

## **THE EFFECT OF BACK ROLLING MASSAGE ON THE EXPENDITURE OF BREAST MILK IN POSTPARTUM MOTHERS**

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### **Abstract**

Back rolling massage is a massage performed on postpartum mothers to stimulate breastfeeding. Expenditure of breast milk will be smooth if the excess milk production marked by breast milk will drip and will radiate profusely when sucked baby. The government hopes that breastfeeding sufficiency in babies can reduce the number of shunting, which prevention was being promoted starting in 2018. Objective, was the effect of back rolling massage on breastfeeding in postpartum mothers. The method used a quantitative research design, using the Quasi Experiment method; the research design used pre-test and post-test with a control group design. The population in this research were postpartum patients in the room who were hospitalized for August to October 2019, totaling 238 people. The sample in this research amounted to 15 people. The sampling technique in this research used nonprobability sampling, namely accidental sampling. Before the rolling back massage, most of the 11 respondents (73.3%) had sufficient milk expenditure, and a small proportion of 4 had insufficient breastfeeding (26.7%). The result, after a rolling massage, most of the 12 respondents (80.0%) had smooth breastfeeding, and a small proportion, namely three (20.0%), had sufficient milk expenditure. The conclusion are there are differences before and after being given *a rolling massage* back then; it is stated that H<sub>0</sub> is accepted. Thus, it can be concluded that rolling massage back influences breastfeeding for post-partum mothers in the Zaitun III Hospital Al-Ihsan West Java Province.

**Keywords:** Back rolling massage, breast milk, quasi experiment.

## **INTRODUCTION**

Back rolling massage is a massage performed on postpartum mothers to stimulate breastfeeding. Expenditure of breast milk will be smooth if the excess milk production marked by breast milk drips and will radiate profusely when the baby sucks (Purwanti, 2004). On the first day, it is enough for the baby to be fed for 10-15 minutes to stimulate milk production and get the nipples used to suckling by the baby. The more often the baby suckles, the more milk will be produced, besides the need for the massage on the mother.

The government hopes that breastfeeding sufficiency in a baby can reduce the number of stunting, which prevention was being promoted starting in 2018. Stunting occurs in babies with signs of height and weight that are smaller than children their age. Give enough breast milk so there is no disease, and even growth and development in babies are average. Breast milk should be given exclusively for the first six months of a baby's life. Without being given any extra food before reaching the age of six months. Do not ignore the feeling of wanting to feed because the baby keeps crying because the assumption is that there is not enough milk.

According to WHO (2016), worldwide coverage of exclusive breastfeeding was only around 38% during 2007-2014. Meanwhile, based on data from Basic Health Research in 2013, starting breastfeeding mainly occurred 1-6 hours after birth (35.2%) and less than 1 hour after early breastfeeding initiation (34.5%). The percentage of exclusive breastfeeding for babies 0-6 months in Indonesia in 2012 was (48.6%), and in 2013 slightly increased by (54.3%). Meanwhile, based on data from Basic Health Research in 2018, it increased by (58.2%). In addition to implementing the correct breastfeeding pattern and technique, we must also evaluate the adequacy of breast milk for the baby. Evaluation of the adequacy of breastfeeding includes signs of effective

breastfeeding and growth patterns. In fulfilling the adequacy of breast milk for babies, it must be supported by adequate maternal nutrition and smooth milk production, one of which is breast care, according to Ayu Devita Citra Dewi, 2019. Moreover, the author researches breast care under the name back rolling massage.

Based on the research results of Sustriyah et al. (2017) regarding the application of back-rolling massage to the smoothness of breastfeeding, after the implementation of back-rolling massage for four days, all respondents experienced an increase in breast milk expenditure, namely from non-smooth breast milk expenditure. *Back Rolling Massage* is massage along the spine (vertebrae) to the fifth-sixth costal bones and is an effort to release the hormones prolactin and oxytocin after childbirth (Yohmi & Roesly, 2009). This massage increases oxytocin, calming the mother so that breast milk comes out automatically.

There were 3,425 visits with SC, as many as 960 people. While in 2019, from January to November, there were 3,253 visits with SC, as many as 885 people in 2018. Based on a preliminary study conducted by researchers, the results of interviews with eight postpartum mothers in Zaitun 3 Room Al-Ihsan hospital. Obtained data that clients complain that their breast milk has not come out: one postpartum mother with expected delivery and seven postpartum mothers with a history of delivery with a section caesarian.

Formulation of the problem: Does the back rolling massage affect breastfeeding for postpartum mothers in the Zaitun 3 Al Ihsan Hospital? General objectives: To determine the effect of back rolling massage on breastfeeding for postpartum mothers in the Zaitun 3 Room Al Ihsan Hospital.

- a. It knows the release of breast milk before doing back rolling massage on postpartum mothers in the Zaitun 3 room at Al Ihsan Hospital.

- b. Knowing the release of breast milk after back rolling massage was carried out on postpartum mothers in the Zaitun 3 room at Al Ihsan Hospital.
- c. It knows the effect of back rolling massage on breastfeeding in postpartum mothers in the Zaitun 3 room at Al-Ihsan Hospital.

