

COMPLEMENTARY BACK MESSAGE CARE (OXYTOCIN MESSAGE) TO FACILITATE BREAST MILK EXTRACTION

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ABSTRAK : PENERAPAN ASUHAN KOMPLEMENTER BACK MESSAGE (PIJAT OKSITOSIN) UNTUK MELANCARKAN PENGELUARAN ASI

Latar Belakang: Produksi ASI yang teratur adalah faktor kunci dalam proses terwujudnya pemberian ASI Eksklusif di Indonesia. Tetapi, beberapa ibu menghadapi masalah produksi ASI. Penyebab aliran ASI tidak teratur adalah karena kurangnya rangsangan. Oleh karena itu, hormon prolaktin dan oksitosin memiliki peran untuk produksi ASI yang baik dan diperlukan upaya alternatif berupa pijat oksitosin.

Tujuan: Studi kasus ini memiliki tujuan guna memberi asuhan kebidanan komplementer pada ibu Nifas dengan melakukan pijat oksitosin untuk memperlancar pengeluaran ASI di PMB "RA" Bandar Lampung.

Metode: Desain penelitian mempergunakan desain deskriptif memakai pendekatan studi kasus. Penelitian dilaksanakan tanggal 17- 24 Maret 2023. Subjek penelitian merupakan Ny. L berumur 27 tahun. Alat ukur yang dipakai adalah format pengkajian. Subyek dilakukan pemijatan 1-2 kali dalam sehari selama 1 minggu. Penelitian mempergunakan data primer. Subjek kasus sudah dimintai *informed consent* guna mengikuti penelitian.

Hasil: Hasil studi kasus ini pada hari 0-3 ASI belum banyak keluar sehingga dilakukan pijat oksitosin, kelancaran ASI terjadi setelah hari ke 3 pijat oksitosin yaitu hari ke-7 dan hari ke-10 ASI sudah banyak keluar, payudara terasa penuh dan terkadang merembes jika tidak disusui secara bergantian.

Kesimpulan: Kesimpulan penelitian bahwa penerapan asuhan komplementer back massage (pijat oksitosin) dapat meningkatkan kelancaran pengeluaran ASI.

Saran: Saran penelitian adalah perlu diterapkan asuhan komplementer yang salah satunya adalah back massage untuk mengatasi permasalahan pada masa nifas seperti kelancaran pengeluaran ASI. Hasil ini juga dapat dijadikan dasar untuk melakukan penelitian selanjutnya dengan metode yang berbeda.

Kata Kunci : ASI, masa nifas, pijat oksitosin

ABSTRACT

Background: Regular breast milk production is a key factor in the process of achieving exclusive breastfeeding in Indonesia. However, some mothers face breast milk production problems. The cause of irregular milk flow is due to lack of stimulation. Therefore, the hormones oxytocin and prolactin play a role in good breast milk production and alternative efforts are needed in the form of oxytocin massage.

Purpose: This case study aims to provide midwifery care to postpartum women to perform oxytocin massage at PMB "RA" Bandar Lampung.

Methods: The research design uses a descriptive design with a case study approach. This research was conducted from 17-24 March 2023. The research subject was Mrs. L is 27 years old. The instrument used is the assessment format. Subjects received massage 1-2 times a day for 1 week. This research uses primary data. Case subjects have been asked for informed consent to take part in the research.

Results: The results of this case study were that on days 0-3, not much breast milk had come out, so an oxytocin massage was carried out. The flow of breast milk occurred after the 3rd day of oxytocin massage, namely day 7 and day 10. A lot of breast milk had come out, the breasts felt full and sometimes leaked if not alternately breastfed.

Conclusion: In conclusion that implementing complementary back massage (oxytocin massage) can increase the smooth flow of breast milk.

Suggestion: The research suggestion is that it is necessary to apply complementary care, one of which is back massage to overcome problems during the postpartum period such as the smooth release of breast milk. These results can also be used as a basis for conducting further research with different methods.

Keywords : Back Massage, Breastmilk, Postpartum

INTRODUCTION

Breast milk (ASI) is a very effective intake for newborn babies because breast milk has a protective effect and can reduce the risk of illness and death for babies. (Fitria et al., 2023; suja delia & Budiarti, 2022; Wulandari et al., 2023). Exclusive breastfeeding means that babies are only given breast milk at the age of zero to six months and can only receive breast milk. It is forbidden to drink orange juice, milk, tea, honey or other solid foods such as papaya, porridge, bananas, rice or cakes. (Retni & Dkk, 2023)

WHO statistical data in 2017 obtained data proving that the rate of exclusive breastfeeding throughout the world is less than 50%. In developing countries, for example, Paraguay 29.6%, Myanmar 50.1%, Nigeria 23.3%, Mexico 30.1%, Afghanistan 43.1%. WHO has reviewed more than three thousand treatments and found that exclusive breastfeeding for six months is the recommended period for exclusive breastfeeding. This is based on scientific evidence that shows exclusive breastfeeding meets children's nutritional needs for better growth and development. (Marantika, 2023)

World Health Organization (WHO) in 2022, exclusive breastfeeding coverage in Indonesia in 2022 was recorded at only 67.96%, compared to 69.7% in 2021, to see the need for more intensive support so that this figure can increase. Only 20% of countries around the world, including Indonesia, require employers to provide paid maternity leave and provide accommodation for breastfeeding or expressing breast milk. Less than half of babies under six months of age receive exclusive breast milk. (world health organization, 2022)

Factors that cause a lack of exclusive breastfeeding including stress. Stress is one of factor that can affect breastfeeding. For example, mothers experience difficulties when starting to breastfeed such as fatigue, low milk supply, and difficulty sleeping at night. Stress can also affect the success of breastfeeding because it inhibits the release of breast milk and will then have an impact on breastfeeding. (ulfa daima & Setyaningsih, 2020)

Oxytocin massage is a solution to the problem of mothers lacking breast milk. Oxytocin

massage is massage along the spine to the 5th to 6th ribs and is an effort to stimulate the postpartum hormones, oxytocin and prolactin. This massage movement helps increase the hormone oxytocin so that it helps the mother feel safe and then breast milk can come out. (hanum farida, 2015) With this oxytocin massage, mothers can feel calm and reduce stress. Oxytocin massage is usually done twice on the first and second days after giving birth, because the amount of breast milk is still insufficient on those two days.

This massage can also reduce swelling in the breasts, reduce breast milk blockages, and maintain breast milk production. (Suriati & Yusnidar, 2022)

RESEARCH METHODS

This case study aims to provide midwifery care to postpartum mothers by performing oxytocin massage to facilitate exclusive breastfeeding at the Independent Midwife Practice (PMB) Bandar Lampung City. The design used descriptive using a case study approach. The case study was carried out March 17 – 24 2023. The subject of this care was Mrs. L, 27 years old. The instrument used an assessment format in the form of a checklist for complementary care providing oxytocin massage to postpartum mothers.

Subjects were massaged in the back area 1-2 times a day for 1 week starting on the 3rd day of the postpartum period until the 10th day. The massage was first carried out by midwife while teaching Mrs. L so that the next massage is carried out by the husband. Observations are carried out every 3 days by making home visits or video calls. Data collection in this case study uses primary data by direct interviews, observations, and providing care to the case subjects. Case subjects have been asked for informed consent to participate in treatment.

RESEARCH RESULTS

This care is carried out at the Independent Midwife Practice "RA", which is one of the Independent Midwife Practices in the city of Bandar Lampung. On March 17-March 24 2023, an oxytocin massage was carried out on the client Mrs. L.

Assessment of subjective data describes Mrs. L, 27 years old, gave birth on March 15 2023 at 09.00 WIB, female, weight 3,600 grams, body length 49 cm, head circumference 34 cm. His mother's name is Mrs. L, 27 years old, Lampung tribe, Muslim, D3 education, private job. His father, Mr. E 27 years old, Lampung tribe, Muslim, Bachelor's degree, private job. The mother said this was day 3 of postpartum, this was her first child. The mother said the baby was breastfeeding, the mother stated that her breast milk was not coming out much, the mother stated that the baby was breastfeeding 4-5 times a day.

Assessment of objective data describes good general condition, TTV within normal limits, composmentis consciousness, examination obtained within normal limits, pink conjunctiva not pale, mammary symmetrical right and left, nipples protruding breast milk has come out, TFU three fingers below the center, good contractions.

Based on objective and subjective assessment data, a diagnosis can be formulated "Mrs. L P1A0 Postpartum day 3 with not much breast milk coming out". The immediate need is to carry out an oxytocin massage on the mother to help produce a lot of breast milk.

The care provided is based on the interpretation of data that has been designed, namely: Explaining to the mother the results of the examination are normal; Tell how to increase breast milk, namely by breastfeeding frequently, drinking lots of fluids, nutritious food, getting enough rest; Re-teach mothers good breastfeeding techniques as well as how to sit comfortably, legs are not allowed to hang, place the baby in the correct position, hold the baby with 1 hand, place the baby's head near the crook of the elbow, the baby's bottom

is in the mother's palm, the baby's stomach is pressed against the body mother, the baby's mouth is in front of the mother's nipple, the forearm hugs the mother's body, not between the mother and the baby. The mother holds the upper hand or places it on her chest. Ears and upper arms are parallel, the baby's lips which are stimulated by the mother's nipple will open wide, then immediately bring it close to the mother's breast and the mother's nipple, put the areola in the baby's mouth, check whether the attachment is correct, chin is against the mother's breast, mouth is wide open, Most of the areola, especially the lower part, is in the baby's mouth, the baby's cheeks are not allowed to poop, the baby's lips are folded out. There are no clicks, only evidence of swallowing is heard, baby is calm, mother is not in pain; Tell the mother again to maintain personal hygiene by bathing at least twice a day, changing underwear when damp, changing sanitary napkins at least twice a day, changing clothes when dirty; Inform the mother of the danger signs of postpartum: the uterus feels soft, vaginal bleeding >500 cc or changing sanitary napkins more than twice a day, severe headache, blurred vision, fever with a temperature >38oC, foul-smelling blood discharge. If there are danger signs, go to the nearest health facility as quickly as possible; Encourage mothers to continue consuming lots of green vegetables such as spinach and katuk leaves; Doing an oxytocin massage has the effect of increasing the oxytocin hormone, namely calming the mother, helping the mother produce breast milk and increasing breast milk production; and Teaching the family (husband) how to do oxytocin massage. The results of the assessment observations can be seen in table 1.

Table 1

Observation Results of the Implementation of Complementary Back Massage (Oxytocin Massage) on the smooth release of breast milk in Mrs. L

Period	Data Review	Observation	
		Observation Results	Planning
1 st observation	Subjective data: 1. Mother stated that not much breast milk is coming out 2. The mother said that the frequency of mothers breastfeeding their children was 4-6 times per day 3. The mother said there was no	Lack of milk production	1. Do an oxytocin massage to increase breast milk production 2. Teach her husband or family to do oxytocin massage on the mother for ten to fifteen minutes, once or twice a day.

Period	Observation		
	Data Review	Observation Results	Planning
	<p>difficulty in giving breast milk to her baby</p> <p>Objective data:</p> <ol style="list-style-type: none"> General condition is good, composmentis. TTV: BP 110/80 mmHg, R: 21 x/minute, P: 80 x/minute, T: 36.0°C. Physical examination: Breasts: Nipples protrude without blisters, breast milk output left and right smoothly, symmetrical right and left, Hyperpigmentation on mammary areola 		<ol style="list-style-type: none"> Monitor the flow of breast milk
2 nd observation	<p>Subjective data:</p> <ol style="list-style-type: none"> Mother stated that she has a lot of breast milk, still gave her baby breast milk alone without complementary foods Mother said to maintain food with balanced nutrition The mother said she was breastfeeding alternately <p>Objective data:</p> <ol style="list-style-type: none"> General condition is good, composmentist. TTV: BP: 120/70 mmHg, R: 22 x/minute, P: 80 x/minute, T: 35.0°C. Physical examination: Breasts: Nipples stand out without abrasions, symmetrical right and left, smooth milk production from left to right, Hyperpigmentation on mammary areola Abdominal TFU is not palpable above the symphysis 	<p>A lot of breast milk has come out</p>	<ol style="list-style-type: none"> The husband does an oxytocin massage on the mother for ten to fifteen minutes, one to two times a day Monitor the flow of breast milk
3 rd Observation	<p>Subjective data:</p> <ol style="list-style-type: none"> Mother said she has plenty of breast milk, still gives her baby breast milk alone without complementary foods The mother stated that she is able to breastfeed her baby well and is able to care for her own baby 	<p>There is already a lot of breast milk and seeps out more</p>	<ol style="list-style-type: none"> Monitor the flow of breast milk Encourage mothers to alternately breastfeed their babies

Period	Observation		
	Data Review	Observation Results	Planning
	<p>Mother's objective data:</p> <ol style="list-style-type: none"> 1. Composmentary, good general condition, vital signs: R 22 x/minute, BP: 110/80 mmHg, T: 36°C, P: 80 x/minute. 2. Physical Examination: <ul style="list-style-type: none"> • Left and right symmetrical breasts, no edema, and prominent nipples, hyperpigmentation on the mammary areola, breast milk is smooth. • TFU abdomen is no longer palpable, anogenital vulva, no edema or varicose veins, perineal suture wound is good/dry, no infection 		

DISCUSSION

The patient said that on the 3rd day there was not much breast milk coming out, the staff did an oxytocin massage and taught Mrs. L how to do oxytocin massage at home. The application of oxytocin massage begins on March 17-24 2023, carried out by the husband and monitored via video call. The patient's husband did oxytocin massage twice a day in the morning and evening, the duration of the massage is 10-15 minutes. The hormone oxytocin will be released by stimulating the nipples by sucking on the baby's mouth or massaging the mother's spine. By massaging the mother's spine, the mother will feel relaxed, calm, increase the pain threshold and love the baby, so that the hormone oxytocin will be released and breast milk will come out quickly. (Marantika, 2023)

On the 7th day, the massage was carried out by the patient's husband and a lot of breast milk was coming out, the breasts felt full. On the 10th day, the massage was still being carried out by the patient's husband. The patient's breast milk was plentiful and smooth, sometimes leaking more than on the 7th day. Mrs. L breastfed her baby alternately on the right and left breast.

Oxytocin massage, also known as rolling massage, is a relaxation therapy that stimulates the central nervous system and the anterior posterior pituitary, which can increase breast milk production, especially for postpartum women, and provide relaxation and comfort after giving birth, carried out for two to three minutes regularly twice a day. (Andriyani, 2019)

Oxytocin massage is a massage on both sides of the spine and an effort to stimulate postnatal hormones, oxytocin and prolactin. The patient's husband or family can participate in the oxytocin massage. Oxytocin massage is done to stimulate the oxytocin reflex. Apart from that, oxytocin massage is also useful in providing comfort to the mother, reducing swelling in the breasts, facilitating breast milk supply, stimulating the release of the hormone oxytocin and maintaining breast milk production when the baby or mother is stressed or sick. (Selistyaningtyas1 & Pawestri1, 2021)

Oxytocin massage is useful in increasing oxytocin which can help mothers relax themselves so that breast milk flows naturally and is an effective therapy in reducing physical discomfort and can also stabilize mood. It is hoped that by doing this massage the mother will be more relaxed or not feel tired after giving birth. If the mother feels relaxed, comfortable, not tired, this can stimulate the release of the hormone oxytocin and then breast milk will come out quickly. (Julizar1 & Fonna, 2022)

Another benefit of this massage is that it can facilitate healing of placental implantation scars, anticipate postpartum bleeding, accelerate uterine involution, increase breast milk production and increase comfort for mothers who are breastfeeding. (Lestari et al., 2022; Riffa & Musfirowati, 2021) So it is recommended to do a back massage (oxytocin massage) as an alternative way to help stimulate breast milk in postpartum mothers, which is done from the first day

postpartum. (Farida et al., 2021; Kushwah, 2021; Lestari et al., 2022; ulfa daima & Setyaningsih, 2020; Widiastuti & Widiani, 2020).

CONCLUSION

Applying complementary back massage (oxytocin massage) can facilitate the release of breast milk.

SUGGESTION

The results of this case study can be used as knowledge material for one method that can be used to deal with problems during the postpartum period, namely the smooth flow of breast milk. These results can also be used as a basis for conducting further research.

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EFFECTIVENESS OF THE REBOZO METHOD AND ZILGREI METHOD ON THE DURATION OF THE FIRST STAGE IN VAGINAL DELIVERY

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ABSTRAK : EFEKTIVITAS METODE REBOZO DAN METODE ZILGREI TERHADAP DURASI TAHAP PERTAMA DALAM PERSALINAN VAGINA

Latar Belakang : Persalinan dianggap sebagai proses yang menegangkan dan menakutkan terutama bagi ibu yang pertama kali atau bahkan yang sudah pernah melahirkan sekalipun, karena prosesnya menimbulkan nyeri, kecemasan, dan rasa tidak nyaman sehingga berdampak pada proses persalinan menjadi lebih lama. Metode rebozo dan metode zilgrei merupakan metode nonfarmakologis yang menurut beberapa penelitian di Indonesia maupun luar negeri efektif untuk mencegah partus lama.

Tujuan: Untuk mengetahui efektivitas metode rebozo dan metode zilgrei terhadap durasi kala I persalinan pervaginam.

Metode: Penelitian ini menggunakan *Quasi Eksperimental* dengan rancangan *post test only non-equivalent groups design*. Dilakukan pada bulan Oktober - Desember 2023. Jumlah sampel 26 responden dengan teknik *sampling purposive sampling*.

Hasil: Uji beda menggunakan *Mann Whitney* diperoleh nilai *Asymp.Sig.(2-tailed)* $0,02 < 0,05$. Artinya ada perbedaan yang signifikan antara efektivitas metode rebozo dan metode zilgrei terhadap durasi kala I persalinan pervaginam di RSUD Akhmad Berahim Kabupaten Tana Tidung. Selanjutnya nilai *mean rank* kelompok rebozo (16,5) lebih besar dibandingkan dengan kelompok zilgrei (10,5), artinya metode rebozo lebih efektif dibandingkan dengan metode zilgrei untuk mempercepat durasi kala I persalinan pervaginam

Kesimpulan: Metode rebozo dan metode zilgrei dapat dijadikan intervensi secara nonfarmakologi dalam mempercepat durasi kala I persalinan pervaginam.

Saran Dapat menggunakan metode Rebozo dan Zilgrei untuk mengurangi angka rujukan akibat partus lama dan menerapkannya dalam praktik kebidanan serta dapat menjadikan penelitian ini sebagai referensi literatur dan referensi bagi mahasiswa dalam penelitian selanjutnya serta memperkaya pengalaman dan pengetahuan dalam penerapan terapi komplementer. untuk ibu bersalin.

Kata Kunci : Rebozo, Zilgrei, Durasi Persalinan Kala I

ABSTRACT

Background: Childbirth is considered a stressful and frightening process, especially for first-time mothers or even those who have already given birth, because the process causes pain, anxiety, and discomfort, resulting in the labor process taking longer. The rebozo method and zilgrei method are nonpharmacological methods that, according to several studies in Indonesia and abroad, are effective for preventing prolonged labor.

Purpose: This study aimed to determine the effectiveness of the rebozo method and zilgrei method on the duration of the first stage of vaginal delivery.

Method: This study used a quasi-experimental design with a post-test-only non-equivalent group design conducted in October-December 2023. The total sample was 26 respondents using a purposive sampling technique

Results: The difference test using Mann Whitney obtained an *Asymp.Sig.(2-tailed)* value of $0.02 < 0.05$. It showed a significant difference between the effectiveness of the rebozo method and the zilgrei method on the duration of the first stage of vaginal delivery at Akhmad Berahim Hospital, Tana Tidung Regency. Furthermore, the mean rank value of the rebozo group (16.5) was greater than the zilgrei group (10.5), indicating that the rebozo method was more effective than the zilgrei method in accelerating the duration of the first stage of vaginal delivery.

Conclusion: This indicates that the rebozo method and the zilgrei method can be used as effective interventions nonpharmacological in accelerating the duration of the first stage of vaginal delivery.

Suggestion Can use the Rebozo and Zilgrei methods to reduce the number of referrals due to old partus and apply them in midwifery practice and can use this research as a literature reference and reference for students in

further research and enrich experience and knowledge in the application of complementary therapies for maternity mothers.

Keywords: Rebozo, Zilgrei, Duration of First Stage of Labor

INTRODUCTION

Childbirth is an important moment that is happy for every prospective parent, especially for prospective mothers. However, on the one hand, childbirth is also considered a stressful and frightening process, especially for first-time mothers or even those who have given birth though, because the process that causes pain, anxiety, and discomfort has an impact on making the labor process longer. The stages of normal labor are determined by several factors, namely power (his and thrust) coming from the mother that pushes the fetus out of the birth canal, passage (birth canal) where the size of the mother's pelvis plays an important role. Passenger (fetus, placenta and amniotic membranes) namely the position of the fetus, the location of the fetus and presentation, psychic includes feelings of fear, worry, or anxiety, especially in the mother, then the helper factor which is a factor that also affects the occurrence of long partus, where it takes the ability and skills of labor helpers to make the duration labor becomes faster (Wijayanti & Safitri, 2022).

Many alternative ways are an effort to deal with and prevent the occurrence of old partus, namely by pharmacological and nonpharmacological methods. The rebozo technique and zilgrei technique are nonpharmacological methods that according to several studies in Indonesia and abroad are effective in preventing old partus. The rebozo technique is by wrapping the rebozo (long cloth) around the mother's pelvis and buttocks and shaking it during labor. This swing from rebozo can help make the pelvic space wider so that the baby is easier to descend the pelvis and the duration of labor becomes faster, besides that it also makes the mother more relaxed and able to position the baby into the birth canal (Munafiah, Astuti, et al., 2020). While the zilgrei method is a well-known method in Germany and is a method used by doctors and midwives. This method has been benefited by thousands of maternity mothers in Germany. Thanks to this method, maternity mothers only need a fairly short delivery time and feel their labor process becomes lighter and more beautiful. This can be seen from the data on maternal mortality in Germany which is only 4 per 100,000 live births. The application of the zilgrei method with breathing techniques with certain rhythms and positions that can push the fetus in an ideal position and make the

opening process in labor smoother (Danuatmaja, 2018).

Globally, the mortality rate due to prolonged partus reaches 3-8%, where there are about 8-11% of pregnant women experiencing abnormalities at the time of childbirth. Slowing labor in the active phase was found in 25% of nullipara women and 15% in multiparous women. A Swedish study found that 23% of patients who went into labor experienced a slowdown in progress in both the latent and active phases. The study also found that the slowdown in labor progress that occurred was more common in nullipara women (29.2%) than multiparous (17%) (Ängeby, K. et al., 2018). In Indonesia, based on data from the Indonesian Demographic and Health Survey (2020) states that old partus causes 1-1.8% of maternal deaths in 2016 – 2019. The number of maternity mothers in North Kalimantan in 2021 was 12,998 deliveries with the number of maternal deaths of 29 people, while the causes of death included bleeding 10.3%, hypertension in pregnancy 17.2%, Covid 19 24.1%, and other causes of 48.2% including old partus (Ministry of Health RI, 2021). Based on data from the Tana Tidung Health Office (2023), the number of maternity mothers in 2022 is 461 deliveries with the number of maternal deaths consisting of 2 people. At RSUD Akhmad Berahim Tana Tidung in 2022, there were 187 maternity mothers with a total of 83% vaginal delivery and 17% referrals with cesarean delivery with a long partus. When compared to the RSUD in Bulungan Regency with a birth rate of 338 / 100,000 kh, the number of referral cases only 5% (Badan Pusat Statistik Kabupaten Bulungan, 2021). This is what causes high interventions for labor induction and surgery (SC) because the principle of old partus management is to speed up the labor process, both using medicamentose in this case labor induction and surgery (SC) (IDHS, 2018). This cause of maternal death shows that maternal death can be prevented if the coverage of services is accompanied by good quality of service.

Primiparous mothers are expected to experience dilatation of at least 1 cm / hour and multiparous mothers slightly faster at 1.5 cm / hour. According to Friedman, the average duration of active phase labor in primiparous mothers is 5.8 hours or 348 minutes, while according to Kilpatrick and Laros the average duration of the active phase

in primiparous mothers is about 8.1 hours or 486 minutes. When monitored through a partograph, the active phase starting from the opening of 4 cm to 10 cm is normally 6 hours or 360 minutes. One of the factors causing prolonged partus is discomfort, anxiety and pain felt by the mother as labor progresses. Therefore, along with the times, scientists have developed various kinds of treatments to reduce pain and fear during labor so that the duration of labor is faster. Actually, this effort can not only be done by pharmacological means, but can also be overcome nonpharmacologically. In terms of risks and side effects, nonpharmacological methods are considered safer, although the success is individual (Rosyati, 2017).

In Indonesia there are several studies that examine the effectiveness of the rebozo method and zilgrei method, including the results of research from Nurpratiwi, et al (2020) entitled Rebozo Technique on Pain Intensity During the Active Phase and Duration of Labor in Multigravida Mothers, The results of the dependent sample t-test analysis showed a significant value of 2-tailed < 0.05 , so there is a significant difference between pre and post in the rebozo technique intervention. According to Td & Masini (2019) about the Effect of the Pelvic Rocking Technique using the birthing ball and the Rebozo Technique on the length of labor when I. The results of this study showed that respondents who used conventional techniques by walking had a mean of 19.73 and respondents who used the Pelvic Rocking technique with Birthing Ball had a mean of 11.27 and an average value after the rebozo technique of 3.80 and a control of 3.30. Statistical tests using Mann-Whitney obtained p-value results for the difference between the intervention group (rebozo technique) and control of $0.028 < 0.05$ concluded that there was a difference in cervical opening in maternity mothers before and after the rebozo technique when compared to the control group which means that this rebozo technique is more effective in increasing the cervical opening of maternity mothers during the active phase I.

On the other hand, with different methods, based on research conducted by (Wijayanti & Safitri, 2022) regarding the effect of the zilgrei method on the length of time 1 active phase in maternity mothers, it was found that almost all samples experienced 1 fast active phase (≤ 6 hours) of 13 samples (81.3%) and a small part experienced 1 normal active phase (6 hours) of 3 samples (18.7%). Referring to the study with the zilgrei method, the work of the pelvic muscles becomes aligned so that the opening stages become smooth.

Based on a preliminary study conducted by researchers in August 2023 at Akhmad Berahim Hospital, based on the monthly report of maternity mothers in 2023, data was obtained from January to April 2023, there were 18 cases of old partus (12.4%) from 145 vaginal deliveries. Then for labor induction there were 12 cases (66.6%) and referrals with diagnosis of old partus and fetal distress due to induction failure recorded 5 cases (41%) from a total of 12 referrals. The above data illustrate that the old partus causes some complications during childbirth for both mother and fetus. Treatment for old partus cases at RSUD Akhmad Berahim is only limited to pharmacological treatment from a specialist doctor and leads to referral action if the general condition of the mother and fetus worsens because there is no OK installation (operating room). On the other hand, the distance that must be traveled from Akhmad Berahim Hospital, Tana Tidung Regency to the referral hospital is quite far, which is about 4-5 hours by road and cross-district road infrastructure which on average is damaged.

So far there has been no non-pharmacological action given by midwives to inpartu mothers to prevent and treat old partus cases. In fact, there are many studies that prove that providing certain complementary care is effective in preventing the occurrence of old partus, including the rebozo method and the zilgrei method. This makes researchers interested in conducting research on the Effectiveness of the Rebozo Method and the Zilgrei Method on the Duration of Kala I in Vaginal Delivery at Akhmad Berahim Hospital in 2023.

RESEARCH METHODS

Type of quantitative research with Quasy-experimental research method with post test only nonequivalent groups design approach. To see the effectiveness of the rebozo method, namely the use of long cloths to provide support and comfort to pregnant women and the zilgrei method, which is a therapeutic technique that combines breathing and body movements to relieve pain and Tension. The population of all mothers who gave birth at Akhmad Berahim Hospital between June and August 2023 is 78 patients. The sample used 26 respondents with purposive sampling techniques. The research was conducted at RSUD Akhmad Berahim, Samarinda. The instrument uses partograph sheets and observation sheets. Analysis of univariate and bivariate data (t-test).

RESEARCH RESULTS

Univariate Analysis

Table 1

Frequency Distribution Overview of Respondent Characteristics By Age, Education and Occupation

Characteristics	Total	%
Age of Respondents		
< 20 years	5	19,2
20-35 years	18	69,2
>35 years	3	11,5
Education		
Primary School / MI	2	7,7
Junior High School / MTs	5	19,2
Senior High School / MA	12	46,2
College	7	26,9
Job		
Housewives	15	57,7
Self Employed	3	11,5
Civil Servants	8	30,8

Based on table 1, data was obtained that most respondents aged 20-35 years, namely 18 respondents (69.2%), based on education, almost half had the last high school / MA education, namely 12 respondents (46.2%) and most of the respondents' jobs as housewives, namely 15 respondents (57.7%).

Table 2

Bivariate Analysis

Table 4
Normality Test of Labor Duration Kala I
In the Rebozo Method Group and the Zilgrei Method Group in Maternity

Duration of Kala I	Intervention Group	Shapiro - Wilk	
		Statistik	Sig.
	Rebozo	0,533	0,000
	Zilgrei	0,592	0,000

Based on the normality test conducted by researchers on the duration of labor duration data on the first batch of the rebozo method and zilgrei method interventions using the Shapiro Wilk test, a

Frequency Distribution of Duration of Labor Period I After Rebozo Method Given to Maternity Women

Duration	Frequency (f)	Presentase (%)
> 6 hours	3	23,1
< 6 hours	10	76,9

Based on table 2, it is known that most respondents given the rebozo method intervention experienced a long period I with a fast duration of 76.9% and a small part experienced a long duration of labor (23.1%).

Table 3
Frequency Distribution of Duration of Labor When I After Zilgrei Method Given to Maternity Women

Duration	Frequency (f)	Presentase (%)
> 6 hours	9	69,2
< 6 hours	4	30,8

From table 3 it can be seen that respondents who were given the zilgrei method intervention mostly experienced a long duration of time I (69.2%), namely 9 respondents.

significant value of 0.000 was obtained from each group. Because the p-value < from 0.05, the data is not normally distributed.

Table 5

Results of statistical tests of the effectiveness of the Rebozo Method and the Zilgrei Method on the duration of vaginal delivery using the Mann Whitney difference test

Duration of Kala I	Intervention Group	N	Mean Rank	Asymp. Sig. (2-tailed)
	Rebozo	13	16,5	0,02
	Zilgrei	13	10,5	

The results of the study in table 4.5 show that based on the output of statistical tests, the Asymp value is known. Sig. (2-tailed) of $0.02 < 0.05$ which means that H_a is accepted. Thus, it can be concluded that there is a difference in the effectiveness of the rebozo method and the zilgrei method on the duration of vaginal delivery at Akhmad Berahim Hospital, Tana Tidung Regency in 2023.

From this data, it is also known that the mean rank value of the rebozo method is greater (16.5) when compared to the zilgrei method (10.5). This means that it can be concluded that in this study the rebozo method is more effective than the zilgrei method to accelerate the duration of time I in vaginal delivery.

DISCUSSION

Duration of Labor After Rebozo Method Given to Maternity Women

In this study, the duration of time I was seen from the opening phase with his < 2 times and 10 minutes in labor. In the group given the rebozo method intervention, namely by placing the cloth wide in the pelvic area to under the buttocks, then moving the cloth in short movements slowly and increasing the speed which is done for 5-10 minutes when contractions take place.

Based on the results of the analysis, it was found that the duration of labor when I in the group given the intervention of the rebozo method was as many as 11 respondents that most respondents experienced time I with a fast duration with a percentage of 76.9%, which is as many as 10 respondents. Then data were obtained that the average duration of labor when I experienced respondents after getting the rebozo method intervention was 5 hours 47 minutes and the average intervention given was 5.8 times.

This is in line with research conducted by Munafiah, et al., (2020) entitled "Benefits of the Rebozo Technique on the Progress of Labor". The results showed that the rebozo technique was more effective against lowering the fetal head during labor.

The rebozo method can be used during labor to help the muscle fibers in the uterine ligaments relax so as to reduce pain and can create positive

psychological and social effects, so that mothers who give birth in a relaxed state, all muscle layers in the uterus will work together harmoniously so that labor goes smoothly, easily, and comfortably. This swing from rebozo can help make the pelvic space wider so that the baby is easier to descend the pelvis and the duration of labor becomes faster, besides that it also makes the mother more relaxed and able to position the baby into the birth canal (Afrilia & Suksesty, 2021).

The same thing was also stated by Iversen et al., (2017) in their book entitled "Danish women's experiences of the rebozo technique during labour" that the rebozo method in labor aims to help calm the mother without the use of drugs, make the mother comfortable and also reduce pain during labor. Another goal is to help the optimal fetal position by helping the fetal head descend into the pelvis, reduce contraction pain caused by pressing the fetal head in the pelvis and make the mother learn to release tension with rhythmic movements and relax, freedom of movement and also the use of light massage on the buttocks and thighs, which will make the ligaments in the uterus and abdominal muscles relax causing comfort and reducing labor pain so that labor time becomes more fast.

However, there was a small percentage (23.1%) of respondents who experienced a long duration of labor during the first period, which was as many as 3 respondents. This is because respondents have babies with a larger weight when compared to other respondents. In addition, there are also respondents who have inadequate contractions. According to Marmi (2018) there are 3 important factors that play a role in childbirth, namely passanger, passage and power. Where the passanger in labor is the fetus, amniotic fluid and placenta. In this case, the fetus of the respondent with a greater weight. Then power in this case is contraction of the abdominal muscles, contraction of the diaphragm and strength in the ligaments. Uterine contractions that occur regularly, gradually and adequately can open the cervix so that the fetus can exit the birth canal. In respondents there were inadequate contractions, thus making the process of

lowering the fetal head and opening of the cervix longer. This affects the labor in 3 respondents to be longer.

Duration of Labor After Zilgrei Method Given to Maternity Women

In this study, the group was given the zilgrei method intervention, which is a movement and breathing exercise technique performed on pregnant women to help speed up the opening of the cervix and reduce labor pain at time I. Based on data analysis, it was found that the duration of labor during I in the group given the intervention of the zilgrei method almost all experienced a long duration of time I (69.2), which was 9 people and a small number who experienced a rapid duration of time I (30.8%) as many as 4 people. The average duration of labor when I experienced by respondents after receiving treatment with the zilgrei method was 7 hours 58 minutes and the average intervention given was 7.3 times. In the zilgrei group, there were several factors that caused respondents to experience a long duration of labor.

The baby's weight is greater when compared to other respondents who experienced a rapid duration of labor when I. Prawirohardjo (2018) mentioned that a large fetus is a factor in the occurrence of a longer duration of labor because it will be difficult to pass through the birth canal. The contractions experienced by respondents were inadequate. Setyorini (2017) said there are several factors that cause labor including hormonal factors and uterine muscle factors that make contractions arise in labor so that if there are no regular and repeated contractions, the duration of labor will be longer. The position of the mother and the mobilization of the mother are lacking. Mothers with improper positions and less mobilization will also prolong the duration of labor, this is in line with the theory put forward by Marmi (2018) that the position of the mother can affect the anatomical and physiological adaptations of labor. The change of position in the mother aims to reduce fatigue, provide comfort and improve circulation. Upright positions (example: standing, walking, sitting and squatting positions) can provide several benefits, one of which is to allow the force of gravity to help the fetus decline. In addition, this position is considered to reduce the incidence of pressure on the umbilical cord. The psychological condition of the mother because she is not accompanied by a partner and family. Psychology is one of the factors that influence childbirth. It is important for mothers who are in labor to feel positive and feel joy, a sense of pride and certainty so that mothers become confident and truly

become real women when understanding their condition from pregnancy to childbirth and will meet the child. One of the influences is the support from the closest people in the mother's life such as husbands, friends, and family.

On the other hand, some studies show that the application of the zilgrei method to inpartu mothers can accelerate the progress of cervical opening. In addition, the zilgrei method can also help reduce tension in the pelvic muscles and increase the potential of the muscles in the uterus to push the fetus towards the birth canal (Saputri et al., 2018). As research conducted by Janah (2021) shows that based on the results of the One-Sample Test Most of the respondents (81.3%) experienced a fast active phase I (≤ 6 hours), a small percentage (18.7%) of respondents experienced a slow active phase I (≥ 6 hours). Based on the results of the One Sample Test test analysis, a significant value of 0.000 p value of 0.05 was obtained. Because the p value ($0.000 < 0.05$), it can be concluded that there is an influence of the Zilgrei method on the acceleration of the length of time I active phase in maternity mothers.

According to researchers, the zilgrei method cannot be used as the only method in reducing pain and speeding up the progress of labor. The use of zilgrei method along with other methods, such as the rebozo method, birth ball, labor position, masase, and breathing relaxation technology can increase effectiveness in reducing labor pain and accelerate labor progress. Like a study conducted by Yuliandari (2020) entitled "The Effect of the Combination of the Zilgrei Method and Lumbar Massage on the Progress Process of Labor in Primigravida", with the results of the duration of labor during the latent phase I, the average control and intervention group was 368 minutes and 307 minutes each with a time difference of 61 minutes ($p = 0.002$) so that the combination of the zilgrei method and lumbar massage affected the progress of the labor process during the latent phase I in primigravida.

This suggests that zilgrei interventions can be very effective when combined with other interventions. Although some studies show positive results related to the application of the zilgrei method, there are variations in the progress of labor between participants. So it can be concluded that the effectiveness of the zilgrei method may vary depending on the combination with other interventions, individual characteristics and conditions of labor.

The effectiveness of the Rebozo method and the Zilgrei method on the duration of vaginal labor

In the results of different tests conducted to analyze the difference in the effectiveness of the rebozo method and the zilgrei method on the duration of vaginal delivery, data were obtained based on the output of statistical tests known Asymp values. Sig. (2-tailed) of $0.02 < 0.05$. Thus, it can be concluded that there is a significant difference in the effectiveness of the rebozo method and zilgrei method on the duration of vaginal delivery at Akhmad Berahim Hospital, Tana Tidung Regency in 2023.

Furthermore, from the results of statistical tests in this study, the mean rank value in the rebozo treatment group was 16.5 greater when compared to the mean rank value of the group that received the zilgrei method intervention, which means the rebozo method is more effective for accelerating the duration of time I in vaginal competition when compared to the zilgrei method.

The rebozo method is a non-pharmacological therapy to accelerate the opening of the cervix of maternity mothers. In this study proved the effectiveness of the rebozo method for cervical opening thereby accelerating the progress of labor. The rebozo method serves as an optimization of fetal position because the ligament muscles in the pelvis and uterus are in a tense position so that the fetus in the uterus is in a non-optimal position. In this study, researchers used a type of apple tree rebozo shake method. Rebozo shake apple tree will provide relaxation to the ligaments of the pelvic muscles. If the mother's ligament muscles are tense and with a poor childbirth position, it will result in the uterus in an oblique position so that the baby is difficult to descend into the pelvis. Where it should be at 37 weeks gestation, the fetus has descended into the pelvis. So the rebozo technique is very helpful for mothers in the labor process.

This is in line with a study on the effectiveness of the rebozo method in labor conducted by Simbolon & Siburian (2021), showing that the rebozo method is believed to reduce labor pain and speed up the labor process. In addition, Rahmawati, et al (2023) also stated in their research that the rebozo method is also known to be effective in managing and controlling pain management in maternity mothers. The results showed that the rebozo technique can provide benefits in speeding up the labor process and reducing pain, so it can be considered effective in helping labor progress.

In this study, overall respondents from two groups both treated with the rebozo method and the zilgrei method stated that the intervention provided by the researcher made respondents feel calmer,

more comfortable and pain when contractions could be diverted. In addition, respondents also felt more cared for by midwives, because each respondent felt painful contractions in addition to being given the intervention and accompanied by positive affirmations by midwives. This makes mothers become more excited and focused when receiving instructions given by midwives so that respondents can be better prepared to face and undergo the labor process. As a result, labor becomes easier and the duration of labor can also be faster.

CONCLUSION

Research at Akhmad Berahim Hospital, Tana Tidung Regency in 2023 on 26 respondents showed that the Rebozo Method was more effective in accelerating the duration of time I in vaginal delivery compared to the Zilgrei Method. The majority of mothers given the Rebozo intervention experienced rapid labor duration (76.9%), while most who were given Zilgrei experienced long duration (69.2%). Statistical tests confirm this significant difference with Asymp values. Sig. (2-tailed) of 0.02, indicating that the Rebozo Method is superior in accelerating the labor process when

SUGGESTION

Can use the Rebozo and Zilgrei methods to reduce the number of referrals due to old partus and apply them in midwifery practice and can use this research as a literature reference and reference for students in further research and enrich experience and knowledge in the application of complementary therapies for maternity mothers.

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GADGET USE AMONG TODDLERS IN BEKASI CITY

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ABSTRAK : PENGGUNAAN GADGET PADA BALITA DI KOTA BEKASI

Latar Belakang : Kemampuan bicara sebagai modal tumbuh kembang anak, salah satunya perkembangan IQ dan masa depan anak. Penggunaan gadgdet kini sangat umum untuk semua kalangan termasuk balita dan keterlambatan perkembangan banyak terjadi pada balita. Data KPAI tahun 2022 menyebutkan 79% anak di Indonesia menggunakan gadget bukan untuk kebutuhan belajar namun untuk kebutuhan lainnya

Tujuan : Mengetahui gambaran penggunaan *gadget* pada balita yang berusia 24-60 bulan di Kota Bekasi Pada Tahun 2023.

Metode : Penelitian ini termasuk jenis penelitian deskriptif dengan teknik accidental sampling, dengan jumlah responden pada penelitian ini adalah 98.

Hasil : Penelitian ini menunjukkan bahwa mayoritas balita menggunakan *gadget* dengan intensitas tinggi dengan durasi penggunaan gadget >60 menit perhari dan frekuensi setiap hari (>6 hari perminggu).

Kesimpulan : Penggunaan gadget yang menjadi trend saat ini di kalangan anak-anak khususnya balita, diharapkan orang tua lebih waspada dengan membatasi pemberian *gadget* kepada anak sehingga anak dapat bermain dengan aktivitas fisik dengan teman seusianya untuk mendukung tumbuh kembang anak.

Saran : Penelitian selanjutnya dapat dilakukan dengan menambahkan jumlah sampel penelitian yang lebih banyak dengan metode penelitian observasional untuk melihat dampak gadget di sektor pertumbuhan dan perkembangan anak usia balita

Kata kunci : Anak, Balita, *Gadget*

ABSTRACT

Background : The ability to speak is an asset for a child's growth and development, one of which is the development of IQ and the child's future. The use of gadgets is now very common for all children, including toddlers, and developmental delays often occur in toddlers. Aim : To find out the description of gadget use among toddlers aged 24-60 months in Bekasi City in 2023.

Method : This research is a type of descriptive research with accidental sampling technique, total of respondents in this study was 98.

Results : This research show that the majority of toddlers use gadgets with high intensity with gadget usage duration >60 minutes per day and frequency every day (>6 days per week).

Conclusion : The use of gadgets is a current trend among children, especially toddlers. It is hoped that parents will be more vigilant by limiting the giving of gadgets to their children so that children can play physical activities with friends their age to support their children's growth and development.

Suggestion Further research can be carried out by adding a larger number of research samples using observational research methods to see the impact of gadgets on the growth and development of children under five.

Keywords: Child, Toddler, *Gadget*

INTRODUCTION

The alpha generation is children born after 2010, this generation is known to be smart and very familiar with the internet. Current technological

advances result in a lack of ethics and social interaction in children (Purnama, 2018). Growth and development in toddler age develops very quickly and it is important to maximize development which

includes religious values, morals, physical motor, cognitive, language, social, emotional and art (K et al., 2020; Slamet, 2020). Gadget is an electronic device that has various feature services and applications that present the latest technology that helps human life become more practical (Yumarni, 2022). Because a technological device is a very effective learning media. With the display of images that can run, sound effects or singing make learning media by utilizing technological devices very favored by children.

The Central Statistics Agency (BPS) in 2022 noted that 33.44% of early childhood use gadgets, and the Indonesian Child Protection Commission (KPAI) in 2022 noted that 79% of them use gadgets not for learning (BPS, 2021; Dewi et al., 2021). West Java Province in 2022 noted that 69.75% of children had been exposed to gadgets (BPS, 2021). Excessive provision of gadgets is an external factor in inhibiting the process of child development. Children who are addicted to gadgets will not care about their environment and affect the development of children's speech and language because children do not interact directly with their environment (Fajariyah et al., 2018). The limit of gadget use for toddlers is not at all up to 1 hour per day, if it exceeds that, it will have an impact on weak gross, fine and verbal motor skills (Dewi et al., 2021).

Children who use gadgets for a long duration will rarely do physical activity so that it can cause obesity, besides that if they do not pay attention to the distance and screen lighting on the gadget, children will get tired easily and experience eye health problems such as eye irritation, decreased vision and stress on visual function so that it can interfere with concentration in learning (Chandra et al., 2022; Julianti & Elni, 2021; Kusumawati et al., 2020). Excessive provision of gadgets is an external factor in inhibiting the process of child development. Children who are addicted to gadgets will not care about their environment and affect the development of children's speech and language because children do not interact directly with their environment (Fajariyah et al., 2018).

Today's modern development everyone has used gadgets for other activities even for work, seeing parents carry gadgets wherever and whenever parents are makes children want to know also what is in the gadget. The unprecedented upheaval of technology over the past few decades has exceeded the ability of scientists to characterize technology, sparking controversy and anxiety among parents, educators, and doctors or other medical personnel (Abdul Hadi et al., 2022; Hutton et al., 2020). The covid-19 pandemic that took place in

2020-2022 forced face-to-face school activities to turn online with the help of gadgets, so the use of these gadgets is inevitable in children. This situation makes researchers interested in knowing what the current situation and circumstances are like in children who are exposed to gadgets.

RESEARCH METHODS

This research is a descriptive research with the research sample technique using accidental sampling. The research was conducted from May 26 to June 2, 2023 at one of the Posyandu in Bekasi City, West Java. 98 respondents obtained in this study were obtained according to the research inclusion criteria, namely children aged 24-60 months, healthy children not in a sick condition or physical and mental disability, children not in the process of medical treatment or other therapists. The use of gadgets in this study is seen from the length of exposure or use of gadgets in children, with the criteria for low gadget use intensity if the duration is 1-30 minutes per day with a frequency of 1-3 days per week. The criteria for moderate intensity of use if the duration is 31-60 minutes per day with a frequency of 4-6 days per week, and the criteria for high intensity of use with the duration of gadget use >60 minutes per day and frequency every day (>6 days per week). Data collection in this study was carried out by filling out a questionnaire, and the person who filled in was the respondent's guardian in this study was the respondent's mother. The data that has been collected was analyzed descriptively using SPSS 25 software.

RESEARCH RESULTS

The results of descriptive analysis in this study are presented in table 1 with the data obtained is the majority of respondents aged 48 - <54 months, namely 21 respondents (21.4%), with the dominant male gender, namely 54 (55.1%) respondents. The last level of education of the mother showed that the majority of respondents' mother's education was at the upper secondary level (SMK/SMA/SLTA) of 69 respondents (70.4%). The majority of mothers' occupations were housewives, 86 respondents (87.8%). This univariate analysis shows the results of the majority of toddlers using gadgets with high intensity of 51 respondents (52.0%), while the use of gadgets with moderate intensity of 32 respondents (32.7%) and low intensity of 15 respondents (15.3%)

Univariate analysis

Table 1
Distribution of age of toddlers, gender of toddlers, mother's latest education, mother's occupation and intensity of gadget use in toddlers in Bekasi City in 2023.

Variable	Frequency (N)	Percent (%)
Toddler Age		
24 - <30	15	15,3
30 - <36	13	13,3
36 - <42	16	16,3
42 - <48	12	12,2
48 - <54	21	21,4
54 - <60	17	17,3
60	4	4,1
Gender of Toddlers		
Male	54	55,1
Female	44	44,9
Mother's Last Education		
Elementary School	3	3,1
Junior High School	15	15,3
Senior High School	69	70,4
Diplomas	4	4,1
Bachelor	6	6,1
Magister	1	1,0
Mother's Occupation		
Housewife	86	87,8
Civil Servants	1	1,0
Private Employee	3	3,1
Self-employed	6	6,1
Teacher	1	1,0
Labor	1	1,0
Intensity of Gadget Use		
Low	15	15,3
Medium	32	32,7
High	51	52,0

DISCUSSIONS

The majority of respondents in this study were aged between 48 - <54 months, which is preschool age. In line with research by Nurmasari (2016), the majority of respondents were preschool age children, namely 44.17% (Nurmasari, 2016). Preschool age is a child aged 3-6 years called the wonder years at this age children have great curiosity and can show their interests. At this time, parents play an important role in choosing toddler activities so that children can achieve their potential and interests in order to prepare children to enter school (Yumarni, 2022). Children after >48 months have entered school and already have a high desire for something, so many at this age use gadgets in this study.

The gender in this study was mostly male compared to female. In contrast to similar research conducted by Kusmawati (2020), the characteristics

of toddler respondents were mostly female (Kusumawati et al., 2020). This difference occurs due to the selection of research subjects tailored to the inclusion characteristics that suit the needs of researchers.

