

The Combination of Nigella Sativa and Lactation Massage in Postpartum Mothers to Increase the Weight of a Baby

Mei Lia Nindya Zulis Windyarti

¹Departement of midwifery, Karya Husada Health Science Institute of Semarang, Indonesia

Abstract: *Introduction: Breast milk is the first, the main and best food for a baby. Lactation is a symbiotic process and the cause of breast milk problems can be from mother, baby or both. Maternal nutrition and nutritional status during pregnancy and lactation are one of the factors that cause a lack of milk production. Most mothers stop breastfeeding due to reduced milk production and lack of stimulation to the mother. This can also affect the baby's weight. Efforts to overcome breast milk production in a non-pharmacological way, giving Nigella Sativa and lactation massage. Nigella Sativa has an active compound that is lactagagum and lactation massage can stimulate prolactin and oxytocin hormones as well as milk production so that it can increase milk production and can affect the increase in baby's weight. Objective: to analyze the effectiveness of the combination of Nigella Sativa and lactation massage in postpartum mothers on increasing infant weight. Method: Quasy experiment with a non-randomized controlled trial design pretest-posttest control group. The sample was 40 respondents. Data analysis used Wilcoxon and repeated measure ANOVA. Nigella Sativa is given 3 times a day at a dose of 400 mg. Lactation massage is given 2x a day in the morning and evening with a duration of about 30 minutes. This intervention is given for 14 days. Results: the results of the study based on bivariate analysis were the combination of Nigella Sativa and lactation massage giving effect on weight gain (p-value 0.001). Significant weight gain on the seventh day. Conclusion: giving a combination of black cumin (Nigella Sativa) and lactation massage effective against and increasing baby's weight.*

Keywords: nigella sativa, lactation massage, baby's weight.

1. Introduction

The relevance of this study refers to the production of breast milk. One of the milk production can be measured by the baby's weight. Breast milk also affects the nutritional needs of infants, thus affecting the baby's weight

2. Literature Survey

The growth and development of a baby are largely determined by the amount of milk obtained includes energy and other nutrients contained in the breast milk. Breast milk without other food ingredients can be sufficient growth needs until around four months of age. In nation-building, the human quality improvement must begin as early as possible, which is from an early age that is still a baby, one of its factors plays an important role in improving the quality of human beings is breastfeeding.^(1, 2) The most common problem faced by breastfeeding mothers is low milk production. The low production of breast milk can cause a lazy mother to breastfeed so that the baby receives less milk and makes the baby lose weight. Based on research conducted by Chan, et.al of 44 postpartum mothers, 77% of women stopped breastfeeding in the third month due to lack of breast milk, breast problems and fatigue.⁽³⁾

Efforts to defeat the problem of breast milk production can be given non-pharmacological therapy is by giving nigella sativa and lactation massage. Nigella sativa is one of the galactagogue herbs that contain lipid elements and hormonal structures in which this active compound plays an active role in the production of milk.⁽⁴⁾ According to research conducted by Amalina, administration of black cumin can increase the

level of the hormone prolactin due to the presence of one of the polyphenol elements which have a similarity of elements found in Sauropus androgynous leaves which has the effect of galactagogue.⁽⁵⁾

Lactation massage is a combination of breast care and oxytocin massage accompanied by effleurage massage done in the breast and back area. Through massage and or stimulation of the back, neurotransmitters will stimulate the medulla oblongata directly sending messages to the hypothalamus in the posterior pituitary to secrete the hormone oxytocin and prolactin to produce milk.^(6, 7)

3. Methods

This type of research used a quasi-experimental design with the non-randomized controlled trial design of the pretest-posttest control group design. The number of samples of 40 respondents divided into intervention groups with the combination of 3 x 400 mg daily cumin and lactation massage which was done twice with a duration of 30 minutes, and a control group with breast care and education provided for 14 days

4. Results dan discussion

4.1 Characteristics of respondents

Table 1 Description the characteristics of age, education, employment

Variable	Group		p-value***
	Intervention	Control	
Age			
mean±SD	23.55±2.724	24.44±2.724	0.788
min±max	20±28	20±29	
Level of education			
Basic	5%	30%	0.156
Middle	55%	70%	
High	40%	0%	
Employment			
Work	55%	60%	0.555
Does not work	45%	40%	

Table 1 illustrates the age-susceptibility of this study is 20-35 years. Age 20-35 years is the safest age for pregnancy, childbirth, and breastfeeding. At this age, the reproductive organs are ready to carry out the process of reproduction concerning breastfeeding. The level of education is generally related to the level of community knowledge it has. The higher the level of education, the easier it will be to absorb information, especially about breastfeeding and nutritional needs in the baby.

Table 2 Description of breastfeeding frequency characteristics and resting patterns

Variabel	Group		p-value
	Intervention	control	
Breast feeding frequency			0.879
Mean ± SD	9.9 ± 1.334	9.45 ± 1.19	
Min ± Max	8 ± 12	8 ± 12	

Frequent term infants are breastfeeding about 8-12 times per day for the first 2 weeks after giving birth. The frequency of breastfeeding is related to the stimulation of the hormones prolactin and oxytocin, thus affecting the production of breast milk and baby's weight.

