JKM (Jurnal Kebidanan Malahayati), Vol 12, No. 7. July 2026,
ISSN (Print) 2476-8944 ISSN (Online) 2579-762X, Hal 407-414

THE EFFECT OF *ALOE VERA* COMPRESSES ON BREAST SWELLING IN POSTPARTUM MOTHERS IN THE WORKING AREA OF THE PAKUAN AJI EAST LAMPUNG HEALTH CENTER

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ABSTRAK : PENGARUH KOMPRESI LIDAH BUAYA TERHADAP PEMBENGKAKAN PAYUDARA PADA IBU PASCA MELAHIRKAN DI WILAYAH KERJA PUSAT KESEHATAN PAKUAN AJI LAMPUNG TIMUR

According to *World Health Organization* (WHO) and UNICEF data, exclusive *breastfeeding* coverage in infants under 6 months is 41% and is targeted to reach 70% by 2030 (2021 in *Global Breastfeeding Scorecard*, 2021). Child growth standards applied around the world according to WHO emphasize breastfeeding from birth to 6 months of age (exclusive breastfeeding). After that the baby starts to be given complementary foods until the age reaches 2 years and continues to breastfeed. The purpose of this study was to determine the effect of aloe *vera* compress (*Aloe Vera*) on breast swelling in postpartum mothers in the Pakuan Aji Health Center Working Area, East Lampung in 2023.

This type of *quantitative* research with *quasy experimental* with *pre test* and *post test design* approach.This research was conducted at Pakuan Aji Health Center Work Area of East Lampung.The number of samples in this study were 16 respondents of postpartum mothers. The analysis in the study used univariate and bivariate analysis with the T-test technique.

The results of the mean value of the incidence of breast swelling in breast milk dams before aloe *vera* compresses in the Pakuan Aji Health Center Working Area in East Lampung in 2023 mean 5.19, SD 0.750. The results of the mean value of the incidence of breast swelling in breast milk dams after aloe *vera compresses (aloe vera*) mean 2.38, SD 0.885. Conclusion The results of the *P value* of *0.*000 which means that Ha is accepted, which means that there is an effect of aloe *vera compresses* on breast milk dams in postpartum women in the Pakuan Aji Health Center Working Area, East Lampung in 2023. With this research, it is hoped that respondents will be able to apply therapy in the form of aloe vera compresses to reduce breast swelling in postpartum women if they later find the same cases and problems outside of this study.

Keywords : *aloe vera*, breast milk dam, postpartum period

ABSTRAK

Menurut data Organisasi Kesehatan Dunia (WHO) dan UNICEF, cakupan pemberian ASI eksklusif pada bayi di bawah 6 bulan adalah 41% dan ditargetkan mencapai 70% pada tahun 2030 (2021 dalam Global Breastfeeding Scorecard, 2021). Standar pertumbuhan anak yang diterapkan di seluruh dunia menurut WHO menekankan pemberian ASI sejak lahir hingga usia 6 bulan (pemberian ASI eksklusif). Setelah itu bayi mulai diberi makanan pendamping hingga usia 2 tahun dan dilanjutkan dengan pemberian ASI. Tujuan penelitian ini adalah untuk mengetahui pengaruh kompres lidah buaya (Aloe Vera) terhadap pembengkakan payudara pada ibu pascapersalinan di Puskesmas Pakuan Aji, Lampung Timur pada tahun 2023.

Jenis penelitian ini adalah penelitian kuantitatif dengan eksperimen semu dengan pendekatan desain pre-test dan post-test. Penelitian ini dilakukan di Puskesmas Pakuan Aji, Lampung Timur. Jumlah sampel dalam penelitian ini adalah 16 responden ibu pascapersalinan. Analisis dalam penelitian ini menggunakan analisis univariat dan bivariat dengan teknik uji-T.

