OXYTOCIN MASSAGE EFFECTS INCREASING BREAST MILK PRODUCTION IN POSTPARTUM MOTHERS

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ABSTRACT

Backgrounds: Oxytocin massage is an action taken by husbands on breastfeeding mothers in the form of back massage on the mother's back to increase the release of the hormone oxytocin. According to data from the Health Profile of Lampung Province (2019), of the total exclusive breastfeeding, only 69.3% of infants aged 0-6 months. The lack of exclusive breastfeeding in urban areas with a percentage of 50%-<75%, especially in Bandar Lampung and several other districts, while in Tanggamus district, exclusive breastfeeding for infants aged 0-6 months is 80.6%. International guidelines that recommend exclusive breastfeeding for the first 6 months are based on scientific evidence about the benefits of breastfeeding for infant survival, growth and development.

Purpose: This study is to know the Average Effect of Oxytocin Massage on Increasing Breast Milk Production in Postpartum Mothers at BPM Damsiana S.ST Talang Padang in 2021.

Methods: The method is Pre Experimental with approach one group pretest and posttest design. Data on all normal postpartum mothers who gave birth at BPM Damsiana, S.ST. in 1 month there were 40 postpartum mothers, technique purposive sampling, univariate and bivariate data analysis using wilcoxon test.

Results: The results of the statistical test obtained a P-value = 0.000 (<0.05) which means that there is an effect of oxytocin massage on increasing milk production in postpartum mothers at BPM Damsiana S.ST Talang Padang in 2021.

Conclusion: According to researchers, by giving oxytocin massage, an alternative that can stimulate the process of increasing breast milk production, oxytocin massage provides a sense of comfort, relaxation and calm

so that it helps increase milk production to become more and can overcome the problem of non-smooth milk production.

Suggestions: It is recommended that mothers accompanied by their families can carry out this activity regularly, the goal is to smooth breast milk, and it is hoped that after being given massage there oxytocin will be an increase in the smoothness of breast milk.

Keywords: Breastfeeding, Oxytocin Massage, Postpartum Mothers

INTRODUCTION

Mother’s milk (ASI) is the best life fluid that is needed by babies. Breast milk contains various substances that are important for the growth and development of babies and according to their needs. Exclusive breastfeeding is breastfeeding only for babies up to 6 months without additional fluids or other foods. Oxytocin massage is an action taken by husbands on breastfeeding mothers in the form of back massage on the mother’s back to increase the release of the hormone oxytocin.

According to the American Pregnancy Association, colostrum in breast milk given to babies has the benefit of strengthening the immune system of newborns and providing sufficient nutrients that babies need for the development and growth of the baby’s brain, eyes and heart. The nutritional situation of toddlers in the world today is 155 million stunted short toddlers, 52 million wasted toddlers, and 41 million overweight toddlers (Infodatin RI, 2018). In Indonesia, based on the results of Riskesdas 2018, 17.7% of toddlers are malnourished poor and undernourished, 30.8% of toddlers are very short and short, 10.2% of toddlers are very thin and thin, and 8% of toddlers are obese. Based on the results of Riskesdas 2018 the proportion of breastfeeding patterns in infants aged 0-5 months in Indonesia is 37.3% exclusive breastfeeding, 9.3% partial breastfeeding, and 3.3% breastfeeding. Predominant breastfeeding is breastfeeding the baby but has given a small amount of water or water-based drinks, such as tea, as a prelacteal food/drink before the milk comes out. While partial breastfeeding is breastfeeding the baby and given artificial foods other than breast milk such as formula milk, porridge or other foods before the baby is 6 months old.

According to the IDHS (2017), exclusive breastfeeding decreases with increasing age of the child, from 67% of children aged 0-1 months to 55% aged 2-3 months and 38% at the age of 4-5 months. The percentage of children who are breastfed and consume complementary foods increases with increasing age and reaches 74% in the 12-17 month age group. The percentage of children who are not breastfed also increases with age, from 8% at the age of 0-1 months to 41% at the age of 18-23 months.

