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RESEARCH ARTICLE

OXYTOCIN MASSAGE, BREAST CARE AND BREASTMILK PRODUCE ON BREASTFEEDING MOTHERS IN BULILI PUBLIC HEALTH CENTER AREA PALU CITY

¹Rosmala Nur, ²Bertin Ayu Wandira, ²Sarini, ¹Sitti Radiah, ³Muh. Jusman Rau, ⁴Lusia Salmawati, ¹Nurhaya S Patui and ⁵Pitriani

¹Biostatistic, Family Planning and Demography Department,

²Administration and Health Policy Department,

³Epidemiology Department,

⁴Occupational and Health Department,

⁵Environmental Health Department, Public Health Faculty Tadulako University

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ABSTRACT

Exclusive breastfeeding in infants in Indonesia is only 40.6%, this is still below the national target of 80%. Inhibiting factors in breast feeding is the breast milk production itself. Less and slowly production of breast milk can causes the mothers not give enough milk to her baby. The aim of the study was to determine the relationship of oxytocin massage and breast care with breast milk production. The research is a quantitative analytic with cross sectional approach. The research sample was 100 breastfeeding mothers in the of Bulili Public Health Center area. Sampling taken by accidental sampling method. Data collection is done by observation and interview using questionnaire and analyzed with Chi Square test. The results showed that there was a relationship between oxytocin massage ($p = 0.001$) and breast care ($p = 0.012$) with breast milk production. According this research result can be concluded that oxytocin massage and breast care has a relationship with breast milk production. It is recommended that public health center to provide socialization regarding the importance of oxytocine massage and breast care for mothers to increase breast milk production.

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INTRODUCTION

Exclusive breastfeeding is one of the keys to reducing the infant mortality rate under five years. Improving breastfeeding rates could save the lives of 820,000 children under five years, 87% of there is a six month baby. This represents about 13% of all deaths of children under five each year (UNICEF and WHO, 2016). Based on data from the Central Sulawesi Provincial Health Office in 2016 coverage of exclusive breastfeeding from 13 regency Donggala is lowest with 6,546 people but the baby target achievements obtained 3,132 votes (47.8%). Of babies in the province of Central Sulawesi amounted to 34.342 people, who were exclusively breastfed only 19.345 people or 56.3% (Profile Central Sulawesi Provincial Health Office, 2016). Based on data from Palu City Health Office of coverage of exclusive breastfeeding 13 existing health centers, health centers Bulili a low of just 106 votes (49.53%) of the target number of 214 people. Inhibiting factors in breastfeeding is the breastmilk production itself. The production of breastmilk which is less and slow to come out

*Corresponding author: Rosmala Nur

Biostatistic, Family Planning and Demography Department, Tadulako University

can cause the mother not give enough milk to her baby. In addition to the hormone prolactin, lactation is also dependent on the hormone oxytocin, which is released from the posterior pituitary in response to the suction of the nipple. Oxytocin affects the myoepithelial cells surrounding the alveoli to contract and secrete milk that has been secreted by the mammary gland. Oxytocin reflex is influenced by the soul of the mother, if there is a sense of anxiety, stress and doubt that is the case, then spending the milk may be hampered (Nahurhanif, 2013). Breastfeeding can be influenced a two factors namely the production and expenditure of breast milk, this production affected of hormone prolactin in which the production of this hormone itself also influenced by the oxytocin hormone. The oxytocin released through the stimulation of nipple when the baby's mouth suction or with massage at the breast area and on the back. the mother will feel calm, relaxed, raises the pain threshold and love her baby, as well as oxytocin come out and accelerate breastmilk production (Hanun, 2015). Based on the fact mentioned above researchers are interested to conduct a study related oxytocin massage, breast care and breastmilk Production on Breastfeeding Mothers in the Bulili Public Health Center Area Palu City.