## **METHODS**

This study uses a type and quantitative descriptive research approach, using the Quasi Experiment method; *the research design used pre-test and post-test with a control group design*. The population in this study were postpartum women in Zaitun 3 Room of Al-Ihsan Hospital who underwent hospitalization from August to October 2019, totaling 238 people. The sampling technique in this study uses non-probability sampling, namely accidental sampling, where sampling is taken by taking cases or respondents who happen to be available or available somewhere according to the research context (Notoatmodjo, 2018). This study's samples were postpartum mothers hospitalized in Zaitun Room 3 at Al Ihsan Hospital. Gay in Mahmud (2011, p. 159) argues that the minimum acceptable sample size is based on the research method used, i.e.:

- a. Descriptive method, at least 10% of the population. For a relatively small population, at least 20%;
- b. Correlational descriptive method, at least 30 subjects
- c. Ex post facto method, at least 15 subjects per group
- d. The experimental method is at least 15 subjects per group.

Sugiyono (2013, p. 138), determines the number of samples for each KKM is calculated proportionally using the formula:

$$s = \frac{n}{N} \times S$$

Statements :

s = The number of samples per unit proportionally

S = The total number of samples obtained

N = The total of population

n = The number of each population unit

**Table 1. Distribution of Research Samples per Month**

No	Month	Total of Population	$s = \frac{n}{N} \times S$	Total of Samples
1	August	68	$68/238 \times 15$	4
2	September	90	$90/238 \times 15$	6
3	October	80	$80/238 \times 15$	5
	Total	238		<b>15</b>

The total of samples are 15 people.

The sample criteria in this study are :

a. Inclusion Criteria :

- 1) On the second day of postpartum, SC patients with a whole level of consciousness (compos mentis)
- 2) Postpartum breastfeeding mothers who do not take drugs to facilitate milk production
- 3) Babies who were not given formula milk during the study
- 4) The baby was born with no physical defects, and the baby's sucking reflex was good

- 5) Postpartum women who have not received breast care, oxytocin massage, or back-rolling massage
- 6) Postpartum mothers who experience ineffective breastfeeding
- 7) Patients undergoing co-hospitalization with their babies
- 8) Willing to be a respondent and take the pre-test and post-test
- 9) Patients are able to read, write and communicate fluently
- 10) Patients without hearing or vision impairment

b. Exclusion Criteria :

- 1) Abnormal shape of the nipples and breasts (no nipples, mammary cancer, mastitis, and abscesses)
- 2) Postpartum women who have infectious diseases through physical contact
- 3) Postpartum patients suffering from psychological disorders (postpartum blues, postpartum depression, baby blues)
- 4) Postpartum women using hormonal contraceptives containing the hormone estrogen
- 5) Postpartum women who experience hypothermia or hyperthermia
- 6) Postpartum patient undergoing bed rest
- 7) A patient who is giving birth in a vacuum

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## **RESULTS**

The research results were conducted for five days in the Zaitun room 3 AL-IHSAN Hospital, West Java Province, Baleendah, Bandung, with a total sample of 15 respondents. The journal applicative process started with giving informed consent and explaining the implementation procedure; the pretest was conducted on post-SC POD 2

respondents who were given a questionnaire. The respondents were given an intervention about Back Rolling Massage where the respondent was given a circular massage using both palms from the back area on the bone (costae 5- 6 to the scapula in a circular motion) for 15 minutes. Then the next day, a post-test questionnaire was given.

#### Univariate Analysis

- a. An overview of the expenditure of breast milk before doing Back Rolling Massage on postpartum mothers in the Zaitun 3 room at Al Ihsan Hospital.

**Table 2. Distribution of Frequency of Breastfeeding before Giving Back Rolling Massage**

<b>Expenditures of breast milk</b>	<b>F</b>	<b>Presentatio n (%)</b>
Pretty Smooth	4	26.7
Not that smooth	11	73.3
Total	15	100.0

*Source: Primary Data 2019.*

Based on the analysis results, it was found that most of the 11 respondents (73.3%) had sufficient breastfeeding expenditure, and a small proportion of 4 respondents had less breastfeeding expenditure (26.7).

- b. An illustration of the release of breastmilk after back rolling massage was performed on postpartum mothers in the Zaitun 3 room at Al Ihsan Hospital

**Table 3. Expenditure Distribution Frequency of Breastmilk after Giving Back Rolling Massage**

<b>Spending Breast milk</b>	<b>F</b>	<b>Presentation (%)</b>
Smooth	12	80.0
Pretty Smooth	3	20.0
Total	15	100.0

Source: Primary Data 2019.

Based on the analysis results, most of the 12 respondents (80.0%) had smooth breastfeeding, and a small proportion, namely three respondents (20.0%), had good breastfeeding.