The mother's education level in this study is mostly upper middle education (SMA / SMK / high school). This study is in line with research conducted by Dian, Upik and Anjar in Surakarta in 2021 that the educational background of fathers and mothers affects the ability of parents to apply the information received in the process of child development and inhibits the acquisition of information that can help child development so that it can result in parents not being able to meet the needs that support child development (Miyati et al., 2021).

The majority of mothers in this study are housewives. In line with Aula Nurmasari's research (2016) the majority of mothers work outside the home and spend a lot of time outside the home so that interaction with children tends to be less frequent than housewives who have more time at home with children so they can find out all their children's activities (Asgaf, 2020; Nurmasari, 2016). The intensity of gadget use in toddlers is mostly high, related to Sari's research (2020) the majority of toddlers use gadgets with high intensity. The majority of gadgets used are TV, tablets or ipad and cellphones. Prolonged exposure to gadgets in children can cause dependence, have an impact on children's emotions which can affect children's behavior (Domoff et al., 2020; Sari, 2020).

Gadgets emit sound waves and UV rays that can affect a child's physical and mental state. Gadgets can affect children's brain development in their growth. The influence of gadget use on child development has both positive and negative impacts. Gadgets are only a means for children to play and find information, but it is the parents who are the guides and directors who can straighten their children so that they are not addicted to gadgets. Children under 5 years old can be given gadgets, but the duration of use must be considered and must be accompanied by parents. The role of parents is very important and influential to their children to overcome the use of gadgets today.

CONCLUSIONS

The majority of children using gadgets are aged 48-<54 months with male gender. Children of this age mostly use gadgets with high intensity with high intensity with duration of gadget use >60 minutes per day and frequency every day (>6 days per week). Children who often use gadgets have minimal interaction with the surrounding environment,

especially peers, so it is necessary for parents to limit the provision of gadgets to children to avoid developmental and emotional delays. The role of parents in parenting is very influential on whether or not there is a negative influence of gadget use on children.

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IDENTIFICATION OF THE PHYSICAL HEALTH QUALITY OF POSTPARTUM MOTHERS WITH SEVERE PREECLAMPSIA

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ABSTRAK : IDENTIFIKASI KUALITAS KESEHATAN FISIK IBU NIFAS DENGAN PRE EKLAMPSIA BERAT (PEB)

Latar Belakang: Preeklampsia pada masa nifas didefinisikan sebagai hipertensi yang disertai kelebihan proteinuria yang terjadi pada masa nifas. Tahun 2022 angka kejadian PEB Dinkes Provinsi Kalsel berjumlah 818, sedangkan di RSUD Ulin Banjarmasin tercatat 78 kejadian. Dampak dari preeklampsia tidak hanya hipertensi yang membuat pusing/ nyeri kepala juga menimbulkan rasa mual, muntah, nyeri epigastrium, dan bahkan berpengaruh terhadap fungsi ginjal, jantung dan hati yang merupakan masalah kesehatan fisik.

Tujuan: Untuk mengetahui bagaimana kualitas kesehatan fisik ibu nifas dengan PEB.

Metode: Penelitian ini merupakan penelitian deskriptif kuantitatif menggunakan studi retrospektive. Pengambilan sampel menggunakan metode total sampling sebanyak 78 ibu nifas dengan PEB pada tahun 2022.

Hasil: Hasil penelitian tekanan darah ibu nifas dengan PEB dari hari ke-1 hingga hari ke-3 didapati adanya hipertensi pada 25,7% ibu nifas, keluhan sakit kepala, nyeri epigastrium, mual, muntah, sesak napas, bahkan demam. Hasil pemeriksaan laboratorium hari ketiga menunjukkan 3 orang (4%) trombositopenia, 2 orang (3%) trombositosis, 19 orang (24%) mengalami kenaikan nilai SGOT, 6 orang (8%) mengalami kenaikan nilai SGPT, 31 orang (40%) peningkatan nilai LDH di atas normal, 8 orang (10%) peningkatan nilai kreatinin dan 11 orang (14%) peningkatan nilai ureum.

Simpulan: Penelitian ini membuktikan bahwa kesehatan fisik ibu nifas dengan PEB sebagian besar masih sehat, namun masih ada beberapa ibu nifas yang kesehatan fisiknya tidak optimal (40%) dikarenakan hipertensi, masalah fisik/ keluhan nyeri kepala, nyeri epigastrium, mual dan muntah, sesak, demam serta peningkatan fungsi organ hati, jantung dan ginjal berdasarkan hasil laboratorium hari ketiga masa nifas.

Saran: Saat merasakan adanya ketidaknyamanan segera melaporkan kepada petugas kesehatan/ bidan agar pemberian asuhan terkait dengan kondisi klinis lebih terarah dan spesifik.

Kata Kunci: Ibu Nifas, Kualitas Kesehatan Fisik, Preeklampsia Berat.

ABSTRACT

Background: Preeclampsia during the postpartum period is defined as hypertension accompanied by excess protein urine that occurs during the postpartum period. In 2022, the number of cases of severe preeclampsia at the South Kalimantan Provincial Health Service will be 818, while at the Ulin Regional Hospital, Banjarmasin, 78 cases will be recorded. The impact of preeclampsia is not only hypertension which causes dizziness/headaches, it also causes nausea, vomiting, epigastric pain, and even affects kidney, heart and liver function which is a physical health problem.

Objective: This study aims to determine the quality of physical health of postpartum mothers with severe preeclampsia

Methods: This research is a quantitative descriptive study using a retrospective study. Sampling used a total sampling method of 78 postpartum mothers with severe preeclampsia in 2022

Results: The results of research on the blood pressure of postpartum mothers with severe preeclampsia from day 1 to day 3 found hypertension in 25.7% of postpartum mothers, complaints of headaches, epigastric pain, nausea, vomiting, shortness of breath, and even fever. The results of laboratory examinations on the third day showed that 3 people (4%) had thrombocytopenia, 2 people (3%) had thrombocytosis, 19 people (24%) had increased SGOT values, 6 people (8%) had increased SGPT values, 31 people (40%) increased LDH values above normal, 8 people (10%) increased creatinine values and 11 people (14%) increased urea values

Conclusion: This research proves that the physical health of postpartum mothers with severe preeclampsia is mostly still healthy, but there are still some postpartum mothers whose physical health is not optimal (40%) due to hypertension, physical problems/complaints of headaches, epigastric pain, nausea and vomiting, shortness of breath, fever and increased function of the liver, heart and kidneys based on laboratory results on the third day of the postpartum period

Suggestion: When you feel any discomfort, immediately report it to the health worker/midwife so that care related to the clinical condition is more targeted and specific.

Keywords: Postpartum Mothers, Quality of Physical Health, Severe Preeclampsia

INTRODUCTION

Preeclampsia during the puerperium is defined as hypertension accompanied by excess proteinuria that occurs during the puerperium (Clinic, 2021). Mothers with a history of hypertension have a risk of preeclampsia of 7.4 times more and a risk of developing severe preeclampsia 2.98 times compared to mothers who do not have a history of hypertension (Laila, 2019).

Complications of preeclampsia in the puerperium with slow symptoms appear in the first 7-10 days after delivery, but this varies greatly, in some other literature symptoms appear up to 3 months after delivery. Mothers most often present with neurological symptoms, usually headaches which are consistently reported as the most common symptom in about 60% to 70% of mothers (D. Dewi, 2022; N. A. T. Dewi, 2020; Manuaba, 2019).

Puerperal headaches are very common, but there are certain characteristics that should be evaluated for other cerebrovascular etiology. There is an increased risk of hypertension, ischemic heart disease, stroke and venous thromboembolism in mothers with a history of preeclampsia who are at relative risk, which increases morbidity rates (Hauspurg & Jeyabalan, 2022).

Morbidity in preeclampsia may have a long-term impact on health that will affect the quality of physical health, if left untreated will cause death. Although the physical problems usually associated with the puerperium are often considered temporary or relatively minor, they are strongly associated with poor functional impairment. A careful assessment of physical health status after childbirth can improve the quality of postpartum care (Eslahi et al., 2021).

The impact of preeclampsia on postpartum mothers that often occurs such as severe headaches, visual disturbances, upper abdominal pain, or symptoms of eclampsia (seizures), nausea or vomiting, is a physical health problem. These problems have a significant influence on the mother's quality of life. If health problems during the puerperium continue, mothers may find it difficult to carry out motherhood (Park & Bang, 2022).

During the puerperal period, women experience a range of moderate to severe physical health symptoms. Headaches are one of the physical health problems that occur during the puerperium. Trigger factors for headaches due to changes in blood pressure that fluctuate (Gómez-Pérez et al., 2020).

The high protein content (proteinuria) that occurs due to preeclampsia is detected by conducting a urine examination to assess the degree of kidney function damage (Xiao et al., 2022). Patients who experience proteinuria or hypertension tend to have a higher risk of kidney failure (Janga et al., 2020). The majority of patients (89.6%) experienced no complications with an overall fetal outcome of 95% live births and 4.4% fetal loss in <12 weeks. 3% of them had kidney problems, 48% had hypertension, and 53% had proteinuria. Kidney disorders are reversible in 100% of cases (Janga et al., 2020).

The WHO estimates the incidence of preeclampsia in developing countries is seven times higher than in developed countries. Based on WHO data in 2018, the incidence of preeclampsia worldwide is around 31.4%. Riskesdas 2018 shows that the prevalence rate of preeclampsia in postpartum mothers in Indonesia is 1% from 78,736 childbirth and postpartum rates with seizure complications as much as 0.2% (Ministry of Health, 2022, 2023).

Data from Ulin Hospital, in 2021 there were 116 cases of postpartum mothers with Severe Preeclampsia, in 2022 the incidence rate decreased to 78 cases of postpartum mothers with severe preeclampsia. Although the incidence of Severe Preeclampsia at Ulin Hospital Banjarmasin has decreased, data from the South Kalimantan Provincial Health Office has a high incidence of preeclampsia in 2022, recorded at 818 cases. The impact of preeclampsia on postpartum mothers is also not only hypertension that makes mothers feel dizzy / headache but also causes nausea, epigastric pain, and even affects kidney and liver function which is a physical health problem.

RESEARCH METHODS

This research method uses quantitative descriptive methods using retrospective studies.

In this study design, researchers tried to identify vital signs, physical problems / complaints and organ function based on laboratory results on the third day of the puerperium period in postpartum mothers with Severe Preeclampsia at RSUD Ulin Banjarmasin from January to December 2022.

The population in this study was all postpartum mothers with severe preeclampsia in 2022 using a total sampling technique of 78 postpartum mothers with severe preeclampsia.

The data collection instrument used in this study was using a checklist in the form of data on the characteristics of postpartum mothers, vital signs of postpartum mothers, complaints and laboratory results on the third day of the postpartum period.

RESEARCH RESULTS

The majority of Severe Preeclampsia incidence is at the age of 20-35 years (59%), multiparous (72%), type of delivery sectio caesarea (60%), high school education level (50%), while in employment, 88% of mothers are not working.

Table 1

Characteristics of the postpartum mother

Characteristics	f	%
Age		
< 20 years	3	4%
20 – 35 years	46	59%
> 35 years	29	37%
Parity		
Primiparous	22	28%
Multiparous	56	72%
Types of Childbirth		
Spontan	17	22%
Vacum Ekstraksi	14	18%
Sectio Caesarea	47	60%
Education level		
not in school	1	1%
primary school	12	15%
Junior High School	17	22%
High school	39	50%
Diploma / Bachelor	9	13%
Work		
Work	9	12%
does not work	69	88%

Table 2
Vital Signs

Characteristics	D.1		D.2		D.3	
	f	%	f	%	f	%
Blood pressure						
Normal <140/90 mmHg	0	0%	61	78%	58	74,3%
Preeclampsia ≥140/90 mmHg	54	69%	9	12%	12	15,4%
Severe Preeclampsia ≥160/110 mmHg	24	31%	8	10%	8	10,3%
Respiratory						
Bradipnea	1	1%	1	1%	0	0%
Normal	63	81%	68	87%	73	94%
Takipnea	14	18%	9	12%	5	6%
Pulse						
Bradycardia	0	0%	0	0%	0	0%
Normal	66	85%	72	92%	75	96%
Tachycardia	12	15%	6	8%	3	4%
Suhu Tubuh						
Hypothermy	0	0%	0	0%	0	0%
Normal	74	95%	76	97%	76	97%
Hyperthermia	4	5%	2	3%	2	3%

Blood pressure in postpartum mothers with severe preeclampsia varied, but on the third day there were still hypertension (25.8%), in breathing

patterns that experienced tightness until the third day 6%, tachycardia 4%, and hyperthermia 3%.

Table 3
Physical / Complaints

Characteristics	D.1		D.2		D.3	
	f	%	F	%	f	%
Headache						
No pain	63	81%	68	87%	75	96%
Headache	15	19%	10	13%	3	4%
Epigastric pain						
No pain	74	95%	74	95%	78	100%
Epigastric pain	4	5%	4	5%	0	0%
Nauseous						
No nausea	76	97%	78	100%	78	100%
Nauseous	2	3%	0	0%	0	0%
Vomit						
No vomiting	77	99%	78	100%	78	100%
Vomit	1	1%	0	0%	0	0%

Complaints of headaches from the first to the third day decreased from 19% to 4%, as well as complaints of epigastric pain on the first and second

days 5%, but not felt on the third day. Nausea 3% and vomiting 1% on the first day of the puerperium.

Table 4
Day 3 laboratory results

Characteristics	f	%
SGOT		
Normal	59	76%
Abnormal	19	24%
SGPT		
Normal	72	92%
Abnormal	6	8%
LDH		
Normal	47	60%
Abnormal	31	40%
UREUM		
Normal	67	86%
Abnormal	11	14%
CREATININ		
Normal	70	90%
Abnormal	8	10%
TROMBOSIT		
Thrombocytopenia	3	3,8%
Normal	73	94%
Thrombocytosis	2	2,2%

Laboratory results on the third day in puerperal mothers with severe preeclampsia 24% increased in SGOT values, 8% increase in SGPT values, 40% increase in LDH values, 14% increase in ureal values, 10% increase in creatinine values, 3.85% thrombocytopenia and 2.2% thrombocytosis.

The results of a study of 78 postpartum mothers with severe preeclampsia found that the majority aged 20-35 years as many as 46 people

(59%). Preeclampsia can occur in women between the ages of 20 and 35, the exact cause is unknown. However, some factors that can increase the risk of preeclampsia include having a history of high blood pressure, multipara, having a history of preeclampsia in previous pregnancies, having certain medical conditions such as kidney disease, diabetes, and family history / genetic factors.

Family history/genetic factors are another major factor that increases the risk of preeclampsia, the National Health Insurance Database of Taiwan in 2021 found that 12.17% of cases had a family history of preeclampsia, and the woman was also at great risk of hypertension (Wu et al., 2021). This is in line with other studies also showing that severe preeclampsia is most prevalent in the age group of 20-35 years (Hipson et al., 2020). Therefore, the age of 20 to 35 years can be considered as the age range at risk for the incidence of severe preeclampsia based on the results of existing studies.

The majority of postpartum mothers with severe preeclampsia were multiparous, out of 78 there were 56 people (72%). This is in line with other studies showing that in multiparous (mothers who have given birth several times), there is an increased incidence of severe preeclampsia. There is a relationship between maternal parity and the incidence of severe preeclampsia, where the incidence of severe preeclampsia is higher in multiparous mothers (Laila, 2019). In this study also found 28% of severe preeclampsia occurred in primipara. Several factors cause preeclampsia in primiparous age during the first pregnancy over 35 years, disorders of the placental vascular (endothelial dysfunction) and the presence of genetic factors. Mothers who have siblings with a history of preeclampsia have 2-4 times the risk, daughters of women with eclampsia, 26% have preeclampsia in their first pregnancy, while daughters-in-law only have a preeclampsia rate in the first pregnancy of 8% (Ward et al., 2022).

Based on the level of education associated with the incidence of severe preeclampsia, of the 78 people, the majority had a high school education, 39 people (50%). Education level is a factor associated with the incidence of preeclampsia, where pregnant women with low education have a higher risk of developing preeclampsia (Pattipeilohy et al., 2023). Although high school education can affect the risk of preeclampsia, other factors such as age, parity, and maternal health conditions also need to be considered in evaluating the risk of developing preeclampsia.

The work of postpartum mothers with severe preeclampsia of 78 people, the majority of whom are not working (housewives) as many as 69 people (88%). The results of this study are in line with research that states mothers who do not work can experience stress due to family problems such as financial problems, family relationships, and anxiety related to pregnancy and childbirth which will increase the risk of preeclampsia (Nimah et al., 2022).

The type of delivery in severe preeclampsia based on data from 78 postpartum mothers, the majority of deliveries by sectio caesarea as many as 47 people (60%), spontaneous labor as many as 17 people (22%), and vacuum labor as many as 14 people (18%). Not all cases of severe preeclampsia require delivery via sectio caesarea, and the determination of delivery method should be based on comprehensive medical considerations (City, 2023).

On the first day of the puerperium the mother's blood pressure was mostly $\geq 140/90$ mmHg in 54 puerperal mothers, blood pressure $\geq 160/110$ mmHg in 24 puerperal mothers. On the second day of the puerperium, the mother's blood pressure decreased, where as many as 61 postpartum mothers had normal blood pressure ($<140/90$ mmHg), 9 postpartum mothers had blood pressure $\geq 140/90$ mmHg, and 8 postpartum mothers had blood pressure still $\geq 160/110$ mmHg. On the third day the mother's blood pressure was also the majority normal ($<140/90$ mmHg) 58 puerperal mothers, 12 postpartum mothers with blood pressure $\geq 140/90$ mmHg and 8 postpartum mothers with blood pressure $\geq 160/110$ mmHg. This is in line with research conducted by (Xue et al., 2023) that in cases of preeclampsia blood pressure during the puerperium is not always the same every day, some of the mothers experience a spike in blood pressure, some experience a decrease, but there are also those whose blood pressure persists. 30% of preeclampsia cases can progress to postpartum hypertension.

Although the use of magnesium sulfate (MgSO_4) is generally recommended to control seizures in severe preeclampsia, it is not always effective in lowering blood pressure. Studies show that in some cases, the blood pressure of postpartum mothers with severe preeclampsia remains high despite MgSO_4 . There is a risk of magnesium sulfate poisoning in preeclampsia patients who receive MgSO_4 therapy for a long time or excessive doses (Putri Andini & Novantri, 2022). Other risk factors that can cause blood pressure to remain high in postpartum mothers with severe preeclampsia are poor maternal health conditions, such as kidney failure or heart disease, as well as internal risk factors such as age and disease history (F. F. Amalia, 2020; M. Amalia et al., 2020).

About 5.7% of new preeclampsia or eclampsia cases appear in the puerperium period (up to six weeks), even in the absence of hypertension in pregnancy. Women with a history of hypertension or preeclampsia should be carefully monitored during the puerperium. Blood pressure usually peaks three to six days of puerperium (Powles & Gandhi, 2017).

On the first day of the puerperium with severe preeclampsia, most postpartum mothers experience normal breathing patterns. However, there are some abnormal (tightness) as many as 15 people (14 people breathing pattern $\geq 25x$ / minute, 1 person $\leq 15x$ / minute). On the second day of the puerperium there were also still 10 postpartum mothers experiencing tightness and on the third day there were also still 5 postpartum mothers with abnormal breathing patterns. The use of crystalloids to replace lost blood, a decrease in albumin produced by the liver, a very large increase in fluid, and a decrease in plasma colloidal oncotic pressure due to proteinuria are the causes of tightness in puerperal mothers with severe preeclampsia (Endang & Martina, 2023). Patients with severe preeclampsia who experience pulmonary or non-pulmonary abnormalities after childbirth are usually at risk of pulmonary edema (Putri Andini & Novantri, 2022).

Some mothers have tachycardia ($>100x/min$). Where on the first day there were 12 people (15%), the second day 6 people (8%) and the third day 3 people (4%). Preeclampsia is a state of sympathetic hyperactivity. As a result of this sympathetic hyperactivity, tachycardia usually occurs in non-pregnant patients (Ravid et al., 2023). If tachycardia is found followed by decreased body temperature, it may be a sign of postpartum hemorrhage (Green et al., 2021).

There are some mothers who have a fever either on the first day 4 people (5%), second or third 2 people (3%). A significant increase in body temperature should be watched out for as it may indicate infection or other serious health problems (Irma & Dkk, 2022).

On the first day some postpartum mothers with severe preeclampsia had complaints of headaches 15 people (19%), on the second day there were 10 people (13%) had complaints of headaches, and on the third day there were 3 people (4%) with complaints of headaches. Complaints of headaches are one of the symptoms that often occur in postpartum mothers with severe preeclampsia (Arafat, 2022). This complaint can be caused by an increase in blood pressure that occurs in postpartum mothers (Clinic, 2021).

Complaints of epigastric pain were also felt, from 78 postpartum mothers with severe preeclampsia, both on the first and second days there were 4 people (5%). Epigastric pain can be caused by increased blood pressure and impaired liver function associated with severe preeclampsia. The occurrence of decreased perfusion in the liver causes damage to liver function which triggers liver edema and subcapsular hemorrhage, which can

cause hemorrhagic necrosis. This process is manifested by an increase in the level of liver enzymes in the mother's blood. This condition causes the mother to experience pain in the right upper quadrant abdomen or epigastric pain (Ratnawati & et al, 2021).

On the first day, a small percentage had complaints of nausea in 2 people (3%). 1 person (1%) complaint of vomiting. Nausea and vomiting are manifestations of increased levels of liver enzymes in the mother's blood (Ratnawati & et al, 2021).

Organ function based on laboratory results on the third day of the puerperium found the majority of platelet results were normal in 73 people (94%). However, there were 3 people (4%) postpartum mothers with severe preeclampsia had thrombocytopenia and 2 people (3%) had thrombocytosis. Thrombocytopenia is a medical disorder characterized by a decrease in the number of platelets in the blood. Thrombocytosis is a medical condition characterized by high levels of platelets in the blood. Another study showed thrombocytopenia that occurs in postpartum mothers has a risk of 1.4 times the occurrence of several maternal morbidity (Tri Utami et al., 2020).

In severe preeclampsia, thrombocytopenia may occur. This condition is known as HELLP syndrome (Hemolysis, Elevated Liver enzymes, Low Platelet count). Increased platelet count may be the body's response to blood vessel damage and organ dysfunction that occurs in preeclampsia. Thrombocytosis can cause blood clotting problems that can be high-risk. Thrombocytopenia in puerperal mothers with severe preeclampsia can increase the risk of bleeding and other serious complications (Tri Utami et al., 2020).

The SGOT and SGPT scores also found an increase. Based on the results of a study of 78 postpartum mothers with severe preeclampsia, 19 people (24%) experienced an increase in SGOT scores, while 6 people (8%) experienced an increase in SGPT values. An increase in SGOT (serum glutamic-oxaloacetic transaminase) and SGPT (serum glutamic-pyruvic transaminase) values may indicate liver damage or impaired liver function. It can be associated with complications of severe preeclampsia involving involvement of the liver system. The level of liver enzymes in serum increases due to periportal hemorrhagic necrosis in the peripheral parts of the hepatic lobules. Bleeding in these lesions can result in hepatic rupture spreading under the hepatic capsule and forming subcapsular hamatomas (Endang & Martina, 2023).

An increase in LDH values in postpartum mothers with severe preeclampsia based on the

results of a study of 78 postpartum mothers with severe preeclampsia 31 people (40%) showed an increase in values above normal. In puerperal mothers with severe preeclampsia, elevated LDH (lactate dehydrogenase) values may indicate cell damage or impaired organ function, such as the liver, heart or other organs that can occur due to various factors, such as impaired blood flow, hypoxia (lack of oxygen), or vascular damage. Elevated LDH levels can occur as part of HELLP syndrome (Hemolysis, Elevated Liver enzymes, Low Platelet count). HELLP syndrome is a multisystem collection of symptoms in severe preeclampsia and eclampsia, characterized by thrombocytopenia, hemolysis, and elevated liver enzymes (Tri Utami et al., 2020).

Kidney function is assessed based on values of urea and creatinine. Based on the results of a study of 78 postpartum mothers with severe preeclampsia, there was an improvement in kidney function based on ureal creatinine values. A total of 8 people (10%) experienced an increase in creatinine values and 11 people (14%) experienced an increase in ureal values. In preeclampsia, vasoconstriction occurs which causes a decrease in blood flow to the kidneys, so that the Glomerular Filtration Rate (LFG) decreases and the excretion rate of creatinine and urea also decreases. In addition, in the renal part there are changes in renal parenchyma, experiencing glomerular enlargement followed by swelling of endothelial cells and loss of glomerular endothelial fenestra. Both of these will result in an increase in creatinine and urea in serum (Arieftha et al., 2019).

CONCLUSION

This research proves that the physical health of postpartum mothers with severe preeclampsia is mostly still healthy, but there are still some postpartum mothers whose physical health is not optimal (40%) due to hypertension, physical problems/complaints of headaches, epigastric pain, nausea and vomiting, shortness of breath, fever and increased function of the liver, heart and kidneys based on laboratory results on the third day of the postpartum period.

SUGGESTION

It is best for postpartum mothers with severe preeclampsia to immediately report any discomfort to the health worker/midwife so that care related to the clinical condition is more targeted and specific.

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IMPLEMENTATION OF COMPLEMENTARY PELVIC ROCKING CARE TO REDUCE LOWER BACK PAIN IN 3RD TRIMESTER PREGNANT WOMEN

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ABSTRAK: PENERAPAN ASUHAN KOMPLEMENTER PELVIC ROCKING UNTUK MENGURANGI LOW BACK PAIN (NYERI PUNGGUNG BAWAH PADA IBU HAMIL TRIMESTER III)

Latar Belakang : Kehamilan adalah periode unik dalam kehidupan yang terkait dengan perubahan hormonal dan fisiologis lainnya pada seorang wanita hamil, yang dapat memicu atau mengubah jalannya gangguan neurologis dan kejiwaan. Fenomena nyeri pada bagian punggung ibu hamil adalah salah satu keluhan yang paling sering dilaporkan di kalangan ibu hamil dan diperlukan upaya alternatif yaitu pelvic rocking exercise untuk mengurangi keluhan.

Tujuan : Studi kasus ini memiliki tujuan guna memberi asuhan kebidanan komplementer pada ibu hamil trimester tiga dengan melakukan pelvic rocking exercise untuk mengurangi keluhan nyeri punggung bawah di PMB "W" Bandar Lampung.

Metode penelitian : Desain penelitian mempergunakan desain deskriptif memakai pendekatan studi kasus. Penelitian dilaksanakan tanggal 20 februari – 13 maret 2023. Subjek penelitian merupakan Ny. N berumur 29 tahun. Alat ukur yang dipakai adalah format pengkajian. Subyek dilakukan pevic rocking exercise 1 kali dalam seminggu selama 3 minggu. Penelitian mempergunakan data primer. Subjek kasus sudah dimintai informed consent guna mengikuti penelitian.

Hasil Penelitian : Dalam studi kasus ini didapatkan hasil bahwa ibu mengalami nyeri pada punggung saat datang ke PMB, bidan mengajarkan Teknik latihan pelvic rocking serta memberikan edukasi pada ibu tentang postur tubuh yang benar, didapatkan perubahan yang dirasakan oleh ibu nyeri pada punggung semakin berkurang dan intensitas yang jarang.

Kesimpulan yang didapatkan bahwa ada pengurangan nyeri punggung pada ibu setelah diberikan latihan pelvic rocking .

Saran : Pada studi kasus tentang *pelvic rocking* ini dapat dijadikan acuan bagi tenaga kesehatan khususnya bidan di PMB dalam menangani keluhan nyeri punggung pada ibu hamil. Penelitian juga dapat dilakukan berdasarkan studi kasus ini.

Kata Kunci : Nyeri punggung bawah, Ibu hamil trimester III, pelvic Rocking

ABSTRACT

Introduction : Pregnancy is a unique period in life associated with hormonal and other physiological changes in a pregnant woman, which can trigger or alter the course of neurological and psychiatric disorders. The phenomenon of pain in the back of pregnant women is one of the most frequently reported complaints among pregnant women and alternative efforts are needed, namely pelvic rocking exercise, to reduce complaints.

The Purpose : This case study aims to provide complementary midwifery care to pregnant women in the third trimester by carrying out pelvic rocking exercises to reduce complaints of lower back pain at PMB "W" Bandar Lampung.

Method : The research design uses a descriptive design using a case study approach. The research was carried out on 20 February – 13 March 2023. The research subject was Mrs. N is 29 years old. The measuring tool used is the assessment format. Subjects performed pevic rocking exercise 1 times a week for weeks. The research uses primary data. Case subjects have been asked for informed consent to participate in the research. In this case study.

The results : showed that the mother experienced back pain when she came to the PMB. The midwife taught pelvic rocking exercise techniques and provided education to the mother about correct body posture.

Conclusion was that there was a reduction in back pain in mothers after being given pelvic rocking exercises.

Suggestion: This case study about pelvic rocking can be used as a reference for health workers, especially midwives at PMB, in handling complaints of back pain in pregnant women. Research can also be conducted based on these case studies.

Keywords : Lower back pain, third trimester pregnant women, pelvic rocking

INTRODUCTION

Pregnancy is a unique period in life associated with hormonal and other physiological changes in a pregnant woman, which can trigger or alter the course of neurological and psychiatric disorders. Pregnant women will experience discomfort, one of which is felt in the lower back in the third trimester from the final thoracic vertebra (T12) to the first sacral vertebra (S1) (Safitri, 2022).

The phenomenon of pain in the back of pregnant women is one of the most frequently reported complaints among pregnant women. Even though the incidence rate is quite high, there are still very few pregnant women who seek information about the problems that arise with lower back pain during pregnancy and their impacts. The availability of information regarding pain during pregnancy and its problems, especially lower back pain in the third trimester, is important for the development of health services for pregnant women (Tirtonegoro, 2024).

Back pain in pregnant women is caused by increased levels of the hormone relaxin, which has an effect on the flexibility of the ligament tissue and has an impact on increasing the mobility of the pelvic joints, causing back pain. Apart from that, the causes of back pain are increased body weight, changes in body shape, a history of past back pain and constant stretching (HN, 2022). Daily activities can affect lower back pain and have a negative impact on pregnant women's ability to carry out daily activities such as self-care, walking, sitting and involvement in sexual activities (Arummega et al., 2022).

The prevalence of lower back pain in pregnant women is more than 50% in the United States, Canada, Ice Land, Turkey and Korea. Meanwhile, the prevalence in non-Scandinavian countries such as North America, Africa, the Middle East, Norway, Hong Kong and Nigeria is higher, ranging from 21% - 89.9% (Lestari, 2023). In Indonesia the incidence of discomfort during pregnancy is around 28.7%, research by (Rahma & Sahrudi, 2024), for the Indonesian region, the prevalence of those experiencing lower back pain reaches 60-80%. Back pain is usually physiological, but can turn pathological if not treated properly. Back pain that is not handled properly will lead to higher risks such as long-term back pain, post partum back pain, and

chronic back pain which will be more difficult to treat (Rasyid & Iqirisa, 2019).

One of the discomforts of pregnancy is progressive lordosis, namely the enlargement of the uterus to an anterior position, an effort to adjust the weight of the body, so that the center of the body's weight shifts backwards towards the legs. As pregnancy increases, the mobility of the sacroiliac, sacrococcygis and pubis joints will increase due to hormonal influences and result in changes in body posture and also cause pain in the lower back in the third trimester of pregnancy. Based on statistical tests conducted by (Hutaosoit et al., 2022) it was discovered that there was an effect of pelvic rocking on back pain in third trimester pregnant women ($p = 0.001$).

Physiologically, pregnant women will experience hormonal changes, weight gain and the growth of the baby in the womb. Meanwhile, from psychological factors, pregnant women with increasing gestational age will experience discomfort, such as complaints of pain in the back area. To overcome pain in the back area, non-pharmacological interventions and complementary methods can be used. Complementary methods that can be used include pregnancy exercises, endorphin massage, pelvic rocking or pelvic rocking movements, and acupressure. These complementary methods can be used as treatment methods to reduce pain in pregnant women (Malia, 2024).

Based on the results of (Dwi Nur Cantika et al., 2023) research, 26 pregnant women experienced moderate pain in the lower back. After the pelvic rocking intervention was carried out, with the majority of the time using the birthing ball being 11-15 minutes, the pain decreased to mild pain. Pelvic Rocking Exercise is a movement where the pregnant woman sits on a ball and slowly swings her hips and shakes her hips (Pelvic Rocking) back and forth, right side and left side, and in circular movements. Pelvic Rocking Exercise makes pregnant women's pelvis more relaxed and also increases the release of transmitters in the form of natural endopins, where this hormone functions as a natural sedative produced by the brain which can provide comfort to pregnant women. (Yusri, 2020) it shows that there is an effect of Pelvic Rocking Exercise on reducing the

level of lower back pain in the third trimester of pregnancy at the UPTD Kutukan Health Center, Randublatung District, Blora Regency with a p value of 0.000.

One light movement that can reduce back pain for pregnant women is the pelvic rocking exercise technique. Pelvic rocking is highly recommended for pregnant women in the third trimester who complain of low back pain. Pelvic rocking can tighten the muscles and ligaments that support the organs as well as reduce muscle tension, improve body posture, increase blood circulation, and reduce lower back pain. (Riset et al., 2023). (Yesi, Tesi, 2021) Research results showed that the average back pain in TM III pregnant women before Pelvic Rocking therapy (pre test) was 7.53, and all (100%) pregnant women experienced severe pain. The average back pain in TM III pregnant women after Pelvic Rocking therapy (post test) was 4.86 and all (100%) pregnant women experienced moderate pain.

The results of Taufiq Jaman's (Jamaan et al., 2024) the average intensity of the back pain scale for pregnant women in the third trimester before being given pelvic rocking was 3.89, after being given pelvic rocking was 2.5, so it was concluded that there was an influence of pelvic rocking on the intensity of the lower back pain scale for pregnant women in the third trimester.

According to Rani Kasniati's research results, in 2023 (Kasiati, 2023) the average back pain before pelvic rocking was given was 73.50, which means experiencing moderate pain. The average back pain after being given pelvic rocking was found to be 38.44, which means it changed to mild pain. So it is concluded that there is effectiveness of pelvic rocking in reducing lower back pain in TM III pregnant women in the Seputih Banyak Health Center Work Area in 2023. Similar to research by Qonita Ulma Rahma and Sahrudi, 2024, the results show a significant effect in reducing back pain in third trimester pregnant women. who performed the pelvic tilt exercise with a p value $(0.000) < \alpha (0.05)$ so it is hoped that the pelvic tilt exercise can be carried out in third trimester pregnant women.

RESEARCH METHODS

This case study aims to provide midwifery care to pregnant women in the third trimester by performing pelvic rocking to reduce lower back pain at the Independent Practice of Midwives "W" Bandar Lampung City. The design used is descriptive using a case study approach. The case study was carried out from 20 February to 13 March 2023. The subject of this care was Mrs. N is 24 years old. The

instrument used is an assessment format in the form of a checklist for complementary care providing pelvic rocking to pregnant women in the third trimester.

Subjects underwent pelvic rocking exercises using a birthing ball once a week for 3 weeks starting at 35 weeks of gestation until 38 weeks of gestation. Pelvic rocking was first carried out by officers while teaching Mrs. N so that the next pelvic rocking is carried out by Mrs. N. Observations by officers are carried out every week at PMB. Data collection in this case study uses primary data by direct interviews, observations, and providing care to the case subjects. Case subjects have been asked for informed consent to participate in treatment.

RESEARCH RESULTS

The care provided is carried out at the Independent Midwife Practice (PMB) "N" which is located in Bandar Lampung from 20 February to 13 March 2023. Mrs "N" is a 24 year old pregnant mother with her first pregnancy, her last education was a Muslim high school with ethnic origin. Java, mother does not have a job, only focuses on being a housewife. when the mother came to PMB complaining of pain in the back. The mother's gestational age is already in the third trimester, namely 35 weeks.

A physical examination was carried out on the mother with normal vital signs, the conjunctiva showed no signs of anemia, the fetal head was in the lowest part of the mother's abdomen, the head had not entered the upper pelvic inlet, the fetal heart rate was normal. HB and urine laboratory examinations were normal.

The diagnosis made was Mrs N G1P0A0 35 weeks pregnant singleton live intra uterine fetus with back pain.

The implementation of care is carried out based on an assessment carried out by the author both in terms of anamnesis and the results of a physical examination. Mothers are given IEC regarding management in reducing back pain by not doing heavy work, adopting correct body posture, avoiding bending when picking up items that are below you. If you want to pick up items that are below or parallel to your feet, you should squat first, then stand up slowly while keeping your back straight, when you want to carry something that is quite heavy then carry it in your arms and it is not recommended to carry it with one hand.

Mothers are also taught to do pelvic rocking movements using a gym ball by moving their hips to the right and left five times, then resting for a count of nine times, then continuing again five times, then

moving their hips to the front and back, and moving their hips. like a half circle with the same count as the initial movement.

The results of observations on Mrs. N can be seen in table 1.

Table 1
Observation Results Applying Complementary Pelvic Rocking Care to Mrs. N with Back Pain

Time	Assessment	Observation	
		Observation Result	Action
1 st Observation	<p>Anamnesis Results</p> <ol style="list-style-type: none"> 1. Mother complains of frequent back pain, especially during activities 2. Mothers do daily work as housewives 3. First time pregnant mother <p>Check up result :</p> <ol style="list-style-type: none"> 1. KU good mother, composmentis awareness. Vital Signs: BP: 120/70 mmHg, R: 22 x/minute, N: 79 x/minute, T: 36.4.0C. 2. The conjunctiva is pink 3. The fetus has not entered the pelvic outlet, head presentation, fetal heart rate 	Discomfort in the mother due to back pain	<ol style="list-style-type: none"> 1. Encourage mothers not to do heavy work 2. Adopt correct body posture by avoiding bending which can cause back strain. When going to pick up an item from the floor, first squat down and when standing, keep your back straight. 3. Encourage mothers to carry heavy items in their arms, not carry them on their side. 4. Teach the mother pelvic rocking movements 5. Observe changes in the mother
2 nd Observation	<p>Anamnesis Results:</p> <ol style="list-style-type: none"> 1. Mother still complains of back pain with intensity that is starting to decrease 2. Mothers still do daily work as housewives but no longer lift heavy things <p>Check up result :</p> <ol style="list-style-type: none"> 1. Good KU, composmentist awareness. Vital Signs: BP: 110/80 mmHg, R: 21 x/minute, N: 83 x/minute, T: 36.0C. 2. The conjunctiva is pink 3. The fetus has not entered the pelvic outlet, head presentation, fetal heart rate is normal 	Discomfort due to back pain	<ol style="list-style-type: none"> 1. Reteach the pelvic rocking movement 2. Observe changes in back pain in the mother

Time	Assessment	Observation	
		Observation Result	Action
3rd observation	<p>Anamnesis Results:</p> <ol style="list-style-type: none"> 1. Mothers rarely complain of back pain 2. Mother always adopts correct body posture and does not look down when picking up items that are under her feet <p>Check up result:</p> <ol style="list-style-type: none"> 1. Composmentary consciousness, good general condition, vital signs R 22 x/minute, BP: 110/80 mmHg, S 36°C, N 80 x/minute. 2. Pink conjunctiva 3. The fetus has entered the pelvic outlet, head presentation, fetal heart rate is normal 	Back pain has reduced a lot	<ol style="list-style-type: none"> 1. Motivate mothers to continue to maintain correct body posture 2. Invite the mother to do pelvic rocking movements. 3. Observe changes in back pain in the mother

DISCUSSION

Mrs. When N came to PMB, she complained of frequent back pain, the mother experienced discomfort due to back pain. Midwives provide education to mothers regarding complaints that mothers feel by recommending that mothers do not do heavy work, helping mothers to adopt correct body posture such as not bending when picking up items that are placed below. If you want to pick up items from below, you should squat first, if When carrying items that are quite heavy, it is better to hug them and not carry them with one hand. Pregnant women, especially in the third trimester, can experience discomfort such as back pain, therefore they must pay attention to correct body posture,(Sutanto, 2018) The midwife also teaches the pelvic rocking movement to reduce the pain felt by the mother, the movement is done five times with the sequence of the first movement being the mother sitting on a gym ball then moving the hips to the right and left five times then resting relaxed for a count of 9 followed by another movement. 5 times, in the second movement the hips are moved forward and backward, in the third movement the hips are shaken in a half circle, the duration of the second and third movements is the same as the first movement.

At the next visit, re-education was still given as at the previous visit, the back pain was still felt but the intensity began to decrease, the midwife continued to invite the mother to do pelvic rocking movements.(Anggrawati Wulandari, 2021) there is a significant connection in reducing back pain by doing pelvic rocking movements, the movements carried out can also relax the muscles in the back and will provide comfort ,(Novaes FS, Shimo AK, 2019)

this movement is also easy to do and can reduce pain(Purnani, 2019).

According to(Susanti et al., 2021), mothers who experienced back pain were also given pelvic rocking exercises which were previously measured for pain using the Numerical Rating Scale, getting a pain scale of 6 before the exercise and after the exercise there was a change with the pain scale score being 4. Likewise, what was done by(Chorida, 2019) was that pregnant women with moderate back pain after pelvic rocking treatment reduced their pain to a mild intensity by 62% and no longer felt pain by 38%.

As pregnancy progresses, there will be changes in body weight, so that standing, sitting and walking can cause back pain due to gravitational pressure which weakens the abdominal muscles so that the pressure on the back increases (Wiarto, 2017), Likewise, according to (Amin, 2023), in carrying out activities and how the body mechanics of pregnant women affect back pain.

Research conducted by(Mariyatul, 2021) shows that pelvic rocking exercises can reduce back pain in pregnant women. In line with research conducted(Kasmandra, 2020) that the pelvic shaking technique can increase muscle flexibility thereby reducing moderate pain to milder pain in the back.

Carrying out pelvic rocking exercises has a low risk. Apart from being able to reduce back pain(Anggrawati Wulandari, 2021), pelvic rocking with forward, backward then right and left movements and shaking the hips can improve blood flow.(Puspitasari & Safitri, 2021)

Pelvic rocking can be done anywhere and is very good at reducing back pain for pregnant women (Purnani, 2019). Pregnant women who experience back pain after doing pelvic rocking movements can reduce the pain, with pelvic rocking movements mothers do not need to take anti-pain medication which makes them worry about the negative impact on the growth and development of their fetus

At the third visit, the mother rarely felt back pain, no longer bent over, was able to maintain the correct body position, the midwife still asked the mother to do pelvic rocking exercises. Improper body position such as bending or lifting heavy weights can cause back pain. The older the gestational age, the heavier the burden felt by the mother. Due to the greater growth and development of the fetus, the mother's body position leans more forward. (Mohamed et al., 2021). The back muscles will experience additional stretching and fatigue when the mother does not maintain the correct posture which can cause back pain (Andarmoyo, 2017).

With increasing gestational age, pregnant women experience back pain, so pelvic rocking exercises using a gym ball are really needed to reduce back pain (Astuti et al., 2021) in (Ekasari, 2022) pelvic rocking exercises are also one of the efforts made to reduce back pain. pregnant women, because back pain will limit the mother's activities and make it difficult to sleep.

CONCLUSION

Pelvic rocking exercises for treating back pain in pregnant women can relieve pain in the back of pregnant women

SUGGESTION

In the case study about pelvic rocking, it can be used as a reference for health workers, especially midwives at PMB, in dealing with complaints of back pain in pregnant women. Research can also be carried out on the basis of this case study.

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ROLE OF YOUTH INFORMATION CENTERS AND COUNSELING IN MINIMIZING PREMATURE WEDDING EVENTS

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ABSTRAK : PERANAN PUSAT INFORMASI DAN KONSELING REMAJA DALAM MEMINIMALKAN KEJADIAN PERNIKAHAN USIA DINI

Latar Belakang: Pusat Informasi Konseling Remaja (PIK-R) adalah suatu wadah yang dikembangkan dalam program GenRe, yang dikelola dari, oleh dan untuk remaja guna memberikan pelayanan informasi dan konseling kepada remaja salah satunya upaya pendewasaan usia perkawinan untuk meminimalkan kejadian dari pernikahan usia dini. Kejadian pernikahan usia 15-19 tahun pada tahun 2018 Barito Kuala menduduki peringkat tertinggi sedangkan pada tahun 2022 Barito Kuala menduduki peringkat ke 12.

Tujuan: Mengetahui peranan Pusat Informasi Konseling remaja (PIK R) dalam meminimalkan kejadian pernikahan usia dini di Barito Kuala.

Metode: Penelitian ini menggunakan metode deskriptif kualitatif, informan dalam penelitian sebanyak lima orang informan utama dan empat orang informan triangulasi. Pengumpulan data menggunakan wawancara mendalam dengan analisis isi.

Hasil: Pernikahan usia dini yang terjadi di Barito Kuala masih sering terjadi dengan beberapa faktor yang mempengaruhinya yaitu pengetahuan, pergaulan, orang tua dan kebiasaan turun-temurun. Peran dari PIK R sendiri sudah cukup baik, namun SDM untuk PIK masih kurang, sehingga pelayanan yang diberikan masih sangat terbatas.

Simpulan: Pusat Informasi Konseling Remaja di Barito Kuala berperan dalam meminimalkan kejadian pernikahan di usia dini.

Saran: Diharapkan untuk meningkatkan promosi PIK R di kalangan remaja, agar peranan dari PIK R sendiri bisa terlaksana dengan baik

Kata Kunci: pernikahan usia dini, Pusat Informasi Konseling Remaja (PIK R), remaja

ABSTRACT

Background: The youth counseling information center (PIK R) is a vessel developed in genre, run of, by, and for youth to provide information services and counseling to youth, one of which is an effort to increase the age of the delegation to minimize incidents of premature marriage. The incidence of a 15-19 - year - old wedding in 2018 named Barito Kuala finished its high rating by 2022; Barito Kuala received its 12th.

Objective: Knowing the role of the youth counseling information center (PIK R) in minimizing youth wedding events in Barito Kuala.

Methods: Qualitative descriptive methods, Informant in research as many as five key informant and four persons informant triangulation. Data collection USES in-depth interviews with content analysis.

Results: Early marriage that takes place in Barito Kuala Lumpur is not uncommon with some factors affecting his knowledge, associations, parents, and past customs. Whereas the role of the PIK R itself was good enough, however, because human resources for PIK R were so small that service was still so limited.

Conclusion: The role of the youth counseling information center in Barito Kuala plays in minimizing premature marriage events.

Suggestion: It is hoped to enhance the PIK R promotion among teenagers, so that the role of PIK R properly carried out.

Keywords: youth, Youth Counseling Information Center (PIK R), Youth marriage,

INTRODUCTION

Early marriage is a case to be handled, as the effects of early marriage on the youth themselves are very much, especially on young women (Handayani et al., 2021). In terms of health according to the world health organization (who), teens often experience the problem of premature pregnancy. So that the who sets a teenage limit to 10-20 years, at which time there is much at risk for youth marrying at an early age (Istawati, 2019). One of the factors that affect early marriage is the lack of understanding about the age of marriage (PUP), where the information on the pup can be obtained by youth through the youth center for information and counseling (PIK R), which is a program of the colonization and family planning (BKKBN), which is called the GENRE (Generasi Berencana) program conducted with an approach to youth through the development of the youth counseling center, And the approach to the family through the development of a youth family building group (BKR). Based on studies conducted by Rismawan (2022), with youth counseling centers (pik-r) at school and community centers can have a say in early marriage events (Rismawan et al., 2022).

According to the report from Armasin City Services (AKI) Maternal Death Rates in 2021 as many as 100 deaths and in Kuala Lumpur's own Barito 133, the largest cause of complications in pregnancy (Jalastri, Aprilita., 2022). According to data from the Badan Pusat Statistik (BPS) of the province of South Kalimantan Selatan, the youth who enters marriage at the age of 15-19 in South Kalimantan Selatan is in Barito Kuala (BPS Kalsel, 2018). As of the year 2022, 12th place. (BPS Kalsel, 2022). This shows a

significant decline over the last 5 years in the case of an early marriage that occurred in Barito Kuala. In the year 2019 in the southern Kalimantan province early marriage events were at its highest in Indonesia at 39.53% of the total number of marriages (Juhaidi & Umar, 2020).

Based on the background that has been outlined, further research will be needed to learn the role of the youth information center and counseling (PIK R) in minimizing premature wedding events.

RESEARCH METHODS

This type of research is qualitative with the case study approach. The study is conducted in Barito Kuala, which approaches a PRECEDE-PROCEED model with five phases covering. The informant in this study was selected using a potent sampling method with 3 major informers and 4 suspected triangulation. The informant in this study corresponds to predetermined characteristics and the data obtained in analysis using content analysis.

The study instrument is a researcher supported by important interview guidelines that are asked to both the source and the recorder. The study was conducted about 2 months from April-June 2023.

RESEARCH RESULTS

The general layout of the research facility presented the characteristics of the research informant who provided important information to the compilation of the study. Based on in-depth interviews that have been conducted in this study. Characteristics of research informants are presented at the table below:

Respondent characteristics data

Table 1
Prime informant

Informant code	Age	Last Education	Work
Iu 1	17 year old	SMP	Student
Iu 2	17 year old	5 th grade SD	Housewife
Iu 3	17 year old	MTs	Housewife

Table 2
Informant Triangulation

Informant code	Age	Last Education	Work
It 1	45 Tahun	Tidak Sekolah	Housewife
It 2	40 Tahun	SD	Housewife
It 3	-	S1	Teacher
It 4	-	S2	Youth Management/ Staff BKKBN

1. Images of an early wedding in Barito Kuala

Social Asseesment

Studies show that premature weddings in social environments are still very frequent. Here is the statement of the main informant (lu₃).

