

## PENGARUH PIJAT WOOLWICH PADA IBU MENYUSUI TERHADAP BERAT BADAN BAYI DI PMB NY “F” JEMBER

Ai Nur Zannah<sup>1</sup>, Ernawati Anggraeni<sup>2</sup>, Umi Kulsum<sup>3</sup>

<sup>123</sup>Department of Midwifery, Faculty of Sciences, Universitas dr. Soebandi, Indonesia

### \*Corresponding Author:

Ai Nur Zannah, midwifery Department Faculty of sciences, Universitas dr. Soebandi, Indonesia B Building 1<sup>nd</sup> Floor Kampus Universitas dr. Soebandi, Indonesia, Email: [ainz@uds.ac.id](mailto:ainz@uds.ac.id), Phone: +6285258965960

Ernawati, midwifery Department Faculty of sciences, Universitas dr. Soebandi, Indonesia B Building 1<sup>nd</sup> Floor Kampus Universitas dr. Soebandi, Indonesia, E-mail: [ernawati\\_anggraeni@uds.ac.id](mailto:ernawati_anggraeni@uds.ac.id), Phone: +6281216744681

Submitted: 01/08/2024

Accepted: 06/07/2024

Terbit: 06/07/2024

### Kata Kunci:

pijat woolwich; berat badan bayi; asi eksklusif

### Keywords:

woolwich massage; baby's weight; exclusive breastfeeding

### ABSTRAK

ASI Eksklusif merupakan program prioritas dan sebagai salah satu indikator kualitas kesehatan bayi dan balita. Berikut capaian cakupan ASI eksklusif di tingkat global tahun 2022 mencapai 48%, Indonesia mencapai 67,96%, Jawa Timur 69,72%, dan Kabupaten Jember mencapai 69,5%. Pijat Woolwich merupakan salah satu upaya dalam meningkatkan produksi ASI, dengan pemijatan pada sinus laktifirus yang terletak 1-1,5 cm diatas areola payudara. Penelitian ini untuk menganalisis pengaruh pijat Woolwich terhadap berat badan bayi. Penelitian ini merupakan penelitian kuantitatif desain *quasi experiment* dengan *non equivalent pretest – posttest with control group*. Populasi nya 42 ibu menyusui secara eksklusif dan bayi usia 0-6 bulan di PMB Ny. “F”, jumlah sampel 30 dengan tehnik *simple random sampling* yang dibagi menjadi kelompok intervensi dan kelompok kontrol. Rata-rata peningkatan berat badan bayi kelompok intervensi *post test* 268 gram dan kelompok kontrol 98,66 gram Berdasarkan hasil uji independen sampel t-test diperoleh p-value 0,022 <0,05, menandakan adanya perbedaan antara rata-rata peningkatan berat badan kelompok intervensi dan kontrol Pijat Woolwich pada ibu menyusui dapat mempengaruhi peningkatan berat badan bayi.

### Abstract

Exclusive breastfeeding is a priority program and an indicator of the health quality of babies and toddlers, are the achievements of exclusive breastfeeding coverage at the global level in 2022 reaching 48%, Indonesia reaching 67.96%, East Java 69.72%, and Jember Regency reaching 69.5%. Woolwich Massage is an effort to increase breast milk production, by massaging the lactiferous sinuses which are located 1-1.5 cm above the breast areola, this study is to analyze the effect of Woolwich massage on baby's weight. This research is a quantitative research with a quasi-experimental design with non-equivalent pretest - posttest with control group. The population is 42 exclusively breastfeeding mothers and babies aged 0-6 months at PMB Ny. "F", the sample size is 30 with simple random sampling technique which is divided into intervention group and control group. The average increase in baby weight in the post test intervention group was 268 grams and the control group was 98.66 grams. Based on the results of independent sample t-tests, a p-value of 0.022 <0.05 was obtained, indicating that there was a difference between the average increase in weight of the intervention group. and control. Woolwich massage for breastfeeding mothers can influence the increase in baby weight.

