http://ejournal.seaninstitute.or.id/index.php/healt
Jurnal eduhealth, Volume 13, No 02, 2022
E-ISSN., P-ISSN. 2087-3271

Postpartum Exercise Effect On Breast Milk Production

Etika Khoiriyah
Akademi Kebidanan Anugerah Bintan, Tanjungpinang, Kepulauan Riau, Indonesia

ARTICLE INFO

Keywords:
Postpartum Exercise, Milk Production.

ABSTRACT

Breast milk is the most important source of nutrition for babies, especially until the age of 6 months. Breastfeeding problems need to be addressed immediately, one of which is by giving postpartum exercise. Postpartum exercise is a muscle movement exercise that provides psychological benefits to provide a feeling of relaxation and freshness which can help the hormones aoxytocin and prolactin work optimally to produce breast milk. This study aims to determine the effect of postpartum exercise on increasing milk production. This research is a quasi-experimental study with a one group pre and post test design. A sample of 47 postpartum women respondents with a sampling technique using purposive sampling. Data analysis using the T test. The results showed that after postpartum exercise there was a significant value related to breast milk production with an average value increasing by 102%. The results of data analysis showed that postpartum exercise had an effect on breast milk production with a p value of 0.000 <0.05, so H1 was accepted and H0 was rejected, meaning that there was an effect of postpartum exercise on increased milk production. It can be concluded that there is an effect of postpartum exercise on increasing milk production. The suggestion of this research is that it is hoped that postpartum mothers will receive postpartum exercise education and can be carried out independently so that they can increase milk production and coverage of exclusive breastfeeding

Email :
Etika2811@gmail.com

1. INTRODUCTION

Breast milk (breast milk) is a source of nutritional intake for newborns, which is exclusive breastfeeding because it is given to babies aged 0 months to 6 months. Exclusive breastfeeding based on Government Regulation Number 33 of 2012 is breast milk given to babies from birth for six months, without adding and/or replacing it with other foods or drinks (except drugs, vitamins and minerals)[1].

The World Health Organization (WHO) has recommended the importance of exclusive breastfeeding for infants aged 0-6 months. This is supported by reports that in low- and middle-income countries, only 37% of children under 6 months of age are exclusively breastfed, including in Indonesia[2].

In this phase, it is necessary to pay proper attention to the provision and quality of breast milk, so that it does not interfere with the baby's developmental stages during the first six months, considering that this period is the golden period of child development until they are 2 years old[1].

Based on the Profile of the Indonesian Ministry of Health (Kemenkes RI), nationally the coverage of babies receiving exclusive breastfeeding in 2019 was 67.74%, decreased in 2020 by 66.06% to 2021 by 56.9%. This figure has exceeded the 2021 program target of 40%. This decline needs attention even though this figure has exceeded the target of government programs[3].

Based on the Profile of the Riau Islands Health Office, the coverage of exclusive breastfeeding in 2019 was 56.5%, while in 2020 it decreased to 47.3% [4] and in 2021 it increased to 63.2%[5]. Whereas for the city of Tanjungpinang, based on the health profile of Tanjungpinang City, the coverage of exclusive breastfeeding in 2018 was 47%, in 2019 there was an increase of 48.5% and in 2021 it decreased to 46.9% [6].

The results of a study in the pediatrics journal in 2006 as quoted by UNICEF, revealed that babies who were given formula milk (infant milk) had a 25 times higher chance of dying in the first month of life than babies who were exclusively breastfed[7].

Efforts that have been made by the government in order to increase the percentage of babies aged >6 months who get exclusive breastfeeding, one of which is the promotion of exclusive breastfeeding to giving rewards in the form of certificates of passing exclusive breastfeeding[8].

The efforts that have been made by the government, but in reality in Indonesia there are still postpartum mothers who do not breastfeed exclusively for 6 months, this is due to decreased milk production so that mothers give formula milk to their babies. While efforts to increase breast milk apart from the nutrition consumed by the mother can also be through one of them, namely postpartum exercise.

According to Cuningham (2006) most postpartum mothers are reluctant to move because they are worried that these movements can cause effects such as pain and bleeding, but take advantage of their time to sleep continuously. In fact, in postpartum mothers who do not do postpartum exercise, the impact is not good, such as bleeding or infection[7].

The benefits of postpartum exercise include helping heal the uterus, stomach and hip muscles that have been traumatized and accelerating the return of these parts to their normal shape, improving blood circulation, helping to normalize loose joints due to pregnancy and childbirth, and preventing weakness and stretching. Furthermore. In addition, postpartum exercise can help mothers to stay relaxed and fresh so that they can help the hormones oxytocin and prolactin work optimally to provide optimal breast milk as well. Postpartum exercise exercises can be started within 24 hours after giving birth and then regularly every day.

2. METHOD

This research is a type of quasi-experimental research with the design used is one group pre and post test design. The location of this research is in the independent practice of midwives in Tanjungpinang. The time of the study was conducted from January to April 2022. The sample in this study were 47 mothers who were undergoing the puerperium and who met the sample criteria. The sampling technique in this study used a purposive sampling technique. The data analysis used is the T test dependent.