According to Ika et al.’s 2019 research results showed that the average milk production before oxytocin massage was 0.00 with an average number of 0.00, while the average is 45.00 so it can be seen that there is an increase in the average milk production before and after oxytocin massage with a Z value of -2.673 and a p-value of 0.008 (p < 0.05), it can be concluded that there is a significant effect on milk production before and after oxytocin massage.

In line with the results of research conducted by Helmy in 2020, breast milk production before and after oxytocin massage was carried out, that the results of further statistical tests using the Wilcoxon Signed Ranks Test obtained p value = 0.035 (p < 0.05) which means that there is an effect of oxytocin massage on breast milk production.

International guidelines that recommend exclusive breastfeeding for the first 6 months are based on scientific evidence about the benefits of breastfeeding for infant survival, growth and development. Breast milk provides all the energy and nutrients (nutrients) that babies need for the first 6 months of life. Breastfeeding for 6 months, meaning only breastfeeding for 6 months without giving other food or drinks. Giving additional fluids will increase the risk of disease. The purpose of this study is to increase the production of breast milk so that mothers are able to give breast milk without any additional food and the baby will get exclusive breastfeeding. With oxytocin massage using lavender aromatherapy oil, it is hoped that it can relax the mother and increase the oxytocin hormone.

RESEARCH METHODOLOGY

This research uses quantitative research. Research by emphasizing the analysis on numerical data (numbers) which is processed by statistical methods. The research design used in this study was the pre-experimental design method. The researcher used the One Group Pretest and Posttest design, purposive sampling technique. Univariate and bivariate data analysis used t-test, the research steps were according to the SOP for baby massage.
Based on table 1 above, it is known that the characteristics of respondents based on the highest percentage, namely the age of 20-30 years as many as 13 respondents (52.0%), high school education 14 respondents (56.0%), work of housewives as many as 13 respondents (52.0%), multipara parity as many as 13 respondents (52.0%).

From table 2 above, the normality test results p-value at 0.004-0.313 p-value > 0.05, which means that one of the data is not normally distributed, so the Wilcoxon test analysis was carried out. Wilcoxon test results obtained Asymp.Sig.(2-tailed) is 0.000 which means 0.000 <0.005 Naka Ha is accepted.

From table 3 above, it can be seen that the average milk expenditure in postpartum mothers before oxytocin massage at BPM Damsiana S.ST 2021 with Mean 471.92.

Table 1

**Characteristics of Breastfeeding Mothers at BPM Damsiana S.ST Talang Padang in 2021**

<table>
<thead>
<tr>
<th>Variabel</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20-35Years</td>
<td>13</td>
<td>52.0</td>
</tr>
<tr>
<td>&gt;35 Years</td>
<td>12</td>
<td>48.0</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Base</td>
<td>7</td>
<td>28.0</td>
</tr>
<tr>
<td>Intermediate</td>
<td>14</td>
<td>56.0</td>
</tr>
<tr>
<td>College</td>
<td>4</td>
<td>16.0</td>
</tr>
<tr>
<td>Profession</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doesn't work</td>
<td>13</td>
<td>52.0</td>
</tr>
<tr>
<td>Working</td>
<td>12</td>
<td>48.0</td>
</tr>
<tr>
<td>parity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multipara</td>
<td>13</td>
<td>52.0</td>
</tr>
<tr>
<td>Primipara</td>
<td>12</td>
<td>48.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>25</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 2

**Data Normality Test**

<table>
<thead>
<tr>
<th>Tests of Normality</th>
<th>Breast milk production</th>
<th>Shapiro-Wilk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statistics</td>
<td>ASI_Pretes 0.868</td>
<td>df 25</td>
</tr>
<tr>
<td>Sig.</td>
<td>0.004</td>
<td></td>
</tr>
<tr>
<td>Statistics</td>
<td>ASI_Postes 0.954</td>
<td>df 25</td>
</tr>
<tr>
<td>Sig.</td>
<td>0.313</td>
<td></td>
</tr>
</tbody>
</table>

Table 3

**Average Milk Expenditure for Postpartum Mothers Before Oxytocin Massage Is Done at BPM Damsiana S.ST Talang Padang in 2021**

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>mean</th>
<th>SD</th>
<th>SE</th>
<th>CI-95%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest breast milk production</td>
<td>25</td>
<td>471.92</td>
<td>62.314</td>
<td>12.463</td>
<td>446.20-497.64</td>
</tr>
</tbody>
</table>