## Introduction

The exclusive breastfeeding program is one of the priority programs. Exclusive breastfeeding is also referred to as one of the indicators of the success of health development. While one of the indicators of a country's health quality is the health of infants and toddlers (Fitra Duhitaet al., 2023). Globally, the achievement rate of exclusive breastfeeding for infants aged 6 months in the main reason for mothers to stop exclusive breastfeeding so that inadequate breastfeeding will actually stop breast milk production (Suliasih, Puspitasari and Dwi Pawestri, 2019). The results of the anamnesis at PMB Mrs. F in December 2023 of 11 postpartum mothers found 4 mothers who did not breastfeed exclusively with interspersed formula milk for their babies. In 2022 reached 48%, which is a percentage achievement that is close to the WHO target. Causative factor exclusive breastfeeding is a lack of low in 2025 of 50% (WHO, 2022). Meanwhile, the coverage of exclusive breastfeeding in Indonesia in 2022 reached 67.96%, which is an achievement that has met the national target for 2022, which is 50% (WHO, 2023). According to the results of records from the Central Statistics Agency (BPS), the coverage of exclusive breastfeeding in East Java in 2022 was

69.72% with a target of 50% (East Java, 2023). The coverage of exclusive breastfeeding in 2022 in Jember Regency reached 69.5% with a minimum service standard target that has been set, namely 80% (Jember, 2023). The results of a study of 82 mothers at the Simomulya Health Center showed that 32 (39%) mothers failed to provide exclusive breastfeeding because they were worried that providing breast milk alone would not be sufficient to meet the baby's nutritional needs. This perception often becomes stimulation of the hormones oxytocin and prolactin which play a role in the smooth production of breast milk, the hormones prolactin and oxytocin will decrease and will cause breast milk not to be produced immediately after giving birth so that breast milk only comes out on the third day or more (Ulyaet al., 2021). The mother feels that her breast milk is not enough to make her baby full so that the mother gives her baby formula milk and ends up only giving formula milk because the breast milk is no longer coming out, this is often the mother's answer when anamnesis is carried out both during the KF4 visit and the KB visit at Mrs. F's PMB.

Inefficient breast milk output will affect the volume of breast milk production. When breast milk output is ineffective it can increase FIL (Feedback Inhibitor Lactation)

Which will cause hypothalamus and responded by anterior decreased breast milk production. Changes in the shape of lactocyte cellswill prevent bindingprolactinso that breast milk production will slow down and eventually stop producing. Poor breast milk supply will result in babies being dissatisfied, frustrated and restless. Babies do not want to empty their breasts to getmilkwhich contains more fat so the baby will experience it easily colic (abdominal pain) and the stool will come out explosively, watery and foamy. Ultimately this condition will inhibit the baby's weight gain from being optimal. Many mothers considerthis condition as the mother's inabilityto produce enough breast milk to satisfy the baby (Wahyuni, 2018).

One of the efforts that can be done to help smooth the production of breast milk is by alternative actions such as massage. MassageWoolwichThis is an alternative action to deal with the problem of smooth breast milk flow that mothers can do themselves by massaging the area. lactiferous sinusabove 1-1.5 cm above the areola of the breast, to remove breast milk that is in the arealactiferous sinus. Massage Woolwichwill stimulate breast nerve cells which will be transmitted to pituitaryto secrete hormones prolactin which will be carried by the blood to the

cellsmyoepithelialbreasts to produce breast milk, increase breast milk volume and prevent breast congestion (Farida, Setyorini and Retno, 2022). By doing massageWoolwichThis will increase the mother's breast milk production and can meet the baby's breast milk supply needs so that the baby's weight can increase optimally. Based on a case study written by (Aprianti, Suciana and Wulandari, 2023), it was explained that from the provision of massage carewoolwichin postpartum mothers is effective in overcoming complaints of little and irregular breast milk. So if the mother avoids problems that often occur in the lactation process, the mother will feel comfortable and satisfied with the optimal breast milk production results and the baby's nutritional needs will be met, one sign of a baby getting enough breast milk is indicated by an increase in the baby's weight (Widaryanti, 2019). Based on the results of the presentation, researchers are interested in analyzing the effect of massageWoolwich in breastfeeding mothers on infant weight atPMB Mrs. "F" Jember district.