Hasil nilai rata-rata kejadian pembengkakan payudara pada ASI sebelum kompres lidah buaya di Puskesmas Pakuan Aji, Lampung Timur tahun 2023 adalah 5,19, SD 0,750. Hasil nilai rata-rata kejadian pembengkakan payudara pada ASI setelah kompres lidah buaya adalah 2,38, SD 0,885. Kesimpulan: Hasil nilai P 0,000 berarti Ha diterima, yang berarti terdapat pengaruh kompres lidah buaya terhadap ASI pada ibu pascapersalinan di Puskesmas Pakuan Aji, Lampung Timur tahun 2023. Dengan penelitian ini, diharapkan responden dapat menerapkan terapi berupa kompres lidah buaya untuk mengurangi pembengkakan payudara pada ibu pascapersalinan jika di kemudian hari menemukan kasus dan masalah serupa di luar penelitian ini.

Kata kunci: lidah buaya, ASI, pascapersalinan

INTRODUCTION

Child health is the main focus of health problems experienced throughout the world, especially developing countries. *United Nations Children's Fund* (UNICEF) data shows that the mortality rate of children under 5 years reached 3.7 percent in 2019 or as many as 5.2 million deaths worldwide (UNICEF, 2019). Under-five mortality in Indonesia shows a rate of 32 deaths per 1000 births (Indonesian Ministry of Health, 2020).

According to the latest WHO data in 2020 in the United States the percentage of breastfeeding women who experienced breast milk dams averaged 9,990 (89.25%) out of 15,760 postpartum mothers, in 2020 mothers who experienced breast milk dams were 9,731 (66.87%) out of 13,974 postpartum mothers and in 2020 while in 2021 the number of occurrences of breast milk dams in postpartum mothers was 8,623 (66.34%) out of 12,943 postpartum mothers. UNICEF mentioned scientific evidence issued by the Journal of *Pediatrics* in 2022, revealed data in the world of mothers experiencing breastfeeding problems around 17,244,321 million people consisting of 36.98% nipple blisters, 65.29% breast dams, and 10.5% mastitis (WHO, 2020, 2021, 2022).

Data from 2021 for postpartum women experiencing breast milk damages, the highest number occurred in Indonesia, 37.12% (Indonesian Ministry of Health, 2021). According to the results of the Lampung Province Maternal and Child Health report, data on post-partum mothers in 2020-2021 there were 292,875 people, the incidence of breast swelling was 185,238 people. This is often associated with the benefits of breast milk in infants 0-2 months as a baby's immune system to avoid infection. Meanwhile, in 2022 the number of postpartum mothers in Indonesia reached 48,983,768 mothers, with the problem of breast swelling as many as 234,809 incidents. (Lampung Health Office, 2021).

Common problems during breastfeeding include duct blockage, causing pain, fever, red breasts, palpable painful lumps and swelling, and breast engorgement, also known as milk dams. This event usually occurs because the collected milk is not released and a blockage occurs. Common symptoms of milk dams include swelling of the breasts, hot and stiff breasts, and an increase in the mother's body temperature. If this situation is not addressed immediately, it can lead to mastitis and breast abscess. One of the leading causes of maternal mortality in obstetrics in Indonesia is infectious diseases (15%). And infection due to unresolved breast milk dam is one of the direct causes of maternal death (Rutina and Fitriani, 2016).

Factors that lead to milk dams include frequency of breastfeeding, inactive infant sucking, mother's motivation to breastfeed, breast care, breastfeeding techniques giving formula supplements to the baby, and using a breast pump without indication leading to over-supply. When milk is normally produced, the breasts become very full. This is physiological, and with effective sucking and ejection of milk by the baby, the feeling is quickly restored. However, it can develop into a dam, with the breasts feeling full of milk and tissue fluid. Venous and lymphatic flow is blocked, milk flow becomes obstructed and pressure on the milk ducts and alveoli increases. The breast becomes swollen and *edematous.* Symptoms that often appear when there is a breast milk dam include swollen breasts, hot and hard breasts and maternal body temperature up to 38 degrees Celsius (Wulandari and Handayani, 2014).