Table 4

**Average Milk Expenditure for Postpartum Mothers After Oxytocin Massage At BPM Damsiana S.ST Talang Padang in 2021**

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>mean</th>
<th>SD</th>
<th>SE</th>
<th>CI-95%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Posttest breast milk production</td>
<td>25</td>
<td>649.20</td>
<td>74.143</td>
<td>14.829</td>
<td>618.60-679.80</td>
</tr>
</tbody>
</table>

From table 4 above, it can be seen that average milk production for postpartum mothers after oxytocin massage at BPM Damsiana S.ST in 2021, with a mean of 649.20.

From table 5 it is seen that average milk production for postpartum mothers before oxytocin massage at BPM Damsiana S.ST in 2021, with a mean of 471.92. Average milk production for postpartum mothers after oxytocin massage at BPM Damsiana S.ST Talang Pafang in 2021, with a mean of 649.20.

### Bivariate Analysis

Table 5
The Effect of Oxytocin Massage on Increasing Breast Milk Production in Postpartum Mothers at BPM Damsiana S.ST Talang Padang in 2021

The results of statistical tests obtained the value of P-value = 0.000 (<0.05) which means there is the effect of oxytocin massage on increasing milk production in postpartum mothers at BPM Damsiana S.ST Talang Padang in 2021.

DISCUSSION

Characteristics of Respondents

Characteristics of Breastfeeding Mothers at BPM Damsiana S.ST Talang Padang in 2021

From the research results, 13 respondents (52.0%) were included in the good category in producing breast milk. The ideal age range for producing breast milk is the age of 20-35 years. There is an influence of ideal age in breast milk production, while at the age of > 35 years, the function of reproductive hormones has begun to decrease, but at this age usually mothers already have various experiences in breastfeeding both from themselves and for their babies.

Mother's education got 3 categories with basic education (28.0%), secondary (56.0%) and tertiary education (16.0%). Education is one of the planned efforts to influence other people, whether individuals, groups or society. The higher the level of education, the easier it is to absorb knowledge. The respondent's education has an important influence in determining the nutritional status of the family. According to Pratiwi (2009), people who have a higher education basis are easier to understand and understand the information they receive when compared to people with lower education.

In this study 13 respondents (52.0%) did not work, (48.0%) respondents worked. Each type of work has a different level of workload, although all types have their own difficulties and demands. However, it is not the type of work that influences the milk production, but the length of time the mother works. The longer the mother works, the less opportunity the mother has to breastfeed her baby so that the frequency of breastfeeding directly to her baby is reduced. Because the more often the baby sucks correctly, the milk production can increase.

Primiparous parity (48.0%) and multipara (52.0%) according to the number of presentations of mothers with multiparous parity, this means that the number of deliveries that mothers have experienced provides experience in breastfeeding and knows how to increase milk production so that they do not there is another problem for mothers in giving breast milk.

Univariate Analysis

Average Milk Expenditure for Postpartum Mothers Before Oxytocin Massage At BPM Damsiana S.ST Talang Padang in 2021

Average Expenditure Breastfeeding for Postpartum Mothers Before Oxytocin Massage At BPM Damsiana S.ST Talang Padang in 2021, with Mean 471.92.

There are several factors that affect lactation including age, education, occupation, and parity. One of the influential ones can increase milk production. Breast milk production depends on the work of hormones and breastfeeding reflexes. During pregnancy, there are changes in the hormones that prepare the mammary glands to produce breast milk. Immediately after giving birth, even starting from the age of 6 months of pregnancy, hormonal changes occur that cause the breasts to start producing milk.

After delivery, prolactine is secreted by adenohypophysis. Oxytocin is released by the neurohypophysis due to sucking from the baby. The workings of these two hormones are assisted by the hormones insulin, cortisol, thyroid, parathyroid, and growth hormone (which are metabolic supporting hormones).

Research conducted by Dwi et al (2020) with the title "The Effect of Oxytocin Massage on Increased Breastmilk Production in Postpartum Mothers" found that the results of breast milk production before oxytocin massage were carried out with a mean of 12.2.