Table 1. The Relationship of Oxytocin massages with breastmilk production on Breastfeeding Mothers in Bulili Public Health Center Palu City

Oxytocin massages	Breastmilk Produce				Total	P-value	
	Produce		Less Produce				
	n	%	n	%	n		%
Massages	20	44,4	7	12,7	27	26,0	0,001
Not Massages	25	55,6	48	87,3	73	74,0	
Total	45	100	55	100	100	100	

Sources : Primary Data, 2018

Table 2. The Relationship of breast care with breastmilk production On Breastfeeding Mothers in Bulili Public Health Center Palu City

Breast Care	Breastmilk Produce				Total	p-value	
	Produce		Less Produce				
	n	%	n	%	n		%
Cares	27	60,0	18	32,7	48	45,0	0,012
Not cares	18	40,0	37	67,3	55	55,0	
Total	45	100	55	100	100	100	

Source : Primary Data, 2018

Table 3. The Relationship of Oxytocin massages and breast care with breastmilk produce On Breastfeeding Mothers in Bulili Public Health Center Palu City

Oxytocin massages and Breast care	Breastmilk Produce				Total	P-value	
	Produce		Less Produce				
	n	%	n	%	n		%
Do that	10	22,2	4	7,3	14	14,0	0,043
Not do that	35	77,8	51	92,7	86	86,0	
Total	45	100	55	100	100	100	

Source : Primary Data, 2018

MATERIALS AND METHODS

This research conducted in Bulili Public Health Center area Palu city on 2 may - 28 july in 2018. The research is a quantitative analytic with cross sectional approach, the dependent variable is a breastmilk production and independent variables are oxytocin massage and breast care. The population is all of breastfeeding mothers in Public Health Center Bulili area. Sampling is done by accidental sampling with restrictions nursing mothers who have children aged 0-2 years. The number of samples taken by using the Slovin formula amount 100 breastfeeding mothers. Data collection is done by observation and interview using a structured questionnaire. the data collected is done editing, coding and data entry for further bivariate analysis using *chi square test* at the 95% confidence level ($\alpha = 0.05$).

RESULTS

The Relationship Oxytocin massages with breastmilk produce: Table 1 showed that of the 100 respondents only 27 mothers who undergo oxytocinmassage, where 20 (44.4%) mothers produce overflow breastmilk and only 7 (12.7%) of them were still produce less breastmilk. while of the 73 mothers who did do a oxytocin massage mostly produce less milk as many as 48 (87.3%) mothers, compared with the produce breastmilk sufficiently only 25 (55.6%) mothers. Based on an bivariate analysis using *Chi Square test* on oxytocin massage with breastmilk produces, obtained the value $\rho = 0.001 < 0.05$, its means the alternative hypothesis in this study received, that there is a relationship of oxytocin massage and breastmilk produce on breastfeeding mothers in Bulili Public Health Center area.

The Relationship Breast Care and Breastmilk Produce: Table 2 showed that of the 100 respondents only 48 mothers who undergo breast care, where 27 (60.0%) mothers produce over flow breastmilk and only 18 (32,7%) of them were still produce less breastmilk. while of the 55 mothers who did do a breast care mostly produce less milk as many as 37 (67.3%) mothers, compared with the produce breastmilk sufficiently only 18 (55.6%) mothers. Based on an bivariate analysis using *Chi Square test* on breast care with breastmilk produces, obtained the value $\rho = 0.012 < 0.05$, its means the alternative hypothesis in this study received, that there is a relationship of breast care and breastmilk produce on breastfeeding mothers in Bulili Public Health Center area.

The Relationship Oxytocin massages and Breast Care with breastmilk produce: Table 3 showed that respondents who did the oxytocinmassage and breast care mostly produce overflow breastmilk as many as 10 (22.2%) mothers, compared with produce less breastmilk as many as 4 (7.3%) mothers. The majority of respondents who did not do both of oxytocinmassage and breast care produced less breastmilk as many as 51 (92.7%) mothers, compared to 35 (77.8%) mothers who produced breastmilk sufficiently. Based on an bivariate analysis using *Chi Square test* on oxytocin massage and breast care with breastmilk produces, obtained the value $\rho = 0.043 < 0.05$, its means the alternative hypothesis in this study received, that there is a relationship of both oxytocin massage and breast care with breastmilk produce on breastfeeding mothers in Bulili Public Health Center area.