The impact of breast milk dam on the mother results in intraductal pressure that will affect various segments in the breast, so that the pressure of the entire breast increases, as a result the breasts often feel full, tense, and painful (WHO), although not accompanied by fever (Nevyda Ardyan, 2014). In addition, the impact on the baby is that the baby is difficult to suck, the baby is not adequately breastfed so that the baby does not get exclusive breastfeeding as a result the baby's nutritional needs will be less fulfilled due to the lack of intake obtained by the baby (Musriah, 2017).

The provision of non-pharmacological methods is the control of pain to be cheaper, simple, effective and without adverse effects. Strategies to reduce breast swelling can be done with acupuncture, traditional breast care (hot compresses or cold compresses combined with massage), alternating hot and cold compresses, cold compresses, ultrasound therapy, aloe vera compresses. *Aloe vera* (Aloe vera) is a plant native to Africa, which belongs to the *Liliaceae* group. The specialty of aloe vera lies in its gel that can make the skin not dry quickly and always looks moist. This situation is due to the nature of aloe vera gel which is able to seep into the skin, so that it can withstand the loss of too much fluid from the skin (Purwanto, 2013).

Aloe *Vera* is efficacious as an anti-inflammatory that functions to damage destroy, reduce, or localize *(cluster)* both the damaged agent and the damaged tissue. Signs of inflammation are swelling or edema, redness, heat, pain. Anti-pyretics are substances that can reduce body

 DOI 10.33024, http://ejurnalmalahayati.ac.id/index.php/kebidanan

temperature or drugs to reduce heat. Aloe vera works as an anti-inflammatory and herbal remedy for burns that can prevent oedema by inhibiting the enzyme cyclooxygenase or inhibiting the *synthesis of prostaglandin* E2 (PGE2) from *arachidonic acid*. PGE2 compounds are *prostaglandins* released by macrophages and modulate several inflammatory responses and increase pain sensitivity. Aloe vera extract also inhibits the migration of neutrophil cells. As an anti-bacterial substance, aloe vera extract inhibits the development of *Streptococcus* and *Shigella bacteria* (Purwanto, 2013).

Sari's research (2019) shows that *aloe vera* compress is effective in reducing the intensity of breast swelling pain in breastfeeding mothers. *Aloe vera* compress can be recommended as a complementary therapy with breast swelling pain. In line with Emilda (2017) there is an effect of *aloe vera compress* on breast pain in the postpartum period at the Bpm Mardiah & Bpm Klahijah Clinic in Langsa City. Other research results were conducted by Hasanah, Novayelinda, Maifera and Isdelni (2017) on the use of aloe vera compresses to overcome it was concluded that after getting an aloe vera compress the degree of phlebitis became degree 1 without pain and swelling.

Based on the results of data obtained in the Pakuan Aji Health Center Working Area in East Lampung in 2020, the number of postpartum mothers was 458 mothers with complications of swollen breasts 45.9%, mastitis 21.0%, 33.1% with other complications. Whereas in 2021 the number of postpartum mothers was 345 mothers with complications of swollen breasts 56.9%, mastitis 31.0%, 12.1% with other complications. Meanwhile, from January to March 2023, the number of postpartum women was 53 postpartum women. Based on the results of labor in the last 2 months, the prevalence of breast swelling in postpartum women in December 2022 and January 2023 was 42 postpartum women. (KESGAZI PKM Pakuan Aji, 2021-2023).

Based on interviews conducted with 10 postpartum mothers with breast milk dam problems, data were obtained that 7 post partum mothers had experienced breast swelling pain, and 3 post partum mothers did not experience breast swelling pain. Postpartum mothers who experienced breast engorgement said that they did not breastfeed their babies since the first day of postpartum because the milk could not be released, the mother felt breast pain when breastfeeding. Breast swelling pain that is not followed up can lead to further complications, so effective management is needed to overcome breast swelling pain in post partum mothers.