## Method

This research is a quantitative research that usesquasi experimental designwithnon equivalent pretest – posttest with control group.The research location was at TPMB

Ny. "F" located on Jl. Gajahmada II No. 41, Jemberkidul Village, Kaliwates District, JemberRegency, this study lasted for 7 days from February 27, 2024 - March 04, 2024. The study population was 42 mothers who exclusively breastfed babies aged 0-6 months at PMB Ny. F. The selection of samples in the experimental and control groups was selected by adjusting the inclusion criteria, namely mothers who were breastfeeding babies aged 0-6 months, mothers who were not From 30 respondents will be divided into 2 groups, namely the experimental group 15 respondents with massage treatment woolwichand 15 respondents in the control group with only counseling on good and correct breastfeeding techniques. The sampling of the number of samples is in accordance with the theory of Slovin, Gay and Dhiel which explains that for this type of experimental research, a minimum of 15 samples from each group. The sample in this study is an unpaired sample because the sample has no relationship whatsoever and is used in research that wants to compare two groups of unrelated subjects (Tohardi, 2019; Firdaus, 2021). The research variables consist of the independent variable massage.woolwich and the dependent variable is the baby's weight. The tools and instruments used in collecting research data

use tools and techniques contained in the standard operating procedure (SOP) for massage. woolwichand observation sheets to record the provision of interventions received by the mother and the baby's weight, measuring the baby's weight using a baby weighing scale that has passed the calibration test. The processing of the data obtained is carried out by editing, coding, entry, tabulating And cleaning. If  $p \text{ value} \leq 0.05$  then  $H_a$  is accepted, meaning there is a difference between mothers who do massagewoolwichwith mothers who only apply correct breastfeeding techniques to the increase in baby's weight, and if  $p \text{ value} > 0.05$  then  $H_0$  is accepted, meaning there is no difference between mothers who do massage. woolwichwith a mother who only Applying the correct breastfeeding technique to increase the baby's weight. The method used in the analysis test is the methodindependent samples ttestbecause the results of the value obtained when testing data normality are  $\geq 0.05$ , which means the data is normally distributed, then  $H_a$  accepted. KEPK Universitas dr. Soebandi with Number 173/KEPK/UDS/II/2024.

## Results

Results The following are the results and discussion obtained by researchers after



conducting research for seven days on breastfeeding mothers and babies aged 0-6 months:

A. General Data Respondent characteristics Table 1. Characteristics of Group Respondents Intervention

No	Karakteristik Responden	Frekuensi	Persentase
1.	Rentan Usia <20 tahun	4	26,7 %
	Usia Ibu 20-35 tahun	8	53,3 %
	Usia > 35 tahun	3	20,0 %
<b>Total</b>		15	100%
2.	Pendidikan Terakhir Ibu		
	SMP	-	
	SMA	8	53,3 %
	Diploma	2	13,3 %
	Sarjana	5	33,3 %
<b>Total</b>		15	100%
3.	Pekerjaan Ibu		
	IRT	12	80%
	Karyawan Swasta	3	20%

<b>Total</b>		15	100%
4.	Paritas		
	Primipara	7	46,7 %
	Multipara	6	40,0 %
	Grande Multipara	2	13,3 %
<b>Total</b>		15	100%
5.	Usia Bayi		
	0-28 hari	4	26,66 %
	1-6 bulan	11	73,33 %
<b>Total</b>		15	100%
6.	Usia Kehamilan		
	Aterm	15	100%
	Premature	-	-
<b>Total</b>		15	100%

Based on the table above, it is known that the age of breastfeeding mothers in the intervention group is mostly 20-35 years old, as many as 8 people (53.3%), the youngest age 35 years is 3 people (20%). The last level of education of breastfeeding mothers in the intervention group is mostly high school graduates as many as 8 people (53.3%), bachelor's degree graduates are 5 people (33.3%), and the minority of the last diploma graduates are 2 people (13.3%). The employment status of breastfeeding mothers in the intervention group is mostly

housewives as many as 12 people (80.0%) and the minority of mothers work as private employees as many as 3 people (20.0%). The history of parity of breastfeeding mothers in the intervention group is mostly mothers primipara with a total of 7 people (46.7%), 6 people (40.0%) multiparous, and minority is a mother large multipara many as 2 people (13.3%). The age of the babies in the intervention group was mostly 1-6 months old, as many as 11 babies (73.33%) and the minority is the age of newborn babies 0-28 days as many as 4 babies (26.66%). The gestational age when the babies were born in the intervention group were all babies born with a gestational age of term (37- 40 weeks) totaling 15 babies (100%)..

