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The Effectiveness of The Technique of Secreting Breast Milk on Breast Milk Production in Post-Partum Women

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ABSTRACT

The technique of secreting breast milk can be influenced by two factors: production and secretion. Breast milk production is influenced by prolactin hormone while secretion is influenced by oxytocin hormone. The suggested technique is by using hands and fingers because they are practical, effective, and efficient, compared with using pumps. If this technique is done effectively and accurately, there will be no problem in producing breast milk and the technique of secreting it so that babies can always obtain breast milk. The objective of the research was to find out the effectiveness in the technique of secreting breast milk on breast milk production in post-partum women. The research used pre-experimental method with One-Shot Case Study (X O) design. The population was 30 primipara post-partum women who had normal childbirth in Klinik Dermawati, Klinik Tanjung, and Klinik Nurhalma, Medan, and all of them were used as the samples (total population). The data were analyzed by using ANOVA test. The result of the research showed that there was the difference in the technique of secreting breast milk on its production at p-value=0.002. The technique of secreting it by doing oxytocin massage was more effective on its production than using marmet technique and warm compress, viewed from the mean value of oxytocin massage which was higher (171.00) and standard deviation of 5.676 than using marmet technique at the mean value of 166.00 and standard deviation of 4.595 and using warm compress at the mean value of 160.50 and standard deviation of 7.246. The group which was significantly different was the technique of oxytocin massage and warm compress (p=0.002) which indicated that there was the difference in action which was done on breasts. It is recommended that the Health Agency of Medan collaborate with the Indonesian Midwife Association to make oxytocin permanent procedure as post-partum service and provide counseling for pregnant and breastfeeding women.

Keywords: Technique of secreting breast milk, Breast milk production

INTRODUCTION

The World Health Organization (WHO) recommends that newborn babies be given exclusive breast milk (without any supplement) within six months because it is the best natural nutrition for babies with its nutritional content which is the most appropriate for optimal growth (Hegar, 2008). UNICEF confirms that babies that are given powdered milk have the possibility to die in their first month of life. The possibility that babies that are given powdered milk will die is 25 times higher than babies that are breastfed by their mothers exclusively (Selasi, 2009).

The research conducted by Siregar (2004) indicates that breastfeed with exclusive breast milk is influenced by some factors: it does not secrete after giving birth/lack of production, babies find difficulty to suck, bad shape of nipples, working mothers, and the influence/promotion of consuming powdered milk. Another research conducted by Afifah (2007) indicates that the factors which make breastfeeding with exclusive breast milk fail are the lack of women's knowledge of exclusive breast milk and the existence of ideology about non-exclusive food so that there is no motivation of women to breastfeed their babies with exclusive breast milk.

Colin and Scott (2002), in their research conducted in Australia, reveal that 29% of post-partum women stop breastfeeding their babies due to the lack of breast milk. Meanwhile, the research conducted by Ahluwia, Morrow, and Hsia (2005) shows that women stop breastfeeding their babies in the first month of post-partum because of chafed nipples, difficulty in putting the baby's mouth on the nipple, and breastfeeding women's perception on insufficient breast milk in satisfying their babies. The decrease in breast milk in the first days after childbirth can be caused by the lack of stimulation of prolactin and oxytocin hormones which play a very important role in the smoothness of breast milk production. The research conducted by Blair (2003) reveals that of the 95 post-partum women who breastfeed their babies undergo decrease in their breast milk production when

the stimulation of the babies to suck decreases. The research conducted by Pace (2001) also shows that the decrease in the babies' sucking will decrease the stimulation of prolactin and oxytocin hormones.

Early breastfeeding in the first hours after childbirth which cannot be done by a childbirth woman will cause the process of breastfeeding to be delayed. The alternative is by milking or pumping breast milk within 10 to 20 minutes until the baby can suck. This action can help maximize prolactin receptor and minimize side effect of the delay in the process of sucking by the baby (Evariny, 2008).