"banyak, si x,y,z."

Epidemiological Assesment

Studies show that the problems that can affect an early marriage can be seen from the influence of social media, association and family. Here's a statement from the chief informant (lu₃).

"sorangan ai, tetamu di hp, hehee." (lu₃)

Behavioral and Environment

Studies show that behavior and the environment themselves can influence events of premature marriage. Here's a statement from the chief informant (lu₃).

"... banyak, si x, y, z."

The above statement is also supported by a statement from the informant triangulation of it₁. Here's the statement from the informant triangulation (lt₁).

"...amun sampai jodoh ku lakiakan kaitu, inya sama handak lah kada kawa pang kita manulak iyakalu ..."

Educational and Ecological Assessment

Studies show that early marriage events are also influenced by education, which can be learned from the informant's statement of lt₁ triangulation. Here's the statement from the informant triangulation (lt₁).

"... kisahny dibawah tangan, yang resmi belum lagi, nah kayaitu, mun sampai umurnya 20 tahun hanyar dinikah akan beasa pulang kasitu. Kaitu jar urang, kaitu ai paling, kada tahu jua aku." (lt₁)

"...nah kada tahu am aku, hehee..." (lt₁)

"...jar urang tu lah ngalih baranak dan sagala-galanya, iyakaitu lah kisah nya tuh, ngalih baranak jar urang. Nang ngitu haja jar urang ngalih baranak yang lain ngitu kada tahu aku." (lt₁)

Administrative and Policy Assessment

Based on the results of studies conducted that the policies of the government on premature marriage, which are governed under laws on marriage age restrictions can be seen from the statements of informant triangulation.

"... kisahny dibawah tangan, yang resmi belum lagi, nah kayaitu, mun sampai umurnya 20 tahun hanyar dinikah akan beasa pulang kasitu. Kaitu jar urang, kaitu ai paling, kada tahu jua aku." (lt₁)

2. Preview of the role of the youth counseling information center in Barito Kuala Social Assesment

Research has shown that the role of the youth counseling information center/ Pusat Informasi Konseling Remaja (PIK R) in minimizing premature marriage events is broad enough. Here's the chief informant's statement. *"...dua puluh satu kah rasanya tuh, ujar kekawanan ulun disana."* (lu₃)

Then in favor with informant triangulation following informant statements triangulation.

"...Alhamdulillah anak-anak kita sudah mengantisipasi atau mendapatkan ilmu yang harus mereka dapatkan dan yang kita harapkan bisa menerapkan ilmu-ilmu yang ada di diri mereka masing-masing. Khususnya di sekolah X dan di lingkungan masyarakat tempat mereka tinggal, itu sementara." (lt₃)

Epidemiological Assesment

Based on research done by researchers on the epidemiology assessments of the role of the PIK R, there is still a lack of management of the activities of the PIK R. Here's a statement from the chief informant (lu₁).

"Untuk saat ini belum ada pang."

The statement above is clarified with a statement from a informant triangulation. Here's the statement from the informant triangulation (lu₃).

"Untuk program kerjanya sendiri memang kita harus mencakup apa yang ingin kita sampaikan atau yang kita dapatkan, tetapi kayaknya memang ada masalah atau sedikit kendala, kendalaa... masalah kegiatan itu ,jadi kalau smpai sekarang anggap aja program yang kita anggarkan itu sudah berjalan beberapa persen itu, anggap seratus persen, karna kan tergantung situasi kondisi disekolah kita."

Behavioral and Environment

Based on research done by researchers on the epidemiology assessments of the role of the pik r, there is still a lack of management of the activities of the pik r. Here's a statement from the informant triangulation (lt₃).

"Untuk peminat PIK R ini sendiri masih sedikit, tapi alamdulillah untuk anggota PIK R, kalo pengalaman kita kan dahulu pembinanya dari ibu rizka, kalau gk salah adalah 8 orang-10 orang, dan untuk tahun berikutnya kayaknya ada peningkatan sejumlah 15 orang. Artinya ada peningkatan dari tahun ketahun."

According to the claims from the top informant, there's still a small percentage of

interest in the PIK R. Here's a statement from the chief informant (lu₁).

"jadi menurut ulun pik ini pusat informasi konseling remaja, jadi ini sangat berguna sekali untuk kami para remaja, untuk saling bertukar cerita pendapat saling memberikan informasi untuk hal-hal yang positif."

Educational and Ecological Assessment

Based on the research that has been done, following the statement of the informant triangulation (It₄).

"... ada yang di sekolah, ada yang di masyarakat. Ada sih nanti saya kasih bisa nanti saya copy, disitu kan dia jalur pendidikan ada jalur masyarakat, nanti itu ada yang smp, sma, sama perguruan tinggi ada sih. Di batola ini sih ada yang SMP dan SMA tapi yang perguruan tingginya gak ada. Sama yang untuk jalur yang masyarakatnya ada yang organisasi keagamaan ada sama ADLSM palingan sama organisasi kepemudaan."

Administrative and Policy Assessment

Based on research into resource assessment, organization, management and policy can be seen from the following statements of the key informant (lu₁) about the activation of member PIK

"Kurang lebih 15 orang." (lu₁)

"Ada yg egak tapi banyak yang aktif sih." (lu₁)

"Karna banyak tugas sekolah lawan sibuk kegiatan lainnya, lawan jua anggota pik kami di sini ada jua umpat kegiatan luaran, kayak padus lawan paskib kak ai. jadi jarang umpat turun rapat." (lu₁)

"Ada struktur organisasinya." (lu₁)

The above statement makes it clear that human resources is still small, but management of management is well structured, but there are some members who are not active due to outside activity. But the information for his own spy was very lacking. Here is the statement of the main informant (lu₂).

"...kada, kadada."

It was also supported by a statement from the main informant lu₁. Here is the statement of the main informant (lu₁).

"...jadi ini sangat berguna sekali untuk kami para remaja, untuk saling bertukar cerita, pendapat saling memberikan informasi untuk hal-hal yang positif."

The above statement is also supported by statements from the source of It₁ triangulation of the informant (It₁).

"... kalau PIK itu yaa selama ini sampai sekarang yaa berjalan, mungkin bisa dilihat

sendiri kan pada PIK di Sari Mulia kan ada nih PIK nya kan, nah bentuk-bentuk kegiatannya yaa seperti kadang kan konseling ada juga yang mereka mengadakan rapat-rapat sendiri terus..."

DISCUSSION

1. Images of an Early Wedding in Barito Kuala Social Assement

Based on studies conducted that the social environment of a teen can affect premature marriages. Based on observations made by researchers, the influence that social interaction and the public view of weddings has given rise to the opinion that such a premature marriage is a good thing, since it makes a bold decision to get married. But most societies and parents don't think long of the consequences.

The consequences of young marriage and pregnancy are at high risk of experiencing problems in pregnancy and childbirth and babies being born. Furthermore, domestic violence or sexual violence often occurs in women who marry at a younger age (Handayani et al., 2021).

Epidemiological Assesment

Based on research already done, that the factor that influences early marriage is the factor of knowledge, association, parents, traditions. Where research is being carried out, the informant to triangulation claims that he doesn't know much more clearly about the reason for the imposition of a minimum of a marriage. This explains that knowledge is essential to decision-making. Then the informer also stated that he would marry his child to avoid misconduct, and since the child had refused to continue school.

Research found by researchers is consistent with research done by Hardianti & Nurwati by 2021, where it states that a girl's lack of knowledge and education can influence her thinking patterns, a teenager will think of things that should not be thought of in her life at that age. A young woman with low knowledge will focus more on young marriage (Hardianti & Nurwati, 2021).

Then the informant claims that his earlier sons performed marriages at a young age and that their marriage was not a problem, and this also proves that the factor of local tradition or culture also influences early marriage events. According to research by Handayani in 2021, early marriage occurred as a result of the environmental influence of some who saw their peers get married and their independence in

order to live apart from their parents (Handayani et al., 2021).

The informant also claims that he is marrying his son because of his mutual love and desire to marry, not only is it supported by the informant's claim that many of his friends have decided to get married. It also proves from here that the factor of child behavior and association also influences early wedding events. This goes hand in hand with research done by Hardianti & Nurwati in 2021 stating that young marriages can also be caused by individuals themselves. The factors that emerge from inside a young woman are such as physical maturity, psychological, a need to meet such needs as dress and sexual or puberty and because of this they encourage a young young woman to marry (Hardianti & Nurwati, 2021).

Behavioral and Environment

Research has shown that the environment of the informant can affect attitudes and behavior. Where the informant claims that his friends have been married in many ways and that the traditional customs of parents who have given their children their children in marriage can influence the informant to get married at a young age. Based on research done by Mawardi & Nugroho in 2019, communication developed between youth and parents and those around the neighborhood can influence the decision for a young person to marry or parents to have children marry (Mawardi & Nugroho, 2019).

Educational and Ecological Assessment

Based on studies stating that education affects the events of premature marriage, in which the informant triangulation explains that he is unaware of the dangers of premature marriage, and states also that his son is no longer continuing education, so the parents of this premature child decide to enter a period, it explains that a good education, can provide a good understanding of early marriage, So that no longer is a premature incident.

That goes in line with the research done by Mujiburrahman in 2021, which states that education is important to anyone. To come out and be free of ignorance, ignorance, and the results of ignorance such as narrow-minded thinking, poverty, ignorance, ignorance, and other results from foolishness (Mujiburrahman et al., 2021).

Administrative and Policy Assessment

Research has yielded results that the policy adopted on the profusion of a marriage is that by applying the minimum of a marriage has

been effective. Marriage is valid when it qualifies, as for the terms it has been specified by both islamic law and law (Handayani et al., 2021). This harmonizes with a study carried out by lasmadi et al in 2020, which states that the age limit for a marriage is crucial, since a marriage is aiming for a biological relationship that results in health. As the law of marriage states, the groom must have rigidly developed in order to get a marriage done so as to bring about a good marriage without ending in divorce and having a good and healthy offspring (Lasmadi et al., 2020).

2. Preview of the role of the youth counseling information center in Barito Kuala

Social Asseesment

According to the research that has been done, the pik r's role itself has been executed on the statement of the major informant, in which the main informant said that he knew of the ideal age for marriage from his friends, and it has been shown it is true that the simple distribution of education done by members of the pik r has been well underway.

A person's communication ability can influence receiving response to the target of communication. Communication can be interpreted as an exchange of thoughts, messages, or information through word, signal, writing or behavior (Rohmani & Utari, 2020).

More than that, research results show that information is given by means of a peer approach. Based on research performed by ismiyati & rumiatun, teens prefer to find information to cope with the problem, including reproductive and sexual health problems to friends or the Internet, not to parents. This is because a parent's uncomfortable demeanor and lack of ability to establish communication (Ismiyati & Rumiatun, 2019). This suggests that good communication and approach skills will make it easier for the delivery of education.

Epidemiological Assesment

Based on studies already done, the activity management in pik r itself is not at its maximum, thus lowering the pik r role in the everyday environment. Management is the control and use of all factors and resources, which some planning is required to achieve a particular goal (Supiana et al., 2019).

Behavioral and Environment

Based on studies of behavior and environment studies affecting the role of the PIK

R is the lack of interest in being a member of the PIK R. it is because there are very few young people who understand the importance and benefits of being a member of the PIK R.

Based on research done by nurul aulia & tan, adolescence is the stage in which one's life reaches the process of emotional, psycho-social and sexual maturity. A youth often develops behavior that carries risk and negative effects on himself. When such an environment is sufficiently conducive, in the sense that its condition is colored by a harmonious, trusting, respectful, and responsible relationship, teenagers tend to reach emotional maturity (Nurul Aulia & Tan, 2020) The study agrees with what researchers have observed about the behavior of medical society members, even though they are dating, they understand the boundaries they should maintain. This suggests that while not completely changing teenage behavior, with information and training given to hospital members can help address delinquency..

Educational and Ecological Assessment

Researchers have found that the presence of the pik r itself is not only in school circles but also in communities. This is made clear by a study carried out by Wahyuninglah & Rustiyah, the pik r is developed through educational pathways and public pathways. Courses of education include schools, colleges and boarding schools. Whereas on the community's pathway through youth organizations, religious organizations and youth communities. The passage will help draw up access to the teens' access to information genre specifically for the health of the youth, the life skills, occupation and family development (Wahyuningsih & Rustiyah, 2021).

Administrative and Policy Assessment

According to the study, the assessment of resources, organizations, management, and policies is good enough, with management management being well structured, but resources are scarce, so the provision of services is limited. This goes hand in hand with Wahyunyyah's study & Rustiyah, to improve the quality of management and youth care need to develop an activity that spurred groups to advance and be self-reliant. One of the activities involved is the selection of the youth group. It is hoped that the selection will encourage each pik-r group to strive to improve its quality and capacity and be an example to the rest of the youth. If this is not done, it will result in aberrant

adolescent behavior as is the loose association that is prevalent among adolescents (Wahyuningsih & Rustiyah, 2021).

CONCLUSION

Based on the study's "Peranan Pusat Informasi Konseling Remaja dalam Meminimalkan Kejadian Pernikahan Usia Dini di Barito Kuala", it has been reached the conclusion that an early wedding in Barito Kuala is a high factor in knowledge, social factors, parents, and cultural factors. The role of the PIK R can also be judged by resource, organization, management and policy assessments.

SUGGESTION

For the next researcher it is expected to supplement the informant so that the data is obtained more clear and complete and make sure there's no outside interference.

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THE EFFECT OF CITRUS AURANTIUM AROMATHERAPY ON SLEEP QUALITY IN PREGNANT WOMEN WITH SLEEP DISORDERS

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ABSTRACT

Background: The number of pregnant women who experience sleep disorders in Sumber Bahagia Village, Central Lampung Regency is 31 (72.1%) pregnant women in 2023. And most often occur in the third trimester of pregnancy which is caused by various factors such as hormonal changes, emotional stress and physique problems. To overcome sleep disorders, you can use citrus aurantium aroma therapy.

Objective: Understanding the effect of Citrus Aurantium aromatherapy on the sleep quality of pregnant women with sleep disorders in Sumber Bahagia Village, Central Lampung Regency.

Method: The research type is a pre-experimental study using a One Group Pretest Posttest Design. The population consists of all pregnant women with sleep disorders. Sleep quality was measured using the PSQI (Pittsburgh Sleep Quality Index). The citrus was administered using cotton, with 2-3 drops of citrus oil to be inhaled for 10 minutes, and this was done for 7 days. The sample was determined using total sampling technique based on inclusion and exclusion criteria, resulting in 31 respondents. The research instrument is the Pittsburgh Sleep Quality Index (PSQI) questionnaire. The statistical test used was the Wilcoxon Signed Ranks test with a significance level of 0.05.

Results: age characteristics of respondents, most of them were 21-35 years old (74.2%), parity 2-3 (61.3%) and gestational age TM I (12.9%), TM II (25.8%) TM III (61.3%). The average sleep quality of pregnant women before being given citrus aurantium aromatherapy based on PSQI was 10.91 in the poor category. After being given aromatherapy, the average sleep quality score based on PSQI was 9.39. Hypothesis test results on the effect of citrus aurantium aromatherapy on sleep quality with a p value of 0.000.

Conclusion: There is an effect of citrus aurantium aromatherapy on sleep quality in pregnant women with sleep disorders in Sumber Bahagia Village, Central Lampung Regency in 2023.

Suggestion: Health workers, especially midwives, recommend that pregnant women who experience sleep disorders try using citrus aurantium aromatherapy.

Keywords : Citrus Aurantium Aromatherapy, Sleep Quality, Pregnant Women

ABSTRAK : PENGARUH AROMATERAPI CITRUS AURANTIUM TERHADAP KUALITAS TIDUR PADA IBU HAMIL DENGAN GANGGUAN TIDUR

Latar Belakang : Jumlah ibu hamil yang mengalami gangguan tidur di Desa Sumber Bahagia Kabupaten Lampung Tengah sebanyak 31 (72,1%) ibu hamil pada tahun 2023. Dan paling sering terjadi pada kehamilan trimester III yang disebabkan oleh berbagai faktor seperti perubahan hormonal, stres emosional dan masalah fisik. Untuk mengatasi gangguan tidur, Anda bisa menggunakan terapi aroma citrus aurantium.

Tujuan: Mengetahui pengaruh aromaterapi Citrus Aurantium terhadap kualitas tidur ibu hamil dengan gangguan tidur di Desa Sumber Bahagia Kabupaten Lampung Tengah.

Metode: Jenis penelitian adalah penelitian pre-eksperimental dengan menggunakan One Group Pretest Posttest Design. Populasinya terdiri dari seluruh ibu hamil dengan gangguan tidur. Kualitas tidur diukur menggunakan PSQI (Pittsburgh Sleep Quality Index). Jeruk diberikan dengan menggunakan kapas, dihirup 2-3 tetes minyak jeruk selama 10 menit, dan dilakukan selama 7 hari. Sampel ditentukan dengan teknik total sampling berdasarkan kriteria inklusi dan eksklusi sehingga diperoleh 31 responden. Instrumen penelitiannya adalah kuesioner Pittsburgh Sleep Quality Index (PSQI). Uji statistik yang digunakan adalah uji Wilcoxon Signed Ranks dengan tingkat signifikansi 0,05.

Hasil: karakteristik usia responden sebagian besar berusia 21-35 tahun (74,2%), paritas 2-3 (61,3%) dan usia kehamilan TM I (12,9%), TM II (25,8%) TM III (61,3%). Rata-rata kualitas tidur ibu hamil sebelum diberikan aromaterapi citrus aurantium berdasarkan PSQI sebesar 10,91 dengan kategori buruk. Setelah diberikan

aromaterapi, rata-rata skor kualitas tidur berdasarkan PSQI sebesar 9,39. Hasil uji hipotesis pengaruh aromaterapi jeruk aurantium terhadap kualitas tidur dengan nilai p value 0,000.

Kesimpulan : Terdapat pengaruh aromaterapi jeruk aurantium terhadap kualitas tidur pada ibu hamil dengan gangguan tidur di Desa Sumber Bahagia Kabupaten Lampung Tengah Tahun 2023.

Saran : Tenaga kesehatan khususnya bidan menganjurkan agar ibu hamil yang mengalami gangguan tidur mencoba menggunakan aromaterapi citrus aurantium.

Kata Kunci : Aromaterapi Citrus Aurantium, Kualitas Tidur, Ibu Hamil

INTRODUCTION

During the pregnancy process, anatomical and physiological changes occur which result in pregnant women experiencing discomfort during pregnancy, especially in the third trimester of pregnancy. This discomfort can be in the form of physical or psychological discomfort, one of which is sleep disturbance and anxiety before giving birth. Basically, anxiety in pregnant women is normal and is an aspect that generally occurs in the adaptation process. Research conducted by Dement (2017) found that 40% of pregnant women complained of sleep quality problems in the first and second trimesters, and this increased to 57% in the third trimester (Dwi Anggraini et al., 2023).

The prevalence increased from 13% in the first trimester to 66% in the third trimester. In a systematic review and meta-analysis, it was reported that the prevalence of sleep disorders during pregnancy was 80.8% in Iran. According to the National Sleep Foundation, around 78% of pregnant women report experiencing sleep problems. A study published in Sleep Medicine Reviews reports that around 97% of pregnant women experience changes in sleep patterns during pregnancy. A study published in the American Journal of Obstetrics and Gynecology shows that around 64% of pregnant women experience sleep disturbances during the third trimester of pregnancy. The research in the Journal of Obstetric, Gynecologic, and Neonatal Nursing indicates that approximately 75% of pregnant women report experiencing difficulties in getting restful sleep. Many studies explain that sleep disorders are a common problem experienced by pregnant women, but detailed data regarding the annual prevalence rate has not yet been published (Gupta & Rawat, 2020).

From the 12th week of pregnancy until 2 months after giving birth, mothers complain of difficulty sleeping, often experience sleep disturbances, insomnia, and poor sleep quality. Increased levels of estrogen, progesterone and cortisol are hormones that influence sleep patterns during this period. Several emotional factors, for example fear of facing new experiences and

acquiring new roles, can also cause sleep disturbances (Mohammadi et al., 2022a).

Sleep is a basic need that must be met by everyone. Getting enough sleep will have an impact on the body working optimally. Sleep is a state of change in consciousness when an individual's perception and reaction to the environment decreases. Sleep is defined by minimal physical activity, a different level of consciousness, altered physiological processes in the body, and a decreased response to external stimuli. The benefits of sleep are that it can restore or rest physically after a day of activities, reduce stress and anxiety, and can increase ability and concentration when carrying out daily activities (Alissa & Nugraha, 2015).

The causes of sleep disorders in pregnant women are caused by several factors, including uncomfortable sleeping positions, fetal movements at night, worry that the baby will be born at any time, which causes mothers to increase their awareness of signs and symptoms of labor, fear of pain and physical dangers that arise during childbirth, worry about safety, worry that the baby will be born in an abnormal condition (Kartika & Setiawati, 2022).

Sleep disorders tend to cause physical and psychological symptoms. Additionally, sleep disorders can impact a person's performance and cause mental fatigue, memory problems, poor concentration, shifts in perception, and impaired judgment. In addition, changes in sleep patterns during pregnancy lead to unfavorable consequences, e.g. fatigue, gestational hypertension, preeclampsia, gestational diabetes, preterm labor, birth weight loss, intrauterine death, increased awareness of the discomfort of labor, and cesarean section (Mohammadi et al., 2022a).

Poor sleep quality in pregnant women can have several negative impacts, including obesity, pregnancy-induced hypertension/preeclampsia, gestational diabetes, and intrauterine growth restriction. Research conducted by Wardani, Agustina, and Damayanti (2018) at RSUD Idaman Banjarbaru found that 70% of third-trimester pregnant women had poor sleep quality. This can lead to higher levels of pain and discomfort during

labor, a higher rate of premature births, a greater likelihood of cesarean section deliveries, and an increased risk of postpartum depression (Kartika & Setiawati, 2022). Many efforts have been made to address sleep disturbances in pregnant women, including pharmacological approaches such as hypnotic sedative medications and non-pharmacological methods like education and acupuncture. However, in this study, the researchers will explore a less commonly used form of aromatherapy, specifically Citrus Aurantium aromatherapy, to address sleep disorders. The choice of using aromatherapy is due to the increasing demand for natural and safe alternatives for pregnant women, and Citrus Aurantium aromatherapy is relatively rare in this context. Citrus Aurantium aromatherapy is selected because it is not frequently used to address sleep problems during pregnancy. In the effort to address sleep difficulties in pregnant women, many seek alternative treatments that are more natural and safe, such as aromatherapy. Lemon aromatherapy is known to have calming effects and can assist in improving sleep. Lemon aromatherapy is produced from the extract of lemon peels (Citrus Lemon) and is commonly used in aromatherapy. It is considered safe for pregnancy and childbirth. Lemon aromatherapy contains properties that can kill meningococcus and typhoid bacteria, has anti-fungal effects, effectively neutralizes unpleasant odors, and produces anti-anxiety, anti-depression, and anti-stress effects while promoting mental focus. Lemon aromatherapy is known to have relaxation and soothing effects on the nervous system, which can help improve sleep quality. Lemon essential oil is one of the most widely used herbal oils and is considered safe during pregnancy (Vitrianingsih & Khadijah, 2019). Research on the effects of lemon on sleep is an emerging area of study within aromatherapy. Lemon is recognized as having relaxing and calming effects, making it believed to be beneficial in improving sleep quality (Agarwal et al., 2022).

The results of a pre-survey conducted in Sumber Bahagia Village, Central Lampung Regency, showed that there were 43 pregnant women and based on the results of interviews with 43 pregnant women, the results showed that 31 (72.1%) mothers complained about sleep disturbances, especially at night with various complaints such as position. uncomfortable sleep, fetal movement and anxiety waiting for the baby to be born.

Based on the phenomenon related to the many complaints of sleep disorders in pregnant women and the benefits of citrus aurantium aromatherapy on sleep quality, as well as the lack of research that has carried out aromatherapy, especially in Sumber Bahagia Village, the author is interested in conducting research with the title: The Effect of Giving Citrus Aromatherapy aurantium on Sleep Quality in Pregnant Women with Sleep Disorders in Sumber Bahagia Village, Central Lampung Regency.

RESEARCH METHODS

This type of pre-experimental research uses a One Group Pretest Posttest Design. The population is all pregnant women with sleep disorders. The sample was determined using a total sampling technique based on inclusion and exclusion criteria of 31 respondents. The research instrument was the Pittsburgh Sleep Quality Index (PSQI) questionnaire. The statistical test used is the Wilcoxon Signed Ranks test with a significance level of 0.05.

RESEARCH RESULTS

Respondent Characteristics

Based on table 1, it can be seen that the age characteristics of the respondents were mostly 21-35 years old as many as 23 mothers (74.2%), parity was mostly 2-3 as many as 19 mothers (61.3%) and gestational age was mostly TM III as many as 19 mothers (61.3%).

Table 1
Characteristics of Pregnant Women Who Experience Sleep Disorders Based on Age, Parity and Gestational Age in Sumber Bahagia Village, Central Lampung Regency, 2023

Respondent Characteristics	Frequency (n)	Percentage (%)
Age		
< 20 years old	0	0%
21-35 ears old	23	74,2%
> 35 years old	8	25,8%
Parity		
1	7	22,6%
2-3	19	61.3%

> 3	5	16.1%
Gestational Age		
TM I	4	12.9%
TM II	8	25.8%
TM III	19	61.3%

Univariate Analysis

Pretest measurement results

Table 2

The Average Sleep Quality of Pregnant Women with Sleep Disorders Before Being Given Citrus Aurantium Aromatherapy in Sumber Bahagia Village, Central Lampung Regency in the year 2023

Variable	N	Mean	Median	SD	Min	Max
Pretest measurement results	31	10,90	11	2,055	7	16

The average sleep quality of pregnant women with sleep disorders before being given Citrus Aurantium aromatherapy in Sumber Bahagia Village, Central Lampung Regency in the year 2023, with an average PSQI score of 10.90, categorized as poor. The highest score is 16, the lowest score is 7, and the standard deviation is 2.055.

Posttest measurement results

The average sleep quality of pregnant women with sleep disorders after being given Citrus Aurantium aromatherapy in Sumber Bahagia Village, Central Lampung Regency in the year 2023, with an average PSQI score of 9.39, categorized as poor. The highest score is 15, the lowest score is 5, and the standard deviation is 2.418.

Table 3

The Average Sleep Quality of Pregnant Women with Sleep Disorders After Being Given Citrus Aurantium Aromatherapy in Sumber Bahagia Village, Central Lampung Regency in the year 2023

Variable	N	Mean	Median	SD	Min	Max
Posttest measurement results	31	9,39	10	2,418	5	15

Data Normality Test

Table 4

Normality of Pretest and Post Test Distribution

Score value test	Shapiro Wilk scores
Pretest scores (before intervention)	0,001
Post test scores (after intervention)	0,002

The results of the normality test using the *Shapiro-Wilk* test with a significance level of 0.001 for the pretest and 0.002 for the posttest is both smaller than 0.05. This indicates that the data from both the pretest and posttest are not normally distributed. Therefore, the influence test to be conducted cannot use a t-test but will use a non-parametric test for two paired groups, specifically the *Wilcoxon Signed Ranks Test*.

Bivariate Analysis

The result of the *Wilcoxon Signed Ranks Test* above yielded a p value: $0,000 < \alpha: 0,05$. Therefore, it can be concluded that there is an effect of *Citrus Aurantium* aromatherapy on the sleep quality of pregnant women with sleep disorders in Sumber Bahagia Village, Central Lampung Regency, in the year 2023.

Table 5
The Effect of Citrus Aurantium Aromatherapy on Sleep Quality in Pregnant Women with Sleep Disorders in Sumber Bahagia Village, Central Lampung Regency

Sleep Quality	N	Mean	Median	SD	<i>P value</i>
Before	31	10,90	11	2,055	0,000
After	31	9,39	10	2,418	

DISCUSSION

Based on the table of Wilcoxon Signed Ranks Test results above, the p value is: $0.000 < \alpha: 0.05$. Therefore, it can be concluded that there is an effect of citrus aurantium aromatherapy on sleep quality in pregnant women with sleep disorders in Sumber Bahagia Village, Central Lampung Regency in 2023. These results show that the majority of respondents experienced an increase in sleep quality, so it can be concluded that giving citrus aurantium aromatherapy has an influence on improving sleep quality in pregnant women with sleep disorders.

These results are in accordance with the theory which states that citrus aromatherapy can help reduce sleep disorders through several different mechanisms, namely increasing relaxation: The aroma of citrus essential oils such as orange, lemon, or grapefruit oil can help relax the body and mind, making it easier to sleep. The scent of citrus can also help reduce anxiety and stress levels which can disrupt sleep.

The scent of citrus essential oil can also help reduce pain or discomfort that may cause difficulty sleeping. Some citrus essential oils have anti-inflammatory and analgesic properties that can help reduce pain and discomfort. The scent of citrus can also improve mood and make someone feel happier and relaxed. This can help reduce depression and mood disorders which can affect sleep quality (Kartika & Setiawati, 2022).

The working mechanism of citrus aurantium aromatherapy stimulates the nervous system: The scent of citrus essential oil can stimulate the nervous system and increase brain activity which can help improve sleep quality. Essential oil vapor molecules from the sense of smell pass through the olfactory nerve to the limbic system. The limbic system is the part of the brain that functions for learning, memory and emotional processes, because the limbic system stimulates these processes. This picture is a form of psychological and physiological response through which neurotransmitters such as serotonin, endorphin and norepinephrine are released from the hypothalamus. Neurotransmitters can decrease the effects of endocrine nerves and system function. Aromatherapy can be trusted to lower blood pressure, hormone secretion, reduce levels of pain,

depression and anxiety. Aromatherapy is effective for relieving stress and several stress-related symptoms such as anxiety, insomnia, and depression. Providing essential oil aromatherapy can cause relaxation at night and can help overcome sleep disorders such as insomnia.

In citrus aurantium aromatherapy, it contains Linalyl Acetate which is an ester compound. This ester is formed from a combination of organic acids and alcohol. Ester is useful for making emotions more normal so that the body's condition is more balanced. Another benefit is that it can be a sedative, especially for the central nervous system, which can reduce pain, tension and tension in someone who smokes it. Serotonin secretion is useful for causing a relaxing effect as a result of inhibiting cell excitation. The feeling of relaxation produced by citrus aurantium aromatherapy is due to the return of normal circulation. Serotonin causes euphoria, relaxation or sedation. The olfactory nerve (olfactory nerve) is the only open channel leading to the brain. Through these nerves, the aroma will flow to parts of the brain so that it can trigger hidden memories and influence the emotional behavior of the person concerned. This can happen because the aroma touches the emotional center directly and then serves to balance the emotional condition. For this reason, citrus aurantium by inhalation can reduce anxiety by increasing serotonin. Reduced anxiety will make research subjects sleep better (Kartika & Setiawati, 2022).

One of the possible mechanisms involved is the influence of the aroma from Citrus essential oil on the autonomic nervous system. The autonomic nervous system regulates unconscious bodily functions such as heart rate, respiration, and digestion. Research has shown that the aroma from Citrus Aurantium essential oil can stimulate the activity of the parasympathetic nervous system, which is a part of the autonomic nervous system responsible for relaxing the body and reducing anxiety. Active compounds like linalool, limonene, and linalyl acetate found in Citrus essential oils have sedative properties and can relax muscles. These compounds can also influence the production of neurotransmitters like serotonin and dopamine, which can help stabilize mood and enhance comfort,

thereby aiding sleep. The aroma from Citrus essential oils also stimulates the production of melatonin, a natural hormone that plays a role in regulating the sleep-wake cycle. Melatonin production increases during the night and decreases in the morning. Some studies suggest that the aroma from Citrus essential oils can increase melatonin production and help regulate the body's circadian rhythm (Mohammadi et al., 2022).

The results of this study are in accordance with the results of previous research by (Abbaspour et al., 2022) entitled "The Effect of Citrus Aurantium Aroma on the Sleep Quality in Postmenopausal Women: A Randomized Controlled Trial" of 80 mothers with the mean score of sleep quality in the intervention group was significantly lower than the control group (5.75 ± 1.33 vs 13 ± 1.59 , $P < 0.001$) so it was concluded that the aroma of citrus aurantium essence could significantly improve sleep quality with a p value of 0.001. Mohammadi et al., (2022) research entitled "The Impact of Aromatherapy with Citrus Aurantium Essential Oil on Sleep Quality in Pregnant Women with Sleep Disorders: A Randomized Controlled Clinical Trial" on 68 pregnant women with a value of ($P < 0.001$), these results show that aromatherapy with citrus aurantium essential oil can improve sleep quality in pregnant women with sleep disorders. Kartika & Setiawati's (2022) research entitled "The Effect of Giving Citrus Lemon Aromatherapy on Insomnia in Pregnant Women in the Third Trimester in the Muara Enim Community Health Center Working Area, Muara Enim Regency" on 40 pregnant women with test results showing that there is an effect of giving citrus lemon aromatherapy on insomnia in pregnant women Trimester III (p value 0.000).

The effect of citrus aurantium aromatherapy, according to researchers' assumptions, could be related to citrus aurantium aromatherapy which is calming so that it can reduce the psychological tension of the mother so that it can improve the quality of sleep of pregnant women. Apart from that, the aroma of lemon is much liked by mothers so that its relaxing effect becomes stronger on the quality of the mother's sleep.

This research data also found that there were 7 mothers whose sleep quality did not improve, which could be caused by other factors that caused the mother's sleep quality to not improve, such as discomfort due to the pregnancy process or household problems which caused the mother's psychology to be disturbed and had an impact on sleep quality.

Based on the results obtained, giving aromatherapy to improve sleep quality can be

recommended for pregnant women who experience sleep disorders because it does not cause side effects and is relatively easy to apply to pregnant women on a daily basis.

CONCLUSION

There is a significant influence of Citrus Aurantium aromatherapy on sleep quality in pregnant women with sleep disorders in Sumber Bahagia Village, Central Lampung Regency (P Value 0,000 < a: 0,005).

SUGGESTION

Healthcare workers, especially midwives, can provide counseling regarding efforts to maintain sleep quality using complementary therapy such as Citrus Aurantium aromatherapy for pregnant women as an alternative option compared to pharmacological drug therapy, which can have side effects on both the mother and the fetus.

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THE EFFECT OF COUNSELING ON ADOLESCENT GIRLS' KNOWLEDGE AND ATTITUDE TOWARD
ANEMIA PREVENTION

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**ABSTRAK : PENGARUH PENYULUHAN TERHADAP PENGETAHUAN DAN SIKAP REMAJA PUTRI
TERHADAP PENCEGAHAN ANEMIA**

Latar Belakang: Tingginya prevalensi anemia pada remaja dapat disebabkan oleh kurangnya pengetahuan dan sikap terhadap pencegahan anemia. Salah satu upaya untuk meningkatkan pengetahuan dan sikap terhadap pencegahan anemia adalah dengan melakukan penyuluhan kesehatan.

Tujuan: Mengetahui pengaruh penyuluhan terhadap pengetahuan dan sikap terhadap pencegahan anemia pada remaja putri.

Metode: Penelitian merupakan kuasi eksperimen dengan the one-group pre-test-post-test design. Populasi adalah remaja putri usia 10 – 19 tahun di Puskesmas Wanaraja Kabupaten Garut. Sampel sejumlah 40 remaja putri, diambil dengan menggunakan *purposive sampling*. Pengumpulan data dilakukan dengan menggunakan kuesioner untuk mengukur sikap pencegahan anemia dan soal pilihan ganda untuk mengukur pengetahuan tentang anemia. Teknik analisis yang dipergunakan uji sampel berkorelasi.

Hasil: Penyuluhan berpengaruh terhadap peningkatan pengetahuan remaja tentang anemia, dengan selisih rata-rata skor sebesar -2,025 dan p-value sebesar 0,000 ($p < 0,01$). Pengetahuan remaja putri tentang anemia meningkat setelah mendapat penyuluhan. Penyuluhan berpengaruh terhadap peningkatan sikap remaja putri terhadap pencegahan anemia, dengan selisih rata-rata skor sebesar -3,300 dan p-value sebesar 0,000 ($p < 0,01$). Sikap remaja putri terhadap pencegahan anemia meningkat setelah mendapat penyuluhan.

Kesimpulan: Penyuluhan berpengaruh terhadap pengetahuan dan sikap remaja putri terhadap pencegahan anemia.

Saran: Puskesmas Wanaraja Kabupaten Garut hendaknya dapat memberikan edukasi secara berkesinambungan tentang anemia kepada remaja putri di wilayahnya dengan bekerjasama dengan kader desa setempat, sehingga dapat menjangkau seluruh remaja putri di wilayahnya.

Kata Kunci : Pengetahuan, Penyuluhan, Sikap pencegahan anemia

ABSTRACT

Background: The high prevalence of anemia in adolescents can be caused by a lack of knowledge and attitudes towards preventing anemia. One effort to increase knowledge and attitudes towards preventing anemia is by providing health counseling.

Objective: To determine the effect of counseling on knowledge and attitudes towards anemia prevention in adolescent girls in the working area of the Wanaraja Community Health Center, Garut Regency.

Method: The research is a quasi-experiment with the one-group pre-test-post-test design. The population is adolescent girls aged 10 – 19 years at the Wanaraja Community Health Center, Garut Regency. A sample of 40 adolescent girls was taken using purposive sampling. Data collection was carried out using a questionnaire to measure attitude toward anemia prevention and multiple choice questions to measure knowledge about anemia. The analysis technique used is paired-sample t-test.

Results: Counseling had an effect on increasing adolescent girls' knowledge about anemia, with an average score difference of -2.025 and a p-value of 0.000 ($p < 0.01$). Adolescent girls' knowledge about anemia increased after receiving counseling. Counseling had an effect on improving the adolescent girls' attitude toward anemia prevention, with an average score difference of -3.300 and a p-value of 0.000 ($p < 0.01$). The adolescent girls' attitude toward anemia prevention improved after receiving counseling.

Conclusions: Counseling has an effect on adolescent girls' knowledge and attitude toward anemia prevention.

Suggestions: Wanaraja Community Health Center, Garut Regency should be able to provide continuous education about anemia to adolescent girls in its area by collaborating with local village cadres, so that it can reach all adolescent girls in its area.

Keywords: Knowledge, Counseling, Attitude toward anemia prevention

INTRODUCTION

Anemia is a health condition that can appear at all ages, from toddlers to the elderly (Kemenkes, 2023). Anemia is a condition characterized by a reduced ability of the body to transport and supply oxygen to tissues, generally caused by a lack of capacity of red blood cells to carry oxygen (Morgan et al., 2024).). The causes of anemia are multifactorial and complex. Adolescent girls are most affected by anemia, because they have a higher need for iron to replace the iron lost during menstruation. In addition, poor diet quality, high rates of infection and worm attacks, especially due to poor living conditions and less than optimal health services, are also causes of anemia in adolescents (Rai et al., 2023).

According to WHO, there are two billion people suffering from anemia worldwide with around 50% of anemia caused by iron deficiency. Globally, 47.4% of preschool children (<5 years), 41.8% of pregnant women, and 25.4% of school children are anemic. In the Southeast Asia region, the prevalence of anemia in preschool children and pregnant women is 65.5% and 48.2%, respectively, while the prevalence in adolescent girls ranges from 17% – 90% (Sasmita et al., 2022). In Indonesia, around 32% of adolescents experience anemia, which means that around 3 to 4 out of every 10 adolescents suffer from this condition (Zulfajriani et al., 2023).

The prevalence of anemia in adolescent girls in West Java Province in 2018, as recorded in the international nutrition survey (NI) baseline survey, reached 41.93% (Aliyah & Krianto, 2023). In 2019, the prevalence of anemia increased to 42.3%, and in 2020, the figure fell again to 40.6%. In Garut Regency, the incidence of anemia in adolescent girls aged 10-19 years reached 647 people from a total of 1461 adolescents examined in 2020. Meanwhile, in 2021, the number of adolescents with anemia increased to 856 people from a total of 1672 adolescents examined (Puspaidari et al., 2023). As for a preliminary study conducted at the Wanaraja Community Health Center, it was found that 20 of the 50 adolescents examined had anemia.

Anemia can cause fatigue, decreased concentration, impaired growth, and affect work productivity. Furthermore, anemia can reduce the body's resistance, making it susceptible to infection (Kusuma & Kartini, 2021). Anemia in adolescents also affects women's quality of life and study concentration (Agustiani et al., 2022).

The high prevalence of anemia in adolescents can also be caused by a lack of knowledge, attitudes and appropriate practices regarding healthy nutrition to prevent anemia (Abu-Baker et al., 2021). Knowledge is an important factor that is the basis for changing attitudes and practices to prevent anemia (Agustina et al., 2021). Knowledge will influence a good lifestyle and consumption patterns to prevent anemia. The higher a adolescent's understanding about anemia, the smaller the possibility that the adolescents will experience anemia because they already have a lot of information about anemia and its prevention (Madestria et al., 2021). Previous research has proven the influence of knowledge on the incidence of anemia (Putri, 2018; Rangkuti, 2020; Mulianingsih et al., 2021; Putri & Fauziyah, 2023). Meanwhile, research by Indriani et al. (2018) found that knowledge influences attitudes towards preventing anemia.

Several studies have found that adolescent's knowledge and attitudes towards preventing anemia are still not satisfactory. Research by Kasumawati et al. (2020) conducted at SMA Muhammadiyah 04, Depok City, found that 66.7% of students had insufficient knowledge about anemia, and 31 (38.3%) respondents had poor attitudes. Munira & Viwattanakulvanid (2024) research on female high school students in Banjarmasin City found that 147 (42.0%) female students had bad attitudes, and 169 (48.3%) had poor knowledge regarding anemia prevention.

In this regard, it is necessary to increase knowledge and attitudes towards preventing anemia. One effort to increase knowledge and attitudes towards preventing anemia is by providing health counseling (Sihombing et al., 2024). Health counseling is an effort that prioritizes learning principles to obtain changes in knowledge, attitudes and motivation, both to achieve the desired prosperity and to know the steps to achieve these goals, both individually and collectively (Nurmala et al., 2018). The influence of counseling on knowledge and attitudes towards preventing anemia is proven by research by Darmawati et al. (2020); Kusuma & Kartini (2021); Agustiani et al. (2022); dan Hidayani et al. (2024).

The aim of this research was to determine the effect of counseling on knowledge and attitudes towards preventing anemia in adolescent girls.

RESEARCH METHODS

The research is a quasi-experiment with the one-group pre-test-post-test design. In this design, the dependent variable is measured in the group (O_1), and then the experimental treatment (X) is carried out. After the experimental treatment, the main variable in the group (O_2) was measured again and then the difference between the pre-test and post-test scores was calculated by referring to the X effect (Cohen et al., 2018). The population in this study were adolescent girls aged 10 – 19 years at the Wanaraja Community Health Center, Garut Regency. The sample in the study was 40 adolescent girls, taken using purposive sampling. Data collection was carried out using a questionnaire to measure attitude toward anemia prevention and multiple choice questions to measure knowledge about anemia. The analysis technique used is paired-sample t-test.

RESEARCH RESULTS

Univariate analysis

Based on the research results, the characteristics of respondents can be described in the following table:

Table 1
Frequency Distribution of Respondent Characteristics

Karakteristik	N	%
Age		
10-12 years	5	12.5
13-15 years	13	32.5
16 – 19 years	22	55.0
Exposure to Information about Anemia		
Never	23	57.5
Ever	17	42.5

Table 1 shows that based on age, most of the respondents were aged 16 - 19 years, namely 22 respondents (55.0%), and at least 10 - 12 years old, namely 5 respondents (12.5%). Based on exposure to information about anemia, the majority had never received it, namely 23 respondents (57.5%).

Based on the research results, adolescent girls' knowledge about anemia can be described in the following table:

Table 2
Frequency Distribution of Adolescent Girls' Knowledge About Anemia

Knowledge about Anemia	Pretest		Posttest	
	N	%	N	%
Good	11	27.5	23	57.5
Moderate	27	67.5	17	42.5
Poor	2	27.5	0	0.0

Table 2 shows that most of the adolescent girls' knowledge about anemia at the pretest was mostly in the moderate category, namely 27 respondents (67.5%). In the posttest, adolescent girls' knowledge about anemia was mostly in the good category, namely 23 respondents (57.5%).

Based on the research results, adolescent girls' attitude toward anemia prevention can be described in the following table:

Table 3
Frequency Distribution of Adolescent girls' Attitude toward Anemia Prevention

Knowledge about Anemia	Pretest		Posttest	
	N	%	N	%
Good	15	37.5	25	62.5
Moderate	21	52.5	15	37.5
Poor	4	10.0	0	0.0

Table 3 shows that the adolescent girls' attitude towards anemia prevention at the pretest was mostly in the moderate category, namely 21 respondents (52.5%). In the posttest, adolescent girls' attitudes towards anemia prevention were mostly in the good category, namely 25 respondents (62.5%).

Bivariate analysis

Based on the research results, the effect of counseling on adolescent girls' knowledge about anemia can be described in the following table:

Table 4
The Influence of Counseling on Adolescent girls' Knowledge about Anemia

Knowledge	Mean	SD	Mean Difference	P-value
Pretest	8.90	2.34	-2.025	0.000
Posttest	10.93	2.23		

Table 4 shows that the average value of adolescent girls' knowledge about anemia at pretest was 8.90+2.34 and at posttest it was 10.93+2.23, with an average difference of -2.025. The p-value was obtained at 0.000 ($p < 0.01$), so it was concluded that counseling had an effect on increasing knowledge about anemia. Adolescent girls'

knowledge about anemia increases after receiving counseling.

Based on the research results, the effect of counseling on adolescent girls' attitude toward anemia prevention can be described in the following table:

Table 5
The Influence of Counseling on Adolescent girls' Attitude toward Anemia Prevention

Attitude	Mean	SD	Mean Difference	P-value
Pretest	28.10	5.09	-3.200	0,000
Posttest	31.30	4.13		

Table 5 shows that the average value of adolescent girls' attitude toward anemia prevention at pretest was 28.10+5.09 and at posttest it was 31.30+4.13, with an average difference of -3.300. The p-value was obtained at 0.000 ($p < 0.01$), so it was concluded that that counseling had an effect on improving adolescent girls' attitudes towards preventing anemia. Adolescent girls' attitude toward anemia prevention increases after receiving counseling.

DISCUSSION

Based on the results, it was found that counseling had an effect on increasing adolescent girls' knowledge about anemia. The results of this research support the research results. The results of this research support the research results of Samria & Fitriani (2021); Wisnuwardani et al. (2023); Megawati et al. (2024).

Knowledge refers to everything related to the activity of knowing or having knowledge about something. The definition of knowledge includes all activities performed, methods used, and results obtained. Essentially, knowledge is the result of the activity of knowing about an object, whether in the form of concrete things or events experienced by individuals (Octaviana & Ramadhani, 2021). Health counseling is one factor that can increase a person's knowledge. Extension is an effort to transfer information, knowledge or technology from extension workers and provide it to extension participants (Bakti, 2023)

If you look at the research results, the counseling carried out has proven to be effective so

that all the information about anemia that is presented can be absorbed well by teenagers. This is also because the information presented concerns adolescent health problems and has the potential to have a long-term impact on their health and life. These information characteristics cause teenagers to pay more attention when information is condensed, so that their absorption of data increases and their knowledge increases.

The research results also showed that counseling had an effect on improving adolescent girls' attitudes towards preventing anemia. The results of this research support the research results of Aidah et al. (2023); dan Hidayani et al. (2024). The aim of health counseling is to influence changes in individual and community behavior in the context of health (Pakpahan et al., 2021). Referring to this goal, during the implementation of outreach, not only information about anemia is provided, but efforts are also made to raise awareness about the importance of anemia prevention behavior and encourage teenagers to implement anemia prevention behavior. This will also have an impact on increasing attitudes towards preventing anemia in a more positive way.

Apart from that, increasing knowledge about anemia obtained during counseling will also improve adolescent girls' attitudes towards preventing anemia. A person's attitude can change when they receive information that is believed to be the truth (Darmawati et al., 2020). Knowledge has the ability to influence a person's attitudes. When a person's knowledge increases, their attitudes also tend to increase because good knowledge can encourage individuals to adopt attitudes that are in line with the

knowledge they have (Sihombing et al., 2024). This is also supported by research by Indriani et al. (2018) found that knowledge influences attitudes towards preventing anemia. Knowledge will produce beliefs, which is one of the core elements of attitude. Knowledge will create beliefs that become the basis for forming ideas about the nature and general characteristics of an attitude.

CONCLUSION

Counseling had an effect on improving adolescent girls' knowledge and attitudes towards preventing anemia. Adolescent girls' knowledge about anemia and attitude toward anemia prevention increases after receiving counseling.

SUGGESTION

The Wanaraja Community Health Center should be able to provide continuous education about anemia to adolescent girls in its area by collaborating with local village cadres, so that it can reach all adolescent girls in its area.