RESEARCH METHODS

The type of research used in this study is a *quantitative* research method with an experimental approach with a *pre test* and *post test design.*This research was conducted at the Pakuan Aji Health Center Work Area in East Lampung. The research time was conducted in March-July 2023.The research sample was 16 postpartum women.Data analysis using univariate and bivariate tests with statistical tests using the t test.Measurement of breast swelling in breast milk dam with SPES measuring instruments before being given the intervention.Given the intervention of Aloe Vera compress by attaching aloe vera gel to the swollen breast and then wrapped with gauze to keep the gel from spreading.Given for 3 days, 2 times a day in the morning and evening for 20-30 minutes.After that, breast swelling was measured again after being given the intervention with SPES measuring instruments.

RESEARCH RESULTS

Normality Test

Based on the normality test table above, it can be seen that the significant value of the incidence of breast swelling in breast milk dam before aleovera compress is 0.064 and the incidence of breast milk dam after aleovera compress is 0.057 with a sig value of shapiro-wilk test> 0.05. Thus it can be concluded that the variable data in this study are normally distributed, so the next stage cannot be carried out dependent t-tests.

Table 1
Normality Test* Results / *Test of normality

Breast Milk Dam	N	P-Value
Breast milk dam before aleovera compress	16	0,064
Breast milk dam after aleovera compress	16	0,057

Univariate Analysis

Average Incidence of Breast Swelling in Breast Milk Dams Before Aloe *Vera* Compress for Postpartum Women in the Pakuan Aji Health Center Working Area, East Lampung, 2023

Based on the results of research that has been conducted on 16 respondents in postpartum women, it can be seen in the table above where the results of the average value of the incidence of breast swelling in breast milk dams before aloe *vera* compresses in the Pakuan Aji Health Center Work Area Lampung Timur Year 2023 are 5.19, the standard deviation value is 0.750, the standard error value is 0.188 with the minimum value for the SPES scale results is 4 and the maximum value for the SPES scale is 6.

Table 2
Average Incidence of Breast Swelling in Breast Milk Dams After Aloe *Vera* Compress for Postpartum Women in the Pakuan Aji Health Center Working Area Lampung Timur Year 2023

Breast Milk Dam	N	Mean	Std. Deviation	Std. Error	Minimum	Maximum
Before aloe vera compress is applied	16	5,19	0,750	0,188	4	6

Average Incidence of Breast Swelling in Breast Milk Dams After Aloe *Vera* Compress for Postpartum Women in the Pakuan Aji Health Center Working Area, East Lampung, 2023

Based on the results of research that has been conducted on 16 respondents in postpartum women, it can be seen in the table above where the results of the average value of the incidence of breast swelling in breast milk dams after *aloe vera* compresses in the Pakuan Aji Puskesmas Work Area Lampung Timur in 2023 are 2.38, the standard deviation value is 0.885, the standard error value is 0.221 with the minimum value for the SPES scale results is 1 and the maximum value for the SPES scale is 4.

Table 3
Average Incidence of Breast Swelling in Breast Milk Dams After Aloe *Vera* Compress for Postpartum Women in the Pakuan Aji Health Center Working Area Lampung Timur Year 2023

Breast Milk Dam	N	Mean	Std. Deviation	Std. Error	Minimum	Maximum
Before aloe vera compress was applied	16	2,38	0,885	0,221	1	4

Bivariate Analysis

Based on the results of research that has been conducted on 16 respondents in postpartum women, it can be seen in the table above where the results of breast swelling in breast milk dams before and after being given aloe vera compresses against breast milk dams in postpartum women in the Pakuan Aji Health Center Work Area Lampung Timur Year 2023 with the results of a mean difference value of 2.812. While the results of the P value of *0*.000, which means the sig value <0.05, which means that Ha is accepted and Ho is rejected, which means that there is an effect of aloe *vera compresses* on breast swelling of breast milk dams in postpartum women in the Pakuan Aji Health Center Work Area, East Lampung, 2023.