According to the researcher, the smoothness of breastfeeding is a stage of the mother's success in providing nutrition to her child, if the mother experiences a lack of breast milk which causes breast milk to not run smoothly, then the mother is said to be unsuccessful in providing nutrition to the baby. are within normal limits.

Average Expenditure of Breast Milk in Postpartum Mothers After Oxytocin Massage is Done at BPM Damsiana S.ST Talang Padang in 2021

Raverage milk production in postpartum mothers after oxytocin massage at BPM Damsiana S.ST in 2021, with a mean of 649.20.

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>mean</th>
<th>SD</th>
<th>SE</th>
<th>P -Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest breast milk production</td>
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<td>Posttest breast milk production</td>
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<td>649.20</td>
<td>74.143</td>
<td>14.829</td>
<td>0.000</td>
</tr>
</tbody>
</table>
Oxytocin massage is a massage along the spine (vertebrae) to the bonescostafifth-sixth and is an attempt to stimulate the hormones prolactin and oxytocin after childbirth (Lowdermilk, Perry & Bobak, 2000). Giving oxytocin massage has an effect on increasing milk production. This action is felt to help the hormone oxytocin to facilitate breastfeeding and increase maternal comfort.

According to Prawirohardjo (2010) explained that there are points that facilitate breastfeeding, including three points on the breast, namely, above the nipple, the right point on the nipple, and the point below the nipple. And the point on the back that is in line with the breast

Oxite massageThis osin is done to stimulate the oxytocin reflex or the reflexlet down. In addition to stimulating reflexeslet downThe benefits of oxytocin massage are to provide comfort to the mother, reduce swelling (engagement), reduce blockage of breast milk, stimulate the release of the hormone oxytocin, maintain milk production when mother and baby are sick (Depkes RI, 2007).

According to researchers, the smoothness of breastfeeding can be influenced by several things, such as the frequency of breastfeeding, the food consumed to the rest pattern, and the provision of reflex massageoxytocin In this study, it can be seen if there is an influence between the smoothness of breast milk before and after being given massagexoxytocin, in this study there was an overall increase.

Simultaneously with the formation of prolactin by the anterior pituitary, stimulation from the baby's sucking is continued to the posterior pituitary where oxytocin is then released. Through the bloodstream, this hormone goes to the uterus, causing contractions. The contraction of the cells will squeeze the milk that has been made out of the alveoli and into the ductal system and then flows through into the baby's mouth. Smooth milk production is a process of releasing milk from the mother's breast with or without sucking by the baby (Wheeler, 2004).

Breast milk should be given immediately after the baby is born. The first milk that lasts about 4-5 days, is still in the form of colostrum. The amount of colostrum that is secreted every day ranges from 10-100 cc, with an average of 30 cc. Milk actually just came out after the fifth day. The mother should stick her breast into the baby's mouth until the whole.

Bivariate Analysis
The Effect of Oxytocin Massage on Increasing Breast Milk Production in Postpartum Mothers at BPM Damsiana S.ST Talang Padang in 2021

Average milk production for postpartum mothers before oxytocin massage at BPM Damsiana S.ST Talang Padang in 2021, with a mean of 471.92. Average milk production for postpartum mothers after oxytocin massage at BPM Damsiana S.ST Talang Padang in 2021, with a mean of 649.20.

The results of statistical tests obtained P-value = 0.000 (<0.05) which means that there is the effect of oxytocin massage on increasing milk production in postpartum mothers at BPM Damsiana S.ST Talang Padang in 2021.

Research conducted by Dewi (2017) with the title "Effectiveness of Oxytocin Massage on Breastfeeding Expenditure at RSIA Annisa in 2017" obtained a p-value of 0.006, which means that there is an effectiveness of oxytocin massage on breastfeeding at RSIA Annisa.

Research conducted by Asri (2013) with the title "The effect of giving oxytocin massage to the smooth breastfeeding of breastfeeding mothers in Muhamadyah Hospital, Malang, East Java in 2013" obtained a p-value of 0.000 which means that there is an effect of giving oxytocin massage to the smooth breastfeeding of breastfeeding mothers in Muhamadyah Hospital, Malang, East Java.