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THE EFFECT OF GIVING SOY MILK TO POSTPARTUM MOTHERS ON INCREASING THE WEIGHT OF NEWBORNS

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ABSTRAK : PENGARUH PEMBERIAN SUSU KEDELAI PADA IBU PASCA PERSALINAN TERHADAP PENINGKATAN BERAT BADAN BAYI BARU LAHIR

Latar Belakang: Menyusui mempunyai banyak manfaat bagi ibu dan bayi. Beberapa manfaat ASI bagi bayi adalah mencegah terjadinya gizi buruk, tumbuh kembang bayi sangat ditentukan oleh banyaknya ASI yang diperoleh termasuk energi dan zat gizi lain yang terkandung dalam ASI. Tujuan penelitian ini adalah untuk mengetahui pengaruh pemberian susu kedelai pada ibu nifas terhadap kecukupan ASI di wilayah kerja UPTD Puskesmas Ulak Rengas Tahun 2023.

Tujuan Penelitian : Tujuan mengetahui pengaruh pemberian Susu Kedelai pada ibu nifas terhadap peningkatan berat badan bayi baru lahir di wilayah kerja UPTD Puskesmas Ulak Rengas Tahun 2023.

Metode Penelitian : ini menggunakan metode penelitian quasi eksperimen. Desain penelitian ini menggunakan desain pre-eksperimental dengan pendekatan one Group Pretest and Posttest Design, kelompok intervensi diberikan susu kedelai selama 14 hari, dengan populasi seluruh ibu nifas di wilayah UPTD Puskesmas Ulak Rengas yaitu 38 orang dengan purposive teknik pengambilan sampel berdasarkan inklusi yaitu 15 responden. Data dianalisis menggunakan analisis univariat, bivariat, dengan uji normalitas Shapiro wilk dan disajikan dalam bentuk tabel.

Hasil penelitian: diketahui nilai mean skor peningkatan berat badan bayi sebelum pemberian susu kedelai pada ibu nifas adalah 3077 dan meningkat menjadi 3633 (nilai mean setelah perlakuan). Diketahui nilai t-hitung sebesar 21 dengan probabilitas (sig.) 0,000. karena probabilitas (sig.) 0,000 > 0,005 maka H_0 ditolak dan H_a diterima. Kesimpulannya pemberian susu kedelai pada ibu nifas berpengaruh signifikan terhadap peningkatan berat badan bayi baru lahir di UPTD Puskesmas Ulak Rengas tahun 2023. Saran diharapkan dapat memberikan susu kedelai pada ibu nifas sebagai alternatif non farmakologi dalam upaya untuk meningkatkan berat badan bayi baru lahir. menambah berat badan bayi.

Kata kunci. : Susu kedelai pada ibu nifas, meningkatkan pertambahan berat badan bayi

ABSTRACT

Background: Breastfeeding has many benefits for mothers and babies. Some of the benefits of breast milk for babies are preventing malnutrition, the growth and development of babies is largely determined by the amount of breast milk obtained including energy and other nutrients contained in breast milk. The purpose of this study was to determine the effect of giving soy milk to postpartum mothers on the adequacy of breast milk in the work area of UPTD Ulak Rengas Health Center in 2023.

Research Objective: The purpose of knowing the effect of giving Soy Milk to postpartum mothers on the increase in newborn weight in the work area of the UPTD Ulak Rengas Health Center in 2023.

Research Methods: this uses a quasi experiment research method. This research design uses a pre-experimental design with a one Group Pretest and Posttest Design approach, the intervention group is given soy milk for 14 days, with a population of all postpartum women in the UPTD Puskesmas Ulak Rengas area, namely 38 people with purposive sampling technique based on inclusion, namely 15 respondents. Data were analyzed using univariate analysis, bivariate, with Shapiro wilk normality test and presented in tabular form.

The results of the study: it is known that the mean value of the score of increasing baby weight before giving soy milk to postpartum mothers is 3077 and increased to 3633 (mean value after treatment). It is known that the t-count value is 21 with a probability (sig.) 0.000. because the probability (sig.) 0.000 > 0.005 then H_0 is rejected and H_a is accepted. The conclusion that the provision of soy milk to postpartum mothers has a significant effect on increasing the weight of newborns at the UPTD Puskesmas Ulak Rengas in 2023. Suggestions are expected to give soy milk to postpartum mothers as a non-pharmacological alternative in an effort to increase baby weight.

Keywords : Soy milk in postpartum mothers, increased infant weight gain

INTRODUCTION

The puerperium is the period that begins after the birth of the placenta and ends when the gynecological apparatus returns state (before pregnancy) which lasts approximately 6 weeks, or \pm 40 days (Fitri, 2017). Baby's birth weight is the weight of the baby weighed within the first hour after birth, birth weight is an indicator of the health of newborns, the average weight of a normal baby is 3200 grams. (Wahyuni, 2015), Changes in body weight during the neonate period occur due to the transfer of fluid from intracellular to extracellular, increased extracellular fluid in neonates causes salt and water diuresis in the first 48-72 hours, excessive extracellular fluid expenditure results in physiological weight loss in the first week of life. Fluid loss in neonates must be balanced with adequate nutrition to prevent dehydration or calorie deficiency.

Low milk production is a major problem for new mothers, in addition to the problem of sunken or flat nipples, swollen breasts, reluctant babies to suckle due to improper technique or short-tongued babies (Dewi, 2013). This has a negative impact on the baby because mothers usually look for alternatives by giving formula milk to their babies which causes the intensity of the baby's suction to decrease because they take turns using formula milk which makes less milk come out (Budiasih, 2008).

Normally on the first day post partum the mother can produce 50-110 ml of milk a day from this amount will continue to increase to around 400-450ml by the time the baby reaches the age of the second week, therefore during this time breast milk is able to meet nutritional needs. After 6 months the volume of milk secreted decreases and from then on the nutritional needs cannot be met by breast milk alone and must be supplemented with additional food, in a state of normal milk production, the most milk volume that can be obtained is the first 5 minutes of suction or sucking by the baby while lasting 15-25 minutes. Over the next few months a healthy baby will consume about 700-800ml of breastmilk daily, but a baby can consume 1 liter of breastmilk in 24 hours.

Breastfeeding has many benefits for both mother and baby. Some of the benefits of breastfeeding for babies are preventing malnutrition, increasing endurance, increasing cognitive intelligence in babies, preventing gastrointestinal infections (vomiting and diarrhea), preventing respiratory infections and preventing the risk of death. While the benefits of breastfeeding for the mother are that the baby's suction on the breast will stimulate the formation of oxytocin by the pituitary gland. Oxytocin works by helping uterine involution

and preventing postpartum bleeding in mothers, as well as delaying menstruation so that it can reduce the prevalence of iron deficiency anemia in new mothers, the incidence of mammary carcinoma in breastfeeding mothers (Valentine N. R, et al 2019).

A breastfeeding mother needs an additional 300-500 calories every day to successfully breastfeed her baby. The 300 calories needed by the baby comes from the fat deposited during pregnancy. This means that a breastfeeding mother does not need to overeat, but simply keep her nutritional intake balanced, and as long as she indulges her hunger. The breastfeeding process itself helps the mother lose weight and become slim again. But dieting or starvation will reduce the mother's milk production.

Breast milk is the perfect food for babies as it is guaranteed clean and has antibodies that can protect against many common childhood diseases. Breast milk provides all the energy and nutrients a baby needs from the first month of life to the second year. Breast milk will always be available and affordable to help babies get adequate nutrition (Puspita M, 2021).

Infant growth and development is largely determined by the amount of breast milk obtained, including the energy and other nutrients contained in the breast milk. Breast milk without other food ingredients is basically able to meet the needs of growth until the age of about 6 months. After that, breast milk only serves as the main source of protein, vitamins and minerals for infants who get additional food, especially rice. In the development of the Nation, improving human quality must begin as early as possible, namely early childhood or infancy. One factor that plays an important role in improving human quality is breast milk. Weight gain is determined by how much protein and calcium is consumed, in the daily menu that is read through the card towards healthy (KMS). The first rapid growth rate, which among others is reflected in significant weight gain, is certainly not the same between one toddler and another, considering that there are hereditary and environmental factors that contribute to it.

As World Healthy Organization (WHO) research has stated that the most common reason for mothers to stop exclusive breastfeeding is because they feel that their milk is not sufficient for the baby's needs, about 35% of mothers stop using exclusive breastfeeding in the postpartum weeks because they feel that the milk is insufficient and the baby is not satisfied.

The Indonesian government has established a national policy related to the exclusive

breastfeeding program contained in the government regulation of the republic of Indonesia number 33 of 2012. The regulation states that breast milk is the best source of nutrition that should ideally be given to infants from birth to 6 months without adding or replacing with other foods or drinks (except drugs, vitamins and minerals). This is also in line with Health Law number 36 of 2009, which explains that during breastfeeding, the family, government, local government and community must fully support the baby's mother by providing special time and facilities (Kusumaningrum, 2021).

Low milk production is a major problem for new mothers, in addition to the problems of sunken or flat nipples, swollen breasts, reluctant babies to breastfeed due to improper technique or short-tongued babies (Dewi, 2013). Factors affecting breastfeeding failure are often attributed to the onset of several factors including socio-cultural changes, psychological factors, physical factors of the mother, increased promotion of formula milk, health worker factors, maternal diet, infant birth weight and contraceptive use.

This is bad for the baby because mothers usually look for alternatives by giving formula milk to their babies, which causes the intensity of the baby's sucking to decrease because they take turns using formula milk which makes less breast milk come out (Budiasih, 2008). Decree No. 450 of 2004 on Exclusive Breastfeeding for Infants in Indonesia (Widjaya, 2007). In World Breastfeeding Week 2010, the Indonesian Ministry of Health also launched the Breastfeeding Program; ten steps to baby love, with the slogan Baby love, and breastfeed. Therefore, breastfeeding mothers need help to make the breastfeeding process more successful, one of which is by consuming foods that can stimulate breast milk production. Breast milk production can be stimulated by consuming several drugs that increase breast milk from katuk leaf extract, and powdered or liquid milk specifically for breastfeeding mothers. Ironically, in rural areas, katuk leaves are difficult to obtain, let alone drugs that increase breast milk, while milk specifically for breastfeeding mothers is too expensive for villagers, and not all mothers like milk. Another alternative to support the nutritional needs of mothers during the postpartum period to help increase breast milk is the consumption of soy milk.

Soy milk is a white liquid derived from extra soybeans with a similar appearance and composition to cow's milk products. The use of soy milk as a favorite beverage as well as a health drink has been known for quite some time.

Soy milk is a soluble fraction extract from soybeans that becomes a beverage product with the

aim of increasing protein consumption. The content of beans is able to help the process of fetal growth in pregnant women and is able to optimize breast milk production and the density of breast milk color in postpartum women (Dwi, 2014). Soy milk is a processed beverage from soy bean starch juice which has many nutritional content and benefits, its potential in stimulating oxytocin and prolactin hormones such as alkaloids, polyphenols, steroids, flavonoids and other substances effective in increasing and facilitating breast milk production (Puspitasari, 2018).

Breastfeeding mothers are given 300 ml of soy milk per day, isoflavones or phytoestrogen hormones are estrogen hormones that are naturally produced by the body and can help the mammary glands of nursing mothers to produce more breast milk (Puspitasari, 2018). When consuming soy milk, it will affect the work of the prolactin reflex and letdown reflex due to nipple stimulation when the baby sucks. After that, the release of breast milk by the hormone oxytocin occurs due to sufficient milk supply.

The World Health Organization (WHO) in 2020 stated that only 41% of all babies in the world are exclusively breastfed and WHO targets that by 2025 the exclusive breastfeeding rate will increase to at least 50% (international journal. dewi aminasty siregar.2022). Nationally, the coverage of exclusive breastfeeding in 2021 is 40% and for the Lampung province in 2021 it reached 65.0% and for the North Lampung region 61.5%.(Health profile).

Based on an initial survey of research conducted by researchers in February 2023 in the work area of the Ulak Rengas Health Center, Abung Tinggi District, the number of postpartum mothers in 2022 was 327 people with exclusive breastfeeding coverage in the work area of the UPTD Ulak Rengas Health Center, namely 139 babies who were given exclusive breastfeeding only (45%) with various factors such as mastitis 10% nipples not protruding 35% and lack of milk production 55%. While postpartum visits include (100%). Infants and toddlers who did not gain weight were 5%, namely about 17 infants and toddlers who did not gain weight.

Based on the above problems, the researcher is interested in conducting research because the coverage of exclusive breastfeeding is still 45% with various factors such as mastitis, 10% of nipples not protruding 35 and lack of breast milk production 55%. in 2022. so the researcher is interested in conducting a study entitled "The Effect of Giving Soy Milk to Postpartum Mothers on Increasing Baby Weight in

the Working Area of UPTD Puskesmas Ulak Rengas".

RESEARCH METHODS

The research method is quasi experiment. This research design uses a pre-experimental design with a one Group Pretest and Posttest Design approach, the intervention group is given soy milk for 14 days, with a population of all postpartum women in the UPTD Puskesmas Ulak Rengas area, namely 38 people with purposive sampling technique based on inclusion, namely 15 respondents. Data were analyzed using univariate analysis, bivariate, with Shapiro wilk normality test and presented in tabular form.

RESEARCH RESULTS

Respondent Characteristics

Based on table 1, it can be seen that the 15 respondents who were given soy milk were mostly respondents with the age of 26-32 years (73.3%), Parity in postpartum women, namely Multigravida (66.7%) and the sex of the baby is female (66.7%), IRT work (93.3%), SMA-SMP education (80%) and the highest pregnancy distance is 0-3 years (73.3%).

Table 1
Characteristics of postpartum women in the working area of UPTD Ulak Rengas Health Center

Variabels	N	Persen
Age	15	100.0
18-25 years old	4	26.7
26- 34 years old	11	73.3
Parity	15	100.0
Multigravida	10	66.7
Primigravida	5	33.3
Baby's Gender	15	100.0
Male	5	33.3
Female	10	66.7
Work	15	100.0
IRT	14	93.3
Honoror	1	6.7
Education	15	100.0
MIDDLE AND HIGH SCHOOL	12	80.0
D1-S1	3	20.0
CHILD Age Range	15	100.0
0-3 years	11	73.3
4-6 years	4	26.7

Univariate Analysis

Based on table 2, shows the results before giving soy milk to postpartum mothers the average maximum baby weight is 3400.00 and a standard deviation of 223. While after giving soy milk the average baby weight is 3633 with a maximum baby weight of 4000 and a standard deviation of 242.

Table 2
Univariate Analysis of Infant Weight Gain

Baby Weight	N	mean	Min	Max	Std. Deviation
Before soy milk administration	15	3077	2500	3400	224
After soy milk administration	15	3633	3150	4000	242

Normality Test

Respondent Characteristics

Based on table 3, the data normality test using Shapiro-wilk for variables both after and before the intervention obtained a significant value > 0.05, which means that the data is normal.

Table 3
Normality Test

Baby Weight Gain	Shapiro-Wilk	Description
Before	0.093	Normal
After	0.566	Normal

Bivariate Test

Table 4
Baby Weight Gain

Baby Weight Gain	N	Mean	Std.Error Mean	t-test	95% CI of Difference		p-value
					lower	upper	
Before soy milk administration	15	3077	26.66	21	613.86	499.47	.000
After soy milk administration	15	3633					

It is known that the t-count value for the results of giving soy milk to postpartum mothers on increasing baby weight at UPTD Puskesmas Ulak Rengas is 21 with a probability (sig.) 0.000. because the probability (sig.) $0.000 > 0.005$ then H_0 is rejected and H_a is accepted. This means that there is a significant effect of giving soy milk to postpartum mothers on increasing baby weight at the UPTD Ulak Rengas Health Center.

DISCUSSION

Univariate Analysis

The effect of giving soy milk to postpartum mothers on increasing the baby's weight in the work area of the UPTD Ulak Rengas Puskesmas based on the results of the study showed that the frequency distribution of characteristics based on age showed that 15 respondents who were given soy milk were mostly respondents aged 26-32 years (73.3%) and 18-25 years (26.7%) in line with the research of Wahyuni Sulia Nengsih (2020) aged 20-35 years (77.3%) and <20 (4.5%). Parity in postpartum women is Multigravida (66.7%) and the sex of the baby is female (66.7%), IRT work (93.3%), SMA-SMP education (80%) and the highest pregnancy distance is 0-3 (73.3%). In line with elikapuspitasari's research, 2018 the effect of giving soy milk on increasing breast milk production in postpartum women at RB bina sehat bantul. The gravida variation or the number of pregnancies that the mother has experienced mostly states the second pregnancy, namely as many as 19 people (47.5%). most of the respondents did not work, namely 30 people (75%). Based on univariate analysis shows the results before obtaining the highest weight 3500 and the lowest 2500 with an average value of maximum baby weight 3400.00. Whereas when done after the highest weight was 4000 and the lowest baby was 3150 with an average value of baby weight of 3633. that there is an increase in baby weight. this research is in line with research (Dewi Aminasty Siregar¹, 2022) entitled The Effect of Soy Milk Giving on Increasing Breast Milk Production in Postpartum Mothers in Salambue Village Southeast Padangsidimpuan District The results of the initial test in the experimental group obtained the highest

body weight of 4700 grams and the lowest weight of 3900 grams. From the calculation of the SPSS 24 program, it is known that the average score (mean) is 4275.00 grams and the standard deviation is 434.93. After the experimental group was given treatment, a final test was conducted to determine the weight gain of the baby after the mother was given soy milk. The final test results in the experimental group obtained the highest body weight of 5800 grams and the lowest body weight of 5000 grams. From the calculation of the SPSS 24 program, it is known that the average score (mean) is 5425.00 grams and the standard deviation is 386.221. Before and after weight grouping of the experimental group.

According to researchers, the increase in baby weight and the increase in baby weight are influenced by the intake of nutrients consumed by mothers during puerperium such as protein intake, calories, fluids, minerals, iron (FE) vitamin A, folic acid and zinc. Protein intake from soy milk can affect breast milk production because the isoflavone content contained in soy milk can increase the body's metabolism so that it can produce more breast milk.

The nutrients needed by breastfeeding mothers to ensure the formation of quality milk in sufficient quantities to meet the needs of their babies are calories. Calorie needs during breastfeeding are proportional to the amount of milk produced and higher during breastfeeding than during pregnancy. Protein is needed for growth and replacement of damaged or dead body cells that form the baby's body, brain development, and milk production from animal protein (eggs, meat, fish, shrimp, shellfish, milk, and cheese). Vegetable protein (tofu, tempeh, beans, and processed soy milk). Consume fluids in the form of water, milk and juice, minerals obtained from vegetables as lime, phosphorus, iodine and calcium, Iron (FE) obtained from iron pills (Fe) at least taken for 40 days postpartum, vitamin A is useful for eye health, bone growth, vitamin D is important for dental health and bone growth, vitamin C babies do not get vitamin C other than breast milk, therefore postpartum mothers need to eat fresh foods folic acid, zinc iodine and fat are needed for postpartum mothers which are important

components for breast milk (Andina vita susanto, 2021).

Isoflavones with higher levels in infants were found in mothers who regularly consumed soy. Isoflavones in soy are believed to increase breast milk production and reduce the risk of breast cancer, increase the division of breast cells, suppress the growth of tumor cells and other mechanisms (Selin et al., 2010).

Bivariate Analysis

Based on the results of the bivariate analysis of the data that the authors did by comparing the values before and after with the average value before 3077 and the average value after 3633. from the average value it is known that the pretest value is $3077 < 3633$ and it is known that the t-count value for the results of giving soy milk to postpartum mothers on increasing baby weight at UPTD Puskesmas Ulak Rengas is 21 with probability (sig.) 0.000. then it can be concluded that giving soy milk to postpartum mothers has a significant effect on increasing baby weight in UPTD Puskesmas Ulak Rengas. Because the probability (sig.) $0.000 > 0.005$. it can be concluded that the provision of soy milk to postpartum mothers has a significant effect on increasing baby weight at UPTD Puskesmas Ulak Rengas in 2023.

This is in line with research (dewi aminasty siregar, 2022) that soy milk has isoflavone content contained in soy milk is an amino acid that has vitamins and nutrients in soybeans in the form of flavonoids. Flavonoids are pigments, such as green leaf substances that usually smell. Green leaf substances have many benefits for the health of the body. The benefits of isoflavones contained in soy milk are to increase metabolism in the body, are nutrients needed by the body, prevent constipation, improve the immune system, strengthen bones and teeth, control blood pressure, control cholesterol levels, prevent the risk of obesity and relieve symptoms of ulcer disease. Isoflavones or phytoestrogen hormones are estrogen hormones that are naturally produced by the body and can help the mammary glands of nursing mothers produce more milk. According to Safitri, higher isoflavone levels in infants are found in mothers who regularly consume soybeans, isoflavones in soybeans are believed to increase breast milk production and reduce the risk of breast cancer, increase breast cell division, suppress tumor cell growth, and other mechanisms. Mothers who consume soy-based foods in the form of soy milk and other soy preparations are believed to increase isoflavone levels in breast tissue. Soybeans if consumed

regularly can have a good effect on health, namely preventing breast cancer. (Glycine max L.Merill), can increase breast milk, as WHO research has said that the most common reason for mothers to stop exclusive breastfeeding is because they feel their breast milk is not sufficient for the baby's needs, about 35% of mothers stop using breast milk exclusively in a few weeks postpartum because they feel the milk is lacking and the baby is not satisfied.

According to the researcher, there are results from research related to increasing baby weight and the effect of giving soy milk to postpartum mothers who breastfeed their babies exclusively influenced by various factors of maternal and infant characteristics, namely factors of maternal age / age, education, occupation, parity, child age spacing and baby gender. And it can be seen that the baby's weight gain in each baby is different - different from the results of research that has been carried out in May and June in the UPTD Puskesmas Ulak Rengas area, this is due to mothers with older age and more than one delivery there is 1 person who has a weight gain of only 350 grams. other than that all pregnant women meet the minimum baby weight gain standards.

A mother's age affects her milk production. Younger mothers produce more breast milk than older mothers.

(Proveravati, 2017), said that in mothers who give birth more than once, breast milk production is much higher than mothers who give birth for the first time. The number of births the mother has experienced provides experience in providing breast milk to the baby. The more parity the mother has, the more experienced she will be in providing breast milk and knowing how to increase breast milk production (Hastuti, 2018).

There is a link between gender and nutritional status, where gender is an internal factor that determines the need for nutrients so that it will ultimately be related to the nutritional state, but it is not mentioned whether it affects breastfeeding patterns. It was revealed that local cultural influences can affect breastfeeding, where male infants are considered more valuable than female infants so exclusive breastfeeding is higher in male infants compared to female infants. There is an assumption in the community that male babies will suck more strongly than female babies so that male babies need more breast milk than female babies. With this assumption, it is possible that mothers who have male babies will have the perception that their breast milk is not sufficient for their baby's needs, or vice versa, with strong and frequent suction of male babies, it will affect the let down reflex so that milk

production increases and mothers have high confidence to breastfeed their babies.

Ignorance or knowledge factor, the benefits of breastfeeding need to be understood by a mother or parent but mothers who do not know this is due to the lack of concern from health workers in providing knowledge about the benefits of breastfeeding.

Work/career factors, nowadays more and more women are developing themselves in the economic field and society seems to realize that women's needs are not only physiological and reproductive needs (giving birth) but also the need to develop intellectually and socially.

CONCLUSION

It is known that the results of the mean value of baby weight before postpartum mothers consume soy milk is 3077.

It is known that the results of the mean value of baby weight after mothers consume soy milk in postpartum women is 3633.

There is an effect of giving soy milk to postpartum mothers on increasing baby weight in the UPTD Puskesmas Ulak Rengas working area in 2023.

SUGGESTION

For postpartum mothers, it is expected to be able to utilize soy milk consumption as a non-facological alternative with a dose of 300 ml of soy milk per day consumed for at least 14 days to help increase baby weight.

For the Puskesmas, it is hoped that this research can be used as a guide to provide counseling in pregnant women's classes, toddler classes and posyandu about giving soy milk to postpartum mothers to increase baby weight.

For Health Workers It is necessary to conduct socialization in the community about the effect of soy milk in postpartum mothers on increasing baby weight. Health workers need to supervise the accuracy of the dose, the accuracy of the time of use, the accuracy of the method of use and the correct selection of ingredients.

For further researchers, the results of this study are expected to be used as reference material and empirical data in conducting further research, and it is also hoped that further researchers will be able to study / make a control group in further research.

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THE EFFECT OF MORINGA LEAF COMPRESSES ON BREASTFEEDING DAM PAIN IN POST PARTUM MOTHERS

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ABSTRAK : PENGARUH KOMPRES DAUN KELOR TERHADAP NYERI BENDUNGAN ASI PADA IBU POST PARTUM

Latar Belakang Di Indonesia angka kejadian bendungan ASI terbanyak terjadi pada ibu-ibu bekerja sebanyak 24,8% dari ibu menyusui (Departemen Kesehatan RI, 2022). Di Provinsi Lampung, dari data Survei Demografi Tahun 2022 di dapatkan ibu nifas yang mengalami bendungan ASI sebanyak 23.870 orang dari 91.398 orang ibu nifas (Survei Demografi Lampung 2022).

Tujuan penelitian untuk mengetahui pengaruh kompres daun kelor terhadap nyeri bendungan asi pada ibu post partum di Wilayah Kerja Puskesmas Wana Melinting Lampung Timur Tahun 2023.

Metode jenis penelitian kuantitatif. Dalam penelitian ini menggunakan desain penelitian metode pre Eksperimental dengan pendekatan *one group pretest-posttest design*. Populasi dalam penelitian ini adalah ibu nifas dengan masalah bendungan pada bayudara sebanyak 64 ibu di Desa Tanjung Aji Kec. Melinting Lampung Timur Tahun 2023. Penelitian ini dilakukan dari bulan Februari hingga Juli tahun 2023, dan dilakukan terhadap 35 ibu postpartum, dengan diberikan kompres daun kelor untuk membantu menurunkan intensitas nyeri pada bendungan asi. Analisa data menggunakan uji univariat dan bivariat dengan uji statistika wicoxon.

Hasil Rata-rata skala nyeri terhadap bendungan asi sebelum kompres daun kelor pada ibu post partum di Desa Tanjung Aji Kec. Melinting Lampung Timur Tahun 2023 sebesar 7.23 dan nilai standar deviation 0.598. Rata-rata skala nyeri terhadap bendungan asi sesudah kompres daun kelor sebesar 3.94 dan nilai standar deviation 0.873.

Kesimpulan hasil nilai P value 0,000 yang bermakna H_a diterima dan H_o ditolak yang artinya terdapat pengaruh kompres daun kelor terhadap nyeri bendungan asi pada ibu post partum di Wilayah Kerja Puskesmas Wana Melinting Lampung Timur Tahun 2023. Saran responden mampu menerapkan terapi berupa kompres dengan daun kelor dalam membantu dalam menurunkan nyeri pada payudara pada payudara sehingga dapat meningkatkan kualitas menyusui pada bayi, dan bagi PKM mampu memberikan edukasi mengenai penatalaksanaan nyeri bendungan asi dengan kompres daun kelor.

Kata kunci : bendungan asi, daun kelor, nyeri

ABSTRACT

Background In Indonesia, the highest incidence of ASI dams occurs in working mothers, as much as 24.8% of breastfeeding mothers (RI Ministry of Health, 2022). In Lampung Province, from the 2022 Demographic Survey data, 23,870 of 91,398 postpartum mothers experienced breast milk retention (Lampung Demographic Survey 2022). The aim of this study was to determine the effect of Moringa leaf compresses on breast milk dam pain in post partum mothers in the Work Area of the Wana Melinting Health Center, East Lampung, in 2023.

In this study the authors used a type of quantitative research. In this study, the research design used the pre-experimental method with the one group pretest-posttest design approach. The population in this study were postpartum mothers with dam problems in their newborns as many as 64 mothers in Tanjung Aji Village, Kec. Melinting East Lampung in 2023. This research was conducted from February to July 2023, and was carried out on 35 postpartum mothers, by being given Moringa leaf compresses to help reduce the intensity of pain in breast milk. Data analysis used univariate and bivariate tests with the Wicoxon statistical test.

The average pain scale for breast milk before compressing Moringa leaves in post partum mothers in Tanjung Aji Village, Kec. Melinting East Lampung in 2023 is 7.23 and the standard deviation value is 0.598. The average pain scale for breast milk after compressing Moringa leaves was 3.94 and the standard deviation value was 0.873. The conclusion of the results is a P value of 0.000 which means that H_a is accepted and H_o is rejected, which means that there is an effect of Moringa leaf compresses on breast milk dam pain in post partum mothers in the Work Area of the Wana Melinting Health Center, East Lampung in 2023. By conducting this research, it is

hoped that respondents will be able to apply therapy in the form of compresses with Moringa leaves in helping to reduce breast pain in the breast so that it can improve the quality of breastfeeding in infants, and for PKM it is able to provide education regarding the management of breast milk dam pain by compressing Moringa leaves.

Keywords: breast milk dam, Moringa leaves, pain

INTRODUCTION

Breast milk dam is a dam of milk due to narrowing of the lactiferous ducts or the glands not being emptied completely or due to abnormalities in the nipples (Mochtar, 2016). The occurrence of breast milk dams in postpartum mothers is caused by several factors, namely internal factors including physical, psychological, work, knowledge, personal desires (motivation) and experience. External factors include baby, environmental, socio-cultural factors, and motivation from various parties, including family, neighbors and health workers themselves (Handoko, 2017). Most primiparous postpartum mothers still appear stiff and anxious about breastfeeding their babies.

According to the latest WHO data in 2022 in the United States, the percentage of breastfeeding women who experience breast milk dams is an average of 9,849 (89.05%) out of 19,798 postpartum mothers, in 2022 mothers who experience breast milk dams will be 8,988 (68.97%) out of 14,978. UNICEF stated that scientific evidence released by the Pediatrics Journal in 2022 revealed data that around 18,949,421 million mothers experienced breastfeeding problems worldwide, consisting of 59.3% sore nipples, 56.92% breast dams and 10.5% mastitis. % (WHO, 2022).

In Indonesia, the highest incidence of breast milk dams occurs in working mothers, 24.8% of breastfeeding mothers (Indonesian Ministry of Health, 2022). In Lampung Province, from the 2022 Demographic Survey data, it was found that 23,870 postpartum mothers experienced breast milk dams out of 91,398 postpartum mothers (2022 Lampung Demographic Survey). The incidence of breast milk dams in East Lampung Regency is 28-39% (15-18 incidents out of 100 breastfeeding mothers) (East Lampung Health Office, 2022). Based on the Partum data report in Tanjung Aji Village, Kec. Melinting East Lampung in 2022 the number of breast milk dam incidents will be 10 (1-3 incidents out of 100 breastfeeding mothers) (Village Report, 2022).

Based on the initial survey in the Wana Melinting Community Health Center Working Area, East Lampung in 2023, starting from January-May, there were 76 postpartum mothers in 6 villages in the working area of the Community Health Center. Based on these results, 45.4% of postpartum

mothers experience breast milk dams, while the incidence of other complications such as mastitis is 21.9% and abscesses are 32.7% (PKM, 2023). Based on the results of interviews conducted with 4 postpartum mothers who had problems with breast milk dams and breastfeeding their babies, they said their breasts felt painful and swollen after giving birth and felt pain when breastfeeding. The mothers also said that when breastfeeding their babies often winced in pain and cried. Based on the number of postpartum mothers at PKM Wana Melinting, the incidence of pain due to swelling of the breasts is 64 postpartum mothers.

It is known that there is an increase in the incidence of breast milk dams which will greatly affect the postpartum period due to failure to provide breast milk to the baby. One of the reasons why exclusive breastfeeding is not achieved is that the baby does not get enough breast milk and the production of breast milk increases, breastfeeding is late, the relationship with the baby (bonding) is not good, and it can also be due to restrictions on breastfeeding time so that inflammation can occur in the mother's breasts and palpation can feel hard, sometimes painful and often accompanied by an increase in the mother's body temperature, and there are signs of redness and fever (Manuaba, 2013).

According to research, the highest incidence of breast milk dams in Indonesia is in working mothers, as many as 16% of breastfeeding mothers, Indonesian Ministry of Health (2017). Due to the busyness of family and work, the level of care and attention given to mothers in carrying out breast care will tend to result in an increase in the incidence of breast milk dams. Apart from that, the causes of breast milk dams occur due to poor breastfeeding positions, limiting breastfeeding, limiting the baby's time with the breast, giving formula milk supplements to babies, using a breast pump without indication, causing excess supply, and breast implants (Ministry of Health, 2017)

Factors that cause breast milk dams include the frequency of breastfeeding, the baby's inactive sucking, the mother's motivation to breastfeed, breast care, breastfeeding techniques, providing formula milk supplements for the baby, and using a breast pump without indication, causing excess supply. When breast milk is normally produced, the

breasts become very full. This is physiological, and with effective sucking and removal of breast milk by the baby, the feeling recovers quickly. However, it can develop into dams, the breasts feel full of breast milk and tissue fluid. Venous and lymphatic flow is blocked, milk flow becomes obstructed and pressure in the milk ducts and alveoli increases. The breasts become swollen and edematous. Symptoms that often appear when breast milk dams occur include swollen breasts, breasts feeling hot and hard and the mother's body temperature up to 38 degrees Celsius. (Wulandari and Handayani, 2014)

The impact of breast milk dams on the mother results in intraductal pressure which will affect various segments of the breast, so that pressure throughout the breast increases, as a result the breast often feels full, tense and painful (WHO), even though it is not accompanied by fever (Nevyda Ardyan, 2014). Apart from that, the impact on the baby is that the baby has difficulty sucking, the baby is not breastfed adequately so that the baby does not receive exclusive breast milk as a result, the baby's nutritional needs will not be met due to the lack of intake that the baby gets (Musriah, 2017)

Management of breast milk dam problems uses pharmacological management using antibiotics, antipyretics or fever reducers, and analgesics or pain reducers as well as drinking plenty of fluids and rest to reduce systemic reactions (fever). Whenever possible, mothers are advised to do lactation exercises (breastfeeding exercises), namely moving their arms in rotation so that the shoulder joints move in the same direction. This movement will help improve blood and lymph circulation in the breast area so that static can be avoided, which means reducing the possibility of breast milk accumulating in the breast (Sarwono, 2013).

Breast and nipple care is very important in the lactation process. These two treatments are often a "savior" for mothers in getting through the early stages of breastfeeding which can sometimes feel very difficult. For example, if sore nipples occur, the abrasions are often only mild. A good start will undoubtedly make the rest of the process run well too. This good start cannot be separated from the mother's own knowledge in caring for her breasts. Likewise with breastfeeding, mothers who know more about breast care tend to have a greater desire to breastfeed (Riksani, 2012 in Pitria, 2018). Non-pharmacologically by giving a compress of Moringa Oleifera leaves. Since ancient times, this plant has been known to contain Moringa leaves, such as tannins, steroids, triterpenoids, flavonoids, saponins, anthraquinones and alkaloids. This

compound has anti-inflammatory, antibiotic, detoxification and antibacterial properties (Aris Widiyanto, 2020).

From several researchers, Moringa leaves contain flavanoids which are efficacious as an analgesic whose mechanism of action is to inhibit the action of the cyclooxygenase enzyme thereby reducing pain and flavanoids also inhibit neutrophil degranulation so as to inhibit the release of cytokines, free radicals and enzymes that play a role in inflammation (Aris Widiyanto, et al., 2020).

Research conducted by Murtini (2022) The results showed that before treatment the average breast swelling was on a scale of 3, while after treatment the average breast swelling was on a scale of 1. In statistical testing using the Wilcoxon test, a p-value of 0.000 was obtained. Because ($\alpha < 0.05$) it was concluded that the Moringa leaf compress was effective in reducing the scale of breast swelling in postpartum mothers.

In this study, researchers focused on giving Moringa leaf compresses to treat breast swelling because they are easy to obtain. Since ancient times, this plant has been known to contain Moringa leaves, such as tannins, steroids, triterpenoids, flavonoids, saponins, anthraquinones and alkaloids. This compound has anti-inflammatory, antibiotic, detoxification and antibacterial properties (Aris Widiyanto, 2020).

The impact of breast milk dams, namely static in the lymph vessels, will result in intraductal pressure which affects various segments of the breast, so that the pressure on the entire breast increases, as a result the breasts often feel full, tense and painful even though they are not accompanied by fever. It can be seen that sometimes the breasts are wider so it is difficult for the baby to suck. As a result, the baby will not drink enough or become dehydrated, which will cause dry skin or lips, infrequent urination, sunken eyes, rapid breathing, lethargy and sleepiness. Breast milk dams that are not breastfed adequately eventually result in mastitis (Manuaba, 2013)

Based on the results of the background description above, the author wants to conduct research with the title "The Effect of Moringa Leaf Compress on Breast Milk Dam Pain in Post Partum Mothers in the Working Area of the Wonna Melinting Community Health Center, East Lampung in 2023"

RESEARCH METHODS

In this research the author uses a quantitative type of research, this type of research is a type of research to get an accurate picture of the characteristics of a problem that classifies data and

collects data related to numbers both obtained from measurement results and the value of the data obtained. This research was conducted in the Wonna Melinting East Lampung Community Health Center Work Area in 2023, and was carried out in 6 villages under the auspices of the community health center. This research was conducted from February to July 2023. This research used a pre-experimental method research design with a one group pretest-posttest design approach. The population in this study was a total of 64 postpartum mothers in the Wonna Melinting Health Center Working Area, East Lampung in 2023. The sample in this study was post partum mothers in the Wonna Melinting East Lampung Health Center Working Area in 2023 with a total of up to 35 mothers with pain problems in breast milk dams. . The sampling technique in this research is purposive sampling

RESEARCH RESULTS

Based on table 1 above, it can be seen that from the results of the characteristics of research conducted on postpartum mothers with pain problems due to breast milk dams in the Wonna Melinting Health Center Working Area, East Lampung in 2023, based on the characteristics of the mother's age, the highest number is 30 years old with a total of 9 (25.7%) respondents, the educational characteristics of the most respondents were high school with 18 (51.4%) respondents, the most job characteristics were housewives with 17 (48.6%) respondents, the most parity characteristics were multipara with 26 (74.3%) respondents.

Table 1
Characteristics of Respondents in the Wonna Melinting East Lampung Community Health Center Work Area in 2023

Characteristics	Jumlah	Frekuensi (%)
Usia		
24 tahun	2	5.7
25 tahun	2	5.7
26 tahun	3	8.6
28 tahun	7	20.0
29 tahun	5	14.3
30 tahun	9	25.7
33 tahun	3	8.6
34 tahun	3	8.6
35 tahun	1	2.9
Pendidikan		
Sarjana	7	20.0
SMA	18	51.4
SMP	10	28.6
Pekerjaan		
Honorer	3	8.6
IRT	17	48.6
Pedagang	6	17.1
Pegawai	6	17.1
Paritas		
Multipara	26	74.3
Primipara	9	25.7

Normality Test

Based on table 2 above, it can be seen that the sig value of the Shapiro-Wilk test is 0.000 for the breast milk dam pain result value before and 0.000 for the breast milk dam pain result value after with the Shapiro-Wilk test sig value <0.05. Thus, it can be concluded that the variable data in this study is not normally distributed, so for the next stage the dependent t-test cannot be carried out and continue using the Wilcoxon test.

Tabel 2
Hasil Uji Normalitas/ Test of normality

Skala nyeri bendungan asi	N	P-Value	Keterangan
Skala nyeri sebelum kompres daun kelor	35	0,000	Tidak normal
Skala nyeri sesudah kompres daun kelor		0,000	Tidak normal

Univariate Analysis

Based on table 3 above, it can be seen from 35 respondents that the average value of the pain scale for breast milk dams before Moringa leaf compresses in postpartum mothers in Tanjung Aji Village, Melinting District, East Lampung in 2023 is

7.23 and the standard deviation value is 0.598, the standard error value is 0.101 with the minimum value for the breast milk dam pain scale of 6, namely and the maximum value for the breast milk dam pain scale which is 8.

Table 3
Average Pain Scale for Breast Milk Damage Before Moringa Leaf Compress in Post Partum Mothers in Tanjung Aji Village, District. Melinting East Lampung in 2023

Breast Milk Bed Pain Scale	N	Mean	Std. Deviation	SE	Min-Max
Before compressing Moringa leaves	35	7.23	0.598	0.101	6-8

Tabel 4
Average Pain Scale for Breast Milk Dam After Moringa Leaf Compress in Postpartum Mothers in the Working Area of the want to Melinting Health Center in East Lampung in 2023

Breast Milk Bed Pain Scale	N	Mean	Std. Deviation	SE	Min-Max
After compressing Moringa leaves	35	3.94	0.873	0.147	2-5

Berdasarkan tabel 4 diatas dapat dilihat dari 35 responden nilai rata-rata skala nyeri terhadap bendungan asi sebelum kompres daun kelor pada ibu post partum di Desa Tanjung Aji Kec. Melinting Lampung Timur Tahun 2023 sebesar 3.94 dan nilai

standar deviation 0.873 nilai standar Error sebesar 0.147 dengan nilai minimal untuk skala nyeri bendungan asi 2 yaitu dan nilai maksimal untuk skala nyeri bendungan asi yaitu 5.

Bivariate Analysis

Tabel 5
The Effect of Moringa Leaf Compress on Breast Milk Dam Pain in Post Partum Mothers in the Working Area of the want to Melinting Health Center in East Lampung in 2023

Breast Milk Bed Pain Scale	N	Mean	Beda mean	Mean rank	Sum rank	p-value
Before compressing Moringa leaves	35	7.23	3,29	18.00	630.00	0,000
After compressing Moringa leaves		3.94				

Based on the results of the table above, it shows that the results before and after giving Moringa leaf compresses to postpartum mothers in the Working Area of the want to Melinting Health Center, East Lampung In 2023, there was a decrease in the intensity of pain in the breast milk dam before and after being given Moringa leaf compresses by 3.29 from all respondents, namely 35 respondents, with the results of a P value of 0.000 which means H_a is accepted and H_o is tolak, which means there is an effect of Moringa leaf compresses on pain breast milk dam on postpartum mothers in the Working Area of the want to Melinting Health Center, East Lampung in 2023

DISCUSSION

Univariate Analysis

Average Pain Scale of Breast Milk Dam Before Moringa Leaf Compress in Post Partum Mother in Tanjung Aji Village, Melinting District, East Lampung in 2023

The average value of the pain scale for breast milk dams before Moringa leaf compresses in postpartum mothers in Tanjung Aji Village, Melinting District, East Lampung in 2023 is 7.23 and the standard deviation value is 0.598, the standard

error value is 0.101 with the minimum value for the breast milk dam pain scale of 6, namely and the maximum value for the breast milk dam pain scale, which is 8.

Factors that cause breast milk dams include the frequency of breastfeeding, inactive baby suction, maternal motivation to breastfeed, breast care, breastfeeding techniques to provide formula milk supplements for infants, and using breast pumps without indication causing excess supply. When normal milk is produced, the breasts become very full. This is physiological, and with effective suction and removal of milk by the baby, the taste recovers quickly. However it can develop into a dam, the breast feels 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 a breast milk dam occurs include swollen breasts, hot and hard breasts and the mother's body temperature up to 38 degrees Celsius. (Wulandari and Handayani, 2014)

Regarding breast milk dams can also occur due to irregular breastfeeding frequency factors, the frequency and duration of breastfeeding have a

relationship with the occurrence of breast milk dams in puerperal mothers because in the breast there are lymphatic veins that drain milk production, if the frequency and duration of breastfeeding is optimal, then breast emptying can be perfect, lymphatic venous flow smoothly, thus preventing swollen breasts or breast milk dams in the breast.

From the third to the sixth day after delivery, when normal milk is produced, the breasts become very full. It is physiological and with effective suction and removal of milk by the baby, the sense of fullness is restored quickly. But this situation can be a dam, at the dam the breast is filled very 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 dammed breasts are enlarged, swollen, and very painful. The breasts can look shiny and edema in the area of diffuse erythema. The nipples are stretched flat, the milk does not flow easily, and the baby is difficult to suck milk. Mother sometimes becomes feverish (Prawirohardjo, 2016).

Research conducted by Fithrah Nuhanifah (2013) on the effect of warm breast compresses on the smooth production of breast milk, showed that breast milk production was mostly in the category of increasing after intervention with pre-intervention results of 2.31 and post-intervention of 3.06. And in addition, the results of the T Test obtained a calculated value of -3.873 with a significant value = 0.002. T-table with free degrees 15 for $\alpha = 0.05$ gets a value of 2.131. Then the T-count is greater than that of the T-table ($3.873 > 2.131$, and besides that the significant value is less than $\alpha = 0.05$ (0.002)

Analysis of the study still exists 13.3% of mothers in RSUD Waled district of Cirebon who did not experience reduction in chest pain after a warm compression occurred because of chest pains not because of milk duct blockage but because of infection so that warm compresses do not affect pain, according to the theory on chest Pain due to an effective infection to lower the pressure is ice or cold compression. This is in line with Roesli's (2015) theory which explains that basically mothers should first know the causes of breast swelling and the principles of compresses. Typically breast feeding mothers are swollen and painful because of gland blockage due to milk production but can also be due to other things like infection. When the breasts swell due to a milk bump then warm compresses are recommended. Because warm compresses will cause the vessels in the compressed place, including the milk vessel (Mother's Milk - red) will expand. So if there is a bite then we compress warm channels that were then narrowed to expand and streamline

milk production According to the assumption of the researchers problems with the swelling of the breast due to problems in the process of breastfeeding the baby and because of the large volume of acid produced. In carrying out pain in the breasts can help reduce problems in the mother's breathing and can increase the health of the mother in the breathing.

Average Pain Scale for Breast Milk Dam After Moringa Leaf Compress in Postpartum Mothers in the Working Area of the want to Melinting Health Center in East Lampung in 2023

The average value of the pain scale against the damsel before the compression of the leaves of the valley on the mother post partum in the village of Tanjung Aji Kec. Crossing the East Lamp Year 2023 is 3.94 and the standard deviation value of 0.873 is the standard value of Error of 0.147 with the minimum value for the scale of pain of the dam 2 i.e. and the maximum value for pain scales is 5.

Milk swelling is the occurrence of swelling in the breast due to increased flow of the veins and lymph so that the milk glands are not completely empty or due to an abnormality in the putting of milk. (Winkjosastro, 2013).

Breast and nipple care is very important in the process of lactation. Both of these treatments are often a "savior" for mothers in the early stages of breastfeeding that are sometimes very difficult. For example, if there's a scratch, it's often mild. A good start is a good start. From the very beginning, it was not without the knowledge of the mother herself in caring for her breasts. So with breastfeeding, mothers who know more about breast care tend to have a greater desire to breastfeed. (Riksani, 2012 dalam Pitria, 2018).

Non-pharmacologically, by supplying compresses of Moringa oleifera leaves. Since ancient times this plant leaves are known to contain, such as tannins, steroids, triterpenoids, flavonoids, saponins, antrakuinon and alkaloids. The compound has anti-inflammatory, antibiotic, detoxifying and antibacterial properties (Aris Widiyanto, 2020).

Caterpillars (Moringa aloiifera) live mostly in sand or clay plants with a slightly acidic pH. In the plants that are often used are the leaves because of the abundance of contents and benefits in it. It grows in Indonesia and is often found in Java, Bali, Flores, Lampung and Sumatra. Plants can be used from leaves, stems, skins, seeds, flowers and roots. The plant's properties can heal antitumor, antipyretic, antiulcer, antispasmodic, antibacterial, lowering cholesterol, antioxidant, hepatoprotective, and fungicidal activity, as well as anti-diarrhea. Recent research suggests that the strawberry plant can be

used for the treatment of cardiovascular, gastrointestinal, hematologic, on hepatorenal disorders, swelling of the body, clots. Kelor leaves also have anti-aging content that can prevent premature aging due to frequent exposure to free radicals and UV rays. Kelor plants are also often used as a spice or traditional medicine that is widely used in the community especially in rural areas. One example is as smooth ashes and producing more ashes for breastfeeding mothers. Besides, the content of the leaves of the shrimp increases the hormone naturally found in the plant's leaves. (Fauzi, 2017).

Research conducted by Murtini (2022) The results showed that before treatment, the average breast swelling was a scale of 3, while after breast swelling treatment, the average scale was 1. In statistical testing using the Wilcoxon test, a p-value of 0.000 was obtained. Because ($\alpha < 0.05$) it was concluded that Moringa leaf compresses are effective for lowering the scale of breast swelling in postpartum mothers.

The compressing procedure is before compressing, it is certain that the respondent is not allergic to Moringa leaves by crushing Moringa leaves on the forearm, covering it with something to keep it attached, then the allergic reaction is waited for up to 5 minutes. Respondents were given Moringa leaf compresses by attaching crushed Moringa leaves mixed with cold water to both breasts that experienced swelling for approximately 2 hours and changed every 30 minutes done 2 times a day for 3 consecutive days. Cold compresses are compresses performed using ice water or cold water that cause vasoconstriction (Murtini, 2022).

One of the things that can cause obstacles in exclusive breastfeeding is the presence of problems with the breast. One of the problems in the breast that often occurs is breast milk dam or breast swelling. Breast milk dams are dams of milk due to narrowing of the active ducts or glands that are not emptied completely. Breast swelling often occurs on the second to tenth day postpartum. Most patients feel swollen, red, hard, painful and hot breasts. The causes of breast milk dams include ineffective frequency of breast milk secretion, this can be caused by several things, including non-hospitalization so that there is separation of mother and child, and the existence of improper and effective breastfeeding techniques (Murtini, 2022).