Table 4
The Effect of Aloe *Vera* Compress on Breast Swelling in Breast Milk Dams in Postpartum Mothers in the Working Area of Pakuan Aji Health Center Lampung Timur Year 2023

Breast Milk Dam	N	Mean	Mean difference	t	95% CI	P value
Before the aloe vera compress	16	5,19	2,812	17.173	2.463-3.162	0.000
After aloe vera compress		2,38				

DISCUSSION

Average Incidence of Breast Swelling in Breast Milk Dams Before Aloe *Vera* Compress for Postpartum Mothers in the Working Area of Pakuan Aji Health Center, East Lampung in 2023

The results of the average value of the incidence of breast swelling in breast milk dams before aloe *vera* compresses in the Pakuan Aji Health Center Working Area Lampung Timur in 2023 were 5.19, the standard deviation value was

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0.750, the standard error value was 0.188 with the minimum value for the SPES scale results being 4 and the maximum value for the SPES scale being 6.

Pharmacological therapy used is serrapeptase anti-inflammatory drugs (*danzen*) which is an anti-inflammatory enzyme agent 10 mg three times a day or Bromelain 2500 units and tablets that contain protease enzymes 20,000 units. Meanwhile, according to Amru, breast swelling therapy is given symptomatically, namely reducing pain (analgesics) such as paracetamol or ibuprofen. The use of non-pharmacological therapy to reduce pain from breast swelling is as follows acupuncture, (traditional breast care) namely hot compresses combined with massage, alternating hot and cold compresses, cold compresses, cabbage leaves and ultrasound therapy (Sutanto, 2018).

Aloe *vera* (*Aloe vera; Latin: Aloe Barbadensis Milleer*) is a type of plant that has been known since thousands of years ago and is used as a wound healer and for skin care. Along with advances in science and technology, the utilization of aloe vera plants is developing as raw materials for the pharmaceutical and cosmetic industries, as well as health food and beverage ingredients. In general, aloe vera is one of the ten best-selling plants in the world that has the potential to be developed as a medicinal plant and raw material (Fauzi, 2014).

Research conducted by Lestari (2023) The purpose of this study was to determine the effectiveness of Aloe Vera compresses on breast swelling of postpartum women in the Karang Tengah District. The research method used was *Quasy experiment, the* subjects of this study were all postpartum mothers who experienced breast swelling in the Karang Tengah District. The object of this research is breast swelling and Aloe Vera compress. The number of samples in this study were 30 respondents. *Quota sampling* technique. The research was conducted in January-February 2023.The measuring instrument used was *six point engorgemet scale* (SPES). The results showed that the average swelling before compressing was 3 and after compressing the average value of swelling was 1. In statistical testing using the *Wilcoxon* test obtained a *ρ-value of* 0.000. Because (α<0.05) it is concluded that Aloe Vera compress is effective to reduce breast swelling scale in postpartum women.

According to the researcher's assumption, providing therapy to reduce breast swelling can improve the quality of breastfeeding in pot partum mothers so that mothers do not feel tortured when breastfeeding their babies and feel relieved. If the breast milk dam is not resolved properly, it will reduce the milk volume and the mother will feel severe pain when her baby suckles and will even feel hot in the breast.

The results of the research conducted show that there is a problem in postpartum women, namely swelling of the breasts due to breast milk dams, this problem is something that often occurs in postpartum women where hormones and milk production will increase and the lack of knowledge of mothers in breastfeeding techniques so that there is a problem with breast milk dams. In its management, breast milk dams can be overcome by providing aloe vera compress techniques which can help the healing process of swelling because it has ingredients that reduce the feeling of swelling.

Average Incidence of Breast Swelling in Breast Milk Dams After Aloe *Vera* Compress for Postpartum Women in the Pakuan Aji Health Center Working Area, East Lampung, 2023

The results of the average value of the incidence of breast swelling in breast milk dam after aloe *vera* compresses in the Pakuan Aji Health Center Working Area in East Lampung in 2023 mean 2.38, standard deviation value 0.885 standard error value of 0.221 with the minimum value for the results of the SPEC scale is 1 and the maximum value for the SPEC scale is 4.