Tabel 2. Karakteristik Responden Kelompok Kontrol

No	Karakteristik Responden	Frekuensi	Persentase
1.	Rentan Usia Ibu tahun	4	26,6%
	Usia 20-35 tahun	9	56,6%
	Usia > 35 tahun	2	16,6%
<b>Total</b>		15	100%
2.	Pendidikan SMP	2	13,3%
	kan		

Terakhir Ibu			
	SMA	9	60,0%
	Diploma	1	6,7%
	Sarjana	3	20,0%
<b>Total</b>		15	100%
3.	Pekerjaan Ibu		
	IRT	10	66,7%
	Karyawan Swasta	5	33,3%
<b>Total</b>		15	100%
4.	Paritas		
	Primipara	8	53,3%
	Multipara	6	40,0%
	Grande Multipara	1	6,7%
<b>Total</b>		15	100%
5.	Usia Bayi		
	0-28 hari	6	40,0%
	1-6 bulan	9	60,0%
<b>Total</b>		15	100%
6.	Usia Kehamilan		
	Aterm	14	93,3%
	Premature	1	6,7%
<b>Total</b>		15	100%

A. Based on the table above, it is known that the age of breastfeeding mothers in the control group is mostly 20-35 years old, as many as 9 people (56.6%), the

youngest age 35 years is 2 people (16.6%). The last level of education of breastfeeding mothers in the control group is mostly high school graduates as many as 9 people (60.0%), bachelor's degree graduates are 3 people (20.0%), junior high school graduates are 2 people (13.3%), and the minority of the last graduate is a Diploma as many as 1 person (6.7%). The employment status of breastfeeding mothers in the control group is mostly housewives as many as 10 people (66.7%) and the minority of mothers work as private employees as many as 5 people (33.3%). The history of parity of breastfeeding mothers in the control group is mostly mothers primipara with a total of 8 people (53.3%), 6 people (40%) multiparous, and the minority are mothers large multipara as many as 1 person (6.7%). The age of the babies in the control group was mostly 1-6 months old as many as 9 babies (60.0%) and the minority were newborns aged 0-28 days as many as 6 babies (40.0%). The gestational age when the babies were born in the control group majority is 37-40 weeks as many as 14 babies (93.3%) and there was 1 baby (6.7%) who was

born at this age premature 36 weeks.

## B. Data Khusus

### Berat badan bayi

Tabel 3. Hasil Berat Badan Bayi

	BB Bayi Kelompok Intervensi (Pijat <i>woolwich</i> )		BB Bayi Kelompok Kontrol (Tehnik Laktasi)	
	<i>Pre Test</i>	<i>Post Test</i>	<i>Pre Test</i>	<i>Post Test</i>
R1	4000 gram	4150 gram	3200 gram	3380 gram
R2	3600 gram	3900 gram	2900 gram	2980 gram
R3	4800 gram	5000 gram	3200 gram	3380 gram
R4	3270 gram	3380 gram	2400 gram	2460 gram
R5	5320 gram	5630 gram	4000 gram	4020 gram
R6	5120 gram	5200 gram	2300 gram	2300 gram
R7	4230 gram	4260 gram	6130 gram	6190 gram
R8	4870 gram	5.040 gram	8200 gram	8350 gram
R9	6470 gram	6680 gram	2700 gram	2780 gram
R10	7280 gram	7500 gram	5630 gram	5630 gram
R11	7720 gram	7830 gram	8000 gram	8150 gram
R12	5200 gram	5380 gram	8370 gram	8500 gram

	gram	gram	gram	gram
R13	4740	4850	7600	7800
	gram	gram	gram	gram
R14	5380	5500	9280	9400
	gram	gram	gram	gram
R15	2890	2900	7900	8.080
	gram	gram	gram	gram

Data analysis results conducted a normality test with a sig. (p-value) of 0.20 or  $> 0.05$  then  $H_0$  is accepted or the data is normally distributed. Furthermore, a data variation test was conducted between the intervention group and the control group with a result of 0.564 ( $> 0.05$ ) which means that the data from the intervention group and the control group are homogeneous. The type of sample is an unpaired sample and the data is on a ratio scale.