Susilawati Research (2021) This study aims to innovate Katuk-Ragi products as a medicine to overcome breast milk dams. This study aims to identify the bio-active content in katuk leaf extract and yeast. Based on the LCMS test results of katuk-

yeast leaf extract, compounds similar to Kaempferol-3-O-rutinoside were found in all samples. Another flavonoid compound found, Kaempferol-3-O- β -D-glucopyranoside, was only found in sample 4. Compounds from the steroid class are found in all types of formulations in katuk-yeast samples, the compound is Stigmastan-3,6-dione which is known to have anti-cancer activity. The compound Taxuspine C (C₃₄H₄₀O₉) was found in samples in formulas 5, 6, and 8. Trigonosine B (C₃₄H₃₈O₁₀) found only in formula 1 samples belongs to the diterpenoid daphnane group. In addition, coclaurine compounds were found in samples 2, 3, and 7.

According to the assumption of researchers after compressing using Moringa leaves can help in overcoming pain in the breast, because in Moringa leaves have 48 antioxidants, 18 amino acids (8 essential amino acids), 36 anti-inflammatory, multi-vitamins, and minerals. Moringa leaves contain approximately about 14% protein, 40% calcium, 23% iron, and close to all toddlers' needs for vitamin A, which can help in reducing pain and coldness in Moringa leaves.

The results of the study conducted showed a change in the decrease in the intensity of pain in the breast milk dam due to different effects in postpartum mothers. The characteristics of respondents also affect changes in the level of pain reduction such as education, age and maternal parity, in less maternal education it will cause problems in the process of maternal knowledge in pain management that occurs in respondents, while in primiparous mothers pain will last longer because it is the first time breastfeeding.

Based on research that has been done shows a difference in the decrease in pain felt in mothers after being given Moringa leaf compresses where the pain felt before experienced a difference in the level of the scale felt so that in decreasing the scale of maternal pain experienced a difference. The decline can also be influenced by several factors such as different maternal postpartum ages where the level of pain in breast swelling ranges from day 3 to 10 post partum.

Bivariate Analysis

The results before and after giving the compressed leaves of kelor to the postpartum mother in the Puskesmas Working Region Wonna Crossing East Lamp 2023 result P value 0,000 which means Ha received and Ho treated which means there is an influence of the compression of the leaf of Kelor on the pain of the axile dungeon in the Postpartum Working Territory Wonna crossing the East Lamp 2023.

Each side effect is different in each human body because of the different immunity and stability of the body, the side effects of the leaves have been thoroughly examined by several experts. One that shows the results of research proves that side effects are caused by leaves such as, hypoglycaemia and sedative effects on nursing mothers (Nurcahyati, 2014)

Treatment of breast swelling is carried out with the use of bristles for breast extension and the administration of analgesics, it is recommended to breastfeed immediately and more often, warm compresses, milk removed with a pump and performed massage (massage) as well as breast treatment. If necessary, given a temporary (2–3 days) supresilation to reduce breast swell and allow the milk to be removed by massage. This condition will generally decrease in how many days and the baby can breastfeed normally (Emilda, 2017).

The compresses use leaves that are crushed and attached to the chest that are painful and beneficial to relieve chest pain. The flavonoid compounds in the leaves of the calorie are useful as analgesics whose mechanisms inhibit the work of cyclooxygenase enzymes, thereby reducing pain, and the flavonoid also inhibits the degranulation of neutrophils, thus inhibiting the production of cytokines, free radicals, as well as the enzyme that plays a role in inflammation. (Aris Widiyanto,dkk., 2020).

Since ancient times this plant has been known to contain, like titannins, steroids, triterpenoids, flafonoids, saponins, antrakuinon and alkoloids. The compound has the capacity as anti-inflammatory, antibiotic, detoxification and antibacterial (Aris Widiyanto, 2020) The compresses of leaves contain flavonoids that have a small molecular weight and moderate solubility in warm water which allows a good potential for skin penetration there is absorption (absorption) that enters through the pores then is absorbed by the epithelial tissue so that there is vasodilatation of blood vessels which causes increased blood flow of painful body parts in addition to the flavoneid content that is in the bloodstream will inhibit the work of cyclooxygenase enzymes so that the formation of prostaglandins is inhibited, thereby reducing the pain. (Murtini, 2022)

According to the Murtini study (2022) The implementation of this study uses Intrumen leaves of kelor to compress swelling of breasts and observation sheets using SPES. Variable independen what this study is the administration of compresses to the mother with the use of young and has been smoothed kelor leaves inbei a little water attached to both breastes with swelling for 2 hours

replaced every 30 minutes once and carried out for 3 days at once. While the dependent ariabel used to use the ordinal scale type is using Cekcklis SPES (Six Point Enggorgemen en Scale) which is scale 1 = soft, no change in the breasts, scale 2 = slightly hard on the Breasts, Scale 3 = hard, but breasts are not perishable, Scala 4 = hard and breasts begin to perish, 5 = Hard and perishables, Scal 6 = very hard and perishable

According to the researchers' assumptions, the impact that will be caused if the breast milk dam is not resolved, namely mastitis and breast abscess will occur. Mastitis is an inflammation or infection of the breast where the symptoms are hard, reddened, and painful breasts, can be accompanied by fever >38.0C (Ministry of Health RI, 2013) while breast abscess is a further complication after mastitis where pus accumulation occurs in the breast.

According to the researcher's assumption, a person's age will affect the addition of one's knowledge. Age is one of the factors that affect the level of knowledge. In addition to them already having physical and mental readiness, they also have a very positive level of suggestion during the puerperium. So that mothers will be more accepting of new things given additional knowledge about breast compresses using Moringa leaves and really in the application of the knowledge given. Increasing one's age will increase one's self-control ability, so that the person's attitude towards a new thing becomes more open to new things. So that the process of receiving how to apply moringa compresses to breast swelling is also easy and fast.

In this study the characteristics of respondents can affect breast milk dam pain that occurs in postpartum mothers, where the age of the mother is between 20 years or mothers who have just given birth for the first time (Primipara) the pain felt will be more intense due to the increase in more hormones, another factor is the lack of knowledge of mothers about good breastfeeding techniques so that it will cause problems with breast milk dams. While maternal education can also affect pain problems where good education will always seek information about the causes and how to overcome it so that breast milk dam pain will be easier to overcome quickly.

The results of research that have been done show a significant influence on this treatment where Moringa leaf compresses can help reduce pain in breast swelling, but if the mother does not understand how to use it properly then the decrease that occurs will be less optimal, there are some mothers who decrease or decrease difference before and after less than optimal gal is because the mother

says there is an error in the technique of breastfeeding her baby so that The problem of pain in swelling still occurs.

CONCLUSION

There is an effect of Moringa leaf compress on breast milk dam pain in postpartum mothers in the Working Area of the want to Melinting Health Center in East Lampung in 2023 with a p-value of $0.000 < 0.05$

SUGGESTION

With this research, it is hoped that the respoden will be able to apply therapy in the form of compresses with Moringa leaves in helping to reduce breast pain in the breast so as to improve the quality of breastfeeding in infants.

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THE EFFECT OF OLIVE OIL APPLICATION ON THE FADING OF STRETCH MARKS IN POSTPARTUM MOTHERS

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ABSTRACT

Background Olive oil, containing fatty acids, hydrocarbons, carotenes, tocopherols, fatty alcohols, waxes, pigments or chlorophyll, and carotenoids, is known for its beneficial properties in addressing stretch marks.

Objective: To determine the influence of olive oil application on the fading of stretch marks in postpartum mothers. **Methodology:** This was a quantitative study utilizing a true experimental design with a pretest-posttest approach using a control group. The population consisted of 50 postpartum mothers in January 2023. A sample of 30 was divided into two groups. Purposive sampling with the Mann-Whitney U test was employed. The study was conducted from January to July 2023.

Result The average stretch mark severity among postpartum mothers before olive oil application in the working area of Seputih Banyak Primary Health Care, Central Lampung Regency, in 2023 was a mean of 5.07, categorized as severe. After olive oil application, the mean decreased to 1.60, indicating a change and reduction in stretch marks, categorized as mild. The statistical test results showed a p-value of 0.000 (<0.05), signifying an influence of olive oil application on the fading of stretch marks in postpartum mothers. The research findings also revealed that age during pregnancy, body mass index during pregnancy, and parity or the number of births influence the occurrence of stretch marks.

Conclusion There is a significant effect of olive oil application on the fading of stretch marks in postpartum mothers within the working area of Seputih Banyak Primary Health Care, Central Lampung Regency in 2023.

Suggestion : Enhancing pregnant mothers' knowledge regarding stretch marks and the utilization of olive oil in their management.

Keywords: Olive Oil, Stretch Marks, Postpartum Mothers

ABSTRAK

PENGARUH PEMBERIAN MINYAK ZAITUN (*Olive Oil*) TERHADAP PEMUDARAN STRETCH MARK PADA IBU NIFAS

Latar Belakang Minyak zaitun dengan kandungan asam lemak, hidrokarbon dan bikarotin, tokoferol, fatty alkohol, waxes, pigmen atau klorofil dan karotenoid, sterol yang sangat baik untuk mengatasi *stretch mark*.

Tujuan Penelitian: Diketahui pengaruh pemberian minyak zaitun (*Olive Oil*) terhadap pemudaran *stretch mark* pada ibu nifas.

Metode Penelitian: Jenis penelitian kuantitatif dengan rancangan *true experimental* melalui pendekatan *pretest-posttest with control grup design*. Populasi 50 ibu nifas pada bulan Januari 2023. Sampel sebanyak 30 dibagi 2 kelompok. Teknik sampling menggunakan *purposive* menggunakan uji *mann whiteny u test*. Penelitian dilaksanakan Januari-Juli 2023.

Hasil Rata-rata *stretch mark* pada ibu nifas sebelum diberi minyak zaitun di Wilayah Kerja Puskesmas Seputih Banyak Kabupaten Lampung Tengah Tahun 2023 dengan *mean* 5,07 dengan kategori parah, Sesudah diberi minyak zaitun *mean* 1,60 mengalami perubahan dan penurunan *stretch mark* dengan kategori ringan. Hasil uji statistic menunjukkan p-value 0,000 ($<0,05$) artinya terdapat pengaruh pemberian minyak zaitun (*Olive Oil*) terhadap pemudaran *stretch mark* pada ibu nifas. Hasil penelitian menunjukkan bahwa usia saat hamil, indeks massa tubuh saat hamil dan paritas atau jumlah kelahiran mempengaruhi terjadinya *stretch mark*.

Kesimpulan Terdapat pengaruh pemberian minyak zaitun (*Olive Oil*) terhadap pemudaran *stretch mark* pada ibu nifas di Wilayah Kerja Puskesmas Seputih Banyak Kabupaten Lampung Tengah Tahun 2023.

Saran: Peningkatan pengetahuan ibu hamil terkait *stretch mark* dan penggunaan olive oil dalam penanganannya.

Kata Kunci : Minyak Zaitun (*Olive Oil*), *Stretch Mark*, Ibu Nifas

INTRODUCTION

Stretch marks are scarring of the skin due to stretching during pregnancy and weight gain during pregnancy. About 90% of women have stretch marks especially in the last trimester of pregnancy. Some stretch marks disappear with time, while others stretch marks remain as permanent. (Susilawati, Julia 2017).

According to the World Health Organization (WHO) in 2018 the number of pregnant women experienced an increase of 5% from the previous year or around 300,900 with an incidence rate of 198,800 stretch marks or around 66% during pregnancy. (Widia, 2020).

Stretch marks which in the medical world are referred to as striae gravidarum (pregnancy lines) are caused by tearing of elastic bands (collagen fibers) in the skin. Striae gravidarum or stretch marks that appear on the skin of 50% to 90% of women during the second half of pregnancy can be caused by the action of deonocorticosteroids. (Bingan et al., 2016) Stretch marks sometimes cause an itching sensation. Stretch marks are often seen on the abdomen and buttocks and disappear into lighter shadows after childbirth. (Hani et al., 2010) Stretching in the abdomen that occurs at 28 weeks of pregnancy.

As a result of the many changes faced by mothers during pregnancy, including drastic changes in body shape and skin changes or striae gravidarum, it is not uncommon for mothers to feel anxious and depressed facing these changes. In the USA in 2004 out of 8000 pregnant women there were 21.9% who suffered from anxiety. In Indonesia, there are data on pregnant women who experience anxiety as many as 107,000 people (28.7%). Anxiety can be very dangerous in pregnant women, because it can affect the health of the fetus or the mother (USA, 2004; Susilawati, 2017).

Stretch marks that arise due to pregnancy still occur in many developing countries, one of which is Indonesia, which reaches 95% with varying degrees or levels. In Indonesia, this happens a lot because of the lack of health education for women who are pregnant so that they are less precise in handling stretch marks. Meanwhile, based on the Indonesian health profile in 2011, the number of pregnant women in Lampung province in 2011 was 186,372 people or 4.8% and those who experienced stretch marks were 5,355 people or 59.8% (BKKBN, 2014; Susilawati, 2016).

The occurrence of stretch marks is highly influenced by the dermis (skin) layer, as this layer is responsible for supporting the skin and keeping it smooth. The dermis is also home to blood vessels

that transport nutrients to the skin cells. The dermis layer is made of elastic tissue that allows the skin to stretch according to the body's needs. But when the body gets bigger in a short period of time, such as during pregnancy, these fibers weaken and eventually break due to thinning skin. Therefore, the appearance of stretch marks is characterized by the spread of blood vessels through the dermis (skin) layer to the thinned epidermal skin layer. (Elvariny, 2011).

Midwives have an important role in overcoming stretch marks, namely as educators and implementers, including providing supervision and health care for pregnant women or their fetuses. Midwives are obliged to provide education and treatment to pregnant women who complain about the discomfort they experience when they are pregnant due to the appearance of pregnancy lines (Kusmiyati, 2008).

Olive oil with fatty acid content (increases the absorption of substances carried), hydrocarbons and bicarotene (the main component of lubricating and smoothing substances), tocopherols (to maintain skin elasticity), fatty alcohols, waxes, pigments or chlorophyll and carotenoids, sterols (maintain collagen flexibility), has excellent benefits for overcoming stretch marks or pregnancy lines (Miller, 2012., Fakhroh, 2017).

Olive oil is a product obtained from mechanical extraction of *Olea europaea* L. fruit (belonging to the Oleaceae family) which contains 70%-80% fatty acids, its effect on the skin is to increase the absorption of substances carried (squalene, α tocopherol, and sterols). (Pratami, 2014).

Other minor components in olive oil are hydrocarbons, such as squalene (the main component of lubricating and smoothing agents) and β -carotene. Olive oil also contains α -tocopherol at 10.6% which is beneficial for maintaining skin elasticity, fatty alcohols, waxes, pigments (chlorophyll and carotenoids), and sterols which function to maintain collagen flexibility. This research is supported by research conducted by Susilawati (2017) with the title Effect of Giving Olive Oil on the Incidence of stretch marks in Pregnant Women at Private Practice Midwife "BPS" DA, Str. Keb Bumi Waras Bandar Lampung. The average value (mean) of stretch marks in pregnant women of 15 respondents who were not given olive oil was 2.93 with a standard deviation of 1.831 while the average value (mean) of stretch marks in pregnant women of 15 respondents given olive oil was 3.13 in a day with a standard deviation of 1.642.

The results of the pre-survey conducted on 10 respondents of postpartum women with stretch marks claimed that previously they never knew about the administration of olive oil can disguise Stretch Mark, then the respondents are willing if later researchers give olive oil with potato extract to disguise Stretch Mark. While from 10 respondents there were 4 who said that previously he had given olive oil.

Based on the description above, the researcher is interested in conducting a study that aims to determine the effect of giving olive oil on the fading of stretch marks in postpartum women in the Working Area of Seputih Banyak Primary Health Care, Central Lampung Regency in 2023.

RESEARCH METHODS

The research is a quantitative study. The research design employed a True Experimental design with a pretest-posttest approach using a control group design. The population for this study comprises all postpartum pregnant mothers in the Working Area of Seputih Banyak Primary Health Care, Central Lampung Regency, in January 2023, totaling 50 individuals. Sampling for this research was conducted using purposive sampling technique. The research will be carried out from February to July 2023. Univariate and bivariate analyses will be performed using the t-test.

RESEARCH RESULTS

Respondent Characteristics

Based on table 1 above, it can be seen that the characteristics of postpartum women in the Seputih Banyak Primary Health Care, Central Lampung Regency in 2023, by looking at the largest number of characteristics, age is not at risk 20-35 years 15 respondents (100%) both intervention and control groups, in the ideal BMI variable as many as 9 respondents (60.0%) intervention group, 14 respondents (93.3%) control group, the highest education is senior high school 10 respondents (66.7%) intervention group, 12 respondents (80.0%) control group, the most work housewife 9 respondents (60.0%) intervention group, 10

respondents (66.7%) control group and the most parity primipara 10 respondents (66.7%) intervention group, 9 respondents (60.0%) control group.

Table 1
Characteristics of postpartum mothers in the working area of the Seputih Banyak Primary Health Care, Central Lampung Regency in 2023

Characteristics	F	P (%)	F	P (%)
Age				
Not at Risk	15	100,0	15	100,0
IMT				
Ideal	9	60,0	14	93,3
Not Ideal	6	40,0	1	6,7
Education				
Bachelor	-	-	1	6,7
Diploma	1	6,7	1	6,7
Senior High School	10	66,7	12	80,0
Junior High School	4	26,7	1	6,7
Occupation				
Merchant	4	26,7	1	6,7
Housewife	9	60,0	10	66,7
Farmers	1	6,7	3	20,0
Civil Servant	1	6,7	1	6,7
Parity				
Multiparous	5	33,3	6	40,0
Primiparous	10	66,7	9	60,0

Univariate Analysis

Intervention Group

Based on table 2 above, it can be seen that the average stretch marks in postpartum women before being given olive oil in the Working Area of the Seputih Banyak Health Center, Central Lampung Regency in 2023 with a *mean* of 5.07 with severe categories, the lowest score is 3 and the highest value is 6. Furthermore, after being given olive oil, the *mean* of 1.60 has changed and decreased stretch marks with mild categories, the lowest score is 1 and the highest score is 3.

Table 2
Average Stretch Marks in Postpartum Mothers Before and After Given Olive Oil in the Working Area of the Seputih Banyak Primary Health Care, Central Lampung Regency in 2023

Stretch Marks	N	Mean	Min-Max	SD	SE
Pretest	20	5,07	3-6	0,961	0,248
Postes		1,60	1-2	0,507	0,131

Control Group

Table 3
Average Stretch Marks in Postpartum Mothers in the Group Not Given Olive Oil on Day 1 and Day 15 in the Working Area of the Seputih Banyak Primary Health Care, Central Lampung Regency in 2023

Stretch Marks	N	Mean	Min-Max	SD	SE
Pretest	20	5,87	4-7	1,060	0,274
Postes		3,00	2-4	0,756	0,195

Based on table 3 above, it can be seen that the average stretch marks in postpartum women in the group not given olive oil on day 1 in the Seputih Banyak Primary Health Care, Central Lampung Regency in 2023 with a mean of 5.87 with severe categories, the lowest value is 4 and the highest value is 7. Furthermore, on day 15, the mean of 3.00 remained unchanged with severe categories, the lowest score is 2 and the highest score is 4.

Bivariate Analysis

Based on table 4 above, it can be seen that the average stretch marks in postpartum women after being given olive oil mean 1.60 have changed and decreased stretch marks with mild categories. While in the control group on day 15, the mean of 3.00 remained unchanged with the severe category.

The results of the statistical test obtained a p-value of 0.000 (<0.05), which means that there is an effect of giving olive oil (Olive Oil) on the fading of stretch marks in postpartum women in the Working Area of the Seputih Banyak Primary Health Care, Central Lampung Regency in 2023.

Table 4
The Effect of Olive Oil on Fading Stretch Marks in Postpartum Mothers in the Working Area of the Seputih Banyak Primary Health Care, Central Lampung Regency, 2023

Stretch Marks	N	Mean	SD	SE	P-value
Intervention	20	1,60	0,507	0,131	0,000
Control	20	3,00	0,756	0,195	

DISCUSSION

Univariate Analysis

Average Stretch Marks in Postpartum Mothers Before and After Given Olive Oil in the Working Area of the Seputih Banyak Primary Health Care, Central Lampung Regency in 2023

The average stretch marks in postpartum women before being given olive oil in the Working Area of the Seputih Banyak Primary Health Care, Central Lampung Regency in 2023 with a mean of 5.07 with a severe category, the lowest score is 3 and the highest value is 6. Furthermore, after being given olive oil, the mean of 1.60 has changed and decreased stretch marks with a mild category, the lowest score is 1 and the highest score is 3.

In line with the theory put forward by Bingan (2016) Stretch marks are lines visible on the abdominal skin of pregnant women. Striae or strokes occur in almost 90% of pregnant women. striae gravidarum occurs in the abdomen due to stretching of the skin in line with the enlargement of the uterus and abdominal wall. The strokes that appear are shaped like indented lines on the surface of the skin with a slightly white color. Sometimes there is itching

in the incision and around it. Many pregnant women complain about stretch marks during pregnancy. Although they cannot be completely removed, their condition can be minimized with early skin care.

According to researchers stretch marks are clinically characterized by linear circles that are initially softly erythematous and gradually fade into discolored skin or hypopigmented atrophic lines that may be thin or wide. Stretch marks occur on the abdomen, breasts, buttocks, hips, and thighs usually developing after the 24th week of pregnancy until the postpartum period. The cause of stretch marks remains largely unknown, but is clearly related to changes in the structure of the skin's tensile strength and elasticity. The technique of stretching the skin is hormonally related.

The mother's saggy and ugly belly will be felt by all postpartum mothers, where in this case the mother is very confused about how to slim down and eliminate the stomach line like before pregnancy. Currently, many postpartum mothers take diet drugs and use "stagen" (postpartum abdominal binder / belly binder) that is too tight, or even just hear stories

from other mothers so that many of them take diet drugs instead of using natural ingredients.

Average Stretch Marks in Postpartum Mothers in the Group Not Given Olive Oil on Day 1 and Day 15 in the Working Area of the Seputih Banyak Primary Health Care, Central Lampung Regency in 2023

The average stretch marks in postpartum women in the group not given olive oil on day 1 in the Seputih Banyak Primary Health Care, Central Lampung Regency in 2023 with a mean of 5.87 with severe categories, the lowest score is 4 and the highest score is 7. Furthermore, on day 15, the mean of 3.00 remained unchanged with severe categories, the lowest score is 2 and the highest value is 4.

In line with the opinion expressed by Pratami (2020) Striae are lesions resembling linear, sunken, atrophic, pink or purple scarring, which later becomes white (striae albicantes, lineae albicantes), and are usually found in the abdominal area, breasts, buttocks, and thighs. Striae are caused by elastic tissue tearing and are associated with pregnancy, obesity, overly rapid growth during puberty and young adulthood, Cushing's syndrome, and long-term topical corticosteroid treatment. Stretch marks indicate a separation of connective tissue or collagen under the skin. Striae are also commonly called striae distansae (SD), linea atrophicae, or linear atrophy. In fair-skinned women, stretch marks will initially look reddish and then turn white. Based on the color, stretch marks are classified into 4 types including striae albae, for white striae, striae rubrae for red or erythema striae, striae caeruleae for bluish striae, and striae nigrae for blackish striae.

According to researchers stretch marks are the result of the role of glucocorticoids. Glucocorticoids are hormones that regulate carbohydrate, protein and fat metabolism. The role of hormones during pregnancy, glucocorticoids are unfavorable in affecting the skin on the formation of fibroblasts from collagen and elastin fibers. stretch marks in postpartum women occur due to skin elasticity and stretching. Stretch marks are also experienced by those who experience weight changes, bodybuilding or hormonal changes. In postpartum mothers, the skin will become stretched, causing lines in the dermis, the middle layer of the skin. The condition starts with the appearance of reddish or purplish marks on the areas where the skin is getting stretched. The marks appear as parallel lines, of varying colors and textures.

In accordance with the opinion of Boran (2013) When the skin develops to accommodate fetal growth in the womb, there is not enough collagen and elastin fibers to maintain skin firmness so that

collagen-elastin damage is characterized by the occurrence of striae gravidarum.

According to James Diugan (2012) after childbirth, usually the uterus will decrease and become heavier than before. The postpartum women who were the subjects in this study were postpartum women on days 1-20. This is because if more than 20 days of postpartum women's abdominal slack has somewhat returned and is not visible.

Bivariate Analysis

The Effect of Olive Oil on Fading Stretch Marks in Postpartum Mothers in the Working Area of the Seputih Banyak Primary Health Care, Central Lampung Regency in 2023

The results of the statistical test obtained a p-value of 0.000 (<0.05), which means that there is an effect of giving olive oil (Olive Oil) on the fading of stretch marks in postpartum women in the Working Area of the Seputih Banyak Primary Health Care, Central Lampung Regency in 2023.

In accordance with the theory of Cuningham (2010, cited by Pratami, 2015) Pregnancy will affect the mother's body as a whole by causing physiological changes that essentially occur throughout the organ system. Most of the changes that occur in the mother's body are temporary and caused by hormonal work. This hormonal work then causes changes in the uterus, vagina, breasts, urinary tract, gastrointestinal tract, respiratory tract, skeleton, joints, body metabolism, cardio vascular and skin. One of the changes in the skin is seen in the surface of the skin which becomes very stretched. In addition, increased hormone secretion in the adrenal cortex due to pregnancy causes the collagen fibers of the skin to rupture, which is then called striae gravidarum. In weeks 18 to 32, there is an over distance of the abdominal wall and striae gravidarum is strongly associated with relaxin hormone.

In this study, the average stretch mark in postpartum women after being given olive oil means 1.60 changes and a decrease in stretch marks with a mild category. While in the control group on day 15, the mean of 3.00 remained unchanged with the severe category.

According to the researcher, this difference is related to the intervention provided, olive oil is a form of pharmaceutical preparation that is used topically or applied to the surface of the skin. Olive oil is ideal for use as a wound closure agent because it can help remove dead tissue. Olive oil is able to create moist conditions in the wound area so that it will create a cool feeling that can reduce swelling around the

wound so that it will accelerate the wound healing process.

The occurrence of stretch marks is highly influenced by the dermis layer, as this layer is responsible for supporting the skin and keeping it smooth. The dermis is also home to blood vessels that transport nutrients to the skin cells. The dermis layer is made of elastic tissue that allows the skin to stretch according to the body's needs. But when the body gets bigger in a short period of time, such as during pregnancy, these fibers weaken and eventually break due to thinning skin. Therefore, the appearance of stretch marks is characterized by the spread of blood vessels through the dermis layer to the thinning epidermis skin layer (Evariny, 2011).

In line with the research of Putu Candrawati et al (2021) that the average reduction in striae gravidarum in the intervention group using olive oil based on the highest age is age <20-25 years as many as 14 respondents experienced a decrease in mean pretest 2.375 to mean posttest 0.929. Age during pregnancy is closely related to the elasticity of one's skin. The younger the age (<20-25 years), the faster the striae gravidarum will decrease compared to the older age (>25 years). This is due to fat deposits in the skin and skin elasticity that decreases with age.

In line with the research of Dainty Maternity and Elya Eva (2018) that there is an increase in striae gravidarum when viewed on the characteristics of BMI (Body Mass Index). The mother's BMI during pregnancy will affect the onset of striae gravidarum, one example is that pregnant women who have an ideal BMI or less after pregnancy experience changes in BMI will affect the striae gravidarum that arises. This shows that striae gravidarum increases with increasing maternal weight and increasing the size of the mother's abdomen.

In line with research by Renad A Alageel et al (2021), it shows that the number of births or parity affects stretch marks. The prevalence of stretch marks will be higher in multiparity. This is influenced by a history of stretch marks in previous pregnancies. If there were stretch marks in the previous pregnancy, there will be an increase in the number of stretch marks in the current pregnancy.

Removing stretch marks can usually be started with the use of treatment creams and oils that contain rich vitamins A, B, C and E. The application of oil can help moisturize the skin, for example by using oil several times a day applied to the abdomen. In addition, risk factors must also be prevented, for example by maintaining a healthy weight.

Besides being used for various dishes, olive oil is also effective for beauty treatments. Olive oil is

rich in vitamin E which is anti-aging and tightens the skin. Olive oil is also useful for smoothing and moisturizing the skin surface without clogging the pores. Olive oil is a good moisturizer for moisturizing facial and body skin. In addition, olive oil is useful for removing layers of dead skin cells. Moisturize and make the skin feel softer. For thousands of years the benefits of olive oil have been used for health care and as a cosmetic ingredient.

CONCLUSION

The results of the statistical test obtained a p-value of 0.000 (<0.05) which means that there is an effect of giving olive oil on the fading of stretch marks in postpartum women in the Working Area of the Seputih Banyak Primary Health Care, Central Lampung Regency in 2023.

SUGGESTIONS

It is hoped that the results of this study can increase maternal knowledge about stretch marks and how to handle them through herbal remedies such as olive oil which is easily available, and it is hoped that postpartum women will diligently consume foods that contain lots of protein which can increase skin elasticity so as to prevent striae gravidarum.

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THE EFFECT OF WET CUPPING THERAPY ON REDUCING CHOLESTEROL LEVELS IN MENOPAUSE WOMEN

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ABSTRAK : PENGARUH TERAPI BEKAM BASAH TERHADAP PENURUNAN KADAR KOLESTEROL PADA WANITA USIA MENOPAUSE DI WILAYAH KERJA PUSKESMAS KUIN RAYA

Latar Belakang: Menopause merupakan salah satu tahapan yang akan dilewati oleh seorang wanita, hal ini ditandai dengan terhentinya menstruasi secara permanen. Sebagian besar wanita menopause mengalami kenaikan kadar kolesterol dikarenakan penurunan fungsi tubuh, salah satunya penurunan hormon estrogen yang memiliki peran sebagai pengatur kadar kolesterol. Kadar kolesterol yang tinggi dapat berdampak pada timbulnya penyakit kardiovaskular. Data dari Dinas Kesehatan Kota Banjarmasin di tahun 2022 menyatakan sebanyak 856 orang wanita usia 45 keatas mengalami penyakit kardiovaskular.

Tujuan: Menganalisis pengaruh terapi bekam basah terhadap penurunan kadar kolesterol pada wanita usia menopause.

Metode: Penelitian ini menggunakan rancangan *pre eksperiment* dengan desain *One Group Pretest Posttest*. Pengambilan sampel ini dengan teknik *purposive sampling*. Jumlah sampel 30 wanita menopause dengan kadar kolesterol tinggi (> 200 mg/dL). Data penelitian ini diambil dengan menggunakan lembar observasi kadar kolesterol sebelum dan sesudah diberikan terapi bekam basah. Kemudian data dianalisis dengan menggunakan uji *Wilcoxon*.

Hasil: Kadar kolesterol sebelum diberikan terapi bekam basah mayoritas adalah kategori tinggi 100% dan setelah diberikan terapi bekam basah mayoritas kadar kolesterol turun menjadi normal sebesar 80%. Analisis bivariat berdasarkan uji *Wilcoxon* diperoleh nilai P_{value} sebesar 0,000 ($< 0,05$) sehingga H_1 diterima.

Kesimpulan: Terdapat pengaruh terapi bekam basah terhadap kadar kolesterol pada wanita usia menopause.

Saran: Diharapkan masyarakat khususnya wanita menopause mengetahui secara umum manfaat yang dihasilkan oleh terapi bekam basah dan bisa menjadi terapi alternatif untuk penurunan kadar kolesterol dalam tubuh.

Kata Kunci: Bekam Basah, Kolesterol, Menopause

ABSTRACT

Background: Menopause is one of the stages that a woman will go through, it is characterized by the permanent cessation of menstruation. Most menopausal women experience an increase in cholesterol levels due to a decrease in body function, one of which is a decrease in the hormone estrogen which has a role as a regulator of cholesterol levels. High cholesterol levels can have an impact on the onset of cardiovascular disease. Data from the Banjarmasin City Health Office in 2022 stated that as many as 856 women aged 45 and over experienced cardiovascular disease.

Purpose: Analyzing the effect of wet cupping therapy on lowering cholesterol levels in women of menopausal age.

Methods: This study used a pre-experiment design with a One Group Pretest Posttest design. Sampling was done using purposive sampling technique. The sample size was 30 menopausal women with high cholesterol levels (> 200 mg/dL). This research data was taken using an observation sheet of cholesterol levels before and after being given wet cupping therapy. Then the data were analyzed using the Wilcoxon test.

Results: Cholesterol levels before being given wet cupping therapy the majority were 100% high category and after being given wet cupping therapy the majority of cholesterol levels dropped to normal by 80%. Bivariate analysis based on the Wilcoxon test obtained a Pvalue of 0.000 (< 0.05) so that H_1 is accepted.

Conclusion: There is an effect of wet cupping therapy on cholesterol levels in women of menopausal age.

Suggestion: It is hoped that the community, especially menopausal women, will know in general the benefits produced by wet cupping therapy and can be an alternative therapy for lowering cholesterol levels in the body.

Keywords: Wet Cupping, Cholesterol, Menopause

INTRODUCTION

Menopause is one of the stages that a woman will go through. This stage is characterized by the permanent cessation of menstruation. Data from the World Health Organization (WHO) states that by 2030 the number of menopausal women worldwide could reach 1.2 billion people. According to the Central Bureau of Statistics (BPS), the elderly population in 2022, women who entered menopause made a considerable contribution, as much as 18.10% of the total population. In Indonesia, the average age of women entering menopause is in the age range of 48 years. In the province of South Kalimantan, the number of people of menopausal age has a percentage of 5.78%, totaling 681,923 people. And the number of people of menopausal age in Banjarmasin City in 2022 reached 251,077 people (Badan Pusat Statistik, 2022).

The menopause should be a more positive and fulfilling period of life for every woman, such as weight control, mental health and avoidance of serious illness (Suryoprajogo, 2019). One of the most common diseases suffered by menopausal women is high cholesterol or commonly referred to as hypercholesterolemia, this is because as a woman ages, there will be a decrease in body function, one of which is a decrease in ovarian function. Ovaries are responsible for producing the hormone estrogen in the female body. The estrogen hormone has a role in relaxing the arteries which can increase blood flow and also as an antioxidant (Bintanah & Mufnaetty, 2021). Cholesterol in most women increases due to the postmenopausal decline in estrogen. A decrease in estrogen in a woman's body can result in impaired blood fat metabolism and increased body weight. Blood cholesterol also changes when estrogen levels decrease, increasing LDL levels and increasing the risk of heart disease (Riyadina, 2019). In general, total cholesterol, LDL cholesterol, as well as dyslipidemia in climacteric women with menopausal status, show a progression towards an atherogenic profile and a higher risk of cardiovascular disease (CVD) from the reproductive to postmenopausal phase (Putu Sutisna et al., 2022). So that the hormone estrogen has an important role in controlling cholesterol levels in the body, namely being an antioxidant function (Hyvärinen et al., 2022).

Patients with high cholesterol in Indonesia can be said to be quite high, reaching 28% and 7.9% of them died due to this disease (RSST, 2022). The percentage of the Indonesian population who have total cholesterol levels above normal is greater

among women (54.3%) than men (48%). High cholesterol levels can have adverse effects on health, the higher the cholesterol levels in the blood, the higher the risk of cardiovascular disease. Data from the Banjarmasin City Health Office in 2022 stated that as many as 856 women aged 45 to more than 60 years experienced cardiovascular disease. Kuin Raya Health Center is one of the health centers in Banjarmasin City with data on cardiovascular disease experienced by women aged 45 to more than 60 years as many as 137 people. (Dinas Kesehatan Kota Banjarmasin, 2022).

Patients with cardiovascular disease in Indonesia are dominated by the elderly with a majority of women (Perhimpunan Dokter Spesialis Kardiovaskular Indonesia (PERKI), 2017). Pharmacological treatment of hypercholesterolemia is widely sold in the market. Statin drugs are a therapy that is often given by health workers to reduce cholesterol levels. However, there are some side effects that can be caused if you take statin drugs too often such as nausea, constipation, abdominal cramps, headaches and muscle pain (Hidayat dkk., 2018). Apart from pharmacological treatment, hypercholesterolemia can also be treated with herbal medicines, Thai-chi exercises and cupping therapy (Arozi & Wibowo, 2018).

The use of traditional medicines and herbs has become an alternative option for those seeking ways to lower cholesterol naturally. Herbs that contain antioxidant compounds, flavonoids, and omega-3 fatty acids have been known to have effects in reducing high cholesterol levels. For example, flaxseed containing alpha-linolenic acid (ALA) has been found to lower the risk of heart disease and reduce high cholesterol levels. Garlic has also been found to have antioxidant properties that can reduce high cholesterol levels and prevent the formation of atherosclerosis. In recent years, studies have shown that some other herbs, such as soy beans, bay leaves, and grapefruit, also have potential in lowering cholesterol. Soy beans, for example, contain fiber that can help lower cholesterol levels in the body effectively by reducing the amount of bile salts. Bay leaves, on the other hand, contain flavonoids that can reduce high cholesterol levels. Grapefruit, which contains pectin, has been found to lower cholesterol by binding to cholesterol in the gut and reducing its absorption into the bloodstream. It's just that traditional medicines cannot be consumed directly by patients, there are several stages that must be passed such as collecting ingredients, cleaning to processing, so it is less practical. While cupping

therapy has several advantages over traditional medicines in lowering cholesterol such as the effectiveness of rapid reduction, sustainable effects, practical use and does not contain chemicals.

Cupping is commonly referred to as al-hijamah, this word comes from Arabic which means to prevent, suck, turn away, bite, peck, keep away. In the context of medicine cupping can be interpreted to be a blood suction with a cupping tool. Cupping is the process of removing harmful static blood (toxins) in the body by means of a light wound and then suctioned with a cupping tool (Suswitha et al., 2022). In Indonesia, cupping therapy has become popular among the public. Cupping is one of the alternative treatments that is sunnahkan in Islam. The Prophet Muhammad SAW said, "Indeed, in cupping there is healing." (Kitab Mukhtashar Muslim (no. 1480), Shahihul Jaami' (no. 2128) dan Silsilah al-Hadiits ash-Shahihah (no. 864), karya Imam al-Albani). Several scientific studies, one of which was conducted by Siti Nur Hasina & Ellya Chandra Hariyani in 2021 to find out whether there is an effect of wet cupping therapy on reducing high cholesterol levels or hypercholesterolemia, and obtained quite good results in reducing high cholesterol levels, so cupping can be an alternative treatment in hypercholesterolemia patients. Cupping therapy can remove toxic substances including cholesterol that are not absorbed by the body through the surface of the skin by wounding and suction (Hasina & Hariyani, 2021).

Cupping therapy given in this study uses wet cupping therapy. This is because when wet cupping therapy is performed, excess cholesterol plaques that accumulate in blood vessels and stimulation of the lipolysis process of fat tissue during cupping cause the total cholesterol levels of cupping therapy patients to drop. There are eight cupping points that are recommended for people with high cholesterol, namely at the point of Azh-Zhahr. The suction, or shoveling, of the cupped skin creates negative pressure, which helps to remove cholesterol plaques. In addition, the negative pressure causes passive congestion of the local tissue on the superficial surface and increases the dilatation of blood vessels (Rahmanda dkk., 2016). In contrast to wet cupping therapy, the implementation of dry cupping therapy does not make an opening to remove blood in the body. Dry cupping therapy is a technique of sucking on the surface of the skin and massaging the surrounding area which is done without bleeding (Nur Alfitha et al., 2023). Dry cupping therapy can have a positive effect in relieving pain, improving blood circulation, and providing a relaxing effect on the body. The relaxation effect can help relax stiff

muscles, reduce pain and get rid of wind in the body (Agustin Lutfiana dkk., 2018).

According to preliminary studies conducted on December 15, 2023 in the Kuin Raya Health Center working area, by conducting brief interviews with 13 women aged 45-60 years, it was found that 11 women had high cholesterol levels and 7 of them did not know about cupping therapy as an alternative treatment that could reduce high cholesterol levels. This illustrates that the general public has not been exposed to this alternative treatment, especially in the menopausal age group of women.

RESEARCH METHODS

This study uses quantitative research and the method used is Pre-Experiment with One Group Pre-Post Test Design. This research was conducted in the working area of Kuin Raya Health Center, Banjarmasin City. The population used in this study were women of menopausal age in the Kuin Raya Health Center working area of 455 people. The sample used in this study was 30 respondents in accordance with the minimum sampling limit in pre-experimental research, this sampling was in accordance with the inclusion and exclusion criteria determined by the researcher.

The data collection instruments used in this study were data collection forms, simple cholesterol checker autocheck brands, observation sheets and cupping SOPs. The study was conducted by checking cholesterol before wet cupping therapy was given, then after 24 hours of wet cupping therapy, cholesterol levels were checked again to compare cholesterol levels before and after wet cupping. After the data is obtained, the data is then tested for normality. To find out whether a data is normally distributed or not. The results of the normality test showed that the data in the study were not normally distributed, then continued with the Wilcoxon test analysis to test the effect of a treatment.

RESEARCH RESULTS

Univariate analysis

Respondents taken in this study were 30 people. Which have been selected according to the inclusion and exclusion criteria. The following data results appear during the study.

Table 1
Cholesterol Level of Menopausal Women Before Wet Cupping Therapy

Cholesterol Level Category	Before Wet Cupping Therapy	
	Frequency	Percentage (%)
Normal	0	0
High	30	100

Based on table 1, it is known that cholesterol levels in menopausal women as a whole are in the high category, namely 30 respondents (100%). During or after menopause, a woman's cholesterol levels can increase due to reduced levels of the hormone estrogen. Menopausal women are considered vulnerable to having high cholesterol levels due to a decrease in the hormone estrogen which plays a role in balancing bad (LDL) and good (HDL) cholesterol in the body. Women of menopausal age are more prone to developing high cholesterol and have a higher risk of heart attack due to the decrease in estrogen hormone levels which can lead to an increase in LDL cholesterol. Estrogen hormone has a protective effect on blood vessel walls and the composition of LDL and HDL cholesterol, maintaining the elasticity of blood vessels, including the blood vessels of the heart (Jati, 2022). The causes of increased cholesterol levels in menopausal women besides the decrease in estrogen hormones are overweight, lack of active movement and unhealthy habits (Teixeira et al., 2019).

Overweight people tend to have high cholesterol levels, especially bad cholesterol (LDL), which is a risk factor for heart disease and other health problems. Obesity can lead to metabolic system disorders such as hypercholesterolemia, where the condition of excess body fat can increase cholesterol levels in the blood (Solikin & Muradi, 2020). Moreover, being overweight is often accompanied by unhealthy eating habits and lack of physical activity, which can also contribute to elevated cholesterol levels. Therefore, maintaining an ideal body weight through a healthy diet and regular exercise is essential for controlling cholesterol levels and maintaining overall health (Lim & Salvirah, 2024).

In addition, inactivity can also increase cholesterol levels because low physical activity or sedentary habits can cause fat accumulation in the body and interfere with fat metabolism, including cholesterol. Lack of physical activity can reduce good

cholesterol (HDL) levels and increase bad cholesterol (LDL) in the blood. Then, unhealthy eating habits, such as eating unhealthy foods, can increase the risk of high cholesterol in menopausal women. Unhealthy foods can raise bad cholesterol (LDL) levels and lower good cholesterol (HDL), which are risk factors for heart disease and other health problems (Agustina, 2022). Although menopause itself does not cause high cholesterol, as the protective effect of estrogen on cholesterol decreases, the incidence of elevated cholesterol can very easily occur (Sullivan & Ames, 2022).

Table 2
Cholesterol Level of Menopausal Women After Wet Cupping Therapy

Cholesterol Level Category	After Wet Cupping Therapy	
	Frequency	Percentage (%)
Normal	24	80
High	6	20

Based on the results of research that has been conducted by researchers, it shows that the cholesterol levels possessed by respondents after being given wet cupping therapy have mostly decreased. Of the 24 respondents (80%) experienced a decrease in cholesterol levels reaching normal values (< 200 mg/dL). Then there were 6 respondents (20%) whose cholesterol levels did not reach normal values.

Researchers use wet cupping therapy because wet cupping therapy works by increasing tissue oxygenation in patients with hypercholesterolemia and the body's ability to excrete cholesterol physiologically after cupping therapy. In addition, wet cupping therapy can also help in the removal of LDL cholesterol through venous blood, as well as increase Apo-B levels and reduce the amount of LDL cholesterol in patients with hypercholesterolemia. Some studies have shown that wet cupping therapy can reduce total cholesterol, LDL, and increase High Density Lipoprotein (HDL), which is the good cholesterol. Cupping therapy is also known to have a preventive effect on the occurrence of atherosclerosis, which is the buildup of plaque in the arteries that can cause heart disease (Solichin Putri & Larasati, 2020).

Bivariate Analysis

Table 3
Cholesterol Levels of Menopausal Women Before and After Wet Cupping Therapy

Cholesterol Level Category	Wet Cupping Therapy				P _{value}	Difference Mean
	Before		After			
	Frequency	Percentage	Frequency	Percentage		
Normal	0	0	24	80	0,000	29,4
High	30	100	6	20		

Based on the table above, it is found that before being given wet cupping therapy, there were 30 respondents (100%) who had high cholesterol levels. However, after being given wet cupping therapy, as many as 24 respondents (80%) cholesterol levels dropped to normal, while 6 respondents (20%) did not reach normal cholesterol levels after being given wet cupping therapy. The results of the analysis using the Wilcoxon test showed a P_{value} of 0.000 (<0.05) so that H1 was accepted.

DISCUSSION

This study was conducted within 24 hours, the difference in cholesterol levels before and after cupping therapy was obtained, the average value was 29.4 mg/dL. Of the 30 respondents who were given wet cupping therapy, there were 24 respondents who experienced a decrease in reaching the normal cholesterol category, namely < 200 mg/dL, after researchers observed cholesterol levels before wet cupping therapy in 24 respondents had high limit category cholesterol levels (200-239 mg/dL), tending to fall more easily into the normal category after being given wet cupping therapy. While the other 6 respondents had cholesterol levels before being given wet cupping therapy included in the high category (>239 mg/dL) so that the decrease in cholesterol levels after being given wet cupping therapy could not reach normal limits.

Overall, respondents experienced a decrease in cholesterol levels after being given wet cupping therapy. But there was 1 respondent who experienced an increase in cholesterol levels after being given wet cupping therapy. When the researcher traced it by conducting an anamnesis, it turned out that the respondent after performing wet cupping therapy, ate a lot of foods containing excess fat and oil. Food is one of the factors for increasing cholesterol in the body (Direktorat Pencegahan Dan Pengendalian Penyakit Tidak Menular, 2019). Foods with high levels of fat, such as fried foods, foods containing trans fats, and foods made from processed meats, such as shrimp, meat, and offal can increase the level of bad cholesterol (LDL) in the blood, which can clog blood vessels and form plaque,

which in turn can inhibit blood flow in the body. (Husen et al., 2022).

In research conducted by Uda'a et al, (2023), The results are the same, namely that there are respondents who experience an increase in cholesterol levels after wet cupping therapy. Over all there is a decrease in cholesterol levels after cupping therapy. In the study, it was stated that the increase in cholesterol levels could be caused by differences in body response regulation in each respondent, consumption of foods containing high fat, age and body metabolic processes, frequency of cupping interventions that tended to be short and observation of cholesterol levels after cupping therapy that was too fast.

Compared to a study conducted by Bebi and Indrawati in 2019 entitled The Effect of Cupping Therapy on Decreasing Total Cholesterol Levels in Hypercholesterolemia Elderly in Sambong Dukuh Hamlet, Jombang showed that total cholesterol levels in hypercholesterolemia elderly before cupping therapy were in the high category, while after cupping therapy it became the normal category. The research time ranged from 3 months with the treatment given cupping therapy once a month to the respondents. In the Wilcoxon test obtained a P_{value} of 0,000 < α ($\alpha=0,05$) then H1 is accepted. The results of this study found that overall respondents experienced a decrease in cholesterol levels after being given wet cupping therapy.

In line with research conducted by Ali et al., in 2020 entitled Response of Cholesterol to Cupping Therapy in Post-Menopausal Women with Hypercholesterolemia stated that there was a significant decrease in cholesterol in women of menopausal age after being given wet cupping therapy once for 3 consecutive months. This test was conducted on 40 women of menopausal age who were divided into 2 equal groups. Group A received cupping therapy while group B was not given any therapy. Both groups were checked for cholesterol levels before and after treatment, when a comparison was made the group that received wet cupping therapy treatment showed a statistically significant decrease. So that wet cupping therapy is an effective method to reduce cholesterol levels in women of

menopausal age who experience hypercholesterolemia.

Judging from the length of cupping therapy, it turns out that it can affect the results obtained in reducing total cholesterol levels, especially in women of menopausal age. The more often the cupping therapy is given, the better the results of lowering cholesterol levels.

CONCLUSIONS

Based on the results of data analysis, researchers can draw the conclusion that there is an effect of wet cupping therapy on reducing cholesterol levels in women of menopausal age in the Kuin Raya Health Center working area.