Breast swelling also causes mothers to stop the breastfeeding process because the breasts feel painful, uncomfortable when breastfeeding, and assume that if the breasts have problems, the breastfeeding process is stopped so as not to transmit the disease to their children (Apriani, Wijayanti, Widyastutik, 2018). This can have an impact on exclusive breastfeeding for infants. If the baby does not get breast milk, the baby's nutritional needs are not met properly and is susceptible to disease (Alhadar & Umaternate, 2017).

Treatment of breast engorgement can be done pharmacologically and non-pharmacologically. Pharmacologically by providing symptomatic therapy in the form of analgesics to reduce pain such as paracetamol and ibuprofen. Non-pharmacologically by giving Aloe *Vera* compresses. The provision of non-pharmacological methods is pain control to be cheaper, simple, effective, and without adverse effects (Endah, Z.A., et al, 2016).

Aloe Vera compress therapy can help overcome breast swelling so that breast milk production in postpartum women becomes smooth. This is in line with research conducted by Sushen (2017) which states that Aloe Vera compresses on breasts that experience swelling due to breast milk damungn pain can decrease by stimulating the

immune system to block prostaglandin biosynthesis (Sushen et al., 2017).

Research conducted by Martini (2022) This study aims to analyze aloe vera compresses and *breast care* compared to cabbage leaf compresses and breast care on breast swelling in postpartum women. This study used a quasi-experimental design with a *non-randomized control group pre-test post-test* design. *Non probability sampling* technique *consecutive sampling* type. The research sample for each group was 15 respondents at one of the Central Lampung Health Centers in June-October 2020. Type of data analysis with *mann whitney test*. The results showed that the average breast swelling before *aloe vera* compress was 4.53 and the average after *aloe vera* compress was 2.47. The average breast swelling before cabbage leaf compress is 5.00 and after cabbage leaf compress is 3.60. Giving aloe vera compress is effective in preventing breast swelling (breast milk dam) in post-partum mothers with p-value (0.018 <0.05) Conclusion H_o is rejected and Ha is accepted, aloe vera compress is effective in preventing breast swelling in postpartum mothers.

The results obtained showed a change in breast milk dam after aloe vera compress. In this study, respondents continued to breastfeed their babies but experienced pain. Breast swelling is caused by several things such as improper breastfeeding techniques, nipple blisters, immersed nipples. Improper breastfeeding technique results in nipple blisters that cause pain when the baby suckles. And immersed nipples will make it difficult for the baby to breastfeed, because the baby cannot suck the nipple and areola. As a result, the baby does not suckle and causes breast engorgement pain.

According to the researcher's assumption, compresses using aloe vera can reduce breast milk dam because aloe vera reduces swelling and heat in the breast that feels swollen so that it can indirectly minimize the breast milk dam. Researchers also assume that breast milk dams that occur can also be influenced by the frequency of breastfeeding, if the mother does not often provide breast milk, the breast swelling that is felt increases because the milk is not smooth. The breastfeeding process will also be hampered because the mother feels the pain of breast swelling, so the mother is afraid or lazy to breastfeed.

The Effect of Aloe *Vera* Compress on Breast Swelling in Postpartum Mothers in the Working Area of Pakuan Aji Health Center, East Lampung, 2023

The results of research that have been conducted on 16 respondents in postpartum women can be seen in the table above where the results of breast swelling in breast milk dams before and after being given aloe vera compresses to postpartum women in the Pakuan Aji Health Center Work Area Lampung Timur Year 2023 with the results of a mean difference value of 2.812. While the results of the P value of *0.*000 which means that Ha is accepted, which means that there is an effect of aloe *vera compresses* (*Aloe Vera*) on breast swelling in breast milk dams for postpartum women in the Pakuan Aji Health Center Work Area, East Lampung in 2023.