Tabel 4. Rata-rata Berat Badan Bayi

Variabel	Kelompok				Nilai P*
	Intervensi		Kontrol		
	Pretest	Posttest	Pretest	Posttest	
<b>Berat Badan</b>					
Mean	4992,67	5260,67	4920,67	5019,33	0,006
<b>Peningkatan (gram)</b>	<b>268</b>		<b>98,66</b>		<b>0,22</b>

Data on average body weight and improvement heavy body in test using techniques Independent sample test with a result of 0.006 ( $< 0.05$ ) meaning  $H_0$  is rejected

and  $H_a$  is accepted. Thus it can be concluded that then is a significant difference between the average weight gain of the intervention group and control group.



## Discussion

### 1. Baby's weight in breastfeeding mothers provided by IEC breastfeeding techniques which is good and right.

Average weight body baby The intervention group and the control group after 7 days of intervention both experienced an increase, but in the control group, one baby was found to have no increase in weight. The baby's sucking triggers the release of milk from the alveoli through duct to lactiferous sinus. With suction can stimulate the production of oxytocin hormone by the posterior pituitary gland. Improper breastfeeding technique can cause the nipples to become sore, breast milk does not come out optimally so that it will affect the next breast milk production or the baby is reluctant to breastfeed. The correct breastfeeding technique is to pay attention to the attachment and position of the mother and baby correctly when breastfeeding (Nurhidayatiet al., 2023). The correct breastfeeding technique is a way of giving breast milk to a baby with the correct attachment and position of the mother and baby. Indicators in the effective breastfeeding process include

the correct position of the mother and baby (body position), effectiveness of the baby's suction on the breast (effective sucking). Breastfeeding with the wrong technique can cause problems such as sore nipples and breast milk not coming out optimally, thus affecting subsequent breast milk production. This causes the baby's breast milk needs to not be met (Purba, 2024). In addition to insufficient breast milk, when breastfeeding techniques are not carried out effectively and correctly, it will also cause the baby's weight to decrease and the baby will also have difficulty breastfeeding, which will affect the success of exclusive breastfeeding (Fitra Duhitaet al., 2023). The baby's weight that does not increase is still a normal condition but still requires further monitoring of the baby's weight increase that remains the same, because the baby's age is a newborn baby in the first week who is still in the adaptation phase of reducing the amount of extra interstitial fluid in the tissue which can possibly cause physiological weight loss (reduced by 5% from birth weight).

### 2. Berat badan bayi pada ibu menyusui yang dilakukan pijat *woolwich*

Results of baby weight evaluation

after 7 days of massage Woolwich in the intervention group there was an increase and there were 3 babies who experienced an increase in body weight <200 grams for 7 days area lactiferous sinus exactly 1-1.5 cm above areola mammae (Girsang, 2023). Woolwich massage is a therapy that can be applied to breastfeeding mothers to facilitate regular breast milk production, can be applied 2 times/day in the morning and evening, for at least 3 days (Lubis, 2023). Breast Prolactin hormone functioning milk sufficiency can be measured as breast milk production in addition to other hormones such as insulin, thyroxine, and others. On the second or third day after giving birth, estrogen and progesterone levels drop drastically, so that the influence of prolactin is more dominant and at that time breast milk secretion increases. Reflexes that are very important in mothers in the lactation process, namely the prolactin reflex and the reflex let down, which arises due to stimulation of the nipples by the baby's sucking (Purba, 2024).

Prolactin is an important hormone in the formation and maintenance of breast milk production. The purpose of massage techniques woolwich is to

stimulate the breast nerve cells which will be forwarded to the hypothalamus and responded to by the anterior pituitary to release the hormone prolactin which will be distributed by the blood to the breast myoepithelial cells to produce breast milk. Massage points woolwich done in through the baby's response after being breastfed such as the frequency of urination, defecation and weight loss of no more than 7% of birth weight (Purba, 2024). Weight gain of less than 100 grams within 7 days after massage Woolwich is one of the gaps due to the status of working mothers and the lactation process with the help of pumping that is not regular. This can be overcome by providing mothers with education about the correct pumping technique and continuing to encourage mothers to breastfeed regularly. Direct Breast feeding (DBF) when the mother is at home with her baby and continues to do massage regularly woolwich. Still recommend routinely attending integrated health posts to monitor baby's weight.