The suggested technique of breast milking is by using hands and fingers because it is more practical, effective, and efficient than by using pumps. The technique of breast milking is by using Cloe Marmet method which is usually called Marmet Technique which is the combination between milking and massaging technique. Milking by using hands and fingers has some advantages, besides negative pressure can be controlled, it is more practical and economical because it is sufficient to wash hands and fingers before breast milking (Roesli, 2010). If this technique is done effectively and accurately, there will be no problem with breast milk production and the way to excrete it so that the baby will always get it, and the use of powdered milk in the first days after the childbirth can be reduced (Soraya, 2006). The attempts to stimulate prolactin and oxytocin hormones in a woman after childbirth is by breast milking, taking care of and massaging breasts, cleaning up nipples, breastfeeding the baby frequently although breast milk does not come out, early breastfeeding, and doing oxytocin massage regularly (Biancuzzo, 2003; Indriyani, 2006; Yohmi & Roesli, 2009).

Not all post-partum women excrete breast milk directly because its secretion is a kind of complex interaction among mechanical stimulation, nerves, and various hormones which have the influence on oxytocin secretion. The secretion of oxytocin hormone is usually influenced by the baby's sucking, the receptor which is located in duct system; when the ducts widen or become soft, oxytocin will be reflectively secrete by pituitary which plays its role in milking breast milk from alveoli (Soetjiningsih, 2004: 32); therefore, it is necessary to secrete it for some post-partum women.

The secretion of breast milk is influenced by two factors: production and secretion. Breast milk production is influenced by proclatin hormone while its secretion is influenced by oxytocin hormone. Oxytocin hormone will secrete through the stimulation to nipples through the sucking of baby's mouth, by massaging the mother's spinal column so that she will be relaxed, and by decreasing pain threshold and loving her baby so that when oxytocin hormone secretes, breast milk also secretes (WBW, 2007: 39).

Massage is one of the methods to cope with the stagnating of breast milk production. It is a massage from vertebrae spine until the fifth and the sixth costae; it is intended to stimulate proclatin and oxytocin hormones after childbirth (Biancuzzo, 2003; Indiyani, 2006; Yohmi & Roesli, 2009). This massage is functioned to increase oxytocin hormone which can make the mother relaxed so that breast milk will automatically secrete. The research conducted by Eko (2011) also reveals that the combination of marmet technique and oxytocin massage can increase breast milk production.

Since it is very important to expedite the secretion of breast milk in post-partum women, it is necessary to do a research to evaluate the effectiveness of breast milk production in Klinik Dermawati, Klinik Tanjung and Klinik Nurhalma, Medan.

The World Health Organization (WHO) recommends that a new-born baby get exclusive breast milk (without any food supplement) within six months because breast milk is the best natural nutrition for babies with its nutritional content which is the most appropriate for optimal growth (Hegar, 2008). UNICEF confirms that babies that are given powdered milk have the possibility to die in their first month of life. The possibility that babies that are given powdered milk will die is 25 times higher than babies that are breastfed by their mothers exclusively (Selasi, 2009).

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METHODS

The research used pre-experimental method with One-Shot Case (X O) study design. The population was 30 post-partum women who had normal childbirth in Klinik Dermawati, Klinik Tanjung and Klinik Nurhalma, Medan, and all of them were used as the samples (total population). The data were analyzed by using ANOVA test.