The efficacious part of *Aloe Vera* as a medicine is the flesh of the thick and spongy leaf content which is shaped like a gel or jelly, which is a kind of thick and dense mucus. *Aloe Vera* gel is widely used. *Aloe Vera* exudate contains *essential* oils*, resins, gum, aloin, and emodin*. The gel contains vitamin A and some important minerals such as iron, potassium, and zinc. The gel also contains enzymes, carbohydrates, proteins, essential acids and non-essential acids. The gel in *Aloe Vera* is in the form of mucus, which can be obtained by cutting the inside of the *Aloe Vera* leaf after removing the exudate first. (Lubis, 2021)

The anti-inflammatory agents possessed by aloe vera include salicylic acid, indomethacin (which can reduce edema, inhibit the enzyme *cyclooxygenase* and inhibit the motility of *poly morpho nuclear* (PMN) leukocytes which when excessive amounts can damage tissue), mannose-6-phosphate*, B-sitosterol*, as well as *lignin, saponin and anthaquinone* components consisting of *aloin, barbaloin, anhtranol, anthracene, aloetic acid, aloe emodin* are basic ingredients of drugs that are antibiotics and pain relievers (Nyco, 2019) The content of aloe vera gel based on its benefits (Silaban, 2019).

Research conducted by Magdalena (2023) to determine "The Effectiveness of *Aloe Vera* Compress and Warm Compress on Breast Swelling at Rizky Anugerah Tangerang Clinic in 2023". Method: *quasy experiment* with non-equivalent control group design with *Wilcoxon Signed Rank* Test analysis. The population in the study was 50 and the sample in this study was 30 respondents, using ramdom sampling technique. The research instrument used was an observation sheet. Results: The results of the analysis showed that there was an influence between the provision of aloevera compresses on the relief of breast swelling in post partum mothers. Based on the results of *statistical*

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tests, the ρ value of 0.05 <0.05 was obtained, so H0 was rejected and H1 was accepted.

According to the researcher's assumption, there was a decrease in breast milk dam, which was measured using the SPEC scale. This happens because of several things that can affect breast milk dams due to breast engorgement such as baby sucking, nipple problems, positioning errors, incompletely emptied breast milk, excessive milk production while the baby's needs in the first days after giving birth are still small, infrequent milk release, and limited breastfeeding time. The researcher also assumed that breast milk dams can also occur if the mother does not breastfeed frequently, the breasts will swell and the pain will increase because the milk is not flowing. The breastfeeding process will also be hampered because the mother feels the pain of breast swelling, so the mother is afraid or lazy to breastfeed.

The results of the research conducted showed a difference in breast swelling before and after being given aloe vera compresses, this is due to differences in the body's response to the therapy given. This can be caused by different levels of swelling and a lot of breast milk production so that the swelling period in the breast will be longer. By giving aloe vera compresses can reduce swelling of the breasts because in this soothing and cooling aloe vera serves to relieve heat and pain due to inflammation. Can maintain skin moisture, so that the skin is not easily dry, wrinkled, or scaly. This is because in aloe vera gel there is a *lignin substance* that is efficacious in providing moisture to the skin. Changes in swelling also occur in mothers who lack breast emptying and lack of intensity in breastfeeding their babies while breast milk production continues to increase.

The results of the research conducted there is a relationship between the incidence of breast milk dam with the characteristics of respondents where the age of postpartum women affects the incidence of breast swelling and most of them occur at the age of 20-35 years, due to lack of experience, understanding and information about breast swelling.Meanwhile, according to the results of the research that has been done, there is a difference in healing in breast swelling in breast milk dams after being given aloe vera compresses due to differences in the level of breast swelling in breast milk dams that occur in mothers because there are some mothers who experience heavier breast milk dams and more milk production so that after being given treatment it is still not optimal.

In this study, the characteristics of respondents also affect the healing of breast swelling in breast milk dams at the age of the mother can affect the healing process of breast milk dams where mothers in the fertile age period of 20-35 years will take longer because of the abundant milk production, not yet having breastfeeding experience, lack of self-preparedness and knowledge of mothers in the correct breastfeeding technique, causing problems such as nipple blisters.