In addition to hormonal work, milk production is also determined by reflexes due to the baby's sucking. The baby's sucking causes two reflexes that cause milk to come out at the right time and amount. The two reflexes are the milk production reflex or the prolactin reflex stimulated by the hormone prolactin and the milk flow/release reflexlet down reflex which is influenced by the hormone oxytocin

Oxytocin Massage Method Oxytocin massage is one solution to overcome the uneven production of breast milk. Oxytocin massage is a massage along the spine (vertebrae) to the bonescostafifth-sixth and is an attempt to stimulate the hormones prolactin and oxytocin after childbirth (Lowdermilk, Perry & Bobak, 2000). Back massage is useful for stimulating the release of the hormone oxytocin. Massage is done so that the hormone oxytocin works. Massage is done so that the work of the oxytocin hormone becomes more optimal (Fikawati, 2015). The release of prolactin is inhibited
by factors whose ingredients are not yet clear, but some ingredients such as dopamine, serotonin, catecholamines, and TSH are related to prolactin secretion. The release of oxytocin is not only influenced by the baby’s sucking, but also by receptors located in the ducts. When the ducts dilate, oxytocin is reflexively released by the pituitary. So the role of prolactin and oxytocin is absolutely necessary (Suherni, Hesty & Anita, 2009).

According to researchers, good breastfeeding fluency can be characterized by how much and often mothers give breast milk for their children, in this study the smoothness of breastfeeding was measured using (ml) from the research data, it can be seen an increase from before giving massage and after giving massage, before giving massage the amount of breast milk was at least 395ml and the highest was 555ml and after being given an intervention the lowest posttest breastfeeding was 480ml and the highest was 780ml, it can be concluded that oxytocin massage can increase breast milk.

Oxytocin massage is one of the non-pharmacological interventions or administrations to help patients relax and relieve discomfort. Relaxation aims to reduce levels of epinephrine and non-epinephrine in the blood so that it becomes balanced (equilibrium), besides massage of the back area can also stimulate endorphins. Endorphins function as ejectors, causing a sense of relaxation and calm, so massage can reduce muscle tension. Massage or spinal stimulation, the neurotransmitter will stimulate the modula oblongata then send a message to the hypothalamus in the posterior pituitary to release oxytocin, causing the chest to release milk. Massage in the spinal area causes relaxation, relieve stress by releasing the oxytocin hormone and will help expel breast milk. Giving oscillotocin massage also has other benefits such as calming and reducing stress, generating self-confidence, helping postpartum mothers to have good thoughts and feelings about their baby and so on.

Due to time constraints, this study was conducted for 15 days and obtained a total of 25 respondents according to the inclusion criteria. The time needed by the researcher was 20 minutes pretest before the oxytocin massage, 10 minutes to prepare the equipment, 2-3 minutes to give oxytocin massage treatment, 20 minutes posttest after the oxytocin massage, and 5 to clean up the equipment. The total time used in one respondent is ± 1 hour. With a different place and time. In a state of the increasing covid pandemic, researchers found it difficult to get respondents, from those who did not receive guests to those who were not willing to be given oxytocin massage treatment.

CONCLUSION

The effect of oxytocin massage on increasing milk production in postpartum mothers at BPM Damsiana S.ST Talang Padang in 2021. Oxytocin massage is one alternative that can stimulate the process of increasing breast milk production, oxytocin massage provides a sense of comfort, relaxation and calm so that it helps increase milk production to become more and can overcome the problem of non-smooth milk production. Breast milk production is also useful for providing comfort to the mother, reducing the blockage of breast milk, so that mothers are able to exclusively breastfeed their babies.

SUGGESTION

Share Science

In writing, it is hoped that it will be useful for educational developers as well as add insight and materials in the application of research, especially regarding giving oxytocin massage with smooth breastfeeding.

For Breastfeeding Mothers

It is hoped that mothers accompanied by their families can carry out this activity regularly, the aim is to smooth breastfeeding, and it is hoped that after being given an oxytocin massage there will be an increase in the smoothness of breast milk.

For Further Researchers

It is hoped that this research can be used as a guide to provide counseling about giving oxytocin massage with smooth breastfeeding and can be used as a comparison for further research.

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