RESULTS

Respondents' Characteristics

Table 1. Distribution of women's characteristics

Characteristics	Technique of breast milk secretion			
	Oxytocin Massage	Marmet Technique	Warm Compress	p
Age (year)				
Mean ± SD	26 ± 2.539	28 ± 6.356	27 ± 4.055	0.403
Min - Max	23 – 31	19 – 38	21 - 32	
Education				
Elem.	4 (40%)	5 (50%)	2 (20%)	
High School	6 (60%)	5 (50%)	8 (80%)	0.169
Higher Ed.	-	-	-	
Occupation				
Unemployed	5 (50%)	7 (70%)	6 (60%)	0.599
Employed	5 (50%)	3 (30%)	4 (40%)	

The result of the research showed that there was no correlation of age and breast milk production at p-value = 0.403 in which the mean value of oxytocin was 26 years and standard deviation was 2.539 years with the minimum value of 23 years and the maximum value of 31 years. The mean value of women's age in marmet technique was 28.80 years and standard deviation was 6.356 years with the minimum value of 19 years and the maximum value of38 years. The mean value age in warm compress technique was 27 years and standard deviation was 4.055 years with the minimum value of 21 years and the maximum value of 32 years.

There was no correlation of education with breast milk production at p-value = 0.169. In oxytocin massage technique, 60 of the respondents were high school graduates, in marmet technique 50% of the respondents were elementary school graduates, and in warm compress technique, 80% of the respondents were high school graduates.

There was no correlation of occupation with breast milk production at p-value = 0.599. In oxytocin massage, 50% of the respondents were employed, in marmet technique 70% of the respondents were unemployed, and in warm compress technique 60% of the respondents were unemployed.

Table 2. Distribution of babies' characteristics

Baby's Charascteristics	Technique of breast milk secretion			
	Oxytocin Massage	Marmet Technique	Warm Comporess	p
Birth Weight				
Mean ± SD	3110 ± 334.830	3215 ± 420.350	3300 ± 346.410	0.005
Min - Max	2600 – 3500	2700 - 4000	2900 - 3800	

There was the correlation of birth weight with breast milk production at p-value = 0.005. In oxytocin massage technique the mean value of birth weight was 3.110 kg and standard deviation was 334.830 kg with the minimum value of 2.600 kg and the maximum value of 3.500 kg; in marmet technique the mean value of birth weight was 3.215 kg and standard deviation was 420.350 kg with the minimum value of 2.700 kg and the maximum value of 4.000 kg; in warm compress technique 235.00 ml; the mean value of birth weight was 3.300 kg and standard deviation was346.410 kg with the minimum value of 2.900 kg and the maximum value of 3.800 kg.

Based on Table 3, it could be explained that the volume of breast milk measurement I in oxytocin massage technique the mean value was 73.5o ml and standard deviation was 14.347 ml with the minimum value of 50 ml and the maximum value of 100 ml. There was the increase in breast milk volume in measurement II at

the mean value was 244.50 ml and standard deviation was 5.676 ml with the minimum value of 165 ml and the maximum value of180 ml.

Table 3. Score of measuring breast milk secretion technique

Measurement	Oxytocin Massage	Marmet Technique	Warm Compress
Measurement I			
Mean ± SD	73.50 ± 14.347	69.00 ± 17.448	66.50 ± 5.798
Min - Max	50 – 100	50 – 100	60 - 75
Measurement II			
Mean ± SD	244.50 ± 17.865	235.00 ± 16.330	227.00 ± 8.882
Min - Max	215 – 280	215 – 260	215 - 245
Measurement Disparity			
Mean ± SD	171.00 ± 5.676	166.00 ± 4.595	160.50 ± 7.246
Min - Max	165 – 180	160 – 175	150 - 170

In marmet technique, in breast milk volume measurement I the mean value was 69.00 ml and standard deviation was 17.448 ml with the minimum value of 50 ml and the maximum value of 100 ml; there was the increase in breast milk volume in measurement II at the mean value was 235.00 ml and standard deviation was 16.330 ml with the minimum value of 215 ml and the maximum value of 260 ml. The disparity of breast milk volume between measurement II and measurement I, the mean value was166.00 ml and standard deviation was 4.595 ml with the minimum value of160 ml and the maximum value of 175 ml.