3. RESULTS AND DISCUSSION

Based on the research that has been conducted on the effect of postpartum exercise on increasing milk production in postpartum mothers in the independent practice of midwives in the city of Tanjungpinang, the authors can describe the results of the research from data acquisition as follows:

Characteristics of respondents

Table 1. Distribution of respondents based on the age of postpartum mothers participating in postpartum exercise

Category	%
<20 years	4,25
20 – 35 years	74,46
>35 years	21,27
Amount	100

Based on table 1, it illustrates that in the implementation of postpartum exercise, most of the respondents belonged to the age category of 20-35 years (74.46%) and the lowest was 4.25%, including the age category <20 years.

Table 2. The distribution of respondents based on the parity variable of pregnancy for mothers participating in postpartum exercise.

Parity	F (n)	P (%)
Primipara	26	55,31
Multipara	19	40,42
grandemultipara	2	4,25
Amount	47	100

Based on table 2, it shows that the majority of respondents based on the parity criteria of mothers who participated in postpartum gymnastics were primiparas, namely 55.31% (26 responden).

Table 3. Distribution of respondents based on birth history

Childbirth History	N	%
SC	2	4,25
Vacuum	0	0
Normal	45	95,74
Amount	47	100

According to the table above, it shows that most of the respondents are included in the history of normal delivery, which is 95.74%. Respondents with a history of SC delivery were 4.25% while for vacuum delivery none of the respondents had a history of vacuum delivery.

Table 4. Assessment of Breast Milk Production Before and After Doing Postpartum Exercise

N	Postpartum Exercise		%
	Before	After	
Average	0,7021	7,89	102
Low	0	0	0
High	5	9	80
Amount	47	47	

The table above shows that the results of the assessment of breast milk production have differences between before and after postpartum exercise, namely the average increase value is 102%. Based on these data there are significant results for the benefits of mothers doing postpartum exercise.

Milk ejection is a very complex interaction between mechanical stimulation, nerves and various hormones. Factors that affect milk production include frequency of breastfeeding, baby's weight at birth, gestational age at delivery, mother's age at delivery, mother's physiological condition, stress, acute illness, consumption of cigarettes and alcohol[9].

From the results of the research above, mothers who have just given birth, especially primiparous mothers, can provide new enthusiasm for mothers to get sufficient information and education to become new mothers and their role in breastfeeding.

Table 5. The effect of postpartum exercise on increasing milk production

Postpartum Exercise	Milk Production		*P Value*
	N	Median	
Before	47	0,7021	0,000
After	47	7,893	

The table above shows that there is an increase in breast milk production before and after postpartum exercise with a significant p value of 0.000 <0.05. These results can be concluded that there is an effect of postpartum exercise on breast milk production in post partum mothers.

The postpartum period is very important for mothers after giving birth. Therefore, to return to its original condition or recovery period so that the body remains healthy and fresh, a movement known as

postpartum exercise is needed. Postpartum mothers who do postpartum exercise according to the rules can improve the mother's general condition, better blood circulation, good lactation process and faster uterine involution [10].

Peace of mind and mother's mind affect the adequacy of breast milk in infants aged 1-6 months. according to Ramayulis and Marbun (2010) The hormones prolactin and oxytocin play a role in producing and maintaining breast milk supplies. The release of oxytocin is influenced by stimulation of the nipples, namely the baby's sucking. While the release of prolactin occurs after breastfeeding for the next milk production. Prolactin is the most important hormone for the continuity and adequacy of breastfeeding. High or low levels of prolactin are influenced by the condition of the mother such as fitness level, state of stress, number of hours of sleep, and sexual arousal [11].

In overcoming the problem of exclusive breastfeeding for postpartum mothers, various efforts are also needed to increase milk production and expenditure, including in the form of support for mothers to breastfeed their babies, and trying to keep mothers relaxed by doing postpartum exercises as an effort to stimulate the release of the hormone oxytocin[12].

Postpartum gymnastics is a motion exercise that is performed as soon as possible after giving birth, so that the muscles that are stretched during pregnancy and childbirth can return to their normal condition[13]. Postpartum exercise is better done immediately after delivery with mothers who are in good health within 6 hours after delivery. Postpartum exercise in this case is done to help the body produce psychological benefits, namely dealing with stress and relaxing so as to reduce postpartum depression. This psychological benefit can optimize the body to secrete the hormones oxytocin and prolactin so that it can increase energy in the body to provide optimal breast milk[14].

According to Diane and Cooper (2019) the benefits of postpartum exercise are to improve blood circulation, body shape or posture, tighten muscle tone, especially uterine muscles in the process of uterine involution and help mothers to be more relaxed and fresh. Mothers who are fresh and have a strong body can help the hormones oxytocin and prolactin work optimally. Because hormones will work actively when blood circulation is smooth. Increased body metabolism can increase energy in the body to provide optimal breast milk [15].

