to be effective in influencing milk production so that oxytocin massage can be given to post partum patients

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