In warm compress technique, breast milk volume in measurement I, the mean value was 66.50 ml and standard deviation was 5.798 ml with the minimum value of 60 ml and the maximum value of 75 ml; there was the increase in breast milk volume in measurement II at the mean value was 227.00 ml and standard deviation was 8.882 ml with the minimum value of 215 ml and the maximum value of 245 ml. The disparity of breast milk volume between measurement II and measurement I was that the mean value was 160.50 ml and standard deviation was 7.246 ml with the minimum value of150 ml and the maximum value of 170 ml.

In order to find out the influence of independent variable (breast milk secretion technique) on dependent variable (breast milk production), bivariate analysis was done. However, normality data test should be done first.

Effectiveness of the Technique of BREAST MILK Secretion on BREAST MILK Production

Anova test was done to find out the effectiveness of breast milk secretion on breast milk production. The result of the Table 4 showed that there was the difference in the technique of breast milk secretion on breast milk production at p-value = 0.002. The technique of breast milk secretion with oxytocin massage was more effective on breast milk production than that of marmet technique and of warm compress; the mean value of oxytocin massage was higher (171.00) and standard deviation (5.676) than that of marmet technique with the mean value of 166.00 and standard deviation of 4.595, compared with warm compress at the mean value of 160.50 and standard deviation of 7.246.

Table 4. Effectiveness if the technique of breast milk excreion on breast milk production

Variables	*Mean*	SD	*p*
Technique of breast milk secretion			
Oxytocin Massage	171.00	5.676	0.002
Marmet Technique	166.00	4.595	
Warm Compress	160.50	7.246	

Table 5. Ratio of breast milk secretion

Technique of breast milk secretion		p.
Oxytocin Massage	Marmet technique	0.212
	Warm Compress	0.002
Marmet Technique	Oxytocin Massage	0.212
	Warm Compress	0.144
Warm Compress	Oxytocin massage	0.002
	Marmet technique	0.144

Based on the Table above, it was found that there was the difference in the technique of breast milk secretion among the groups. Groups which had significant difference were oxytocin massage with warm

compress technique at p-value = 0.002 which indicated that there was the difference in action done to breasts and caused far difference in breast milk volume, viewed from the mean value.

DISCUSSION

Oxytocin Massage Technique on breast milk Production in Post-Partum Women

The result of the research showed that the mean value of oxytocin was 171.00 and standard deviation was 5.676. Oxytocin massage technique can effectively increase breast milk production of post-partum women. This indicates that oxytoocin massage can expedite breast milk production of post-partum women. Oxytocin massage done on the back of a childbirth woman will give comfort to her. Physiologically, it can stimulate oxytocin reflexes or let down reflexes to secrete oxytocin hormone. This oxytocin causes myoepithelium cells surrounding alveoli to contract and makes breast milk flow from alveoli to ductile toward sine and nipples and is then sucked by the baby. Mardiyaningsih (2010) points out that by being massaged with oxytocin massage, a breastfeeding woman will be relaxed, more comfortable, and her fatigue after giving birth will disappear because the massage stimulates oxytocin hormone so that breast milk will secrete.

This is indicated that the better the nutritional status is, the more breast milk will be produced. However, this research did not evaluate the coverage of nutrition or food intake of the post-partum women. Nugroho (2011) points out that there is close relationship between nutrition and breast milk production which was highly needed for a baby's growth and development. If breastfeeding is successful, the baby's weight will increase skin integrity will be good, muscle tonus and meal will be satisfactory.

The research conducted by Jamilah (2013) in the Dawe Puskesmas, Kudus, reveals that the combination of oxytocin massage technique and rose aromatherapy is very effective in increbreast milkng prolactin hormone content (0.004). Endah dan Masdinarsah (2011), in their research in the Midwifery Room of Muhammadiyah Hospital, Bandung, shows that oxytocin massage had the influence on the amount of colostrums production (p=0.009). Oxytocin massage is the method to accelerate the secretion of breast milk of colostrums by the stimulation of massage on both sides of spine column, from throat toward shoulder blade, up to costae beneath the two breasts of post-partum women (Perinbreast milka, 2007).