This is in line with research conducted by (Savitri and Suryanti, 2017) that postpartum exercise can increase milk production. So with the processing, and the data that has been obtained, the researchers concluded that there was an effect of Postpartum Gymnastics on breast milk production in post partum mothers at KRT Setjonegoro Hospital, Wonosobo[7].

Based on Lubis 2021 study there is an increase in breast milk production after postpartum exercise. Postpartum exercise is a form of early ambulation for postpartum mothers, one of which is to facilitate the involution process. In addition, postpartum gymnastics functions to improve blood circulation so that the hormones oxytocin and proactin are able to work optimally in the alveoli area[15]

In accordance with the results of the analysis above, the researchers argue that postpartum exercise is an alternative to overcome the problem of irregular milk production. This is because postpartum exercise affects the smooth circulation of blood, which will speed up the metabolic process and speed up the process of milk production along with the hormone oxytocin.

Postpartum exercise is also an effective, safe, simple and economical effort because it does not require any costs to increase milk production. Arisman et al.'s research results. 2021 Postpartum exercise which is carried out from 2 hours of postpartum to 7th day of postpartum increases the average volume of breast milk, including day 1 > 11.25 ml, day 3 > 47.5 ml, day 5 > 73.9375 ml, day 3 7 >89.1875 ml with an overall p-value <0.005[16].

4. CONCLUSION

Based on the results of the research and the results of the analysis carried out by the researchers, it was found that there was an effect of postpartum exercise on increasing breast milk production with a p value (<0.05).

Based on the conclusions, it is suggested that health workers can provide education about postpartum exercise so that postpartum mothers can perform postpartum exercise independently so as to increase milk production and coverage of exclusive breastfeeding.

REFERENCES

[1] Kemenkes RI, *Profil Kesehatan Indonesia*. Kementrian Kesehatan Republik Indonesia, 2021.
[2] K. D. Purnamasari and Y. I. Hindiarti, "Metode Pijat Oksitosin, Salah Satu Upaya Meningkatkan Produksi ASI Pada Ibu Postpartum," *Jurnal Kesehatan Perintis*, vol. 7, no. 2, pp. 1–8, 2020.
[3] Kemenkes RI, *Profil Kesehatan Indonesia 2021*. 2022.
[4] Dinkes Prov Kepri, *Profil Kesehatan Dinkes 2019*. 2020.
[5] Dinkes Prov Kepri, *Profil Kesehatan Dinkes 2020*. 2021.
[6] Dinkes Kota Tanjungpinang, *Profil Kesehatan Kota Tanjungpinang 2021*. 2022.
[7] N. P. H. Savitri and S. Suryanti, "Pengaruh Senam Nifas Dalam Peningkatan Produksi Asi," *Jurnal Kebidanan*, vol. 09, no. 02, pp. 101–212, 2017.
[8] Dinkes Prov Kepri, *Rencana Strategi*. 2021.
[9] A. Maryunani, *Inisiasi Menyusu Dini, ASI Ekslusif, dan Manajemen Laktasi*. Jakarta: Trans Info Media, 2018.
[10] Wahyuni, "Penerapan Senam Nifas Terhadap Penurunan Involusi Uteri Pada Ibu Post Partum di Rumah Bersalin Bida Sri Rahayu Sragen," 2018.
[11] R. Rayhana and S. Sufriani, "The Factors Influencing Breast Milk Production With Breastfeeding Sufficiency," *JIM.*, vol. 2, no. 3, 2017.
[12] M. Delima, G. Z. Arni, and E. Rosya, "Pengaruh Pijat Oksitosin Terhadap Peningkatan Produksi Asi Ibu Menyusui Di Puskesmas Plus Mandiangin," *Jurnal Ipteks Terapan*, vol. 9, no. 4, pp. 282–293, Jul. 2016, doi: 10.22216/jit.2015.v9i4.571.
[13] M. Zakiyyah, T. Ekasari, M. Silvian, N. A. Kebidanan, H. Zainul, and H. Genggong, "Pendidikan Kesehatan Dan Pelatihan Senam Nifas," *Jurnal Pengabdian Kepada Masyarakat*, vol. 2, no. 1, pp. 11–16, 2018.
[14] I. N. Saputri, R. Gurusinga, and N. Friska, "Pengaruh Senam Nifas Terhadap Proses Involusi Uteri Pada Ibu Postpartum," *Jurnal Kebidanan Kestra (JKK)*, vol. 2, no. 2, pp. 159–163, Apr. 2020, doi: 10.35451/jkk.v2i2.347.
[15] B. Lubis, "The Effect of Public Exercise on Increasing Breast Milk Production in Post Partum Mothers in Puskesmas Tanjung Tiram," *Jurnal Aisyah : Jurnal Ilmu Kesehatan*, vol. 6, no. 1, Mar. 2021, doi: 10.30604/jika.v6i1.956.
[16] Y. Arisman and R. S. Endang, "Effect Gymnastics Postpartum on Milk Production of Postpartum," *International Journal of Allied Medical Sciences and Clinical Research (IJAMSCR)*, vol. 9, no. 3, pp. 520–526, 2021, [Online]. Available: www.ijamscr.com