DISCUSSION

The Relationship Oxytocin massages with breastmilk produce: The oxytocin massage purpose to stimulate the

oxytocin reflex (let down reflex). oxytocin massage is done with massages the hip area along both sides of the spine, it is expected this massage will feel relaxed and exhausted a mothers after the birth will be overcome. If the mother is relaxed and not exhausted after delivery may help stimulate the hormone oxytocin (MOH, 2007). Table 1 showed that respondents who did the oxytocin massage and produce overflow breast milk as many as 20 people (44.4%). This happens because the mothers would get information about oxytocinmassage during pregnancy so that when entering the breastfeeding time are them do this and produce of breastmilk. In addition, support the family as husband and in-laws also provide a major impact on the action of oxytocinmassage to facilitate the production of breast milk. The respondents who did the oxytocin massage but not produce breast milk as many as 7 (12.7%). This happens because of them perform unregularly oxytocin massage so that breastmilk is not fluently.

The respondents who did oxytocinmassage and less produce breastmilk as many as 48 people (87.3%). It happens because they are did not know and family's unsupported to do this massage, on the other hand the mothers think breastmilk will come out itself without doing oxytocinmassage. In addition there are respondents who did not do the oxytocinmassagebut still produce breast milk as many as 25 (55.6%). This happens due to lack of knowledge, but they are still perform other tips such as eating nutritious foods that the mother still produce breastmilk although without the oxytocinmassage. Based on Chi Square test values $p = 0.003 < 0.05$ can be concluded that there is a relationship between oxytocin massage and breastmilk produce in breastfeeding mothers at Bulili Public Health Centers. Breastfeeding mothers who do this massages properly in accordance with the procedures produce breastmilk fluently. however, breastfeeding mothers who improperly oxytocinmassage in accordance with the procedure will cause poor breastmilk produce. In breastfeeding mothers who do not do oxytocin massage almost all experience less of breastmilk produce. This caused they are not know about it and husband or family not supported to do massage. While breastfeeding mothers who do not do oxytocinmassages but still produce breastmilk as well, is caused they are always keep feeding the baby, feel calm, comfortable and harmonic marriage relationship.

Oxytocin massage that is carried out regularly can stimulate of breastmilk produce so that they can provide it regularly to their babies, besides family support and knowledge of breastfeeding mothers regarding Oxytocin massage procedures according to the procedure make they are comfortable and easy to practice it. in addition a husband or family helps to massages makes the mothers feel loved, cared, happy and calm. in these conditions the production of breastmilk is greatest and available anytime to breastfeed. These findings are consistent with previous research by Elbertina *et al* (2017), who argued that the nape and back massage is a great contribution for postpartum mothers who are breastfeeding. Mother felt a sense of comfort that will help in expending milk so they will not feel pain either of baby sucking breast and uterine contractions due to the nape and back massage is able to secrete endorphins, which are compounds soothing. In this calm state as a breastfeeding mother is able to maintain adequate milk produce for babies Kandini *et al.*, (2017), suggests that oxytocin Massage stimulates the production of oxytocin hormone can also excite a prolactin that facilitate spending breastmilk. oxytocin

massage accordance with the procedures carried out for 15 minutes at 1-3 days post-partum, massage performed at certain points in the nape of the mother.it is also in line with the findings of Sulaiman, *et al.*, (2016), that in order to increase breastmilk produce in post-partum mothers, carried out early breastfeeding initiation and massage oxytocin.

The Relationship breast care with breastmilk produce:

Breast care is very important during pregnancy until lactation, the breast is the only producer of milk which is the staple food for the baby that needs to be done as early as possible. When a pregnant woman does not perform breast care during pregnancy and just do it in the postpartum will caused some problems such as: milk does not come out, the milk coming out after a couple of days later, the nipple does not protrude, milk production is less and not delicate, infection in the breast, and breast bump (Masnila, 2014). Table 2 showed that respondents who do breast care and produce over flow breast milk as many as 27 (60.0%). This happens because the mother informed the breast care during pregnancy so that she did care during pregnancy to lactation.