Risani (2013) points out that the percentage of the respondents whose breast milk secretion runs smoothly is higher in the respondents who are given the treatment of oxytocin massage (80%) than those who do not get the treatment of oxytocin massage (10%). There are 20% of the respondents whose breast milk secretion does not run smoothly although they get the treatment with oxytocin massage. But this percentage is still low, compared with those who do not get oxytocin massage (90%). In the research conducted by Wijayanti (2014), it was found that p-value = 0.032 which indicated that there was the influence of oxyticin massage on breast milk production in post-partum women at Mergangsan Puskesmas, Yogyakarta, in 2014.

This result of the research is strengthened by the research conducted by Budiarti (2009) on the effectiveness of giving "SUKSES ASI" package to breast milk production of breastfeeding women by sectio cesarean in Depok, West Java. This package contains a study on the preparation physically and psychologically to breastfeed for women, provides education by using booklets and toy display, and intervention for women in prenatal at the end of trimester III (the 38^{th} week – 40 weeks), and the period of 24 hours after the operation until the third day of post-operation in order to do intervention with oxyticin massage. The educational material in this package in prenatal period consists of the benefit of breast milk for babies, mothers, family, and the country and the advantage of breast milk compared with powdered milk, correct position of nipples while breastfeeding, how to cope with the problems in breastfeeding, how to make breast milk production run smoothly, and management for working women. Education is held by presenting toy display to demonstrate the position in breastfeeding correctly.

The frequency of oxytocin massage will influence breast milk production (prolactin hormone content). In this research, oxytocin massage was done twice: in the morning and in the afternoon. According to Hockenberry (2002), oxyticin massage which done twice a day can influence breast milk production in post-partum women.

Oxytocin massage can increase breast milk production (prolactin hormone content). Because it can increase stimulation in the afferent nervous system so that oxyticin hormone increase (let down reflexes); the increase in this hormone will give feedback toward the increase in prolactin hormone (prolactin reflexes).

Oxytocin massage stimulates oxytocin production by posterior hypophysis gland (nerohypophysis). Oxytocin enters blood circulation and causes the contraction of specific cells (mioepoitel cells) which surround alveolus mammae and ductus lactives. The contraction of miopitel cells stimulates breast milk to secrete from alveolus through ductus lactives toward sinus lactives. By the time a baby sucks, breast milk in sinus is pushed secreting to the baby's mouth. The movement of breast milk from the sinus is called "Let Down" or discharge. At the same time, it stimulates adenohypophysis gland so that peolactin enters blood circulation and causes acinus cells in alveolus produce breast milk (prolactin reflexes).

Oxytocin massage is one of the solutions to cope with the stagnation of breast milk production. It is a massage on the whole spinal column (from vertebrae until the fifth-the sixth costa) and an attempt to stimulate

prolactin and oxytocin hormones after childbirth. Scientifically, however, the baby's suction during breastfeeding causes signals sent to hypothalamus gland in the brain to produce prolactin hormone which spreads in blood. Alveolus is the cells which produce breast milk there is lactocytes in it which function as the receiver of prolactin hormone and stimulate the establishment of breast milk. Alveolus is a group of some alveoli. When alveolus is full of breast milk, prolactin cannot enter lactocytes; the result is that breast milk production will decrease. Therefore, as soon as the baby is born, when IMD (Early Breastfeeding Initiation) is started, frequent feeding (in the neighborhood of 8-12 times per day) is very important to help expedite the supply of breast milk and to prevent from the incidence of engorgement in breast. When the baby is established in its sucking, let it suck on demand/ does not need to be scheduled as when it is born in order that prolactin hormone increases.