### **3. Pengaruh pijat *woolwich* pada ibu menyusui terhadap berat badan bayi di PMB Ny.F**

Results of analysis on the effects of massage Woolwich to mother towards increase in infant weight over 7 days, namely the difference between the average increase in infant weight in the group of mothers who applied massage Woolwich with the weight of the baby in the control group with the results p-value 0.002 ( $< 0.05$ ). Breast care for breastfeeding mothers after giving birth which aims to stimulate the mother's mammary glands so that they can produce breast milk. This massage technique is carried out in the lactiferous sinus area, precisely 1-1.5 cm above the areola mammae, to release breast milk in the lactiferous sinus. With this massage, it can stimulate breast nerve cells, this stimulation will be transmitted to the hypothalamus and responded to by the anterior pituitary to release the hormone prolactin which will. Technique lactation can be distributed by the blood to the breast affect the lactation process because with the right position it creates comfort for both the baby and the mother, so that the mother and baby can remain calm and relaxed during the breastfeeding process, the bonding effect between the mother and baby will also be realized. The correct attachment

between the baby's mouth and the mother's breast determines the accuracy of the baby's suction and the amount of breast milk that can be released by the breast (Rahmawati and Prayogi, 2018). Lack of stimulation of the hormones oxytocin and prolactin which play a role in the smooth production of breast milk is one of the factors causing the lack of breast milk production. Massage Woolwich is one of the methods myoepithelial cells to produce breast milk, increase breast milk volume and prevent breast dams that cause breast swelling (Farida, Setyorini and Retno, 2022; Malatuzzulfaet al., 2022; Girsang, 2023).

With the influence of increasing breast milk, the fulfillment of infant nutrition will be more optimal as explained in the book (Widaryanti, 2019) regarding signs that a baby is getting enough breast milk, namely the baby's weight increases according to the growth curve in the KMS, the frequency of urination is 6 times or more, the frequency of defecation. Optimal weight gain in infants according to (KIA Book, 2022) at the age of 1-3 Normally the baby's weight will increase by around 800-900 grams per month, which means that if you divide it

per week, the baby's weight will normally increase by around 200 grams. A 4 month old baby will add 600 grams, a 5 month old baby will add 500 grams and a 6 month old baby will add 400 grams, which if monitored per week, the baby's weight at that age will increase between 100-200 grams.

According to the book written by (Fitra Duhitaet al., 2023) which discusses the benefits of breast milk for babies as the best nutrition for babies, increasing immunity, protection against disease, increasing intelligence, The growth and development of the baby will be better. The weight gain of babies who get breast milk is greater when compared to babies who do not get exclusive breastfeeding. On Mother breastfeed Which apply massage Woolwich Breast milk can be produced more according to the benefits and goals of massage. woolwich so that the baby's weight is easier and increases significantly with an average increase reaching 268 grams in 7 days after the implementation of the intervention. Meanwhile, the average weight gain of babies with mothers who only apply lactation techniques is only 98.6 grams in 7 days. This occurs because mothers from the control group only get

stimulation from the baby's suction when breastfeeding, while mothers who apply lactation techniques massage woolwich get stimulation other than from the baby's sucking also from massage woolwich twice a day.

## Conclusion

From the presentation of the results and discussion in this study it can be concluded that:

1. Implementing the correct breastfeeding technique can help increase breast milk production so that the baby's weight can increase.
2. Application of massage Woolwich In mothers, it can also help increase breast milk production by stimulating the prolactin reflex so that the baby's weight increases more easily.
3. J with mothers who only applied lactation techniques as a control group had different results in the average increase in baby weight.

## Abbreviation

- FIL : Feedback Inhibitor Lactation  
GALT :Gut Associated Lymphatic Tissue  
HPL : Human Placental Lactogen  
WHO : World Health Organization

## Ethics Approval and Consent to Participate



Ethical approval in research plays a role in considering ethics and law to protect respondents and avoid physical and psychological harm and discomfort as stated in the Indonesian Minister of Health Regulation Number 75 of 2020 concerning the national health research and development ethics committee. The following are things that will be considered in the KEPK of Dr. Soebandi University.

## Acknowledgment

This research implemented with independent funding from the researchs them selves.