SUGGESTIONS

For women entering menopause, it is hoped that they will know in general the benefits produced by wet cupping therapy and can be an alternative therapy for reducing cholesterol levels in the body. And for health workers, the results of this study can be a motivation to use or combine pharmacological and non-pharmacological therapies that can be used as a form of intervention in providing services to reduce cholesterol levels in women of menopausal age.

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THE EFFECTIVENESS OF THE COMBINATION OF EFFLEURAGE MASSAGE AND WARM COMPRESSES IN REDUCING BACK PAIN IN THE THIRD TRIMESTER PREGNANT WOMEN

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ABSTRACT

Background: Back pain in pregnant women is one of the discomforts felt by pregnant women, especially in the third trimester of pregnancy. Back pain is a condition where pain is felt in the lumbosacral, which is caused by several factors, including enlargement of the uterus, changes in body pos, tension, and increased hormones. This back pain is a physiological thing felt by pregnant women, but it will turn pathological if not treated properly and will have a fatal impact on both the mother and the fetus in the womb. Back pain in pregnant women can be treated non-pharmacologically by applying a combination of effleurage massage and warm compresses.

Purpose: This study aimed to determine the effectiveness of a combination of effleurage massage and warm compresses in reducing back pain in third-trimester pregnant women at UPT Tideng Pale Health Center.

Method: This study used a quasi-experiment design with a pre-test and post-test approach with a control group. The number of participants in this study was 34, and they met the inclusion criteria, consisting of 17 respondents in the intervention group and 17 in the control group. The pain assessment instrument used the Numeric Rating Scale (NRS). **Results:** Based on the Wilcoxon test, the P-value was $0.000 < \alpha (0.05)$, so H_a was accepted.

Conclusion: This indicates a difference in the results of the post-test in the intervention group and the control group because there is a very significant difference; it shows that the combination of effleurage massage and warm compress is effective in reducing back pain for pregnant women in the third trimester at UPT Tideng Pale Health Center Tana Tidung Regency.

Suggestion It is expected that pregnant women in the third trimester continue to apply a combination of effleurage massage and warm compresses to reduce back pain during pregnancy. Midwives and research sites should provide information to pregnant women about the use of this method as an alternative solution for back pain. Educational institutions are expected to use the results of this research as a reference in the development of midwifery science to improve the quality of midwifery care. In addition, researchers can further make the results of this study as a reference for further research

Keywords: Effleurage Massage, Warm Compress, Back Pain

ABSTRAK : EFEKTIVITAS KOMBINASI PIJAT EFFLEURAGE DAN KOMPRES HANGAT DALAM MENURUNKAN NYERI PUNGGUNG PADA IBU HAMIL TRIMESTER III

Latar Belakang : Nyeri punggung pada ibu hamil merupakan salah satu ketidaknyamanan yang dirasakan oleh ibu hamil secara khusus pada ibu hamil Trimester ke III. Nyeri punggung merupakan kondisi dimana nyeri yang dirasakan pada daerah lumbosakral yang disebabkan oleh beberapa faktor diantaranya pembesaran rahim, berubahnya postur tubuh dan juga peningkatan hormon. Nyeri punggung ini merupakan hal fisiologis yang dirasakan oleh ibu hamil namun akan berubah menjadi patologis jika tidak ditangani dengan tepat akan berdampak fatal baik bagi ibu maupun janin dalam kandungan. Nyeri punggung pada ibu hamil dapat ditangani secara non farmakologis yaitu dengan menerapkan kombinasi *effleurage massage* dan kompres hangat.

Tujuan : Untuk mengetahui efektivitas kombinasi *effleurage massage* dan kompres hangat terhadap pengurangan nyeri punggung pada ibu hamil trimester III di UPT Puskesmas Tideng Pale.

Metode : Penelitian ini menggunakan desain *quasy-eksperiment* dengan pendekatan *pre-test and post-test with control group*. Jumlah sampel dalam penelitian ini adalah 34 orang yang memenuhi kriteria *inklusi* yang terdiri dari 17 responden pada kelompok intervensi dan 17 orang pada kelompok kontrol. Instrumen penilaian nyeri menggunakan *Numeric Raiting Scale (NRS)*

Hasil: Berdasarkan uji *Wilcoxon* menunjukan nilai-Pvalue sebesar $0.000 < \text{daria } (0.05)$, sehingga H_a diterima.

Kesimpulan: Ada perbedaan hasil *post test* pada kelompok intervensi dan kelompok kontrol, karena ada perbedaan yang sangat signifikan.

Kesimpulan : Kombinasi *effleurage massage* dan kompres hangat efektif terhadap pengurangan nyeri punggung ibu hamil trimester III di UPT Puskesmas Tideng Pale Kabupaten Tana Tidung.

Saran Diharapkan bagi ibu hamil trimester III untuk tetap menerapkan kombinasi pijat *effleurage* dan kompres hangat untuk mengurangi nyeri pinggang saat hamil. Bidan dan tempat penelitian hendaknya memberikan informasi kepada ibu hamil tentang penggunaan metode ini sebagai alternatif solusi nyeri punggung. Instansi pendidikan diharapkan dapat menjadikan hasil penelitian ini sebagai acuan dalam pengembangan ilmu kebidanan untuk meningkatkan mutu pelayanan kebidanan. Selain itu, peneliti selanjutnya dapat menjadikan hasil penelitian ini sebagai referensi untuk penelitian selanjutnya

Kata kunci : *effleurage massage*, kompres hangat, nyeri punggung

INTRODUCTION

Pregnancy is a process of a woman's life, there are many major changes for the woman herself, both from physical, mental and social aspects. There are factors that affect pregnancy itself, namely: physical factors, psychological factors, environmental, social, cultural, and economic factors. Each factor influences each other, because it is interrelated with each other and can be both a cause and effect. (Gultom, 2020).

During the process of pregnancy, there are physical changes that can cause discomfort, especially in the third trimester of pregnancy. such as frequent urination, shortness of breath, back pain, heartburn, constipation, insomnia, dyspnea, perineal discomfort, calf muscle cramps, varicose veins, ankle edema, fatigue, Braxton hicks contractions, erratic mood, and increased anxiety. Weight gain, fundus uteri height increase, and abdominal enlargement (Pudji & Ina, 2018).

The incidence rate of pregnant women with back pain in the world as much as 50-80% of pregnant women complain of back pain that is quite disturbing during pregnancy (Holingworth, 2017). In pregnant women, about 50% of women experience back pain and about 10% of women with chronic back pain. Back pain in pregnancy is mostly experienced when entering the 6th month of pregnancy. About 80% of women will experience back pain at some point during pregnancy. The prevalence of discomfort during pregnancy is around 3-17%, in developed countries 10% and in developing countries 25% (Ministry of Health, 2019), In 2018 and 2019, around 20% to 90% of pregnant women in Canada, Nepal, the United States, Europe, and parts of Africa complained of back pain that interfered with daily activities such as walking and sitting for long periods of time (Wanti & Fatmarizka, 2022).

In Indonesia in 2017 it was found that 68% of pregnant women experienced moderate intensity

back pain, and 32% of pregnant women experienced mild intensity back pain, there were 373,000 pregnant women. From data collected from the health department of North Kalimantan Province in 2020, the incidence of pregnancy discomfort, back pain in pregnant women ranges from 29.23%. (North Kalimantan provincial health office).

Tana Tidung Regency is the youngest district in North Kalimantan, has a population of 727,755 people, spread across 5 districts. And each sub-district in Tana Tidung Regency has 5 Puskesmas, one of which is UPT Puskesmas Tideng Pale, based on data from the Tana Tidung Regency Health Office, the Tideng Pale Health Center has a K1 visit coverage of 235 pregnant women and K4 visits of 250 pregnant women in 2022, followed by UPT Puskesmas Sesayap with K1 visits of 189 pregnant women, K4 visits 205 pregnant women and those who have the least number of K1 and K4 visits are UPT Puskesmas Tana Lia as many as 128 K1 visits and 156 K4 visits for pregnant women. Based on these data, researchers are interested in conducting a preliminary study at UPT Puskesmas Tideng Pale, Tana Tidung Regency. On June 6, 2023, researchers had the opportunity to conduct interviews with 10 III trimester pregnant women who were visiting at that time. 8 of them complained of back pain, 3 of them complained that they could not be brought to sleep well, difficulty standing, difficulty going to the bathroom and doing other housewife activities. 6 of them complained of frequent urination and back pain, 2 pregnant women complained of not sleeping well at night.

Lower back pain is pain in the lumbosacral region, which is affected by changes in posture, this is in line with gradual weight gain during pregnancy. The body leans forward due to stretching of the abdominal muscles which causes muscle imbalance around the pelvis and causes pain in the back (Resti, et.al 2020). Generally, lower back pain in pregnant women is physiological, but can turn pathological if

not treated properly. In severe cases, the pregnant woman may be unable to walk, sometimes anatomical, congenital, or traumatic abnormalities. Pain due to intervertebral disc herniation occurs in pregnancy with approximately the same frequency as at other times (Resti, et.al 2020).

Back pain in pregnant women can be overcome by pain management consisting of 2 ways, namely pharmacology and non-pharmacology. Pharmacological procedures are carried out by administering analgesics to reduce or relieve pain, while non-pharmacological procedures can be done by giving complementary therapies such as breathing techniques, changing positions, massage, hot or cold therapy, and finger grip relaxation therapy (Rosa et al., 2023).

In previous studies, non-pharmacological therapy has often been given and proven to help relieve back pain, especially for III trimester pregnant women, one of which is effleurage massage. The mechanism of action of effleurage massage in reducing back pain in the third trimester of pregnant women is a movement by using the entire surface of the palm attached to the rubbed body parts. The shape of the palms and fingers always adjusts to the part of the body that is rubbed. The therapeutic effects or healing effects of this effleurage include helping to improve venous blood circulation and lymph circulation / lymph fluid, helping to improve metabolic processes, improving the process of removing combustion residues or reducing fatigue, helping the absorption (absorption) of odema due to inflammation, relaxation and reducing pain (Andriani et al., 2023).

According to research conducted by Andriani Amelia, et.al of 2022 by giving therapy effleurage massage to third trimester pregnant women at UPT Puskesmas Yosomulyo Kota Metro, it was found that there was a decrease in the scale of back pain in respondents from a pain scale of 5 to a pain scale of 3 Third trimester pregnant women are advised to do effleurage massage regularly in the morning in order to reduce the scale of back pain so that mothers are comfortable in carrying out activities.

Another study that is in line is research from lin Setiawati (2019) entitled "The Effectiveness of Massage Effleurage Techniques and Relaxation Techniques Against Back Pain in Third Trimester Pregnant Women" Wilcoxon test results, in the massage effleurage group obtained p-value $0.003 < 0.05$ and the relaxation technique group p-value $0.003 < 0.05$. then H_a was impeached. So it was concluded that there was an influence before and after effleurage massage techniques and relaxation techniques were carried out on reducing back pain in

third trimester pregnant women in Socah, Bangkalan Regency.

In addition to effleurage massage, one of the non-pharmacological measures that have proven effective in relieving back pain in III trimester pregnant women is to use warm compresses. The mechanism of action of warm compresses in helping reduce back pain in III trimester pregnant women is The heat caused by warm compresses can cause dilation and physiological changes so as to facilitate blood circulation and relieve pain. This heat response is used for pain reduction therapy. The therapeutic effect of applying warm compresses will be able to reduce muscle spasms and reduce joint bone stiffness (Suryani et al., 2022).

According to research conducted by (Putri et al., 2023) entitled "The Effect of Warm Compresses on the Intensity of Back Pain in Third Trimester Pregnant Women at PMB D South Jakarta City in 2022" These results showed a decrease in back pain before and after with a difference of 2.97 and obtained significant results of 0.000 smaller than the significant level of 5% ($p\text{-value} = 0.000 < 0.05$), then the conclusion is that H_a is accepted which means there is an influence of warm compresses on Back pain in III trimester pregnant women.

Efforts to handle the improvement of back pain complaints carried out at the Tideng Pale Puskesmas UPT are based on preliminary studies, namely in the form of IEC on rest needs and preventive treatment that has been carried out in the form of pregnancy exercises in pregnant women classes at the Tideng Pale Health Center UPT. To maximize the rate of reducing back pain in pregnant women, especially the Third Trimester, researchers are interested in improving back pain with non-pharmacological measures, in line with previous studies above, researchers are interested in providing effleurage massage and warm water compresses in reducing back pain in III trimester pregnant women. So based on these data, researchers are interested in proving the effectiveness of the combination of Effleurage Massage and Warm Compresses on reducing back pain in third trimester pregnant women at UPT Puskesmas Tideng Pale

RESEARCH METHODS

Type of quantitative research with quasy-experimental method with pre-test and post-test approach with control group. The population of all third trimester pregnant women of 28-36 weeks gestation who experience back pain as many as 40 people. The sample used 33 respondents with purposive sampling techniques. The research was

conducted at the Tideng Pale Health Center. The instrument uses numeric rating score (NRS) observation sheet and standard operating procedure (SOP) for effleurage massage. Analysis of univariate and bivariate data (t-test).

RESEARCH RESULTS

Univariate Analysis

Based on table 1 on the age characteristics of the intervention group, most respondents aged 31-35 years amounted to 9 pregnant women (52.9%), and in the control group also found almost half aged 31-35 years amounted to 8 pregnant women (47.1%). In the characteristics of education, the level of junior and senior high school education in the intervention group was the same, which was almost half of the respondents (35.3%), while in the control group

showed the level of high school education almost half, namely 7 pregnant women (41.2%). Job characteristics showed that most of the respondents' jobs were IRT in the intervention group (64.7%), While in the control group most were 10 pregnant women (58.8%). In the characteristics of gestational age, gestational age obtained different results between the intervention and control groups, in the intervention group based on gestational age 34-36 weeks was the number of mostly 9 pregnant women (52.9%) while in the control group obtained some gestational age of 26-30 weeks, namely 9 pregnant women (52.9%). In the parity characteristic, there were multipara respondents in the intervention group, mostly 12 pregnant women (70.6%), while in the control group, almost all multiparaly, namely 14 pregnant women (82.4%).

Table 1
Frequency Distribution of Respondents at UPT Puskesmas Tideng Pale

Characteristic Responden	Intervention Group		Control Group	
	frek	%	frek	%
Age				
20-25 Years	3	17.6%	5	29.4%
26-30 Years	5	29.4%	4	23.5%
31-35 Years	9	52.9%	8	47.1%
Education				
Primary School	2	11.8%	3	17.6%
Junior High School	6	35.3%	5	29.4%
Senior High School	6	35.3%	7	41.2%
College	3	17.6%	2	11.8%
Job				
Civil Servants	1	5.9%	1	5.9%
Honorar	5	29.4%	6	35.3%
Housewife	11	64.7%	10	58.8%
Gestational Age				
26-30 Weeks	7	41.2%	9	52.9%
31-33 Weeks	1	5.9%	2	11.8%
34-36 Weeks	9	52.9%	6	35.3%
Paritas				
Primipara	5	29.4%	3	17.6%
Multipara	12	70.6%	14	82.4%

Table 2
Identification of back pain scale for third trimester pregnant women at UPT Puskesmas Tideng Pale, Tana Tidung Regency before a combination of effleurage massage and warm compresses was carried out

Pain Scale	Intervention Group		Control Group	
	Frek	%	Frek	%
0	0	0	0	0
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	2	11.8%	2	11.8 %
6	2	11.8%	1	5.9 %
7	9	52.9%	4	23.5%
8	4	23.5%	10	58.8%
9	0	0	0	0
10	0	0	0	0

Based on the data in Table 2, the results of the statistical test identifying the scale of back pain for third trimester pregnant women at UPT Puskesmas Tideng Pale, Tana Tidung Regency before the combination of effleurage massage and warm compresses in the intervention group was that most (52.9%) respondents experienced severe pain with a pain scale score of 7. While in the control group, most (58.8%) respondents experienced severe pain with a pain scale score of 8.

Table 3
Identification of back pain scale for third trimester pregnant women at UPT Puskesmas Tideng Pale, Tana Tidung Regency after a combination of effleurage massage and warm compresses

Pain Scale	Intervention Group		Control Group	
	Frek	%	Frek	%
0	12	70.6%	0	0
1	5	29.4%	0	0
2	0	0	0	0
3	0	0	1	5.9%
4	0	0	0	0
5	0	0	2	11.8%
6	0	0	1	5.9%
7	0	0	4	23.5%
8	0	0	9	52.9%
9	0	0	0	0
10	0	0	0	0

Based on the data in Table 3, from the results of the statistical test of the back pain scale scale for

third trimester pregnant women at UPT Puskesmas Tideng pale, Tana Tidung Regency after a combination of effleurage massage and warm compresses in the intervention group, most (70.6%) respondents experienced a decrease in the pain scale to painless with a pain scale score of 0. While in the control group, very different results were obtained, namely only a small percentage (5.9%) of respondents experienced changes in pain to mild with a pain scale score of 3.

Bivariate Analysis

Table 4
Statistical Test Results The effectiveness of a combination of effleurage massage and warm compresses towards reducing back pain for pregnant women at UPT Puskesmas Tideng Pale

Variabel	Z	p-value
Intervention Group	-3.714	0.000
Control Group	-1.000	0.317

Based on the data in Table 4 The results of the statistical test show a p-value of 0.000 smaller than α (0.05), it can be concluded that there is a difference between the scale of back pain of III trimester pregnant women in the pre-test and post-test in the intervention group so that it can be concluded that there is an effectiveness of the combination of effleurage massage and warm compresses on reducing back pain of third trimester pregnant women at UPT Puskesmas Tideng Pale. while in the control group, a p-value of 0.317 was greater than α (0.05), so it can be concluded that there is no difference between the scale of back pain of third trimester pregnant women at UPT Puskesmas Tideng Pale in the pre-test and post-test in the control group.

DISCUSSIONS

Identification Of The Scale Of Back Pain For Third Trimester Pregnant Women At UPT Puskesmas Tideng Pale Kabupaten Tana Tidung Before A Combination Of Effleurage Massage And Warm Compresses Is Carried Out

The results of the identification of the back pain scale for third trimester pregnant women at UPT Puskesmas Tideng pale Tana Tidung Regency before the combination of effleurage massage and warm compresses in the intervention group were a small percentage (11.8%) of respondents experienced moderate pain complaints with a pain scale score of 5, a small percentage (11.8%) of respondents experienced moderate pain with a pain

scale score of 6, most (52.9%) respondents experienced severe pain with a pain scale score of 7 and a small part (23.5%) Respondents experienced severe back pain with a pain scale score of 9. While in the control group, a small percentage (11.8%) of respondents experienced moderate pain with a pain scale score of 5, a small percentage (5.9%) of respondents experienced moderate pain with a pain scale score of 6, a small part (23.5%) of respondents experienced severe pain with a pain scale score of 7 and most (58.8%) respondents experienced severe pain with a pain scale score of 8.

Back pain is more widely felt by pregnant women, especially when entering the second and third trimesters and is a common complaint that is often felt so that it is estimated that around 70% of pregnant women complain of some form of back pain during pregnancy, labor to postpartum. Back pain is a very frequent problem in pregnancy, especially in the third trimester of pregnancy. The phenomenon of pain today has become a complex problem defined by the International society for the study of pain as "unpleasant sensory and emotional experiences resulting from tissue damage, both actual and potential". Pain causes fear and anxiety and can increase stress and drastic physiological changes during pregnancy. These changes are caused by the weight of an enlarged uterus, excessive bending, walking without rest, and lifting weights. Symptoms of back pain are also caused by the hormones estrogen and progesterone that relax the joints, bone bundles and muscles in the hips. (Purnamasari & Widiyawati, 2019)

Back pain in pregnant women can be overcome by pain management consisting of 2 ways, namely pharmacology and non-pharmacology. Pharmacological procedures are carried out by administering analgesics to reduce or relieve pain, while non-pharmacological procedures can be done by giving complementary therapies such as breathing techniques, changing positions, massage, hot or cold therapy, and finger grip relaxation therapy (Rosa et al., 2023).

According to researchers, it is very necessary to take actions that help pregnant women in the third trimester to reduce back pain, considering that if back pain does not get proper and proper management it can have a long impact on pregnant women and greatly interfere with the activities of third trimester pregnant women. According to researchers, non-pharmacological intervention can greatly help trimester III pregnant women to reduce back pain, because it has no long-term and serious effects for pregnant women.

Identification of the scale of back pain for third trimester pregnant women at UPT Puskesmas Tideng Pale, Tana Tidung regency after a combination of effleurage massage and warm compresses

The results of the identification of the back pain scale for third trimester pregnant women at UPT Puskesmas Tideng Pale, Tana Tidung Regency after a combination of effleurage massage and warm compresses in the intervention group were most (70.6%) respondents decreased the scale to painless with a pain scale score of 0 and almost half (29.4%) respondents experienced a decrease in the pain scale to mild with a pain scale score of 1 While in the control group only partial results were obtained Small (5.9%) respondents experienced a change in pain to mild with a pain scale score of 3, while a small percentage experienced moderate pain (11.8) respondents with a pain scale score of 5, a small percentage (23.5%) respondents continued to experience severe pain with a pain scale score of 7 and most (52.9%) respondents continued to experience severe pain with a pain scale score of 8

In previous studies conducted by (Andriani et al., 2023) non-pharmacological therapy has often been given and proven to help relieve back pain, especially for third trimester pregnant women, one of which is effleurage massage. The mechanism of action of effleurage massage in reducing back pain in the third trimester of pregnant women is a movement by using the entire surface of the palm attached to the rubbed body parts. The shape of the palms and fingers always adjusts to the part of the body that is rubbed. The therapeutic effects or healing effects of this effleurage include helping to improve venous blood circulation and lymph circulation / lymph fluid, helping to improve metabolic processes, improving the process of removing combustion residues or reducing fatigue, helping the absorption (absorption) of odema due to inflammation, relaxation and reducing pain (Andriani et al., 2023).

In addition to effleurage massage, one of the non-pharmacological measures that have proven effective in relieving back pain in III trimester pregnant women is to use warm compresses. The mechanism of action of warm compresses in helping reduce back pain in III trimester pregnant women is that the heat caused by warm compresses can cause dilation and physiological changes so as to facilitate blood circulation and relieve pain. This heat response is used for pain reduction therapy. The therapeutic effect of applying warm compresses will be able to reduce muscle spasms and reduce joint stiffness (Suryani et al., 2022).

According to researchers, the decrease in the scale of back pain in the intervention group in the third trimester of pregnant women occurred due to an increase in comfort, relaxation produced by effleurage massage and a warm feeling that made stiff back muscles relax because of the warm feeling of warm compresses given to the back of III trimester pregnant women. The decrease in pain scale was obtained after a combination intervention of effleurage massage and warm compresses, this was evidenced by 5 assessments of pain scales that were getting smaller in value on each parameter.

In the control group did not experience changes in the scale of pain, this was because the control group was not given any intervention, only given leaflets about the management of back pain of pregnant women by means of a combination of effleurage massage and warm compresses on the back of III trimester pregnant women. This is in line with research that conducted by (Simbung et al., 2022) with the title of research on the effectiveness of progressive muscle relaxation techniques with effleurage massage on back pain in III Trimester Pregnant Women, statistical analysis was obtained in the control group using the Wilcoxon Signed Ranks Test in the control group was 0.157 ($\alpha \leq 0.00$) so that it can be concluded that in the control group (the group that was not given any treatment) it could not affect the reduction of maternal back pain Third trimester pregnancy, this is because IEC alone is not proven effective for changing one's behavior because each individual has a different response to the information obtained.

The effectiveness of the combination of effleurage massage and warm compresses on reducing back pain for third trimester pregnant women at UPT Puskesmas Tideng Pale, Tana Tidung Regency

The results of the study based on the output of statistical tests in this study are known to be p-values of 0.000 smaller than α (0.05), so it can be concluded that there is a difference between the scale of back pain of III trimester pregnant women in the pre-test and post-test in the intervention group so that it can be concluded that there is an effectiveness of a combination of effleurage massage and warm compresses on reducing back pain for third trimester pregnant women at UPT Puskesmas Tideng Pale, Tana Regency Tidung. While in the control group, the p-value of 0.317 was greater than α (0.05), then H_A was rejected and it can be concluded that there is no difference between the scale of back pain of III trimester pregnant women in the pre-test and post-test in the control group.

This is in line with previous research conducted by (Suryani et al., 2022) with the research title "The effectiveness of massage effleurage and relaxation techniques on the level of back pain of third trimester pregnant women at the Puskesmas Kenali Besar Jambi City" this study they used the Wilcoxon test to show that p-value = 0.000 which means there is an effect of giving effleurage massage on reducing back pain for III trimester pregnant women. and also in line with research conducted by (Dian Agustriyani Putri et al., 2023) with the research title "The effect of warm compresses on the intensity of back pain in third trimester pregnant women at PMB D South Jakarta City in 2022" the results of this study using the Wilcoxon test obtained significant results of 0.000 smaller than the significant level of 5% (p-value = 0.000 < 0.05), then the conclusion is that H_a is accepted which means there is an effect of warm compresses on back pain in III trimester pregnant women.

Effleurage massage is a long, uninterrupted gentle stroke, causing a relaxing effect. Some patterns of effleurage massage where the selection of massage patterns depends on the wishes of each user and its benefits in providing comfort, as well as the role of warm compresses to reduce back pain, where compresses given to the back will produce a warm sensation and can reduce pain, and also improve blood circulation, vascularization smoothly and vasodilation occurs which makes relaxation in the muscles because the muscles get excess nutrition carried by blood so that muscle contractions decrease and cause effects to relieve pain, one of which is back pain that is often felt by III trimester pregnant women.

While in the control group, the results of the Wilcoxon test obtained a p-value of 0.317 greater than α (0.05), then H_a was rejected and it can be concluded that there is no difference between the scale of back pain of third trimester pregnant women at UPT Puskesmas Tideng Pale, Tana Tidung Regency in the pre-test and post-test in the control group who were not given any treatment, but purchased by KIE regarding reducing the scale of back pain using leaflet media. In previous research conducted by (Hudana et al., 2022), Where this study also examined the reduction of back pain in III trimester pregnant women obtained significant results between the intervention group and the control group. In the intervention group, bakom massage treatment was given to 15 respondents of III trimester pregnant women and carried out a Wilcoxon static test of 0.000 ($\alpha \leq 0.00$) then H_a was accepted, while in the kontrol group that was not

given treatment only given IEC obtained results of 0.157 ($\alpha \leq 0.00$) then H_a was rejected. So the conclusion of the study in the control group that was only given intervention only given IEC alone proved not to be petrified in reducing back pain felt by pregnant women in the third trimester, this is because the response of each individual to the information conveyed was different.

According to the researchers, there is a very prominent difference between the intervention group and the control group, this is because the intervention group is given routine treatment of effleurage massage combined with warm compresses, this is effective for reducing back pain felt by pregnant women. While in the control group, researchers only provided leaflets about reducing back pain using effleurage massage and warm compresses without special treatment, this is because each individual's response to the information provided is different. From this study, researchers also concluded that there is an effectiveness of the combination of effleurage massage and warm compresses to reduce back pain for III trimester pregnant women, specifically for III trimester pregnant women in the working area of UPT Puskesmas Tideng Pale, Tana Regency, Tidung Province, North Kalimantan.

CONCLUSION

Research at UPT Puskesmas Tideng Pale, Tana Tidung Regency showed that third trimester pregnant women who experienced moderate to severe back pain experienced a significant decrease in pain scale after being given a combination of effleurage massage and warm compresses. Before the intervention, all respondents experienced moderate to severe back pain, but after the intervention, almost all respondents reported a decrease in pain scale to mild pain or no pain at all. These results indicate that the combination of effleurage massage and warm compresses is effective in reducing back pain in III trimester pregnant women.

SUGGESTION

It is expected that pregnant women in the third trimester continue to apply a combination of effleurage massage and warm compresses to reduce back pain during pregnancy. Midwives and research sites should provide information to pregnant women about the use of this method as an alternative solution for back pain. Educational institutions are expected to use the results of this research as a reference in the development of midwifery science to improve the quality of midwifery care. In addition,

researchers can further make the results of this study as a reference for further research

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THE RELATIONSHIP OF ANTENATAL CARE SERVICES WITH THE INCIDENT OF LOW BIRTH WEIGHT

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ABSTRAK : HUBUNGAN PELAYANAN PERAWATAN ANTENATAL DENGAN KEJADIAN BERAT BADAN LAHIR RENDAH

Latar Belakang: Survei Status Gizi Indonesia (SSGI 2021) angka kejadian BBLR di Indonesia mengalami peningkatan 0,4% dari tahun 2018 yaitu dari 6,2% menjadi 6,6%. Pelayanan ANC dapat mengidentifikasi pelayanan yang diberikan kepada ibu hamil, termasuk penelusuran riwayat penyakit ibu, pemeriksaan tekanan darah, pemeriksaan anemia, pergerakan janin, tindakan pemberian suplementasi zat besi dan asam folat serta pendidikan kesehatan secara keseluruhan. Beberapa penelitian lain juga menunjukkan keterkaitan antara pelayanan ANC dengan kejadian BBLR.

Tujuan: Adapun penelitian ini bertujuan untuk mengetahui hubungan pelayanan ANC dengan kejadian BBLR di Kabupaten Belitung tahun 2022.

Metode: Desain potong lintang (cross-sectional) yang berlokasi penelitian 9 (sembilan) Puskesmas wilayah kerja Dinas Kesehatan Kabupaten Belitung pada periode 1 Januari-31 Desember tahun 2022 yang tercatat di kohort ibu. Analisis menggunakan Uji Chi Square untuk melihat hubungan pelayanan ANC dengan kejadian BBLR. Derajat suatu hubungan diperoleh dengan ukuran asosiasi berupa odds ratio (OR).

Hasil: Didapatkan bahwa Berat Badan Lahir rendah (BBLR) yaitu 33 (10,6%). Ibu dengan jumlah kunjungan ANC tidak sesuai standar (OR=6,12 95% CI 2,44 – 15,31; P value <0,001); jumlah kualitas layanan ANC tidak sesuai standar (OR=5,32 95% CI 1,47 – 19,27; P value 0,021); komposit pelayanan ANC tidak sesuai standar (OR=5,59 95% CI 2,34 – 13,35; P value <0,001) berisiko melahirkan bayi BBLR dibanding dengan ibu yang memiliki pelayanan ANC sesuai standar.

Kesimpulan: Keberhasilan pelayanan ANC pada penelitian ini mendukung dalam menurunkan kejadian BBLR. Jumlah kunjungan, jumlah kualitas layanan ANC, dan komposit pelayanan ANC merupakan faktor yang baik untuk menurunkan kejadian BBLR. Disarankan bahwa peningkatan petugas kesehatan yang memberikan layanan ANC harus berupaya meningkatkan kelengkapan cakupan dan layanan ANC kepada seluruh ibu hamil.

Saran: fokus pada kualitas dan minimum kuantitas layanan ANC adalah suatu yang sangat penting untuk dicapai

Kata Kunci : BBLR, Kabupaten Belitung, Pelayanan Antenatal Care

ABSTRACT

Background: The Indonesian Nutrition Status Survey (SSGI 2021) shows that the incidence of LBW in Indonesia has increased by 0.4% from 2018, namely from 6.2% to 6.6%. ANC services can identify the services provided to pregnant women, including tracing the mother's medical history, checking blood pressure, examining anemia, fetal movements, providing iron and folic acid supplementation and overall health education. Several other studies also show a link between ANC services and the incidence of LBW

Purpose: This research aims to determine the relationship between ANC services and the incidence of LBW in Belitung Regency in 2022.

Methods: Cross-sectional design with research locations in 9 (nine) Community Health Centers in the working area of the Belitung Regency Health Service in the period 1 January-31 December 2022 which were recorded in the maternal cohort. The analysis used the Chi Square Test to see the relationship between ANC services and the incidence of LBW. The degree of a relationship is obtained by measuring the association in the form of the odds ratio (OR).

Results: It was found that low birth weight (LBW) was 33 (10.6%). Mothers whose number of ANC visits did not meet the standard (OR=6.12 95% CI 2.44 – 15.31; P value <0.001); the number of ANC service qualities not up to standard (OR=5.32 95% CI 1.47 – 19.27; P value 0.021); composite ANC services that do not meet

standards (OR=5.59 95% CI 2.34 – 13.35; P value <0.001) have a risk of giving birth to LBW babies compared to mothers who have ANC services that meet standards.

Conclusion: The success of ANC services in this study supports reducing the incidence of LBW. The number of visits, the quality of ANC services, and the composite of ANC services are good factors for reducing the incidence of LBW. It is recommended that an increase in health workers providing ANC services should strive to increase the completeness of ANC coverage and services to all pregnant women.

Suggestions; Antenatal care services can improve again.

Keywords: LBW, Belitung Regency, Antenatal Care Services

INTRODUCTION

Low Birth Weight (LBW) is a public health problem that still occurs globally and has short-term and long-term effects (Hidayah, 2017). LBW is a baby with a birth weight of less than 2500 grams (Ningsih, 2020). The percentage of births of babies with LBW is one of the indicators most widely used to measure the health level of the population throughout the world, and is often used as an indicator of Intra Uterine Growth Restriction (IUGR), morbidity, mortality and disability in developing countries due to the unavailability of information regarding nutrition (Ningsih, 2020; Weyori et al., 2022).

LBW is one of the risk factors that most influences the incidence of neonatal death. The World Health Organization (WHO) in 2018 stated that the prevalence of LBW babies in the world is around 15.5% or around 20 million babies born every year and around 96.5% of them occur in developing countries (WHO, 2018). Based on data from the 2012 Indonesian Demographic and Health Survey, the infant mortality rate (IMR) reached 32 per 1,000 births (Sormin et al., 2016). Based on the results of the 2018 Indonesian Basic Health Research (Riskesdas), LBW is the second highest cause of risk factor for infant death in Indonesia at 34%. The birth rate of LBW babies in Indonesia reaches 350,000 every year. In 2019 LBW was the main cause of neonatal death (AKN) at 35.5% (Kementerian Kesehatan RI, 2020).

Based on data from the Indonesian Nutrition Status Survey (SSGI 2021), the incidence of LBW in Indonesia has increased by 0.4% from 2018, namely from 6.2% to 6.6% (Kemenkes RI, 2021). The profile of the Bangka Belitung Islands Provincial Health Service states that the incidence of LBW in the Bangka Belitung Islands Province in 2020-2022 is around 4.20%-4.38%. Of the 7 regencies/cities, Belitung Regency is the district that contributed the most in the last 3 years with a percentage of LBW rates ranging from 6.59% -7.69%. In 2021, Belitung Regency is one of the regencies that is the locus for reducing MMR/IMR out of 200 regencies/cities throughout Indonesia determined by the Ministry of

Health of the Republic of Indonesia (Dinas Kesehatan Provinsi Kepulauan Bangka Belitung, 2022).

The impact of LBW incidents has short-term and long-term impacts. Short-term impacts, babies with LBW are at risk of experiencing pain during the neonatal period (such as respiratory problems, infections, body temperature disorders and nutritional disorders), then there are other disorders related to the immaturity of the baby's internal organs and need intensive care so as not to cause pain and death. The long-term impact of LBW, babies are at risk of experiencing growth delays from the start, developmental delays, poor school performance, risk of death in infancy and childhood, risk of experiencing non-communicable diseases in adulthood (Sormin et al., 2016).

The factors that cause LBW are the result of the interaction of various factors through processes that take place while in the womb. Factors that can influence LBW are internal factors (mother), external factors and fetal factors (Daniels, 2011; Kurniasari et al., 2023). Internal factors include antenatal care (ANC) visits, hemoglobin levels of pregnant women, mother's weight during pregnancy, parity, distance between pregnancies, upper arm circumference, age, preeclampsia and nutritional status of the mother. External factors consist of the environment, socio-economics and health facilities. Fetal factors consist of prematurity and multiple pregnancies (Kurniasari et al., 2023; Purwanto & Wahyuni, 2016; Sormin et al., 2016).

Antenatal Care (ANC) is a routine pregnancy check-up which aims to check the condition of the mother and fetus, ensure that the pregnancy can progress normally and prepare for childbirth (Palewang et al., 2019). ANC visits have an important role in efforts to detect and treat possible LBW incidents. ANC provides pregnant women with access to various interventions to improve maternal and child health (Mekonnen et al., 2023; Weyori et al., 2022). Antenatal care can be used as an initial screening for the condition of the baby to be born. Babies can be born with high, normal or low birth

weight. On this occasion the author will focus on low birth weight babies (Sukarni, 2014). Based on data from Riskesdas Indonesia in 2013, K1 coverage nationally was 81.6% and K4 coverage nationally was 70.5%. It was found that the difference between ideal K1 and K4 coverage nationally showed that there were 12% of mothers who received ideal K1 but did not continue ANC according to standards until K4 (Kementerian Kesehatan RI, 2013; Ruindungan et al., 2017).

Reducing the incidence of LBW will have an impact on reducing the Infant Mortality Rate (IMR). Lattot et al's research states that a lack of ANC visits in pregnant women can increase the risk of LBW events 2 mores (Lattot et al., 2020). Guidelines from the World Health Organization (WHO) explain that ANC services can identify services provided to pregnant women, including tracing the mother's medical history, checking blood pressure, checking for anemia, fetal movement, providing iron and folic acid supplementation and overall health education (World Health Organization, 2016). Several other studies also show a link between ANC services and the incidence of LBW (Arsyi et al., 2022; Arsyi & Besral, 2021). Another study conducted at RSU Tangerang showed that poor ANC quality would increase the risk of LBW by 3.7 times compared to good ANC quality, but age and pregnancy complications were not factors that influenced the incidence of LBW (Oktasila, 2015). Ekasari's research (2019) shows that there is a relationship between antenatal care and the incidence of LBW, which obtained an OR value of 8.00, which means that pregnant women who do not have an incomplete ANC are 8 times more likely to experience LBW than pregnant women who have a complete ANC (Ekasari & Natalia, 2019).

RESEARCH METHODS

Design and Location of the Research

This research is using a cross-sectional design, which is when exposure and outcome are measured simultaneously. Nine community health centers—Tanjung Pandan, Air Saga, Perawas, Sijuk, Tanjung Binga, Badau, Membalong, Simpang Rusa, and Selat Nasik—are located in the working area of Belitung Regency, Belitung Islands, where the research is being conducted. Between March and April of 2024, data will be gathered.

Both the population and the sample

All of the study's participants were infants living in the Belitung Regency Health Center's operational area in 2022. A subset of infants who fulfilled the inclusion and exclusion criteria and were

born in 2022 in nine community health centers within the Belitung Regency Health Service's service area served as the study's sample. Live births documented in the maternal cohort between January 1, 2022, and December 31, 2022, at nine community health centers in the Belitung District Health Service's service area, met the inclusion criteria for this study. In the Belitung Regency Community Health Center's work area, babies were born surviving as part of the cluster random sample approach employed in the sampling process. 310 samples are needed as the minimum sample, according to the findings of calculating the minimum sample using the hypothesis test formula for various proportions.

Collecting and Analyzing Data

"Researchers chose 2 clusters per village/kelurahan from 9 health centers (the highest proportion of LBW in each community health center), but at the Nasik Strait Community Health Center, there was only 1 village that had an LBW case, so the total of selected villages/subdistricts was 17 villages/subdistricts." The cluster random sampling technique was used in this study to sample, which involves selecting multiple groups at random from the population and then taking some of the elements of each selected group to use as samples. In order to ensure a fair comparison, proportionate sampling was then used to establish the number of samples in the chosen cluster. The frequency distribution of all the variables examined—both dependent (LBW) and independent (number of ANC visits, quality of ANC services, and ANC services composite)—in the Department's work area is then determined by applying univariate analysis to the collected data. Health of Belitung Regency 2022. "The analysis is shown as numbers and frequencies in a tabular format. Subsequently, this research employs bivariate analysis to examine the correlation between the independent and dependent variables. "The test used in this bivariate analysis is the Chi Square test (X^2) because the two variables (independent and dependent) are categorical data using a confidence level of 95%." The relationship can be determined using the Chi Square test. Results of a statistical test are considered significant if the p value is less than 0.05. Comparing the odds in the exposed group with the unexposed group yields the degree of relationship by measuring the association in the form of an odds ratio (OR). In this study When the independent variable's magnitude is compared to the occurrence of the dependent variable, it indicates that the independent variable is either neutral or unrelated to the dependent variable's occurrence,

while an OR > 1 indicates that the independent variable is a risk factor and is significantly related to the dependent variable's occurrence. Lastly, if the independent variable has an OR less than 1, it is a protective factor that will lower the incidence of the dependent variable.

RESEARCH RESULTS

The 310 live births that were chosen and registered in the maternal cohort at nine community health centers in the Belitung District Health Service's service region in 2022 served as the research subjects. Table 1 provides the following summary of the incidence of LBW:

Table 1
Description of LBW incidents in Belitung
Regency in 2022, (n=310)

Variable	Number (n)	Frequency (%)
Normal	277	89.4
LBW	33	10.6

Table 1 shows that there were 277 babies with normal weight (89.4%). Meanwhile, babies with low birth weight (LBW) were 33 (10.6%).

Table 2
Overview of LBW Risk Factors in Belitung
Regency in 2022, (n=310)

Variables	N	%
Number of ANC visits		
Compliant with standards	285	91.9
Non-compliant with standards	25	8.1
Quality of ANC services		
Compliant with standards	299	96.5
Non-compliant with standards	11	3.5
ANC services composite		
Compliant with standards	280	90.3
Non-compliant with standards	30	9.7

Table 2 shows that the majority of mothers had the number of ANC visits that compliant with standards (91.9%), the quality of ANC services that compliant with standards (96.5%) and the ANC service composite that compliant with standards (90.3%).

Table 3
Relationship between ANC services and LBW incidence in Belitung Regency in 2022, (n=310)

Variables	Normal		LBW		Total	P-Value	OR (95% CI)
	n	%	n	%			
Number of ANC visits							
Compliant with standards	261	91.6	24	8.4	285	<0.001	1
Non-compliant with standards	16	64.0	9	36.0	25		6.12 (2.44 – 15.31)
Quality of ANC services							
Compliant with standards	270	90.3	29	9.7	299	0.021	1
Non-compliant with standards	7	63.6	4	36.4	11		5.32 (1.47– 19.27)
ANC services composite							
Compliant with standards	257	91.8	23	8.2	280	<0.001	1
Non-compliant with standards	20	66.7	10	33.3	30		5.59 (2.34 – 13.35)

Table 3 demonstrates that, in comparison to the group whose number of ANC visits compliant with standards (8.4%), the incidence of LBW was highest in the group whose number of visits non-compliant with standards (36%). The number of ANC visits and the incidence of LBW are related, according to the findings of statistical tests (p value <0.001). Compared to whose ANC visit compliant with standards, mothers whose ANC visit non-compliant with standards of the criterion had a 6.12-fold increased risk of giving birth to LBW babies (OR=6.12 95% CI 2.44 – 15.31).

The incidence of LBW was higher in the ANC service quality ANC that non-compliant with standards (36.4%) than in the group that did (9.7%), according to the results. The outcomes of statistical analyses indicate that there is a significant (p value = 0.021) between the occurrence of LBW and the caliber of ANC services. Compared to mothers whose ANC service quality meets norms, mothers whose ANC service quality non-compliant with standards are 5.32 times more likely to give birth to LBW babies (OR=5.32 95% CI 1.47 – 19.27).

The results showed that the incidence of LBW was highest in the composite group of ANC services

that non-compliant with standards (33.3%) compared to the group that compliant with standards (8.2%). The results of statistical tests show that there is a relationship between composite ANC services and the incidence of LBW (p value <0.001). Mothers whose composite ANC services non-compliant with standards had a 5.59 times risk of giving birth to LBW babies compared to mothers whose composite ANC services compliant with standards (OR=5.59 95% CI 2.34 – 13.35).

DISCUSSIONS

Overview of LBW incidents in Belitung Regency in 2022

LBW is a very important public health problem and still occurs globally. Apart from being caused by preterm birth (birth before 37 full weeks of gestation), LBW is also caused by small size for gestational age. Low Birth Weight (LBW) is a baby with a birth weight of less than 2500 grams. The percentage of babies born with weight birth is one of the indicators most widely used to measure the health level of the population throughout the world. Reducing the incidence of LBW is also a goal of health policy throughout the world (Tshotetsi, et al. (2019). Based on the results of the analysis, it was found that there were 277 children with Normal Birth Weight (89.4%) and 33 children with Low Birth Weight (10.6%). The results of this research are in line with research by Kurniasari et al (2023) which stated that the incidence of LBW at Ogan Ilir Regional Hospital in 2021 was 31 children (38.3%) and children with Normal Birth Weight were 50 children (61.7%) (Kurniasari et al., 2023).

LBW is a health problem that has received quite a lot of attention. This is because the risk of death in babies with low birth weight is four times greater than babies with normal weight. Apart from that, LBW babies have health complications, namely disorders of the respiratory system, digestion, central nervous system, cardiovascular, hematology, immunology, and so on (Ambarwati, 2015). The incidence of LBW is a health problem that will not only have an impact on survival after birth but will also affect the quality of life in the future related to the potential for disease that will be experienced due to the LBW condition (Bekela et al., 2020).

Overview of LBW Risk Factors in Belitung Regency in 2022

Antenatal Care (ANC) examinations are an important part of health care during pregnancy. Health service providers during pregnancy such as specialist doctors, obstetricians and gynecologists, general practitioners and nurses must be able to

provide appropriate information with knowledge and professionalism in order to influence the mother's perceptions and decisions during pregnancy, childbirth and the postpartum period (Ruindungan et al., 2017). Pada setiap kunjungan ANC, petugas pelayanan kesehatan mengumpulkan dan menganalisis data mengenai kondisi ibu melalui anamnesis dan pemeriksaan fisik untuk mendapatkan diagnosis kehamilan. Antenatal care dapat digunakan sebagai screening awal terhadap kondisi bayi yang akan lahir. Bayi dapat lahir dengan kondisi bayi lahir dengan berat badan tinggi, normal ataupun rendah. Pada kesempatan ini penulis akan fokus pada bayi lahir dengan berat badan rendah. Berat Badan Lahir Rendah (BBLR) adalah bayi yang lahir dengan berat badan sama atau kurang dari 2500 gram (Sukarni, 2014).

The research results show that ANC services are a risk factor for LBW. This risk factor is seen based on the number of ANC visits, quality of ANC services and composite ANC services. The number of ANC visits in Belitung Regency in 2022 that met the standards was 91.9% and those that did not meet the standards was 8.1%. These results are in line with research by Ningsih (2020) which stated that the number of visits by respondents in the study that were >4 times or according to standards was 94.9% and ANC visits <4 times or did not meet standards was 5.1%. Pregnancy checks or ANC services are examinations of pregnant women both physically and mentally and save mothers and children during pregnancy, childbirth and the postpartum period (Ningsih, 2020).

The quality of ANC services in Belitung Regency in 2022 that meet standards is 96.5% and those that do not meet standards are 3.5%. The composite of ANC services in Belitung Regency in 2022 that meet standards is 90.3% and those that do not meet standards are 9.7%. The recommended ANC examination is at least 4 times during pregnancy. In this time period, it is hoped that ANC services according to standards can be met both during pregnancy, childbirth and the mother's postpartum period so that babies are born healthy and can reduce maternal and perinatal morbidity and mortality. The quality of ANC services can be seen from the service facilities and also the service staff. Research by Sormin et al (2016) shows that the use of ANC quality can be seen from the general health and laboratory examinations carried out on pregnant women. The research results show that good use of ANC services occurs when pregnant women use public health services and laboratories. The quality of ANC services is also seen from the quality of ANC officers. Research by Sormin et al (2016) shows that

97.4% of respondents were satisfied with the quality of ANC officers and 71.8% of respondents were satisfied with the first impression of ANC services (Sormin et al., 2016).

According to Prawirohardjo in 2014, the benefits of ANC services are to help mothers and their families to prepare for birth and emergencies that may occur, detect and treat complications that arise during pregnancy, whether medical, surgical or obstetric, improve and maintain physical and mental health. and social care for mothers and babies by providing education, supplements and immunizations, helping prepare mothers to breastfeed babies, through the normal postpartum period, and maintaining children's health physically, psychologically and socially (Prawirohardjo, 2014).

Relationship between ANC services and LBW incidents in Belitung Regency in 2022

Based on the research results, it shows that ANC services have a significant relationship with the incidence of LBW in Belitung Regency in 2022 with the number of ANC visits (pvalue <0.001), quality of ANC services (pvalue 0.021) and ANC service composite (pvalue <0.001). The results of this study are in line with several studies which state that pregnant women who visit ANC according to standards experience a reduction in the incidence of LBW (Kananura et al., 2017; Kassar et al., 2013; Khatun & Rahman, 2008). Follow ANC services recommended by the World Health Organization (WHO) for pregnant women and families to receive health services and receive information regarding obstetric care and identifying management of infectious diseases. Uwimana's research (2023) also explains that pregnant women who receive quality ANC services that meet standards can reduce the prevalence of LBW incidents (Uwimana et al., 2023).