Oxytocin massage is a mechanic receptor directly on skin so that it simultaneously stimulates efferent ganglion in limbic system along the vertebra and costa 5-6. The stimulation gives feedback in posterior hypophysis gland (neurohypophysis) so that oxytocin secretion enters blood circulation. Oxytocin which enters blood can cause the contraction of specific cells, mioepitel cells which surround alveolus mammae and lactiferous duct. The contraction of miopitel cells push breast milk to come out from alveolus through lactiferous duct toward lactiferous sinus. By the time the baby sucks, breast milk in sinus is pushed to come out to its mouth. The flow of breast milk from the sinus is called "Let Down" of discharge. At the same time it stimulates adenohypophysis gland (hypotalamus part anterior) so that prolactin enters blood and causesacinus cells in alveolus produces breast milk (prolsactin reflexes)

Marmet Technique on BREAST MILK Production in Post-Partum Women

The result of the research showed that the mean value of marmet technique was 166.00 and standard deviation was 4.595. Effective marmet technique can increase breast milk production of post-partum women because there are two actions: massaging and milking in breasts and nipples.

The research conducted by Marliana (2013) showed that post-sectio Caesarea women who are treated with marmet technique, their breast milk production was 70% in good condition, while in the control group which was not given marmet technique, their breast milk production only had 30% in good condition. The research conducted by Mardyaningsih (2010) on the effectiveness of the combination between marmet technique and oxytocin massage toward breast milk production in post-sectio Caesarea women showed that the combination between marmet technique and oxytocin massage had the influence on the increase in breast milk production. From this result, it could be concluded that breast milk production highly influenced the smoothness of breast milk secretion because the more the breast milk secretes, the more increbreast milkng its production. Widuri (2013) also points out that if marmet technique is done accurately and frequently, there will be no problem in the production and the secretion of breast milk.

Milking breast milk by using marmet technique was firstly invented by a woman who secreted her breast milk by medical method. The technique of milking breast milk by hands is called marmet technique. This technique is more comfortable, safer, more practical, and much ebreast milker to do. She did this technique because she found difficulty in secreting her breast milk when she wanted to breastfeed her baby. She ten found a method by massaging and stimulating in order that her breast milk secreted reflexively and optimally (Suryoprajogo, 2009).

Novianti (2009) points out that marmet technique is a technique of milking by using hands so that it does not need other accessories, and the woman will ebreast milkly do it any time and in any place.

Technique of Warm Compress toward Breast Milk Production in Post-Partum Women

The result of the research showed that the mean value of warm compress was 160.50 and standard deviation was 7.246. It is very effective in increbreast milkng breast milk production in post-partum women because the action was done on breasts by compressing them.

According to Huang, et. al, (2007), some physiological effects of warn compress are vasodilatation, increasin capillary permeability, increasing cellular metabolism, relaxing muscles, and increasing blood flow to a certain area. The use of warm compress for a strained and painful area can ease the pain by reducing muscle spasm caused by ischemia. Besides that, according to Siska, et. al, (2002), warm compress therapy can also fulfill the feeling of comfort, reducing or increasing pain, reducing or preventing from the incidence of muscle spasm, stimulating peristaltic intestine, and providing the warmness of the soul. The change from hot the hot jar into the stomach will stimulate contraction of intestine so that flatus occurs.

From the result of the observation on warm compress on breasts, it was found that the respondent looked more comfortable and relaxed after her breasts were treated with warm compress technique. This condition was because when warm compress was done, breasts would give signal to hypothalamus through spinal cord. When the receptor that was sensitive to heat in the hypothalamus was stimulated, effectors' system secreted signal

through peripheral vasodilatation (Potter, 2005).Warm compress can also fulfill the need for comfort, reduce pain, prevent from muscle spasm, and provide the feeling of warmness on breasts.