4.2 Baby's weight

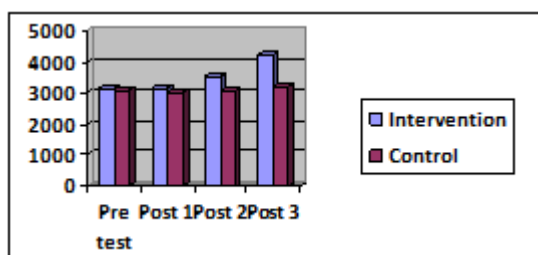


Figure 1: Effect of Combination of Black Cumin and Lactation Massage on Baby Weight

It can be concluded that there is a significant difference in the difference in infant body weight between the intervention group and the control group. This shows that the combination of giving nigella sativa and lactation massage can increase milk production in postpartum mothers supported by an increase in baby's weight.

Assessment of milk production is not only seen from the volume of milk, but there are several criteria as a reference to determine the release of milk and the amount is fulfilled,

one of them is by gaining weight, defecating the baby, urinating the baby, and the length of sleep of the baby.⁽²⁾ Bodyweight describes the amount of protein, fat, water and minerals in the bones. At the age of a few days the baby's body weight decreases which is normal. Newborns will lose 5-10% during the first few days of life. This is due to the release of urine, feces, and fluid that is excreted through the lungs, and because the baby's intake is small, but the weight will return to normal in 10 days.⁽⁸⁾

Consuming nigella sativa and doing lactation massage can help increase milk production because black cumin contains lactogogum.⁽⁹⁾ Lactatogum is a nutrient that can increase and expedite milk production, especially for mothers who experience problems in milk production. During breastfeeding, the mother needs good nutrition. One of the nutrition needed by the mother is energy. Innigella sativa there is a fairly large energy namely protein 20.2gr / 100gr, carbohydrate 37.gr/100gr while the calcium value is quite high at 188 mg / 100gr. The adequacy of the mother's nutrition during breastfeeding will affect the quality and quantity of breast milk.⁽¹⁰⁾ Dwi's research results explained that black cumin can maintain the body's power in infants and increase baby weight.

Lactation massage is a combination of breast care and oxytocin massage accompanied by effleurage massage done in the breast and back area. Through massage or stimulation of the spine, neurotransmitters will stimulate the medulla oblongata directly sending messages to the hypothalamus in the posterior pituitary to release oxytocin. Dripping or escaping milk is a sign of active oxytocin reflex⁽¹¹⁾ Research conducted by Patel states that by giving massage in the back area for postpartum mothers for 16 months will increase milk production as measured by the baby's body weight increased 238%, the frequency of BAB increased 49%, the frequency of urination increased by 130% and the length of sleep the baby increased by 200 %.⁽⁶⁾

5. Conclusion

The combination of nigella sativa and lactation massage effective to increase baby's weight with an increase of 40,8%.

6. Future Scope

Researchers cannot control the duration of breastfeeding and the strength of baby suction

7. Other recommendations

For further research, researchers can continue their research by researching the optimum dose of nigella sativa to increase milk production and baby's weight.

References

- [1] Roesli Utami YE. Manajemen Laktasi. Jakarta: IDAI; 2010.
- [2] Wiji RN. ASI dan Panduan Ibu Menyusui. Yogyakarta: Nuha Medika; 2013.
- [3] Scott J, Colin W. Breastfeeding: reasons for starting, reasons for stopping and problems along the way. *Breastfeeding Review*. 2002;10(2):13.
- [4] Nergiz C, Ötles S. Chemical composition of *Nigella sativa* L. seeds. *Food chemistry*. 1993;48(3):259-61.
- [5] Susilani AT, Kurniawan H. Pemberian Jintan Hitam (*Nigella sativa*) Dalam Peningkatan Kadar Hormon Produksi ASI (Prolaktin Dan Oksitosin) Serta Jumlah Neutrofil Neonatus Dari Ibu Post Seksio Sesaria Di Yogyakarta. *Jurnal Permata Indonesia*. 2016;7(2):1-14.
- [6] Patel U, Gedam D. Effect of back massage on lactation among postnatal mothers. *International journal of medical research and Review*. 2013;1(01).
- [7] Rahayuningsih T, Mudigdo A, Murti B. Effect of Breast Care and Oxytocin Massage on Breast Milk Production: A study in Sukoharjo Provincial Hospital. *Journal of Maternal and Child Health*. 2016;1(2):101-9.
- [8] Serrano MSC, Doren FM, Wilson L. Teaching Chilean mothers to massage their full-term infants: effects on maternal breast-feeding and infant weight gain at age 2 and 4 months. *The Journal of perinatal & neonatal nursing*. 2010;24(2):172-81.
- [9] Tembhurne S, Feroz S, More B, Sakarkar D. A review on therapeutic potential of *Nigella sativa* (kalonji) seeds. *Journal of Medicinal Plants Research*. 2014;8(3):167-77.
- [10] Al-Jassir MS. Chemical composition and microflora of black cumin (*Nigella sativa* L.) seeds growing in Saudi Arabia. *Food Chemistry*. 1992;45(4):239-42.
- [11] Aryani Y, Evareny L. Pengaruh Masase pada Punggung Terhadap Intensitas Nyeri Kala I Fase Laten Persalinan Normal Melalui Peningkatan Kadar Endorfin. *Jurnal Kesehatan Andalas*. 2015;4(1).

Author Profile



Mei Lia Nindya Zulis Windyarti received Amd., Keb and STr., Keb from Midwifery Diploma and Midwifery Applied Bachelor Degree from Telogorejo Semarang College of Health Sciences and Karya Husada Health Sciences College Semarang in 2014 and 2015. In 2018 graduated from Postgraduate Midwifery Masters Program, Health Politecnic Semarang, Indonesia. She's now lecturer at Departemen of Midwifery, Karya Husada Health Science Institute of Semarang, Indonesia..