Whereas maternal education can also affect the healing of breast swelling in breast milk dams where education is a way of seeing or how mothers explore information that underlies a person's knowledge, mothers with low education are more likely to not pay attention to the problem of breast milk dams where they assume that this problem is a natural problem and often occurs in postpartum women. The high level of education affects the incidence of breast engorgement, a person with a high level of education will know more information, have a broad insight, capturing power and a much better mindset, so that it has more chances to know information about breast engorgement and how to overcome breast engorgement, but a person's level of education cannot be used as a guideline that someone will succeed in the breastfeeding process.

CONCLUSIONS

The results of the mean value of the incidence of breast swelling in breast milk dams before aloe *vera* compresses in the Pakuan Aji Health Center Work Area in East Lampung in 2023 were 5.19, a standard deviation value of 0.750, a standard error value of 0.188 with a minimum value for the SPES scale results of 4 and a maximum value for the SPES scale of 6. The results of the average value of the incidence of breast milk dam after aloe *vera* compresses in the Pakuan Aji Health Center Working Area in East Lampung in 2023 are 2.38, the standard deviation value is 0.885, the standard error value is 0.221 with a minimum value for the SPES scale results of 1 and a maximum value for the SPES scale of 4. The result of the P value of *0.*000 means that Ha is accepted and Ho is rejected, which means that there is an effect of aloe *vera* compresses on breast milk dams in postpartum women in the Pakuan Aji Health Center Working Area in East Lampung in 2023.

REFERENCES

Astuti, Sri, et al, (2015). *Textbook of Maternal Midwifery Care I (Pregnancy).* Yogyakarta; Rohima Press

Astuti, Sri, et al, (2015). *Childbirth and Breastfeeding*. Yogyakarta; Rohima Press

Dewi Putri Ratna, (2017). *Community Midwifery Care*". Andi Offset. Yogyakarta

Ellya, (2016).*Reproductive Health*. Jakarta: Health Book Publisher

Fauzi (2014) *Various Medicinal Plants and Their Efficacy*.Meddia Pressindo, Yogyakarta

Febriyanti (2019) The *Effect of Aloe Vera Compress on Breast Pain in Mothers Experiencing Breast Milk Dams in the Uptd Work Area of Sudimoro Health Center, Tanggamus Regency*

Ministry of Health, (2021). *Indonesia Health Profile 2017*. Jakarta: Ministry of Health of the Republic of Indonesia

Ministry of Health, (2020). *Indonesia Health Profile 2016*. Jakarta: Ministry of Health of the Republic of Indonesia

Lubis (2021) The *Effect of Giving Aloe Vera Compress to Reduce Pain Due to Breast Swelling in Post Partum Mothers at the Pintu Padang Health Center in 2021.*

Yuli (2021) Giving Cold Cabbage Leaf Compress Reduces Breast Swelling in Post Partum Mothers

Maulana, (2013). The *Complete Guide to Pregnancy*. Kata Hati. Yogyakarta

Manuaba, (2013). A *complete guide to pregnancy*. Slara Medika

Notoatmodjo, (2018). *Health Research Methodology*. Jakarta. Rineka Cipta. 2016. h. 37-38

Nurwiandani, (2019). "*Childbirth Care, the Concept of Comprehensive Childbirth in Midwifery Care*"

Prawirohardjo, (2016). *Maternal and Neonatal Health Services*. Jakarta: PT Yayasan Bina Pustaka Prawirohardjo.

Purwoastuti (2016) Midwifery *Care of the Postpartum Period and Breastfeeding*. Pustaka Baru Press. Yogyakarta

Rukiyah, (2010). *Midwifery Care in Childbirth*. Jakarta: CV. Trans Info Media

Silaban (2019) *Effectiveness of Aloe Vera Compress on Breast Swelling Pain in Postpartum Mothers at Theresia Clinic*

Sutanto.(2018) *Midwifery care of puerperium and breastfeeding*. Pustaka Baru Press. Yogyakarta

Vivian, (2013). *Pregnancy care for midwifery*. Jakarta: Salemba Medika