The lack of the smoothness of breast milk secretion by the disturbance of let down reflexes so that breast milk becomes stagnant in its sinus can influence breastfeeding with exclusive BREAST MILK. Warm compress on breasts during breastfeeding can increase the secretion of breast milk from the glands as the 'producer' of breast milk. Huang, et. al, (2007). Point out that some physiological effects of giving warm compress, among others, are vasodilatation, increasing capillary permeability, relaxing muscles, increasing blood flow to a certain area, increasing blood circulation in breasts, causing more oxytocin to flow toward breasts, and expediting the secretion of breast milk.

Effectiveness of the Technique of Breast Milk Secretion on Breasst Milk Production in Post-Partum Women

The result of the research showed that there was the influence of the technique of breast milk secretion on breast milk production at p-value = 0.002. The technique of breast milk secretion by performing oxytocin massage is more effective on breast milk production than that of marmet technique and warm compress at the mean value of oxytocin massage was higher (171.00) and standard deviation of 5.676 than marmet technique at the mean value of 166.00 and standard deviation of 4.595, than warm compress at the mean value of 160.50 and standard deviation of 7.246.

There was the difference in the technique of breast milk secretion among the groups. The groups which had significant difference were oxytocin massage technique and warm compress technique at p-value = 0.002 which indicated that there was far difference in the action which was done toward breasts and caused the ratio of breast milk volume, viewed from the mean values.

Oxytocin massage technique is effective in increbreast milkng breast milk production in post-partum women because during a relaxing condition, blood circulation and hormonal system will run smoothly so that post-partum women feel comfortable in the process of breastfeeding. Oxytocin hormon also makes breast milk duct wider so the breast milk flows ebreast milkly. At the same time, stimulation through integument system (direct absorption through skin) increases in nervous impulse which causes blood circulation run smoothly, relaxation of muscles and psychological condition of the women become more comfortable. The result is that the baby will suck comfortably. This is supported by women's characteristics such as age in which oxytocin massage in women who are still young will produce more breast milk than in women who are old.

Besides that, women should pay attention to the factors which influence the success in using oxytocin massage by listening to the baby's cry which can trigger the flow of breast milk which is indicated that breast milk production can be influenced by psychological and environmental condition during breastfeeding. They should also have self-confidence so thast perception on insufficient breast milk can be eliminated and should be close to their babies. Relaxation, an exercise which is aimed to relax and soothe like meditation, yoga and progressive relaxation, can help and restore the imbalance of nerve and hormone and provide natural power, touch, and massage while breastfeeding. Husbands' and family's support and warm drinks can also be enjoyed, but the are not allowed to drink coffee since it contains coffein.Breasts can be warmed and nipples can be stimulated by pulling and winding them with fingers slowly (Astutik, 2014).

In order to produce more breasrt milk, women who want to breastfeed should be psychologically in a relaxing condition. Besides that, massaging can also be done, along with emptying and pumping. If these techniques are carried out properly, the process of breastfeeding can become more effective.

It is recommended by this research that women use oxytocin massage, marmet technique, and breast warm compress as an alternative too increase breast milk production.

Besides oxytocin massage, birth weight is also related to breast milk production at p-value = 0.005, in oxytocin massage technique with the mean value of body weight of 3110 kg and standard deviation of 334.830 with the minimum value of 2600 kg and the maximum value of 3800 kg. Therfore, normal birth weight tended to undergo smooth breast milk production.

CONCLUSION

Based on the results could be concluded that the technique of breast milk secretion with oxytocin massage was more effective on breast milk production than the marmet technique and warm compress. The suggestion are:

1. It is recommended that the Health Agency of Medan collaborate with the Indonesian Midwife Association make oxytoocin massage as permanent procedure for post-partum service and provide counseling about oxytocin massage for pregnant and breastfeeding women in order that they can increase the coverage of exclusive breast milk.
2. It is recommended that post-partum women ask help from family members in implementing oxytocin

massage at home and give information to their community members about it so that they will get knowledge it.

3. It is recommended that the next researchers measure post-partum women's nutritional status and food intake as confounding variable which can influence breast milk production.

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