In addition, the family support giving encouragement and attention to mothers in the treatment of breast make them comfortable to do this activities. While the respondents who did breast care and did not produce breast milk were 18 (32.7%). This happens because breast care that does not accordance with the procedure set forth and irregular. Respondents who did not take breastcare and produce breastmilk were 18 (40.0%). This caused of bonding factors between mother and child, so without perform breastcare they are still producing well, while respondents who do not perform breastcare and lack of breastmilk produce were 37 (67.3%), it is because they do not have an effective time as well as because the children born very closely. Based on Chi Square test with the value $p = 0.012 < 0.05$ means that there is a relationship between the breast care with breastmilk produce in breastfeeding mothers at Bulili public health centers area. This is due to breastfeeding mothers who do breast care can produce good milk. In breastfeeding mothers who do not breast care but can produce a milk, is caused they are always breastfeed and consume vegetables and peas. While the mother does not produce breast milk as well, is caused they are do not want to breastfeed at work reasons, do not know the procedure of breast care, nipple abrasions and do not protrude. Breast Care conducted regularly and on the set can produce breast milk with good hygiene, especially breast nipples, flex and strengthen the nipple making it easier for the baby to breastfeed and to prevent inflamed breast milk due to overlapping. awareness of mothers to early breast care are required to facilitate future mothers when breastfeeding (Alhadar, 2016).

This study in line with Masnila (2014), which suggested that one important thing to do in preparation for that exclusive breastfeeding is a breast care carried out during the third trimester of pregnancy and post-partum. During pregnancy the breasts will swell and the area around the nipple color will be darker. With the swelling of the breast becomes easily irritated and injured. Therefore it is necessary for breast care during pregnancy, but in reality many pregnant women who ignore this treatment, the grounds are lazy and do not know the benefits of these treatments. Haeriati (2010), which suggests that the continuity of breast milk can be affected by various factors including food consumption, mothers psychological,

drugs and breast care since pregnancy and post-partum. Ahn, et al., (2011) also noted that in South Korea maternal breast care can reduce pain while breastfeeding and to increase breastmilk produce.

The relationship oxytocin massages and breast care with breastmilk produce: Table 3 showed that respondents who perform oxytocin massage and breast care simultaneously produce breastmilk as many as 10 (22.2%). This happens because mothers get information about the importance of both earlier so that they do that during pregnancy until the breastfeeding period. In addition, the family support is giving encouragement and attention into this critical success factor. The respondents who did oxytocin massage and breast care and did not produce breast milk were only 4 (7.3%). This happens because they are did both of these things not according to the established procedure. Oxytocin massage is massage on both sides along the spine. This massage is done to stimulate the oxytocin reflex or reflex spending breast milk. Mother to accept the massages are more relaxed (Monika, 2014). Breast care is an action carried out either by the mother itself and was helped others family who held from the first or two day after birth (Alhadar, 2016). Based on Chi Square test values $\rho = 0.043 < 0.05$ means that there is a correlation between Oxytocin massage dan breast care with breast milk produce on breastfeeding mothers in Bulili public health centers area. This is due to breastfeeding mothers who do oxytocin massage and breast care more produce breast milk smoothly compared to only do one or the other or even not perform and produce less breast milk. These findings are consistent with previous research conducted by Fatonah (2017), that the oxytocin massage is the solution to address the inability of breastmilk production. In addition, there are other ways to deal with it, namely breast care. Another study by Safitri (2016) suggests that a baby touch through continuous suction reflex will causes sensory stimulation in the mothers' brains to produce breast milk and provide a sense of safety in infants. The study of Mardilla and Risa (2015) also suggest that there is the influence of a combination techniques oxytocin massage and breast care on the smoothness of the breastmilk, where the smoothness of milk six times finer than a uncombination of both. The same thing is also explained in the study Hasti, et al., (2017), that the treatment of oxytocin massage and breast care simultaneously can significantly increase a milk production by the number of cases increased by 17.09 to 220 cc, 91 cc and controls only increased by 17, 09 cc to 72.00 cc.

Conclusion

This study can conclude that there is a relationship between oxytocin massage and breast care with the production of breast milk in nursing mothers in the work area of Bulili Health Center. where the combination of these the both treatments will be better done simultaneously.

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