Ibu hamil yang memiliki kualitas pelayanan kunjungan ANC yang baik dan sesuai standar memungkinkan pengurangan sebesar 4,18% kejadian BBLR (National Institute of Statistics of Rwanda (NISR) & M of H (MOH) [Rwanda], 2021). Good ANC service is a predictor of LBW events. The results of this study are in line with research by Euindungan (2017) which states that there is a relationship between Antenatal Care (ANC) examinations and the incidence of LBW (pvalue 0.0001) (Ruindungan et al., 2017). According to Sistiarani (2008), maternal factors and the quality of antenatal care are at risk of low birth weight (LBW). A study of mothers who had their pregnancy checked by health workers and gave birth at the Banyumas District Hospital in 2008 found that poor quality of antenatal care was a risk factor for LBW (OR 5.85),

the quality of antenatal care was assessed by the quality of health workers, the quality of the environment, the quality of visit frequency, examination activities according to 7T service standards (weighing BB, measuring TFU, measuring BP, administering TT, administering Fe tablets, PMS testing, interviewing) as well as communication and health education (Sistiarani, 2008).

The results of the study showed that mothers whose quality of ANC services did not meet standards were 5.32 times more likely to give birth to LBW babies compared to mothers whose quality of ANC services met standards. Mothers whose number of ANC visits does not meet the standards are 6.12 times more likely to give birth to LBW babies compared to mothers whose number of ANC visits meet the standards. Mothers whose composite ANC services did not meet standards had a 5.59 times risk of giving birth to LBW babies compared to mothers whose composite ANC services met standards. Pregnancy examinations have an important role in preventing and detecting abnormalities and complications in mothers and babies, including the risk of low birth weight. Pregnancy examination services are a public health program, especially maternal and child health programs. Pregnancy progress, including improving maternal health and normal fetal development, can be monitored during Antenatal Care examination visits. Apart from that, Antenatal Care examinations can detect early possible danger signs that occur during pregnancy which can affect the health condition of the mother and baby. If a mother gives birth to a LBW baby and is not treated appropriately, it will affect growth and cognitive development as well as the emergence of chronic diseases in the baby throughout life (Brown et al., 2008).

ANC provides pregnant women with access to various interventions to improve maternal and child health (Mekonnen et al., 2023; Weyori et al., 2022). The results of this study are also in line with research by Fatimah (2017) which states that there is a significant relationship between ANC visits made by pregnant women and the incidence of LBW. When visiting ANC, pregnant women can carry out preventive efforts including health promotion during pregnancy. So it can prevent the occurrence of LBW when the mother gives birth (Fatimah et al., 2017). In accordance with provincial regulations, pregnant women must undergo examinations with health workers at least 4 times during pregnancy. ANC services aim to ensure that all pregnant women have the same rights in carrying out services. One of the goals of ANC services is to provide comprehensive and integrated services. Apart from that, ANC

services can also provide early detection of events experienced by pregnant women (Novika et al., 2013).

Lattof's research states that pregnant women who miss standard ANC services are 4 times more at risk of giving birth to LBW children. In low-middle developing countries, LBW cases cause increased natal morbidity and mortality, hamper cognitive development and inhibit growth and increase the risk of chronic diseases in children later in life (Lattof et al., 2020). The incidence of LBW is related to ANC services and the lack of availability of ANC service facilities and infrastructure (Tayebi et al., 2014; Zhou et al., 2019).

CONCLUSIONS

In this study, ANC services were successful in reducing LBW incidence. When mothers have a number of ANC visits that do not meet the standards, they are 6.12 times more likely to have LBW babies (OR=6.12 95% CI 2.44 - 15.31). A mother who receives poor quality ANC services is 5.32 times more likely to give birth to a LBW baby compared to a mother who receives high quality ANC services (OR=5.32 95% CI 1.47 - 19.27). In comparison to mothers whose composite ANC services met standards, those whose composite ANC services did not meet standards had a 5.59 times higher risk of having LBW babies (OR=5.59 95% CI 2.34 - 13.35). The benefits of ANC services include helping women and their families get ready for labor and any emergencies that may arise, identifying and treating any medical, surgical, or obstetric complications that may arise, and improving and maintaining the physical, mental, and social health of mothers and babies by offering education, supplements, and immunizations. Additionally, ANC services help women prepare for breastfeeding and get through a normal postpartum period and maintain the physical, psychological, and social health of their children.

SUGGESTIONS

It is recommended that health workers providing ANC services strive to increase the coverage and availability of ANC for all pregnant women. In addition, maternal health literacy is extremely important for the well-being of mothers and babies (for example emphasizing the importance of comprehensive ANC services). In addition, it is very important to focus on the quality and minimum quantity of ANC services.

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THE INFLUENCE OF GIVING GINGER WATER ON THE PAIN OF DYSMENORRHOA IN ADOLESCENT WOMEN

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ABSTRAK : PENGARUH PEMBERIAN AIR JAHE TERHADAP NYERI DISMENORROA PADA REMAJA WANITA

Latar Belakang: Dismenore merupakan gejala nyeri atau rasa tidak nyaman pada perut bagian bawah saat menstruasi sehingga dapat mengganggu aktivitas sehari-hari, yang paling sering dijumpai pada wanita usia muda dan reproduktif. Di Indonesia, dismenore juga menjadi keluhan yang sering dijumpai pada remaja putri. Di Indonesia, angka kejadian nyeri haid pada tahun 2018 sebanyak 107.673 orang (64,24%), terdiri dari 59.671 orang (54,89%) mengalami nyeri haid primer dan 9.496 orang (9,36%) mengalami nyeri haid sekunder. Tujuan Penelitian: Untuk mengetahui pengaruh pemberian air jahe terhadap nyeri dismenore pada remaja putri di SMK Tri Bhakti Kecamatan Abung Tengah Kabupaten Lampung Utara Tahun 2023

Metode Penelitian: Jenis penelitian yang digunakan adalah pre-eksperimental dengan pendekatan one group pre-test and post-test design. Populasi Penelitian Populasi dalam penelitian ini adalah seluruh remaja putri SMK Tri Bhakti yang mengalami dismenore sebanyak 53 orang. Sampel dalam penelitian ini berjumlah 23 orang. Teknik pengambilan sampel purposive sampling Analisis menggunakan uji Wilcoxon.

Hasil penelitian: Rata-rata tingkat kejadian dismenore sebelum pemberian rebusan jahe (*zingibers officinale*) pada remaja putri adalah 4,43 dengan standar deviasi 0,662. Minimal 3 dan maksimal 5. Rata-rata kejadian dismenore setelah pemberian rebusan jahe (*zingibers officinale*) pada remaja putri adalah 2,39 dengan standar deviasi 0,789. Kesimpulan Minimal 1 dan Maksimal 3 Terdapat perbedaan yang signifikan pemberian ramuan jahe terhadap tingkat nyeri dismenore pada remaja putri di SMK Tri Bhakti Kecamatan Abung Tengah Kabupaten Lampung Utara p value 0,000.

Saran hasil penelitian ini dapat menjadi solusi dalam mengatasi dismenore dengan menggunakan jenis terapi non farmakologi yaitu pemberian air jahe merah.

Kata Kunci : dismenore, jahe, remaja putri

ABSTRACT

Background: Dysmenorrhea is a symptom of pain or discomfort in the lower abdomen during menstruation so that it can interfere with daily activities, which is most often found in young and reproductive women. In Indonesia, dysmenorrhea is also a complaint that is often found in young women. In Indonesia, the incidence of menstrual pain in 2018 was 107,673 people (64.24%), consisting of 59,671 people (54.89%) experiencing primary menstrual pain and 9,496 people (9.36%) experiencing secondary menstrual pain. Research objective: To know the effect of giving ginger water on dysmenorrheal pain in young women at Tri Bhakti Vocational School, Abung Tengah District, North Lampung Regency in 2023

Research Methods: The type of research used was pre-experimental with a one-group pre-test and post-test design approach. Research population The population in this study were all young women at Tri Bhakti Vocational School who experienced dysmenorrhea as many as 53 people. The sample in this study amounted to 23 people. Sampling technique purposive sampling Analysis using the Wilcoxon test.

The results of the study: The average level of dysmenorrhea before administration of ginger decoction (*zingibers officinale*) in female adolescents was 4.43 with a standard deviation of 0.662. A minimum of 3 and a maximum of 5. The average rate of dysmenorrhea after administration of ginger decoction (*zingibers officinale*) in young women is 2.39 with a standard deviation of 0.789.

Conclusion Minimum 1 and maximum 3 There is a significant difference between giving ginger concoction to the level of dysmenorrhea pain in young women at Tri Bhakti Vocational School, Abung Tengah District, North Lampung Regency, p value 0.000.

Suggestion that the findings of this study can be a solution in overcoming dysmenorrhea by using a type of non-pharmacological therapy, namely giving red ginger water.

Keywords : dysmenorrhea, ginger, young women

INTRODUCTION

Dysmenorrhea is a symptom of pain or discomfort in the lower abdomen during menstruation so that it can interfere with daily activities, which is most often found in young and reproductive women. Dysmenorrhea is the complaint that most often causes young women to go to the doctor for consultation and get treatment (Manuaba, 2012).

dysmenorrhea is pain or discomfort that occurs during menstruation. This is due to the presence of prostaglandins which can increase uterine contractions and at excessive levels will activate the large intestine. This dysmenorrhea can occur due to an increase in prostaglandin (PG) F₂-alpha which is *cyclooxygenase* (COX-2) can cause hypertonicity and vasoconstriction in the myometrium, causing ischemia and pain during menstruation (Pratiwi, 2017).

According to the data *World Health Organization* (WHO) that the incidence of dysmenorrhea in the world is very high, more than 50% of women in every country experience dysmenorrhea, such as in America the presentation rate is around 60%, in Sweden around 72% (Arianti, 2020).

The incidence of dysmenorrhea in Indonesia in 2018 was 107,673 people (64.24%), consisting of 59,671 people (54.89%) experiencing primary menstrual pain and 9,496 people (9.36%) experiencing secondary menstrual pain. In West Java in 2018, it was reported that the number of reproductive young women aged 10-24 was 56,598 souls. Meanwhile, there were 11,565 people (1.31%) who experienced menstrual pain and came to obstetrics (Ministry of Health, Republic of Indonesia, 2020).

The impact of dysmenorrhea in everyday life is that it can reduce the ability to concentrate and disrupt learning by 75% and changes in normal physical activity by 60%. Secondary dysmenorrhea is dysmenorrhea that occurs as a result of organic pelvic disease such as *Pelvic Inflammatory Disease* (PID), endometriosis, cervical stenosis, ovarian cysts, congenital malformations, uterine myomas (Putri, 2018).

Research on Putri Isti Karomah (2022) The effectiveness of giving ginger water to reducing pain intensity *dysmenorrhea* in young women. shows that there is effectiveness between ginger water and dysmenorrhea where p value = 0.0001. Conclusion: That there is effectiveness between ginger water and dysmenorrhea. In overcoming dysmenorrhea by using a type of non-pharmacological therapy, namely

giving ginger water.

Efforts to deal with menstrual pain (*dysmenorrhea*) can be carried out *pharmacological* and regularly *non-pharmacological*. Basically, *pharmacological* This can be done by taking non-steroidal anti-inflammatory drugs *Nonsteroidal Antiinflammatory Drugs* (NSAIDs) that inhibit the production and action of prostaglandins. These medications include aspirin and ibuprofen formulas. Kindly *nonpharmakologis* which can help reduce menstrual pain, including a number of spices, warm compresses on the back or lower abdomen, or even a warm bath, exercise, aromatherapy, listening to music, reading books or watching movies can also help (Haryono and Setiyaningsih, 2018).

Herbal concoction therapy can be done by using traditional medicines derived from plant ingredients. Some plant ingredients are believed to reduce pain. One such plant is ginger (*Zingibers Officinale Rosc.*) whose rhizome functions as an analgesic, antipyretic, and anti-inflammatory. *Annual Meeting of the Society for Economic Botany* in Chicago in 2007 stated that ginger (*Zingibers Officinale Rosc.*) can reduce pain and inflammation during dysmenorrhea.

The ingredients in the ginger plant include the essential oil zingiberene (zingirone), zingiberol, bisabolene, kurkumen, gingerol, filandrene, and bitter resin. The distinctive properties of ginger are due to the presence of ginger essential oil and oleoresin. The fragrant aroma of ginger is caused by essential oils, while the oleoresin causes a spicy taste which functions as an analgesic, antipyretic and anti-inflammatory.

The incidence of dysmenorrhea in Lampung Province is quite high, the results of the study found that 54.9% of women experienced dysmenorrhea. Data from the Lampung Provincial Health Office for 2017 dysmenorrhea has not been classified, the incidence of dysmenorrhea in Lampung is included in the other category, namely 19.375 people (12.08%) (Arianti, 2020).

A preliminary study conducted on 10 young women at Tri Bhakti Vocational School, Abung Tengah District, North Lampung Regency who were menstruating, there were 6 young women who experienced *dysmenorrhea*. *Dysmenorrhea* resulting in decreased activity during menstruation, abdominal pain, nausea, back pain. Students who experience *dysmenorrhea* not seek treatment for reduce the pain.

RESEARCH METHODS

The research method used in this study is quantitative, namely a type of research that obtains an accurate description of a problem characteristic in the form of classifying data (Notoatmodjo, 2018).

RESEARCH RESULTS

Characteristics of respondents

Table 1
Age Frequency Distribution of Young Girls at Tri Bhakti Vocational School, Abung Tengah District, North Lampung Regency in 2023

Variable	Amount	%
First Menstrual Age		
< 12 years old	8	34,8
>12 years old	15	65,2
Cycle		
< 28 days	19	82,6
28-35 days	4	17,4
>35 days	-	-
Family history of dysmenorrhea		
Yes	13	56,5
No	10	43,5

Based on table 1 above, it can be seen that most young women experience first menstruation (menarche) aged >12 years (65.2%). Most menstrual cycles <28 days 82.6% and 56.5% have a family history of dysmenorrhea.

Data Normality Test

In this study the normality test was carried out using the Shapiro-Wilk test. The data normality table is contained in the table below

Table 2
Data Normality

Shapiro-Wilk		
Statistic	df	P value.
Prior pain level	.746	23 .000
Pain level after	.710	23 .000

Based on table 2 above, it can be seen that the pain level data is not normal, which can be seen from the p value of 0.000 (> 0.05), meaning that the next test used is *Wilcoxon test*

Univariate analysis

Dysmenorrhea Level Before Giving Ginger Water (*Zingibers Officinale*) in young women.

Table 3
The average level of dysmenorrhea pain before giving ginger water (*Zingibers Officinale*) For young women at Tri Bhakti Vocational School, Abung Tengah District, North Lampung Regency in 2023

Variable	Amount	Mean	Std. Deviation	Minimum	Maximum
Dysmenorrhea Pain Level Before Giving Ginger Boiled Water	23	4,43	0,662	3	5

Based on table 3 above, it can be seen that the average level of dysmenorrhea before giving ginger boiled water (*zingibers officinale*) in young women 4.43 with a Standard Deviation of 0.662.

Minimum 3 and maximum 5.

Dysmenorrhoea Level After Giving Ginger Water (*Zingibers Officinale*) in Young Women

Table 4
The Average Level of Dysmenorrhea Pain After Giving Ginger Water (*Zingibers Officinale*) For young women at Tri Bhakti Vocational School, Abung Tengah District, North Lampung Regency Year 2023

Variable	Amount	Mean	Std. Deviation	Minimum	Maximum
Dysmenorrhoea pain level after administration of ginger decoction	23	2,26	0,541	1	3

Based on table 4 above, it can be seen that the average level of dysmenorrhea after giving ginger boiled water (*zingibers officinale*) in young

women 2.39 with a Standard Deviation of 0.789. Minimum 1 and maximum 3.

Bivariate Analysis

The effect of giving ginger water to dysmenorrheal pain in young women at Tri Bhakti Vocational School,

Abung Tengah District, North Lampung Regency in 2023

Table 5

The Effect of Giving Ginger Water on Dysmenorrhea Pain in Young Women at Tri Bhakti Vocational School, Abung Tengah District, North Lampung Regency in 2023

Variable	N	Mean	Std. Deviation	Minimum	Maximum	Z	P value
Pain before	23	4.43	.662	3	5	-4,416	0,000
Pain after	23	2.26	.541	1	3		

Based on table 5 above, it can be seen that the average level of dysmenorrhea before giving ginger boiled water (*zingibers officinale*) in young women 4.43 with a Standard Deviation of 0.662. Minimum 3 and maximum 5. Disminore Level After Giving Ginger Boiled Water (*zingibers officinale*) in young women 2.39 with a Standard Deviation of 0.789. Minimum 1 and maximum 3. Statistical test results obtained value *p value* of 0.000 which is less than the research critical limit of 0.05 so that the decision of the hypothesis is that there is a significant difference between the pretest and posttest groups, there is an effect of giving ginger boiled water on reducing dysmenorrheal pain in young women.

DISCUSSIONS**Univariate analysis**

The average level of dysmenorrhea pain before giving ginger water (*Zingibers Officinale*) For young women at Tri Bhakti Vocational School, Abung Tengah District, North Lampung Regency in 2023

The results showed that the average level of dysmenorrhea before administration of ginger decoction (*zingibers officinale*) in young women 4.43 with a Standard Deviation of 0.662. Minimum 3 and maximum 5.

Pain is an unpleasant sensory or emotional experience resulting from potential or actual tissue damage (Potter and Perry, 2015). Pain is a physiological need. Pain is an uncomfortable feeling that is very subjective and only people who experience it can explain and evaluate this feeling. (Maslow's Hierarchy). Pain is a feeling of discomfort, both mild and severe (Mubarak, 2017).

Individuals experiencing pain of sudden onset may react very differently to pain that lasts for a few minutes or becomes chronic. Pain can cause fatigue and make the individual too tired to groan or cry. The patient can sleep, even with severe pain. Patients can appear relaxed and engaged in activities because they become adept at diverting attention from pain (Potter and Perry, 2015).

Pain intensity is a description of how severe

pain is felt by an individual, the measurement of pain intensity is very subjective and individual and the possibility of pain of the same intensity is felt very differently by two different people by two different people. Measurement of pain with an objective approach that is most likely to use the body's physiological response to the pain itself. However, measurements with this technique also cannot provide a definite picture of the pain itself.

Pain during menstruation *ordysmenorrhea* occurs due to excessive release of certain prostaglandins *alfa* derived from uterine endometrial cells. Prostaglandin *F2alfa* is one of the strongest stimulators of contraction of the myometrial smooth muscle and constriction of the uterine vessels. Warm compresses are giving a warm feeling to the patient to reduce pain by using fluids that function to dilate blood vessels and increase local blood flow. It was further explained that warm compresses aim, (1) to dilate blood vessels and improve blood circulation in these tissues; (2) on muscles, heat has the effect of reducing tension; and (3) increase in total white blood cells and the phenomenon of inflammatory reactions as well as dilatation of blood vessels resulting in increased blood circulation and increased capillary pressure. The pressure of O₂ and CO₂ in the blood will increase while the blood pH will decrease.

The results of this study are in line with Retno Wils' research on the effect of boiled ginger water on reducing the degree of menstrual pain in high school and vocational school students Yadika Kopandakan II. The results showed that the intensity of menstrual pain before being given ginger boiled water to Stikes' Aisyiyah Yogyakarta students ranged from 5-8 with an average of 7 and after being given ginger boiled water the second day ranged from 1-4 with an average of 2.

Karomah Research (2022) The Effectiveness of Giving Red Ginger Water on Reducing Pain Intensity *dysmenorrheal* In Young Women showed differences in menstrual pain scores before and after the intervention of giving red ginger water. Descriptively, it can be explained that the average menstrual pain score after treatment has a lower

average, which is 1.22 compared to the mean menstrual pain score before treatment, which is 2.18, so from these results there is a decrease in menstrual pain after being given the intervention. Analytically it can be seen that the test results *Wilcoxon* shows a significance value of 0.0001, meaning a significance value $<\alpha$ (0.05). The results of the statistical test showed that there was a significant difference between menstrual pain before and after being given the red ginger water intervention

According to researchers, there are still many adolescents who experience pain in dysmenorrhea caused by stress, anxiety, endometriosis, fibroids, adenomyosis, inflammation of the fallopian tubes, abnormal adhesions between organs in the abdomen and lack of knowledge about non-pharmacological methods for pain relief.

The Average Level of Dysmenorrhea Pain After Giving Ginger Water (*Zingibers Officinale*) For young women at Tri Bhakti Vocational School, Abung Tengah District, North Lampung Regency in 2023

The results showed that the average level of dysmenorrhea after administration of ginger decoction (*zingibers officinale*) in young women 2.39 with a Standard Deviation of 0.789. Minimum 1 and maximum 3

Menstruation is a part of a woman's life journey that starts from *menarche* until *menopause*. The normal menstrual cycle varies in length from 21-45 days and the bleeding period ranges from 3 to 7 days. Most women experience menstruation until the age of 40 or 50 years (Ahimsa Yoga Anindita, 2010). In general, menstruation occurs according to a regular pattern and does not have problems, however, there are some women who experience several abnormalities at certain times. The most common disorders are pain during menstruation (painful menstruation) and premenstrual syndrome.

About a third of menstruating women will feel some pain accompanying menstruation (Stik, Carolus, Carolus, & Carolus, 2015)

During menstruation, some women experience various menstrual disorders, from mild, moderate to quite severe. For example, some experience cramps due to contractions of the smooth muscles in the uterus, headaches, stomach aches, feeling weak to extreme pain. Excessive pain in the lower abdomen that often occurs during menstruation is called dysmenorrhea. Dysmenorrhea is pain during menstruation caused by an excessive amount of prostaglandin $F2\alpha$ in menstrual blood, which stimulates uterine hyperactivity and uterine muscle spasms (Suciani et al., 2014)

How to deal with pain non-pharmacological

namely *transcutaneous electrical nerves stimulation* (tens), acupuncture, distraction measures, deep breathing techniques, guided imagination, music therapy, compresses (warm compresses and cold compresses), traditional herbs.

Ginger concoction is a variant of ginger that is very suitable for herbs with a higher content of essential oils and oleoresin than other ginger variants, because of that red ginger can usually be used for traditional medicine and what is most widely given is in the form of ginger drinks. Red ginger or Latin name (*Zingiber officinale* Roscoe) has red and smaller rhizomes, red ginger has a fairly high essential oil content (Stikes & Waluyo, 2014)

The decrease in the intensity of menstrual pain experienced by respondents in the experimental group was due to impulses that suppressed pain so that the pain was reduced. Impulse-The impulse is in the form of a feeling of warmth which is the effect of ginger cooking water on the part that feels painful, namely the lower abdomen. The local response to heat occurs through stimulation of nerve endings, which are deep in the skin and sensitive to temperature. This stimulation sends impulses from the periphery to the hypothalamus which will cause awareness of local temperature and trigger an adaptive response to maintain normal body temperature (Potter & Perry, 2015).

According to Sonyaza (2009), the spicy taste and aroma of ginger can warm the body and produce sweat. Its essential oil is useful for relieving pain, anti-inflammatory and anti-bacterial.

Respondents consumed ginger water before eating because on an empty stomach the stomach can more easily absorb the substances contained in ginger and have not been contaminated by other food substances. Respondents consumed red ginger water, some at school and some at home due to school holidays.

The results of this study are in line with Retno Wils' research on the effect of boiled ginger water on reducing the degree of menstrual pain in high school and vocational school students Yadika Kopandakan II. The results showed that the intensity of menstrual pain before being given ginger boiled water to Stikes' Aisyiyah Yogyakarta students ranged from 5-8 with an average of 7 and after being given ginger boiled water the second day ranged from 1-4 with an average of 2.

Karomah Research (2022) The Effectiveness of Giving Red Ginger Water on Reducing Pain Intensity *dysmenorrhea* in Young Women. showed differences in menstrual pain scores before and after the intervention of giving red ginger water. Descriptively, it can be explained that the average

menstrual pain score after treatment has a lower average, which is 1.22 compared to the mean menstrual pain score before treatment, which is 2.18, so from these results there is a decrease in menstrual pain after being given the intervention. Analytically it can be seen that the test results *Wilcoxon* shows a significance value of 0.0001, meaning a significance value $<\alpha$ (0.05). The results of the statistical test showed that there was a significant difference between menstrual pain before and after being given the red ginger water intervention

According to researchers, pain in dysmenorrhea can be reduced by giving rosella tea because it can relax tense muscles and provide a sense of comfort. Rosella tea is another alternative way to reduce pain, using non-pharmacological methods has no side effects, is simple, and comfortable.

Bivariate

The effect of giving ginger water to dysmenorrheal pain in young women at Tri Bhakti Vocational School, Abung Tengah District, North Lampung Regency in 2023

The results showed that the average level of dysmenorrhea before administration of ginger decoction (*zingibers officinale*) in young women 4.43 with a Standard Deviation of 0.662. Minimum 3 and maximum 5. Disminore Level After Giving Ginger Boiled Water (*zingibers officinale*) in young women 2.39 with a Standard Deviation of 0.789. Minimum 1 and maximum 3. Statistical test results obtained value of 0.000 which is less than the critical research limit of 0.05 so that the hypothesis decision is that there is a significant difference between the pretest and posttest groups, there was an effect of giving ginger decoction to reducing dysmenorrheal pain in young women

Negative Ranks or the difference (negative) between the Pre Test of Giving Ginger Boiled Water on the Reduction of Dysmenorrhea Pain in Young Girls and the Post Test. From the results of the output above, it can be seen that there are 23 negative data (N), meaning that there are 23 young women who experience a decrease in the level of dysmenorrhea after giving ginger water decoction. The Mean Rank or average decrease is 12, while the Sum of Rank or the number of negative ratings is 276. Ties value = 0, meaning that there is no equal score between the Pre Test and Post Test.

The positive rank value or difference (positive) between the administration of ginger decoction to the decrease in the intensity of dysmenorrhea in young women for pre-test and post-test. From the output, it appears that both the value of N, Mean Rank, and

Sum of Rank are 0. This means that there is no increase from the Pre Test score to the Post Test score. This means that young women who have consumed boiled ginger water did not increase the intensity of dysmenorrhea compared to before giving the boiled ginger water.

During menstruation, various complaints or problems are usually experienced by a woman, but the most common problem is discomfort or intense pain, this is commonly referred to as dysmenorrhea or menstrual pain. dysmenorrhea is a menstrual disorder with the greatest prevalence followed by menstrual irregularities and prolongation of menstrual duration. Dysmenorrhea occurs on the first day or the second day during menstruation, it can increase when doing activities or stress.

In general, the treatment of dysmenorrhea is divided into two categories, namely pharmacological and non-pharmacological approaches. Pharmacologically, pain can be treated with analgesic therapy which is the most commonly used method for pain relief. Even though analgesics can relieve pain effectively, the use of analgesics will have an addictive effect and will have side effects of drugs that are dangerous for patients. Non-pharmacologically, they include warm compresses, relaxation techniques such as deep breathing and yoga (Potter & Perry, 2015).

Pain impulses are transmitted when a defense is opened and impulses are inhibited when a defense is closed. Efforts to close these defenses is the basis of the theory of pain relief.

A balance of activity from sensory neurons and descending control fibers from the brain regulates defense processes. Delta-A and C neurons release substance C to transmit impulses through defense mechanisms. In addition, there are mechanoreceptor, beta-A neurons are thicker, which fire faster neurotransmitter inhibitor. If the dominant input comes from beta-A fibers, it will close the defense mechanism. It is believed this closing mechanism can be seen when a nurse rubs the client's back gently. The resulting message will be stimulating mechanoreceptor, if the dominant input comes from delta A fibers and C fibers, it will open these defenses and the client perceives a sensation of pain. Even if pain impulses are transmitted to the brain, there are cortical centers higher in the brain that modify pain. Descending nerve pathways release endogenous opiates, such as endorphins and dinorfin, a natural pain killer that comes from the body. Neuromediator this shuts down the defense mechanism by inhibiting the release of substance P. distraction techniques, counseling and placebo administration are attempts to release endorphins

(Potter and Perry, 2015)

The problem of menstrual pain (dysmenorrhea) is not a disease, but a symptom that arises due to abnormalities in the pelvic organs. Pain that is felt under the stomach usually occurs on the first and second day of bleeding. The degree of pain is reduced after a lot of blood loss. While Okaparasta (2013) stated that it is severe menstrual pain that forces sufferers to rest and leave work or their daily way of life, for several hours or several days (Okaparasta, 2013).

The cause of dysmenorrhea due to PMS is thought to be due to hormonal factors, which occur due to imperfect ovulation due to hormonal imbalance. It could be the cause of an imbalance in the hormones estrogen and progesterone or it could also be caused by an excess of dominant estrogen coming from outside the body. There are also those who say that according to research found, PMS is caused by estrogen and menstrual hormones that interact with serotonin. PMS is also associated with intake of B vitamins, calcium and magnesium. PMS symptoms will appear a week or two before you experience menstruation. The use of non-steroidal anti-inflammatory drugs can cause side effects when consumed, therefore another alternative is needed to treat menstrual pain, especially primary menstrual pain. In this case the use of natural ingredients will be better and reduce side effects that are harmful to health, one of which is often used is ginger. It is known that the content aleoresin in ginger rhizome such as gingerol has antioxidant activity above vitamin E. Gingleol in ginger is also an anticoagulant, which can prevent blood clots. This is very helpful in removing menstrual blood, ginger can reduce the production of prostaglandins, which are known to be the main cause of menstrual pain (Agusta, 2011). Aleorisin works in inhibiting the reaction *cyclooxygenase* (COX) thereby inhibiting inflammation which will reduce uterine contractions (Thania, et al., 2010).

Ginger is known as a traditional medicine in dealing with various diseases, one of which is menstrual pain, reduced pain intensity related to thromboxane inhibition and the presence of prostaglandin activity. Menstrual pain is the result of myometrial contractions caused by prostaglandins. Prostaglandin concentrations in women with dysmenorrhea are very high. Ginger is as effective as mefenamic acid and ibuprofen in relieving menstrual pain.

Ginger is the choice because it has a lot of oleoresin. Oleoresin is a bioactive component consisting of gingerol which has antioxidant activity above vitamin E and shogaol which functions as an

anti-inflammatory (anti-inflammatory) which can block prostaglandins so that it can reduce the intensity of inflammation. *dysmenorrhea* (Ozgoli et al, 2009 in Rahayu & Nujulah 2018).

The results of this study are in line with Betty's research (2021) The Effect of Giving Red Ginger Boiled Water on Declined *dysmenorrhea* in the 8th Semester of Stikes Widya Dharma Husada Tangerang, the research results were obtained *dysmenorrhea* on a mild scale 15 respondents (50%) while on a moderate scale 14 respondents (46.7%).

Based on data analysis by test *Wilcoxon* with a degree of significance ≤ 0.05 (5%), obtained a mean value of 1.100 and a probability (p) of 0.000, it can be concluded that there is an effect of red ginger cooking water on decreasing *dysmenorrhea* in Putri Isti Karomah (2022), The Effectiveness of Giving Red Ginger Boiled Water on Reducing Pain Intensity *dysmenorrhea* in young women, research shows that there is an effectiveness between red ginger boiled water and dysmenorrhea where p value = 0.0001.

Indah Dewi Sari's Research, 2021, The Effectiveness of Acupressure and Ginger Drinks in Reducing the Intensity of Menstrual Pain/Dysmenorrhea in Young Women. Test *Wilcoxon* there is value *p-value* 0,001 ($p < 0.05$) means that there is effectiveness of the ginger drink in reducing the intensity of menstrual pain/dysmenorrhea. It is hoped that the school will provide ginger drinks and acupressure measures for young women who experience menstrual pain/dysmenorrhea so that they can participate in school learning activities.

Hartika Samgryce Siagian's research, 2021, the effect of drinking ginger (*zingiber officinal Roscoe* var. *Rubrum*) on reducing the pain scale of primary dysmenorrhea in female students in the Bachelor of Pharmacy study program at Imelda University Medan. The results of this study indicate that menstrual pain can interfere with the activities of female students at the University of Imelda Medan in accordance with research data from 34 female students with a percentage (81.0%) having their activities disrupted. This study shows that dysmenorrhea or menstrual pain in female students greatly affects activities. Based on the results of this study, ginger drinks can reduce menstrual pain or dysmenorrhea pain according to the percentage of the study, which was 29 female students (69.0%). This study shows that ginger drinks greatly affect the reduction of menstrual pain or dysmenorrhea.

At the time of the study, it was found that the respondents at the age of menarche < 12 years were 34.8%. Risk factors that can cause dysmenorrhea

include the rapid age of menarche, which is <12 years. The first menstruation or menarche experienced by women is an early sign of a woman's entry into the reproductive period. The younger a woman experiences menarche, the less ready she is to receive menstruation because psychologically this is considered a disturbance in the response of a child. The stressor causes a reduction in Gonadotropin-Releasing Hormone (GnRH) secretion in the hypothalamus which then inhibits the synthesis and release of Luteinizing Hormone (LH) and Follicle Stimulating Hormone (FSH). This causes a decrease in progesterone secretion. Progesterone plays an important role in causing dysmenorrhea. Prostaglandins will bind to receptors in the myometrium which in turn increase myometrial contractions and vasoconstriction of blood vessels, causing pain during menstruation (Anugrah, 2022).

Based on the research results, respondents tend to experience moderate pain intensity and mild pain before giving red ginger drink. Some respondents were known to just let it go when menstrual pain came, this disturbed some of their activities and made it difficult to concentrate while studying

In the opinion of researchers, ginger concoction for dysmenorrhea has a better effect on reducing the intensity of pain because it is related to thromboxane inhibition and the presence of prostaglandin activity. It results in less pain and less trauma to the genital tract and can be applied to young woman with this research, it is hoped that respondents will get references that can be used to treat dysmenorrhea menstrual pain. The results of the research should be used as additional knowledge for midwives and other health workers in providing information and counseling about the benefits of ginger in reducing the pain.

CONCLUSION

There is a significant difference between giving ginger concoction to the level of dysmenorrhea pain in young women at Tri Bhakti Vocational School, Abung Tengah District, North Lampung Regency *p value* 0,000

SUGGESTION

It is a useful reference especially regarding the effect of ginger decoction on reducing dysmenorrhea pain and can be used as a comparison for future research, and can be used as material for improving the quality of education. Respondents can use ginger herb to reduce menstrual pain (primary dysmenorrhea) as an alternative method. Non-pharmacology that is safe

and easy, needs to be socialized, especially to health workers who conduct counseling for young women (doctors, midwives, and nurses) about ginger ingredients to reduce menstrual pain.

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THE INFLUENCE OF REPRODUCTIVE HEALTH EDUCATION ON ADOLESCENT GIRLS ON THE LEVEL OF KNOWLEDGE ABOUT DYSMENORRHEA

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ABSTRAK PENGARUH EDUKASI KESEHATAN REPRODUKSI PADA REMAJA PUTRI TERHADAP TINGKAT PENGETAHUAN TENTANG DISMENORE

Latar Belakang: Pada masa remaja terdapat perubahan yang disebut masa pubertas. Salah satu tanda pubertas pada wanita yaitu menstruasi. Adapun gangguan pada menstruasi salah satunya dismenore. Berdasarkan Kemenkes tahun 2020 kejadian dismenore yaitu 90% dan di Kalimantan Tengah sebesar 63.64%. Dismenore disebabkan ketidakseimbangan hormon. Salah satu cara untuk mengurangi kejadian dismenore yaitu memberikan edukasi kesehatan kepada remaja.

Tujuan: Mengidentifikasi pengaruh edukasi kesehatan reproduksi pada remaja putri terhadap tingkat pengetahuan tentang dismenore di SMPN 5 Selat Kelurahan Murung Keramat.

Metode: Metode penelitian ini adalah pre experimental dengan desain one group pretest posttest. Teknik pengambilan sampel yaitu purposive sampling, diambil berdasarkan kriteria berjumlah 30. Analisis data pada penelitian menggunakan uji marginal homogeneity.

Hasil: Hasil penelitian, pretest 10 orang (33,3%) dikategorikan baik, 14 orang (46,7%) dikategorikan cukup dan 6 orang (20,0%) dikategorikan kurang. Hasil posttest, 23 orang (76,7%) dikategorikan baik, 7 orang (23,3%) dikategorikan cukup. Hasil uji yaitu nilai p value = 0,0001 dimana $p < 0,05$ artinya berpengaruh.

Kesimpulan: Adanya pengaruh edukasi kesehatan reproduksi pada remaja putri terhadap tingkat pengetahuan tentang dismenore di SMPN 5 Selat Kelurahan Murung Keramat Kabupaten Kapuas.

Saran: Diharapkan dapat diberikan lebih banyak lagi informasi mengenai kesehatan reproduksi khususnya tentang dismenore, atau menambah sumber bacaan di perpustakaan untuk menambah wawasan pada murid khususnya remaja putri.

Kata Kunci : Dismenore, Edukasi kesehatan, Remaja Putri

ABSTRACT

Background: In adolescence there is a change called puberty. One of the signs of puberty in women is menstruation. As for disorders in menstruation, one of them is dysmenorrhea. Based on the Ministry of Health in 2020, the incidence of dysmenorrhea is 90% and in Central Kalimantan it is 63.64%. Dysmenorrhea is caused by hormonal imbalance. One way to reduce the incidence of dysmenorrhea is to provide health education to adolescents.

Purpose: Identifying the effect of reproductive health education on adolescent girls on the level of knowledge about dysmenorrhea in SMPN 5 Selat Kelurahan Murung Keramat.

Methods: This research method is pre-experimental with a one group pretest posttest design. The sampling technique is purposive sampling, taken based on 30 criteria. Data analysis in research using marginal homogeneity test.

Results: The results of the study, pretest 10 people (33.3%) were categorized as good, 14 people (46.7%) were categorized as sufficient and 6 people (20.0%) were categorized as less. Posttest results, 23 people (76.7%) were categorized as good, 7 people (23.3%) were categorized as sufficient. The test result is the value of p value = 0.0001 where $p < 0.05$ means influential.

Conclusion: There is an influence of reproductive health education on adolescent girls on the level of knowledge about dysmenorrhea at SMPN 5 Selat Kelurahan Murung Keramat Kapuas Regency.

Suggestions: It is hoped that more information can be provided about reproductive health, especially about dysmenorrhea, or add reading resources in the library to add insight to students, especially young women.

Keywords: : Dysmenorrhea, Health education, Young Women

INTRODUCTION

Adolescence is the transition period from childhood to adulthood, this term indicates that the period from the beginning of puberty to the reach of maturity, usually starting from the age of 14 years in men and 12 years in women (Dewi & Yusri, 2023). Adolescence is divided into two, namely early adolescence and late adolescence (Octavia, 2020). The transition to adulthood varies from one culture to another, but is generally defined as the time during which individuals begin to act independently of their parents (Wood et al., 2017). Adolescence is a very important period of development in adolescence, which begins with the maturation of physical (sexual) organs so that later they will be able to reproduce (Permata, 2020) (de Azevedo et al., 2017). In adolescence there are changes that occur such as hormonal changes, physical changes, psychological and social changes, which is a period of pubertas. One sign of puberty in adolescent girls is menstruation. All women expect a normal menstrual cycle, but there are still many of them who feel pain or pain during menstruation, this is called dysmenorrhea. Dysmenorrhea is caused by an imbalance of the hormone progesterone in the blood, prostaglandins and stress factors that can lead to dysmenorrhea (Salamah, 2019) (Núñez-Troconis et al., 2021).

According to WHO data in 2019 there were 1,769,425 people (50%) women experiencing dysmenorrhea (Sari & Hayati, 2020) (Ayuningtyas & Ratnawati, 2021). Meanwhile, data from the Ministry of Health in 2020 recorded the incidence of dysmenorrhea in Indonesia at 64.52% (Idaningsih et al., 2023). Based on data in the Central Kalimantan Health Profile, it was found that dysmenorrhea problems amounted to 63.64% (Bingan, 2021).

The problem of dysmenorrhea that occurs in adolescents is caused by the lack of knowledge of adolescents about dysmenorrhea itself (Pratiwi et al., 2022) (de Sanctis et al., 2020). This can be seen from the results of research conducted by Heni Marlany, Ima Sukmawati, Hani Septiani and Ade Siti Nurhidayah in 2022 in research conducted at SMA Negeri 2 Ciamis showing the results of adolescent knowledge research before being given Health Education with good categories as many as 10 female students (11.5%), sufficient categories as many as 19 female students (21.8%) and less categories as many as 58 female students (66.7%). So from the results of the study, it can be concluded that the knowledge of adolescent girls before being given Health Education is still lacking. The existence of health education can provide benefits in increasing insight, knowledge, and information that can increase

adolescent knowledge. Given the low knowledge of adolescent girls about dysmenorrhea, providing health education is one of the right ways to increase knowledge (Marliany et al., 2022) (Friscila, 2021).

The results of a preliminary study that researchers have conducted on November 9, 2023 at SMPN 5 Selat, female students have never received health education or health education, especially regarding dysmenorrhea. Furthermore, researchers conducted a simple discussion about knowledge about dysmenorrhea in 10 respondents, namely female students at SMPN 5 Selat. Based on answers from respondents that 70% of female students stated that they did not know about dysmenorrhea and had never received health education or reproductive health education, especially dysmenorrhea, and 30% of female students stated that they had been exposed to or heard information about dysmenorrhea. Based on the data that has been found and the importance of health education, especially dysmenorrhea for adolescent girls, the author is interested in conducting research on the Effect of Reproductive Health Education on Adolescent Women on the Level of Knowledge About Dysmenorrhea in SMPN 5 Selat Murung Keramat Village, Kapuas Regency.

RESEARCH METHODS

The research method used in this study is quantitative with a Pre-experimental design with One Group Pretest and Posttest design. This research was conducted at SMPN 5 Selat Kelurahan Murung Keramat Kapuas Regency. The population used in this study was all young women or all grade 7, 8 and 9 students at SMPN 5 Selat totaling 39 people. The sample used in this study was 30 respondents, this sampling was in accordance with the inclusion and exclusion criteria determined by the researcher.

The inclusion criteria in this research are teenagers who have menstruated, teenagers / female students at SMPN 5 Selat, willing to be respondents and take part in education provided by researchers and willing to take the pretest and posttest. And the exclusion criteria in this study were those who were not willing to be respondents, teenagers who had not experienced menstruation and did not participate in education provided by researchers and did not take part in the pretest and posttest.

The data collection instrument used in this study was a questionnaire that was distributed directly to respondents before being given an intervention or Pretest and after being given an intervention or Posttest which aimed to determine the level of knowledge before and after the intervention.

Data analysis in this study is univariate and bivariate analysis using the Marginal Homogeneity test. Marginal homogeneity testing is used to find out if there are differences between the two groups of interconnected data. Maginal homogeneity refers to the similarity between one or more rows of marginal proportions and columns of corresponding proportions (Kuniawan & Agustini, 2021) (Syahza & Riau, 2021).

RESEARCH RESULTS

Table 1
Number of Students, Boys and Girls by class

Class/Grade	Boys	Girls	Total
7 th	8	11	19
8 th	13	13	26
9 th	12	15	27

Table 2

Table 3
Frequency Distribution of Knowledge Level Before Reproductive Health Education About Dysmenorrhea Based on Class at SMPN 5 Selat Murung Keramat Village

Knowledge Level	Frequency					
	7 th grade		8 th grade		9 th grade	
	F	%	F	%	F	%
Good	2	25.0	3	23.1	5	55.6
Adequate	4	50.0	6	46.2	4	44.4
Less	2	25.0	4	30.8	0	0

Based on the table 3 above, data on the level of knowledge of adolescent girls based on class before being given an intervention or Pretest with the results of 8 students / young women grade 7 who have a good level of knowledge as many as 2 people (25.0%), 4 people (50.0%) have a sufficient level of knowledge and 2 people (25.0%) have a level of knowledge less. Of the 13 grade 8 students/young women who had a good category, only 3 people

Frequency Distribution of Knowledge Level Before Reproductive Health Education About Dysmenorrhea in Young Women at SMPN 5 Selat Murung Keramat Village

Knowledge Level	Frequency	%
Good	10	33.3
adequate	14	46.7
Less	6	20.0

Based on the table 2 above, data on the level of knowledge of young women before intervention or Pretest were obtained with the results that 10 students / young women (33.3%) were categorized as having a good level of knowledge, 14 students / young women (46.7%) were categorized as having sufficient knowledge levels and as many as 6 students / young women (20.0%) were categorized as having a lack of knowledge level.

(23.1%), 6 people (46.2%) had a sufficient category and 4 people had a less category (30.8%). While grade 9 numbered 9 people, those who had knowledge with good categories amounted to 5 people (55.6%) and those who had knowledge with sufficient categories as many as 4 people (44.4%). From the table, it can be concluded that the higher level of knowledge before intervention is given is in grade 9.

Table 4
Frequency Distribution of Knowledge Level Before Reproductive Health Education About Dysmenorrhea Based on Age at SMPN 5 Selat Murung Keramat Village

Knowledge Level	Frequency					
	12 years old		13 years old		14 years old	
	F	%	F	%	F	%
Good	1	14.3	3	25.0	6	54.5
Adequate	4	57.1	5	41.7	5	45.5
Less	2	28.6	4	33.3	0	0

Based on the table 4 above, data on the level of knowledge of adolescent girls based on age before

being given an intervention or Pretest with the results of 12 years old who have a good level of knowledge

amounting to 1 person (14.3%), have a sufficient level of knowledge as many as 4 people (57.1%), and those who have a level of knowledge less than 2 people (28.6%). At the age of 13 years who have a good level of knowledge there are 3 people (25.0%), who have a sufficient level of knowledge of 5 people and have a level of knowledge of less than 4 people (33.3%), while at the age of 14 years who have a good level of knowledge there are 6 people (54.5%), and those who have a sufficient level of knowledge are 5 people (45.4%).

Table 5
Frequency Distribution of Knowledge Level After Reproductive Health Education About Dysmenorrhea in Young Women at SMPN 5 Selat Murung Keramat Village

Knowledge Level	Frequency	%
Good	23	76.7
Adequate	7	23.3
Less	0	0

Based on the table 5 above, data on the level of knowledge of adolescent girls after intervention or Posttest were obtained with the results that 23 students / young women (76.7%) were categorized as having a good level of knowledge, and 7 students / young women (23.3%) were categorized as having a sufficient level of knowledge.

Table 6
Frequency Distribution of Knowledge Level After Reproductive Health Education About Dysmenorrhea Based on Class at SMPN 5 Selat Murung Keramat Village

Knowledge Level	Frequency					
	7 th grade		8 th grade		9 th grade	
	F	%	F	%	F	%
Good	5	62.5	9	69.2	9	100.0
Adequate	3	37.5	4	30.8	0	0
Less	0	0	0	0	0	0

Based on table 6, data on the level of knowledge of adolescent girls based on class after being given an intervention or Posttest with the results of 8 students / young women in grade 7 who have a good level of knowledge as many as 5 people (62.5%), and 3 people (37.5%) have a sufficient level of knowledge. Of the 13 grade 8 students / young

women who have a good category, 9 people (69.2%), and 4 people (30.8%) have sufficient categories. While grade 9 who has a sufficient level of category knowledge is 9 people (100%). From the table, it can be concluded that the higher level of knowledge after intervention is given in grade 9.

Table 7
Frequency Distribution of Knowledge Level After Reproductive Health Education About Dysmenorrhea Based on Age at SMPN 5 Selat Murung Keramat Village

Knowledge Level	Frequency					
	12 years old		13 years old		14 years old	
	F	%	F	%	F	%
Good	4	57.1	8	66.7	11	100.0
Adequate	3	42.9	4	33.3	0	0
Less	0	0	0	0	0	0

Based on table 7, data on the level of knowledge of adolescent girls based on age after being given an intervention or Posttest with the results are at the age of 12 years who have a good level of knowledge totaling 4 people (57.1%), and those who have a sufficient level of knowledge as

many as 3 people (42.9%). At the age of 13 years who have a good level of knowledge amounted to 8 people (66.7%), and those who had a sufficient level of knowledge amounted to 4 people (33.3%), while at the age of 14 years who had a good level of knowledge amounted to 11 people (100%).

Table 8
Results of Statistical Test of the Effect of Reproductive Health Education on Young Women on the Level of Knowledge About Dysmenorrhea at SMPN 5 Selat Murung Keramat Village

Knowledge Level	Sebelum	Sesudah	P Value	Note
Good	10 (33.3%)	23 (76.7%)	0.01	There Are Differences
Adequate	14 (46.7%)	7 (23.3%)		
Less	6 (20.0%)	0		

From these data, statistical test results were obtained using the marginal homogeneity test with a p value = 0.0001 where $p < 0.05$ which means statistically there is a difference or influence, so it can be concluded that reproductive health education affects the level of knowledge of adolescent girls about dysmenorrhea at SMPN 5 Selat Murung Keramat Village.

DISCUSSION

Level of Knowledge Before Reproductive Health Education About Dysmenorrhea in Young Women at SMPN 5 Selat Murung Keramat Village

Based on the table above, it can be concluded that the dominant age of 14 years has a level of knowledge with a good category. While at the age of 12 years and 13 years there are still many who have enough knowledge and lack. Based on the researchers' assumptions, this is due to the lack of knowledge of adolescent girls about reproductive health, especially about dysmenorrhea. Therefore, the existence of health education can provide benefits in increasing insight, knowledge, and information that can increase adolescent knowledge. Given the low knowledge among adolescent girls about dysmenorrhea, providing health education is one of the right ways to increase knowledge.