## References

- Aprianti, E., Suciana, S. and Wulandari, W. (2023) ‘Asuhan Kebidanan Pada Ny “P” Dengan Woolwich Massage (Pijat Payudara) Untuk Meningkatkan Produksi Asi Pada Ibu Nifas’, *Menara Ilmu*, 17(2), pp. 24–31. Available at: <https://doi.org/10.31869/mi.v17i2.4271>.
- Buku KIA (2022) *Buku KIA Kesehatan Ibu dan Anak*, Kementrian kesehatan RI.
- Farida, S., Setyorini, C. and Retno, Z.M. (2022) ‘Pijat Woolwich untuk Meningkatkan Produksi ASI pada Ibu Menyusui Tahun Pertama’, *Prosiding Seminar Informasi Kesehatan Nasional (SIKESnas)*, pp. 393–398.
- Firdaus, M.. (2021) *Metodologi Penelitian Kuantitatif*. Edited by F. Ravida. Bengkalis: Dotplus Publisher.
- Fitra Duhita *et al.* (2023) *LAKTASI (Lambang MangASIhi dalam Berbagai Tantangan Keadaan dan Kondisi)*, Juni. Edited by Moh.Nasrudin. Pekalongan: PT. Nasya Expanding Management.
- Girsang, B.M. (2023) *Evidence Bsed Practice Periode Nifas*. Yogyakarta: CV Budi UTAMA.
- Jatim, D. (2023) *profil kesehatan provinsi jawa timur tahun 2022*. Surabaya. Available at: [www.dinkes.jatimprov.go.id](http://www.dinkes.jatimprov.go.id).
- Jember, D.K.K. (2023) *Profil Kesehatan Kabupaten Jember Tahun 2022*. Jember.
- Lubis, Kholilah. *et al.* (2023). *Pelayanan Komplementer Kebidanan*. Bandung: Kaizen Media Publishing.
- Malatuzzulfa, N.I. *et al.* (2022) ‘Upaya



Peningkatan Produksi ASI melalui Pijat Woolwich dan Massage Rolling pada Ibu Nifas 1 Minggu Post Partum Efforts to Increase Breast Milk Production through Woolwich Massage and Rolling Massage in Postpartum Mothers 1 Week', 12(1), pp. 65–72.

Nurhidayati *et al.* (2023) *ASI Eksklusif dan Ruang Laktasi*. Yogyakarta: Selat Media patners.

Putri, Y. *et al.* (2022) *Buku Ajar Fisiologis Kehamilan, persalinan, nifas dan bayi baru lahir*. Edited by Moh. Nasrudin. Pekalongan: PT. Nasya Expanding Management.

Rahmawati, A. and Prayogi, B. (2018) *Buku Ajar Asuhan Keperawatan Manajemen Laktasi Dengan Pendekatan Berbasis Bukti (Evidence Based approach)*. Malang: Media Nusa Creative.

Purba, B.R . *et al.* (2024) *Bunga Rampai Gizi Prakonsepsi, Kehamilan, Dan Menyusui*. Cilacap : PT. Media Pustaka Indo.

Suliasih, R.A., Puspitasari, D. and Dwi Pawestri, D.A. (2019) 'Faktor

yang Berhubungan dengan Keberhasilan ASI Eksklusif', *Sari Pediatri*, 20(6), p. 375. Available at: <https://doi.org/10.14238/sp20.6.2019.375-81>.

Tohardi, D.A. (2019) *Buku Ajar Pengantar Metodologi Penelitian Sosial + Plus*. Pontianak: Tanjungpura University Press.

Ulya, N. *et al.* (2021) *Buku Ajar Asuhan Kebidanan Nifas dan Menyusui*. Edited by Moh.nasrudin. Pekalongan: PT. Nasya Expanding Management.

Wahyuni, E.D. (2018) *bahan ajar asuhan kebidanan nifas dan menyusui*.

WHO (2022) 'Global Breastfeeding Scorecard 2022 Protecting Breastfeeding Through Further Investments And Policy Action', in. UNICEF, p. 6. Available at: <https://www.who.int/publications/i/item/WHO-HEP-NFS-22.6>.

WHO (2023) 'World BreastFeeding Week', in. Available at: <https://www.who.int/indonesia/news/events/world-breastfeeding-week/2023>.