### 3.2 Bivariate Analysis

- c. Influence *Back Rolling Massage* on Breastfeeding Expenditures for postpartum mothers in Zaitun 3 Room Al Ihsan Hospital

**Table 4. Distribution of the Effect of Back Rolling Massage on breastfeeding expenditure**

<b>Spending Breast milk</b>	<b>Mean</b>	<b>N</b>	<b>Delta</b>	<b>P Value</b>
<i>Pretest</i>	50.67	15	28.66	0,000
<i>Posttest</i>	79.33			

*Paired Simple T-Test*

Based on the results of the analysis, there was an increase in breastfeeding expenditure by 28.66 after being given *Back Rolling Massage*; there is an effect of

rolling back massage on breastfeeding expenditure, with a p-value = 0.000 ( $p > 0.05$ ). In line with the research results of Sustriyah et al. (2017), regarding the application of Back Rolling Massage to smooth breastfeeding, after implementing Back Rolling Massage for four days, all respondents experienced an increase in breastfeeding expenditure, namely from non-smooth breastfeeding to smooth.

Based on the results of research implementation on September 20-25, 2020, after rolling back massage, the 12 respondents who were sampled found that most of the respondents were eight people (66.7%), breastfeeding was smooth, and a small proportion of 4 respondents (33.3%) were breastfeeding. Relatively smooth with a p-value of 0.000 so that  $H_0$  is rejected,  $H_a$  is accepted, it is said that there is the effectiveness of Back Rolling Massage on breastfeeding.

#### Researchers Limitation

1. Some of the respondents were still in the taking-in phase, so they were not aware that their milk had come out or not
2. Some respondents were still reluctant and shy when doing massage
3. Respondents felt that rolling back massage was not important, so we had to explain it many times to get the respondent interested

#### CONCLUSION

The output of breast milk before back rolling massage for postpartum mothers is small to sufficient, but after that, it has increased or is relatively smooth. Giving a massage on the back, to be precise, on the spine or ribs 5-6 to the scapula with a circular motion will stimulate the release of the hormone prolactin. As described by Dalimartha in Mayang Sari & Rahma 2019, the act of back-rolling massage can affect the hormone

prolactin, which stimulates milk production in mothers during breastfeeding. The action of back rolling massage will provide comfort and relax the mother because massage can stimulate the release of endorphins and can stimulate the oxytocin reflex. Massage techniques at specific points can remove blockages in the blood, and energy in the body will return smoothly.

### **Theoretical Suggestions**

**a.** For STIKes Budi Luhur Cimahi

The results of this study can become literature, reference materials, and documentation. And can be a source of knowledge for developing maternity nursing care about back rolling massage.

**b.** For Zaitun Room 3

For the Zaitun 3 postpartum room, training can be held on back rolling massage and applying it in the field because it is proven very effective in increasing milk production. So that in the room, there are no more mothers who use formula milk because the milk does not come out.

### **Practical Advice**

**a.** Writers

The results of this study can add to the author's knowledge and apply nursing care to patients with postpartum mothers by using existing theories.

**b.** Postpartum Mother Patients

Applying the Back rolling Message given to postpartum mothers can provide significant knowledge for postpartum mothers to express breast milk.

## REFERENCES

Gay. (2011).Metode penelitian kuantitatif, kualitatif. Dalam Sugiono. (2017). Metode Penelitian Kuantitatif, Kualitatif,. Bandung: Alfabeta.

Haryono, Rudi dan Sulis setianingsih. 2014. Manfaat Asi eksklusif untuk buah hati anda. Yogyakarta: Gosyen.

Mayang Sari & Rahma. 2019. Manfaat back rolling massage terhadap pengeluaran ASI. Semarang: jurnal SMART kebidanan.

Mercer. (1995). Becoming a Mother: Research on Maternal Identify from Rubin to The Present

Mercer & Walker. (2006). Efektivitas atau intervensi yang bertujuan untuk membina proses menjadi seorang ibu

Naziroh. 2017. Pengaruh pijat oksitoksin terhadap kelancaran ASI pada ibu primipara. Skripsi. Jombang.

Notoatmojdo. (2018). Metodologi penelitian kesehatan. Jakarta: Rikena cipta.

Purwanti 2004 dalam Devi Aprilia, 2017. Faktor-faktor yang mempengaruhi kelancaran produksi ASI pada ibu postpartum. Jurnal.stikeswilliambooth.

*Shanti. 2018. Efektifitas produksi ASI pada ibu postpartum dengan back massage rolling. Jurnal kebidanan: yogyakarta. Diakses pada tanggal 02 Desember 2019.*

Sulistiyawati, A.(2009). Buku Ajar pada Asuhan Ibu Nifas. Yogyakarta:Andi Offset.

*Sustriyah. (2018). Penerapan rolling massage punggung terhadap kelancaran pengeluaran ASI. Skripsi. Kebumen: STIKes Muhammadiyah Jombang. Diakses pada tanggal 02 Desember 2019.*

Sutanto, Andina Vita. (2018). Asuhan Kebidanan Nifas dan Menyusui. Yogyakarta: Pustakan Baru Press.

*Tikawati. (2015). Penerapan tindakan rolling punggung terhadap peningkatan produksi ASI. Skripsi. Surakarta:STIKes Kusuma Husada. Diakses pada tanggal 08 Desember 2019.*

Widyasih & Hesty. 2012. Perawatan Masa Nifas. Yogyakarta: Fitramaya