There is a study that states that there is no relationship between the age of respondents and how to handle dysmenorrhea, this study grouped the age of adolescents into 2 parts, namely adolescents aged less than 17 years where they are included in the middle age adolescent group, while adolescents aged more than 17 years are included in the late adolescent age group. Early stage adolescents (10-14 years) have only a vague understanding of him. They are unable to attribute their behavior to the consequences of that behavior. Middle-stage adolescents (15-16 years) struggle with feelings of dependency versus independence as peers take the place of parents. They have a greater tendency to show a wide variety of their emotions. Early and secondary stage adolescents learn and receive information but are unable to apply that information in their lives. The late adolescent (17-21 years)

understands himself well and can clearly relate abstract information to his life (Marlia et al., 2020).

In adolescence, there is a lot of growth both in terms of physical and psychological and also reproductive organs so it is often referred to as the healthiest period of life. As a person ages, it will be followed by a transformation in physical and psychological aspects. The growth in the physical aspect can be seen by changes in size and shape as a result of the function of the organ that is maturing. While on the psychological aspect, there will be a change in the way of thinking. With increasing age, it will also be followed by more experience and knowledge gained so that it will affect the level of mental and intellectual maturity.

Level of Knowledge After Reproductive Health Education About Dysmenorrhea in Young Women at SMPN 5 Selat Murung Keramat Village

After conducting research where it was found that the highest level of knowledge is in adolescent girls aged 14 years and grade 9 which is because they enter the middle adolescent stage (Middle Adolescence) where at this stage their curiosity is great, have thoughts that have begun to mature, at this stage also intellectual development is getting better by knowing and starting to explore their abilities.

And adolescence is a period of rapid growth and development both physically, psychologically and intellectually. The unique nature of teenagers who have a high curiosity, like adventure and challenges and tend to dare to bear risks for the actions they do without careful consideration (Hapsari, 2019). After being given health education, students' knowledge increases. This is because reproductive health education, especially about dysmenorrhea in adolescents, is one strategy to increase adolescent knowledge about dysmenorrhea. This health education or education can have a good effect on the level of knowledge of adolescents (Meylawati & Anggraeni, 2021).

The information obtained by adolescents will affect the knowledge they have and also because of their level of education. Events that occurred privately in earlier times can also be an informal

source of knowledge. The level of knowledge of respondents is also influenced by age, that is, the more mature the age, the better their thinking ability will be.

The Effect of Reproductive Health Education on Young Women on the Level of Knowledge About Dysmenorrhea at SMPN 5 Selat Murung Keramat Village

From the results of research conducted at SMPN 5 Selat Murung Keramat Village on adolescent girls, after a Pretest, Intervention, then Posttest and then the data obtained were tested statistically, results were obtained with a value of p value = 0.0001 where $p < 0.05$ which means there is an influence of reproductive health education on the level of knowledge of adolescent girls about dysmenorrhea. This research shows that the provision of health education has succeeded in increasing the knowledge of female students or young women at SMPN 5 Selat. Through health education, they get important information about reproductive health, especially dysmenorrhea that was not previously obtained from other sources. Basically, young women's curiosity about dysmenorrhea is very large, so that every information given by them can be received well and fulfill their curiosity during this time. Plus the provision of reproductive health education about dysmenorrhea which is delivered using video media containing interesting animations so that their curiosity increases. Health promotion is an effort to improve the ability of an individual or community through a learning process so that it is expected that someone can be able to maintain and improve their health status.

Health education affects adolescent attitudes about reproductive health. It is characterized by a change in attitude between before and after intervention in the form of health education. The results of this study are also in accordance with Rofi'ah S's research that there was a change in adolescent attitudes between before and after being given health education from 50% less supportive attitudes to 94.1% having supportive attitudes (Rofi'ah, 2017). Based on the results of Agustina and Ulfa's research, it is stated that there are differences in attitudes from before and after health education is given, where positive attitudes are higher than before health education was carried out (Agustina & Ulfa, 2014).

CONCLUSION

Based on the results of research and discussion conducted at SMPN 5 Selat Murung

Keramat Village with a sample of 30 people regarding the Effect of Reproductive Health Education on Young Women on the Level of Knowledge About Dysmenorrhea at SMPN 5 Selat Murung Keramat Village, Kapuas Regency, the following results were obtained, Knowing the Frequency Distribution of Knowledge Level Before Reproductive Health Education About Dysmenorrhea Based on Class and Age at SMPN 5 Selat Murung Keramat Village. Frequency Distribution of Knowledge Level After Reproductive Health Education About Dysmenorrhea Based on Class and Age at SMPN 5 Selat Murung Keramat Village. The Effect of Reproductive Health Education on Young Women on the Level of Knowledge About Dysmenorrhea at SMPN 5 Selat Kelurahan Murung Keramat. From the results of the marginal homogeneity test, results are obtained with a value of p value = 0.000 where $p < 0.05$ which means statistically there are differences between variables. This states that there is an influence of reproductive health education on adolescent girls on the level of knowledge about dysmenorrhea in SMPN 5 Selat Murung Keramat Village.

SUGGESTIONS

It is hoped that more information can be provided about reproductive health, especially about dysmenorrhea, or add reading resources in the library to add insight to students, especially young women.

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THE EFFECT OF GIVING SOY MILK TO PUBLIC WOMEN INCREASING BABY WEIGHT

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ABSTRAK : PENGARUH PEMBERIAN SUSU KEDELAI PADA IBU NIFAS TERHADAP PENINGKATAN BERAT BADAN BAYI

Latar Belakang: Menurut *World Health Organization* (WHO) merekomendasikan agar bayi baru lahir mendapatkan ASI eksklusif selama 6 bulan pertama kehidupan bayi dan melanjutkan menyusui untuk waktu dua tahun, karena ASI sangat seimbang memenuhi kebutuhan nutrisi bayi baru lahir, dan merupakan satu-satunya makanan yang dibutuhkan sampai usia 6 bulan, serta nutrisi yang baik untuk diteruskan hingga masa usia dua tahun pendampingan. Meskipun banyak sekali manfaat dan keuntungan pemberian ASI, namun WHO memperkirakan hanya (40%) dari seluruh bayi di dunia yang mendapat ASI untuk jangka waktu enam bulan.

Tujuan: Mengetahui pengaruh pemberian susu kedelai pada ibu nifas terhadap peningkatan berat badan bayi di Wilayah Kerja Puskesmas Naras Kota Pariaman.

Metodologi: Penelitian ini menggunakan metode penelitian eksperimen (*quasi experiment*). Desain penelitian ini menggunakan rancangan *Two Group Pre and Post Test Design* yaitu penelitian yang dilakukan pada dua kelompok, kelompok intervensi yang diberikan susu kedelai selama 7 hari dan diukur peningkatan berat badan bayi sebelum dan sesudah intervensi, pada kelompok kontrol dengan perlakuan konsumsi sari kacang hijau selama 7 hari dan diukur peningkatan berat badan bayi sebelum dan sesudah intervensi. Data dianalisis menggunakan analisis univariat, bivariat, dan multivariat.

Hasil Penelitian: Hasil penelitian diketahui bahwa rata-rata skor peningkatan berat badan bayi pada kelompok intervensi nilai *pre test* dari 3176.47 meningkat menjadi 3705.88 (nilai *post test*), dengan selisih rata-rata 529,41 sedangkan pada kelompok kontrol nilai *pre test* dari 3320.59 meningkat menjadi 3726.47 (nilai *post test*) dengan selisih rata-rata 404,88. Hasil Uji value $0,000 < 0,05$ artinya ada pengaruh pemberian susu kedelai pada peningkata berat badan bayi. Ini membuktikan bahwa pemberian susu kedelai dapat meningkatkan berat badan bayi lebih tinggi dari pada sari kacang hijau.

Kesimpulan : Ada pengaruh pemberian susu kedelai pada peningkata berat badan bayi di Wilayah Kerja Puskesmas Naras Kota Pariaman.

Saran: : Bagi petugas kesehatan khususnya bidan dalam memberikan pelayanan kebidanan yang ada di Kota Pariaman agar aktif dalam mensosialisasikan tentang kandungan yang terdapat di dalam susu kedelai tersebut sehingga masyarakat dapat dijadikan tolak ukur dalam melakukan upaya promotif terhadap peningkatan berat badan bayi.

Kata Kunci : Susu Kedelai, Peningkatan berat badan bayi

ABSTRACT

Background: According to the *World Health Organization* (WHO) recommends that newborns get exclusive breastfeeding for the first 6 months of the baby's life and continue breastfeeding for two years, because breast milk is very balanced to meet the nutritional needs of newborns, and is the only food needed until the child's age. 6 months, as well as good nutrition to be continued until the age of two years of mentoring. Despite the many benefits and advantages of breastfeeding, WHO estimates that only (40%) of all babies in the world are breastfed for a period of six months.

Purpose: Knowing the effect of giving soy milk to postpartum mothers on increasing infant weight in the Working Area of Naras Health Center in Pariaman City.

Method :This research uses experimental research method (*quasi experiment*). The design of this study used a *Two Group Pre and Post Test Design*, which was a study conducted in two groups, the intervention group was given soy milk for 7 days and the baby's weight gain was measured before and after the intervention, the control group was treated with green bean juice consumption for 7 days. 6 days and measured the baby's weight gain before and after the intervention. Data were analyzed using univariate, bivariate, and multivariate analysis.

Results: The results showed that the average score of the increase in infant weight in the intervention group, the pre test value from 3176.47 increased to 3705.88 (post test value), with an average difference of 529.41 while in the control group the pre test value from 3320.59 increased to 3726.47 (post test scores) with an average difference of 404.88. The test results value 0.000.

Conclusion: There is an effect of soy milk on infant weight gain in the Working Area of Naras Health Center in Pariaman City.

Suggestion: For health workers, especially midwives, in providing midwifery services in Pariaman City, they should be active in socializing the contents of soy milk so that the community can use it as a benchmark in making promotive efforts to increase baby weight.

Keywords: Soy milk, increase in baby weight

INTRODUCTION

The World Health Organization (WHO) recommends that newborns receive exclusive breast milk for the first 6 months of the baby's life and continue breastfeeding for two years, because breast milk is very balanced to meet the nutritional needs of newborns, and is the only food needed until the age of 6 months. as well as good nutrition to continue until the age of two years of assistance. Even though there are many benefits and advantages of breastfeeding, WHO estimates that only (40%) of all babies in the world receive breast milk for a period of six months. (1).

Exclusive breastfeeding means that babies are only given breast milk without the addition of other fluids such as formula milk, oranges, honey, water, and without additional solid foods such as bananas, papaya, milk powder, biscuits, rice porridge, and tim. WHO recommends exclusive breastfeeding for the first 6 months of life. At the age of 6 months, babies are introduced to solid foods such as pureed fruit and vegetables to supplement breast milk until the child is 2 years old.

Exclusive breastfeeding plays an important role in the baby's future. Breast milk has many benefits for babies, mothers, families, the country and even the world (2). Problems that often occur in postpartum mothers in breastfeeding, one of which is that breast milk is not flowing smoothly or comes out very little. The main cause of failure in breastfeeding is not carrying out Early Breastfeeding Initiation (IMD) immediately after the baby is born, breastfeeding from one breast only, providing other sources of nutrition. Breast milk, babies who tend to sleep often, shorten the breastfeeding period, breastfeeding in an uncomfortable position and attachment (3).

Based on the 2018 Basic Health Research (Riskesmas), breastfeeding coverage in Indonesia is still quite low, namely (37.3%), based on Indonesian Health Profile data (2020) maternal services

Postpartum coverage of complete KF visits in Indonesia in 2020 was (88.3%).

The achievement of the indicator for the percentage of babies aged less than 6 months who receive exclusive breastfeeding has met the 2020 target, namely 40%. Based on the distribution of provinces, 32 provinces have achieved the expected target and there are still 2 provinces that have not achieved the target, namely West Papua (34%) and Maluku (37.2%), while the province with the highest achievement is West Nusa Tenggara (87.3 %). Exclusive breastfeeding coverage in West Sumatra Province is 77.8% (4).

Coverage of exclusive breastfeeding in Kota Pariaman has still not reached the target set by the government of 80%. Pariaman City experienced a decrease in exclusive breastfeeding from 80.1% in 2019 to 70.3% in 2020 (5).

Higher levels of isoflavones in babies were found in mothers who regularly consumed tofu and soy milk. Isoflavones in processed soybeans are believed to increase breast milk production and reduce the risk of breast cancer. Soy milk is a drink made from soybean starch which has many nutritional and beneficial contents. Its potential in stimulating the hormones oxytocin and prolactin such as alkaloids, 30 polyphenols, steroids, flavonoids and other substances is effective in increasing and facilitating breast milk production (6)..

Soy milk is a dissolved fraction extract from soybeans which is a beverage product with the aim of increasing protein consumption. The content of nuts can help the fetal growth process in pregnant women and can optimize breast milk production and the concentration of breast milk color in postpartum mothers. Based on research conducted by Dwi, (2014). Giving soy milk can increase a baby's weight by an average of 150 grams.

The content of green bean juice consumed by mothers is an additional food that can meet the nutritional needs of breastfeeding mothers so that the quality and volume of breast milk increases thereby

supporting the growth and development of the baby. Breast milk is a source of fat and protein which is important for the growth and nutrition of babies. The quantity of breast milk consumed by the baby and the nutritional content of breast milk are often used to assess nutritional adequacy during the breastfeeding process.

One way to ensure mothers are successful in providing exclusive breast milk is that mothers who are breastfeeding their babies must receive additional food to avoid decreasing breast milk production. If the content in a breastfeeding mother's food does not meet nutritional requirements, the milk-making glands will not work properly, thereby affecting breast milk production. The average baby's weight before giving the green bean juice drink and after giving the green bean juice drink showed an increase of 56 grams.

Based on the initial research survey conducted by researchers on April 30 2024 at PMB "A" and PMB "N" in the working area of the Naras Health Center, Pariaman City, it was found that in PMB "A" and PMB "N" the number of postpartum mothers in 2022 was 123 people. and the number of postpartum mothers in 2023 will be 109 people. Supported by report data on exclusive breastfeeding coverage in the Naras Community Health Center working area, namely (54.8%).

RESEARCH METHODS

The research design used in the research is an experimental method (quasi experiment). This research design used a Two Group Pre and Post Test Design, namely research conducted on two groups, the intervention group was given soy milk for 7 days and the increase in baby weight was

measured before and after the intervention, and the control group was treated with consumption of green bean juice for 7 days. 7 days and measured the increase in baby's weight before and after the intervention.

The population in this study were postpartum mothers on the 10th day who were in the working area of the Naras Health Center, Pariaman City, totaling 45 people..

The research sample in this study was normal postpartum women taken using purposive sampling technique. To anticipate postpartum mothers dropping out, the sample was increased by 10% so the total sample in this study was 17 people. So the total sample in this study was 34 postpartum mothers, divided into 17 as the intervention group and 17 as the control group..

The instruments in this research are SOP, questionnaire sheet, observation sheet, and master table.

RESEARCH RESULTS

Univariate Analysis

Based on table 1, it can be seen that in the intervention group of 17 respondents who were given soy milk, most of the respondents were aged 20-35 years (56.0%), more than half of them were postpartum mothers, namely primigravida (53.3%), and most postpartum mother respondents with jenis The sex of the baby was female (52.2%), while of the 17 respondents who were in the control group who were given green bean juice, most of the respondents were aged 20-35 years (44.0%), more than half of whom were of the parity of postpartum mothers, namely multigravida (52, 6%), and most Postpartum mother respondents with female babies (47.8%).

Table 1
Characteristics of postpartum mothers in the working area of the Naras Health Center, Pariaman City

Variable	Group			
	Intervention (N=17)	Percent	Control (N=17)	Percent
Age				
<20 years and >35 years	3	33,3	6	66,7
20-35 years	14	56,0	11	44,0
Parity				
Primigravida	8	53,3	7	46,7
Multigravida	9	47,4	10	52,6
Child's Gender				
Woman	12	52,2	11	47,8
Man	5	45,5	6	54,5

Table 2
Average baby weight before and after giving soy milk and soybean juice in the intervention group in the working area of the Naras Health Center, Pariaman City

Group	N	Mean	Min	Max	Standard Deviation
<i>Pre-test</i> <i>Soy milk</i>	17	3176.47	2900	3600	163.093
<i>Post test</i> <i>Soy Milk</i>	17	3705.88	3350	4000	191.933
<i>Pre-test</i> <i>Green bean juice</i>	17	3320.59	2900	3900	3726.47
<i>Post test</i> <i>Green bean juice</i>	17	3726.47	3350	4100	225.775

Based on table 2, it shows that in the intervention group (given soy milk) when the pre-test was carried out the average baby weight was 3176.47 with a minimum of 2900 and a maximum of 3350 and a standard deviation of 163.093. Meanwhile, when the post test was carried out, the baby's weight was 3705.88 with a minimum of 3350 and a maximum of 4000 and a standard deviation of 191.933..

In the control group (given green bean juice) when the pre-test was carried out the average baby weight was 3320.59 with a minimum of 2900 and a maximum of 3900 and a standard deviation of 3726.47. Meanwhile, when the post test was carried out, the average baby weight was 3726.47 minimum

3350 and maximum 4100 and standard deviation 225.775.

Bivariate Analysis

Before data analysis was carried out, a normality test was carried out using the Shapiro Wilk test. The results for the soy milk group were p -value 0.069 and green bean juice p -value 0.677. The baby's weight data after being given the intervention had a normal distribution. So this research will be processed using the Paired Sample T test statistical test. The results of the analysis can be seen in the following table:

Table 3
The effect of giving soy milk and green bean juice to postpartum mothers on increase in baby weight

Variabel	N	Mean	Different Mean	p -value
Intervention Group (soy milk)	17	529.41	123.53	0.007
Control Group (mung bean juice)	17	405.88		

Based on Table 3 above, the mean difference is 123.53 with a p -value of $0.007 < 0.05$, meaning that there is an influence of giving soy milk and green

bean juice to postpartum mothers on increasing the baby's weight.

Table 4
Effect of Soy Milk, Green Bean Juice, Maternal Age, Parity, and Gender Regarding the Increase in Baby Weight in the Working Area of the Naras Health Center, Pariaman City

Variable	N	Mean	Standard Deviation	p -value
Soy milk	17	529.41	98.518	0.000
Green bean juice	17	405.88	144.577	0.000
Age				
< 20 and > 35 years	9	3833.33	212.132	0.045
20 -35 years	25	3674.00	191.551	
Parity				

Primigravida	15	3773.33	180.145	0.155
Multigravida	19	3671.05	219.416	
Gender				0.005
Woman	23	3650.00	181.534	
Man	11	3854.55	192.944	

Table 4 shows that soy milk has a value of ρ value = 0.000, green bean juice has a value of ρ value = 0.000, age has a value of ρ value = 0.045, parity has a value of ρ value = 0.155 and gender has a value of ρ value = 0.005. This means that soy milk, green bean juice, age, parity and gender of the child influence the increase in baby's weight because ρ value < 0.05.

Multivariate Analysis

Multivariate analysis was carried out to see the effect of soy milk on increasing baby weight by controlling external variables, namely age, parity and gender on increasing baby weight. The analysis used is the ANCOVA test.

Table 5
The effect of soy milk and green bean juice on increasing baby weight after controlling for external variables age, parity, and gender in the working area of the Naras Health Center, Pariaman City

Source	Type III Sum of Squares	Df	Mean Square	F	Sig
Intervention	121207.398	1	121207.398	7.318	0.11
Age	1325.049	1	1325.049	0.080	0.779
Parity	1300.003	1	1300.003	0.078	0.781
Gender	6982.706	1	6982.706	0.422	0.521

Based on table 5, it shows that the intervention of soy milk and green bean juice on increasing baby weight was influenced by 22.5% and 77.5% was influenced by other factors.

DISCUSSIONS

The Effect of Giving Soy Milk to Postpartum Mothers on the Increase in Baby's Weight in the Working Area of the Naras Health Center, Pariaman City

Analysis based on research results shows that the frequency distribution of characteristics in postpartum mothers in the intervention group of 17 respondents who were given soy milk was mostly respondents aged 20-35 years (56.0%), more than half of whom were parity in postpartum mothers, namely primigravida (53.3 %), and the majority of postpartum mother respondents were female (52.2%) while of the 17 respondents who were in the control group who were given green bean juice, most of the respondents were aged 20-35 years (44.0%), more Of the parity of half of postpartum mothers, namely multigravida (52.6%), and the majority of postpartum mother respondents were female (47.8%).

Based on the research results, it is known that from 34 samples, the mean weight of babies in the intervention group was 3705.88 and the weight of babies in the comparison group was 3726.47. Based

on the research results, it was found that the baby's weight increased every day during the intervention. This is in line with research (Elika, 2018) that soy milk containing nuts can help the process of producing breast milk as well as the concentration of breast milk color in breastfeeding mothers and higher levels of isoflavones in babies found in mothers who regularly consume soybeans. The isoflavones in soybeans are believed to increase breast milk production and reduce the risk of breast cancer (7).

Based on research (Jahriani. The nutritional content of green beans is quite high and the composition is complete. Based on the amount, protein is the second main constituent after carbohydrates (8).

Green beans contain 20-25% protein. Mothers really need high protein during lactation, especially protein that contains amino acids so it can stimulate breast milk secretion. Green beans also contain active compounds, namely polyphenols and flavonoids which function to increase the hormone prolactin. When the hormone prolactin increases, milk secretion will be maximum so that the quantity of breast milk will increase and the nutritional content contained in green bean juice will increase the nutritional content in breast milk (9).

The results of this research show that soy milk and green bean juice have an effect on increasing baby weight because the value is 0.007. The results

of this research are supported by research conducted (Elika, 2018) on the Effect of Giving Soy Milk on Increasing Breast Milk Production in Postpartum Mothers at RB Bina Sehat Sentul. There is an influence of giving soy milk on increasing breast milk production showing a positive effect where all respondents experienced an increase in breast milk production and able to optimize breast milk production and the density of breast milk color in breastfeeding mothers (7).

The effect of soy milk and green bean juice on increasing baby weight after controlling for external variables of age, parity and gender on increasing baby weight in the Telaga Dewa Community Health Center working area, Bengkulu City. Intervention has a value of value = 0.11, age has a value of value = 0.779, parity has a value of value = 0.781 and gender has a value of value = 0.521. This means that the intervention of soy milk and green bean juice on increasing baby weight was influenced by 22.5% and 77.5% was influenced by other factors.

The effect of soy milk on increasing baby weight after controlling for age, parity and gender variables in the Telaga Dewa Community Health Center working area soy milk and green bean juice affect baby weight with a value of $(0.011) \leq 0.25$ which means the frequency of soy milk and Green bean juice has a greater influence on increasing baby weight compared to age, parity and gender of the baby.

Meanwhile, in the intervention group, soy milk was given for 7 days with a frequency of 250 ml of soy milk given to postpartum mothers once a day. The way to give soy milk is in the morning and then weigh the baby. Meanwhile, in the control group, green bean juice was given for 7 days with a frequency of 250 ml of green bean juice given to postpartum mothers once a day. The way to give green bean juice is in the morning and then weigh the baby.

CONCLUSIONS

Based on the conclusion that was obtained, there was a before and after effect of consuming soy milk and green bean juice on postpartum mothers who were carried out in research for 7 days which was measured as an increase in baby weight, mother's age, parity, and gender with the amounts measured. influence by 22.5% and 77,5% with a p-value of 0.007 in the Working Area of the Naras Health Center, Pariaman City in 2024.

SUGGESTIONS

Providing information and knowledge to postpartum mothers about the benefits of consuming

soy milk, one of which is to increase the baby's weight and use natural ingredients to be consumed to facilitate breast milk and for health workers, especially midwives, in providing midwifery services in Pariaman City to be active in socializing What are the benefits contained in soy milk so that society can use it as a benchmark in making promotional efforts to increase baby weight.

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EFFECTIVENESS OF DEEP BREATH RELAXATION AND HAND MASSAGE TOWARDS A DECREASE IN PAIN SCALE POST-CAESAREAN PATIENTS

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ABSTRAK : EFEKTIVITAS RELAKSASI PERNAPASAN DALAM DAN PIJAT TANGAN TERHADAP PENURUNAN SKALA NYERI PASIEN PASCAESAREAN

Latar Belakang: Angka persalinan SC di provinsi Lampung menurut Riskesdas tahun 2018 adalah 4,5%, angka kejadian SC di kota Bandar Lampung adalah 3.401 dari 170.000 persalinan (20%) dari seluruh persalinan.

Pada pembedahan SC, rasa nyeri biasanya dirasakan pasca melahirkan karena hilangnya pengaruh pembiusan. Pengaruh obat bius biasanya akan menghilang sekitar 2 jam setelah proses persalinan selesai, rasa nyeri pada bagian perut mulai terasa karena luka yang terdapat pada bagian perut. Nyeri pasca bedah akan menimbulkan reaksi fisik dan psikologi pada ibu postpartum seperti mobilisasi terganggu, malas beraktifitas, sulit tidur, tidak nafsu makan, tidak mau merawat bayi sehingga perlu adanya cara untuk mengontrol nyeri agar dapat beradaptasi dengan nyeri post operasi SC dan mempercepat masa nifas.

Tujuan : Mengetahui efektivitas relaksasi nafas dalam dan pijat tangan terhadap penurunan skala nyeri pasien post operasi *sectio caesarea* di Ruang Cempaka Rumah Sakit X

Metode: Jenis penelitian ini adalah penelitian kuasi eksperimen, dengan *two group pre test post test design*. Penelitian ini dilakukan di Ruang Cempaka Rumah Sakit X pada 1-30 Juli 2021. Populasi dalam penelitian ini adalah seluruh ibu bersalin dengan rata-rata jumlah per bulan adalah 70 orang dengan jumlah sampel pada masing-masing kelompok adalah 30 orang. Variabel bebas (*independent*) yaitu relaksasi nafas dalam dan pijat tangan, sedangkan variabel terikat (*dependent*) yaitu skala nyeri pasca operasi *sectio caesarea*. Kuesioner pengukuran nyeri menggunakan *Numeric Rating Scale*. Analisis data menggunakan uji Wilcoxon.

Hasil: Pada kelompok relaksasi nafas dalam, nilai rata-rata skala nyeri sebelum dan sesudah dilakukan intervensi adalah 6,53 dan 5,37. Sedangkan Pada kelompok pijat tangan, nilai rata-rata skala nyeri sebelum dan sesudah dilakukan intervensi adalah 6,27 dan 4,07. Nilai p-value sebesar 0,000 yang berarti bahwa ada perbedaan nilai rata-rata skala nyeri sebelum dan sesudah intervensi relaksasi nafas dalam. Intervensi pijat tangan dan relaksasi nafas dalam sama-sama efektif dalam menurunkan skala nyeri persalinan *sectio caesarea*.

Kesimpulan: Ada perbedaan nilai rata-rata skala nyeri sebelum dan sesudah intervensi relaksasi nafas dalam. Intervensi pijat tangan dan relaksasi nafas dalam sama-sama efektif dalam menurunkan skala nyeri persalinan *sectio caesarea*.

Saran: Dapat dilakukan intervensi pijat tangan dan relaksasi nafas dalam dalam menurunkan skala nyeri persalinan *sectio caesarea*.

Kata Kunci : Nafas dalam, Nyeri, Pijat tangan, Post SC

ABSTRACT

Background: The SC birth rate in Lampung province according to Riskesdas in 2018 was 4.5%, the SC birth rate in Bandar Lampung city was 3,401 out of 170,000 deliveries (20%) of all births.

In SC surgery, pain is usually felt after delivery because the anesthesia disappears. The effect of the anesthetic will usually disappear around 2 hours after the birth process is complete, pain in the stomach will begin to be felt due to the wound in the stomach. Post-surgical pain will cause physical and psychological reactions in postpartum mothers, such as impaired mobility, laziness in activities, difficulty sleeping, no appetite, unwillingness to care for the baby, so there needs to be a way to control pain so that they can adapt to post-SC surgery pain and speed up the postpartum period.

Objective: To determine the effectiveness of deep breathing relaxation and hand massage in reducing the pain scale of patients post caesarean section surgery in the Cempaka Room, Hospital.

Method: This type of research is quasi-experimental research, with a two group pre test post test design. This research was conducted in the Cempaka Room, Hospital. The independent variable is deep breathing

relaxation and hand massage, while the dependent variable is the pain scale after caesarean section surgery. The pain measurement questionnaire uses the Numeric Rating Scale. Data analysis used the Wilcoxon test.

Results: In the deep breathing relaxation group, the average pain scale scores before and after the intervention were 6.53 and 5.37. Meanwhile, in the hand massage group, the average pain scale scores before and after the intervention were 6.27 and 4.07. The p-value is 0.000, which means that there is a difference in the average value of the pain scale before and after the deep breathing relaxation intervention. Hand massage and deep breathing interventions are both effective in reducing the pain scale of caesarean section labor.

Conclusion: There is a difference in the average value of the pain scale before and after deep breathing relaxation intervention. Hand massage and deep breathing interventions are both effective in reducing the pain scale of caesarean section labor.

Suggestion: You can intervene with hand massage and deep breathing to reduce the pain scale of caesarean section labor.

Keywords: Deep breathing, Pain, Hand massage, Post SC

INTRODUCTION

Partus is the process of movement out of the fetus, placenta and membrane from the womb through the birth canal. Various changes occur in the female reproductive system in a matter of days and weeks before labor begins. There are five essential factors that affect labor, namely the fetus, the birth canal, mother's strength, mother's position and psychological response (Fitriahadi & Utami, 2019). One method of childbirth carried out besides normal delivery is the Sectio Caesarea (SC) method. This method is a medical procedure that aims to remove the fetus through the incision in the stomach and uterus of the mother. This operation is carried out with an epidural anesthesia or spinal anesthesia which keeps the mother aware during surgery. The majority of mothers can undergo treatment at home after from the hospital 3-5 days after surgery (Antoine & Young, 2020).

The delivery rate in the Victoria Australia in the 1999-2007 period found 566,202 partus and 93,349 were done through caesarean delivery (16.48%) (Agius et al., 2018). Caesarean delivery in Malaysia during 2011-2015 obtained 608,747 birth (Karaalasingam et al., 2020). Caesarean delivery in China was obtained as many as 62,653 labor from January-June 2016 (Ming et al., 2019). Caesarean delivery in Bangladesh obtained 3.5% in 2004 and 23% in 2014 (Khan et al., 2017).

SC figures in Indonesia are also still high, one of which is in the city of Makassar by 26% (Nurdianty et al., 2020). Post SC incision wound can cause pain where the incidence of Post SC pain is 15%. The results of the Basic Health Research (Riskesdas) in 2018, showing the prevalence of fault actions in labor in Indonesia is 17.6%, the highest number in the DKI Jakarta region (31.3%) and the lowest figure in Papua (6.7%). SC action causes an incision wound that can cause pain. The incidence of Post SC pain

according to the results of Riskesdas in 2018 is 22.5% where the pain arises after the anesthesia drug has expired and the patient began to carry out early mobilization (Ministry of Health of the Republic of Indonesia, 2018).

SC delivery rate in Lampung Province according to Riskesdas in 2018 is 4.5%, the incidence of SC in Bandar Lampung City is 3,401 out of 170,000 labor (20%) of all labor (Lampung Provincial Health Office, 2020). Based on delivery data at Hospital X obtained the number of SC labor in 2020 as many as 1,121 SC delivery. While the number of SC delivery in January-February 2021 was 141 SC delivery. So that the average SC delivery is 70 SC delivery (RS X, 2021).

Pain due to incision wounds in SC actions can be overcome by pharmacological and non-pharmacological management methods. Pharmacological pain management is done by administering analgesics, which is to reduce or relieve pain. While the non-pharmacological method can be done by relaxation using deep breathing techniques, hand massage, foot massage, movement or changes in position, acupressure, heat therapy, cold therapy, hypnobirthing, music, transcutaneous electrical nerve stimulation (TENS) and aromatherapy administration (Potter & Perry, 2010).

Based on the observations that researchers made at RS X, data were obtained in Post Operation SC patients as many as 10 people, as many as 10 people (100%) they complained of pain in the incision wound after two hours of surgery. They say that pain will increase if they move or change position. The pain they feel varies, some feel pain at mild to severe levels. As many as 1 person (10%) feel pain like lies, as many as 6 people (60%) feel pain like being pricked and 3 people (30%) feel pain like being hit by heavy objects. The pain they feel

must be handled by minimizing side effects. One of them is by non-pharmacological therapy, namely by using massage and touch, movement and maternal position, breathing techniques with relaxation, hot or cold applications, music and audio-teak, deep breath relaxation and hand massage.

Relaxation of deep breathing and hand massage proved effective for reducing the pain operating pain scale SC. Previous studies found that deep breathing relaxation techniques were able to reduce the intensity of pain in postoperative patients sectio caesarea (Suhartiningsih, 2019). Previous studies also found that there was a decrease in the Post SC pain scale after giving deep breathing relaxation (Lailiyah, 2019), (Ningsih, 2018). Research on the effect of breathing relaxation techniques has a decrease in pain intensity after breath relaxation is carried out (Amita et al., 2018). Research (Mampuk & Mokoagow, 2017) Getting breathing relaxation techniques in reducing post SC pain. Research on hand massage to reduce post-fault pain found that there was a decrease in pain after giving hand massage (Lailiyah, 2019); (Yunitasari et al., 2018); (Yuniwati, 2019).

Based on the description above the researcher is interested in examining the effectiveness of deep breath relaxation and hand massage to the reduction in pain scale of postoperative patients sectio caesarea in the Cempaka room RS X in 2021.

The research design used was a two group pre test post test design. This study looked for the effect of deep breathing relaxation and hand massage on reducing the pain scale of patients after caesarean section surgery. This research was conducted in the Cempaka Room at RS The sampling technique used was accidental sampling. Inclusion Criteria: Mothers who had a cesarean delivery, mothers who were willing to be respondents in the study. Post-SC mother 3-4 hours (assuming the effect of the anesthesia has disappeared, adjusting to the time of antibiotic administration). Mother Pain scale is moderate. Exclusion Criteria: Mothers who have complications during cesarean delivery. Mother does not consume anti-pain medication, whether medical or herbal. The measuring instrument uses a numeric rating scale sheet and a method for measuring pain using a pain scale of 1-10. Activities for relaxation using deep breathing techniques by inhaling deeply from the nose and exhaling from the mouth slowly, after 3-4 hours post-surgery, and carried out for 15 minutes twice, for one day and carried out for two consecutive days. The massage that researchers gave to mothers who had had a cesarean section lasted 3-4 hours, on the hands for 15 hours minutes by pinching the client's hand (supinated position) using the gap between the ring finger and little finger, massaging the client's palm in circles from the inside out using the thumb 30 times, clamping the client's hand (pronated position) using the gap between the ring finger and little finger, massaging circle the back of the client's hand from the inside out using the thumb 30 times and do this for two consecutive days.

RESEARCH METHODS

RESEARCH RESULT AND DISCUSSION

Table 1
Characteristics of Post Operation *Sectio caesarea* Respondents

Characteristic	Category	Number	Persentase
Age	<20 year	2	3,3
	20-35 year	49	81,7
	>35 year	9	15,0
Parity	Primipara	39	65,0
	Multipara	21	35,0
Education	SD	6	10,0
	SMP	5	8,3
	SMA	39	65,0
	College	10	16,7
Work	Housewife	39	65,0
	Private	5	8,3
	PNS	16	26,7

The characteristics of the respondents in the table above can be seen that the majority of respondents aged 20-35 years were 49 people (81.7%), the majority of respondents were

primiparous, 39 people. (65.0%), the majority of respondents had a high school education, 39 people (65.0%) and the majority of respondents were housewives, 39 people (65.0%).

Table 2
Average Postoperative Pain Scale for Sectio Caesarea Before and After Deep Breath Relaxation

Variabel	Mean	SD	Min-Max	95;CI		N
				Lower	Upper	
Pain Scale Post Sectio Caesarea Surgery Before Deep Breathing Relaxation	6,53	0,629	5-8	6,30	6,37	30
Pain Scale Post Sectio Caesarea Surgery After Deep Breathing Relaxation	5,37	0,765	4-7	5,08	5,65	30

Based on the table above, it can be explained that before the deep breathing relaxation treatment, the average pain scale after caesarean section surgery was 6.53 with a standard deviation of 0.629, the lowest pain scale was 5 and the highest was 8. In the confidence interval 95% believe that the average pain scale after caesarean section surgery before deep breathing relaxation treatment is between 6.30 up to 6.37. Data after deep breathing

relaxation treatment, the average pain scale after caesarean section surgery was 5.37 with a standard deviation of 0.765, the lowest pain scale was 4 and the highest was 7. At a 95% confidence interval it was believed that the average The average pain scale after caesarean section surgery before deep breathing relaxation treatment was between 5.08 to 5.65.

Table 3
Average Postoperative Pain Scale for Sectio Caesarea Before and After Hand Massage

Variabel	Mean	SD	Min-Max	95;CI		N
				Lower	Upper	
Pain Scale Post Sectio Caesarea Surgery Before Hand Massage	6,27	0,691	5-8	6,30	6,37	30
Postoperative Sectio Caesarea Pain Scale After Hand Massage	4,07	0,980	2-6	5,08	5,65	30

Based on the table above, it can be explained that before hand massage treatment, the average pain scale after caesarean section surgery was 6.27 with a standard deviation of 0.691, the lowest pain scale was 5 and the highest was 8. At a 95% confidence interval it is believed that the average The pain scale after caesarean section surgery before hand massage was between 6.30 and 6.37. Data after hand massage treatment, the average pain scale after caesarean section surgery is 4.07 with a standard deviation of 0.980, the lowest pain scale is 2 and the highest is 6. At the 95% confidence interval it is believed that the average pain scale after caesarean section surgery before treatment hand massage is between 5.08 to 5.65.

Bivariate Analysis

Differences in the Effectiveness of Deep Breathing Relaxation and Hand Massage in Reducing the Pain Scale of Patients Post Sectio Caesarea Surgery .

After carrying out the normality test, the significance value for both groups of data was $p < \alpha 0.05$, thus hypothesis testing was continued using non-parametric statistics. To determine the difference in the pain scale before and after treatment, the Wilcoxon test was used with a significance level of $p < \alpha 0.05$ as can be seen in the following description:

Table 4
Differences in the Effectiveness of Deep Breathing Relaxation and Hand Massage in Reducing the Pain Scale of Patients Post Sectio Caesarea Surgery

Variabel	Mean±SD	Selisih Mean±SD	95%CI of the Difference		t	p- value
			Lower	Upper		
Deep Breathing Relaxation Before	6,53±0,629	1,16±0,461	0,994	1,339	13,857	0,000
After	5,37±0,765					
Hand Massage Before	6,27±0,691	2,20±0,610	1,972	2,428	19,746	0,000
After	4,07±0,980					

Based on the table above, it can be seen that the average pain scale after caesarean section surgery before giving deep breathing relaxation was 6.53±0.629 and after giving deep breathing relaxation was 5.37±0.765 with a difference in the average pain scale.

post caesarean section operation is 1.16±0.461. The results of the Wilcoxon test showed a p-value of 0.000 ($p < \alpha 0.05$), meaning that there was a significant difference in the post-caesarean section pain scale between before and after treatment, or in other words, there was

The effect of providing deep breathing relaxation on reducing the pain scale after caesarean section surgery.

The average pain scale after caesarean section surgery before hand massage was 6.27±0.691 and after hand massage was 4.07±0.980 with the difference in the average pain scale after caesarean section surgery being 2.20±0.610. The results of the Wilcoxon test obtained a p-value of 0.000 ($p < \alpha 0.05$), meaning that there was a significant difference in the pain scale after caesarean section surgery between before and after treatment or in other words, there was an effect of giving hand massage on reducing the pain scale after caesarean section surgery.

Based on the table above, it can be explained that before the deep breathing relaxation treatment, the average pain scale after caesarean section surgery was 6.53 with a standard deviation of 0.629, the lowest pain scale was 5 and the highest was 8. At a 95% confidence interval, it is believed that the average The average pain scale after caesarean section surgery before deep breathing relaxation treatment was between 6.30 and 6.37. Data after deep breathing relaxation treatment, the average pain scale after caesarean section surgery is 5.37 with a standard deviation of 0.765, the lowest pain scale is 4 and the highest is 7. At the 95% confidence interval it is believed that the average pain scale after caesarean section surgery Caesarean area before

deep breathing relaxation treatment was between 5.08 to 5.65. Pain is the body's defense mechanism, it occurs when tissue is damaged and this will cause the individual to react by moving the painful stimulus. Often described in terms of destructive processes, tissue like being pricked, burning hot, wrapped around, like emotions, feelings of fear, nausea and dread (Lailiyah & Pertiwi, 2017).

scale before and after the deep breathing relaxation intervention. This is in line with research by Lailiyah and Pertiwi (2017), who found that after carrying out deep breathing relaxation techniques the majority of post-SC postpartum mothers in IRNA room C, Syarifah Ambami Rato Ebu Bangkalan Regional Hospital, the intensity of the pain is light. The results of this research also showed that after the massage technique was carried out, the majority of post-SC postpartum mothers in the IRNA C room at Syarifah Ambami Rato Ebu Bangkalan District Hospital had mild pain intensity. There was no difference in pain intensity between deep breathing relaxation techniques and massage techniques for post-SC postpartum women in the IRNA C room at Syarifah Ambami Rato Ebu Bangkalan Hospital.

According to the theory of Smeltzer & Barre (2014), about breath relaxation in explaining that the rhythm of breathing is very important to achieve relaxation during maternity. Labor pain, especially during the latent phase, can decrease with this breathing technique. The technique used is usually with a slow rhythm (6-12 breath/minute) to moderate (30-60 breath/minute), without hyperventilation. The breathing rhythm must adapt to the intensity of the patient's contraction. A study shows that compared to other techniques, breathing techniques are the most widely used non-pharmacological methods in reducing pain (Smeltzer & Barre, 2014).

Relaxation is a form of activity that can help overcome stress. This relaxation technique involves the movement of limbs easily and may be done everywhere. In relaxation can be added by visualizing. Visualization is a way to release

disturbances in the mind by imagining the disturbance as something, and then we release it. Benefits of deep breathing relaxation techniques include peace of liver, reduced anxiety, worry and anxiety, lower pressure and tension, lower heartbeat, reduce blood pressure, greater resistance to disease, sleeping sleep, mental health. , better memory, increase logical thinking power, increase creativity, beliefs, will, intuition, improve the ability to relate to others (Smeltzer & Barre, 2014).

The principle that underlies the decrease in pain by relaxation techniques lies in the physiology of the autonomic nervous system which is part of the peripheral nervous system that maintains the homeostasis of the individual internal environment. During the release of chemical mediators such as bradykinin, prostaglandin and substance, it will stimulate sympathetic nerves, causing vasoconstriction which ultimately increases muscle tone which causes various effects such as muscle spasm which ultimately suppress blood vessels, reduce blood flow and increase the speed of muscle metabolism which causes impulse delivery Pain from the spinal cord to the brain and is perceived as pain (Smeltzer & Barre, 2014).

The results of this study are in accordance with the theory put forward by Smeltzer & Barre (2014), which states that relaxation of deep breathing can reduce pain, one of which is post section caesarea pain. This study also received statements from respondents who said the pain they felt was reduced after relaxing deep breathing. Respondents also said that with deep breath relaxation exercises can benefit them when experiencing pain due to post *sectio caesarea*.

Based on the table above, it can be explained that before the hand massage treatment, the average postoperative caesarea post surgery scale is 6.53 with a standard deviation of 0.629, the lowest pain scale is 5 and the highest is 8. In the 95% confidence interval it is believed that the average Post -Caesarea Postoperative Pain Scale before hand massage treatment is between 6.30 to 6.37. Data After hand massage treatment, the average postoperative caesarea postoperative pain is 5.37 with a standard deviation of 0.765, the lowest pain scale is 4 and the highest is 7. In the 95% confidence interval it is believed that the average postoperative pain operational scale is cesareana Before the treatment of hand massage was between 5.08 to 5.65.

Pain is an unpleasant multidimensional experience due to tissue damage. Some state that pain is an unpleasant condition, very subjective that can be different in everyone, only that person can

explain or evaluate the pain they experience. Stimulus that can cause or almost cause tissue damage is pain. Pain stimulus can cause various changes, such as increased heart frequency, increased blood pressure, release of adrenaline (epinephrine) into the bloodstream and increased blood glucose levels. In addition, pain can result in decreased gastric motility and decreased skin supply of the skin that causes sweating (Smeltzer & Bare, 2014).

Management of non-pharmacological in labor pain, in addition to reducing pain, can also increase comfort in patients during labor. The non-pharmacological approach has been widely used to reduce labor pain. Both pharmacological and non-pharmacological therapy has been applied to maternity patients. Non-pharmacological management in reducing pain has advantages, where this therapy can reduce side effects in mothers and infants caused by drugs. In addition, it can also give a pleasant sense to the mother and fetus. In mothers who have cardiorespirator and also mothers who are allergic to drugs, non-pharmacological methods can be an option during labor. Some non-pharmacological therapy methods that can be selected, including hand massage and deep breath relaxation (Smeltzer & Bare, 2014). In the hand massage group, the average pain scale value before the intervention is 6.27 with a standard deviation of 0.691. While the average pain scale value after intervention is 4.07 with a standard deviation of 0.980, and a difference of 2.2. P-value value of 0,000 which means that there is a difference in the average pain scale value before and after hand massage intervention. Hand massage is the most effective step to increase relaxation and be used as palliative therapy. Hand massage means stimulating under the skin tissue by providing a touch and soft pressure to provide a sense of comfort. Previous research on the effect of hand massage on pain after surgery found that hand massage for 5 minutes before surgery can reduce pain. Therefore, this method can be used to increase patient comfort and reduce surgical pain. It also can reduce anxiety (Tiffany et al, 2011).

Research on the effect of hand massage on Post Sectio Caesarea pain, found that the intensity of post section caesarea pain can be reduced after hand massage (p-value = 0,000). According to this finding, hand massage can be considered a complementary method to reduce pain from cesarean section effectively and to reduce the number of drugs and side effects (Abbaspoor et al, 2014).

The results of this study are in accordance with the theory put forward by Smeltzer & Barre (2014), which states that hand massage can reduce pain, one of which is post sectio caesarea pain. This study also received statement from respondents who said the pain they felt was reduced after doing hand massage. Respondents also said that the presence of hand massage given by nurses can benefit them when experiencing pain due to post *sectio caesarea*.

Differences in the effectiveness of deep breath relaxation with hand massage in reducing the Postoperative Pain Scale *Sectio Caesarea*

Based on the table above, it can be seen that the average postoperative caesarea postoperative pain before giving deep breath relaxation is 6,530.629 and after giving deep breath relaxation is 5.37±0.765 with an average scale difference is 1,167±0,461. Wilcoxon test results obtained P-value 0,000 ($p < \alpha 0.05$) means that there is a significant difference in the post operating pain section sectiona between before and after treatment or in other words there is an effect of giving deep breath relaxation on a decrease in the post operating pain section cesarean.

The average postoperative pain section of Caesarea before hand massage is 6,27±0,691 and after hand massage administration is 4.07±0.980 with an average difference in the postoperative caesara post operational pain is 2,200±0.610. Wilcoxon test results obtained P-value 0,000 ($p < \alpha 0.05$) means that there is a significant difference in the Postoperative Caesarea Post Operation Scale between before and after treatment or in other words there is the effect of giving hand massage on a decrease in the post operating pain scale Sectio Caesarea.

The results showed that a decrease in the postoperative pain surcan cesareana in the hand massage group was more than the group of deep breathing relaxation. In the hand massage group, a decrease in pain scale was 2.2, whereas in the group of deep breath relaxation there was a decrease in pain scale by 1,167. That is, hand massage is more effective in reducing the Postoperative Pain Scale Sectio Caesarea.

The benefits of hand massage include relieving stress, making the body relaxed, launching blood circulation, massage therapy can facilitate blood flow, blood pressure can move blood through blocked areas, mechanical massage effects have the ability to train nerves and body muscles that lead to The brain so that it can make the body healthier and fitter, reduce pain or pain, massage helps maintain relaxation in the optimal stage, accelerate

recovery after pain and massage helps the body pump more oxygen and network nutrition and vital organs by increasing circulation and relaxing muscles.

The results of this study are in line with previous research. Research on the Effect of Hand and Foot Massage on Post-Cesarean Pain and Anxiety, getting the intensity of pain and anxiety Post Sectio Caesarea can be reduced after hand and foot massage (P-value = 0,000). This study is also a very effective complementary method applied to reduce anxiety and pain in postoperative patients.

This study indicates that between deep breath relaxation and hand massage can reduce the scale of postoperative caesarea postoperative pain. In the relaxation of breath in the patient still feels pain when doing relaxation techniques because the relaxation uses the abdominal part so that the decrease in the level of pain is less, because there are incision wounds. While the respondent's hand massage gets a direct hand massage from the researcher so that the reduction in pain is more. According to the researcher, the hand massage is more effective than the relaxation of deep breathing because hand massage is the most effective step to increase relaxation and used as palliative therapy.

Hand massage means stimulating under the skin tissue by providing a gentle touch and pressure to provide a sense of comfort. With the effect of relaxation due to hand massage, providing comfort so as to reduce the scale of postoperative caesarea postoperative pain. This study also received statements from respondents who said the pain they felt was reduced after doing hand massage, respondents said they were relaxed, comfortable, and calm after hand massage and really reduced stress. From the beginning the pain felt pain was becoming mild pain. Respondents also said that the presence of hand massage given by nurses can benefit them when experiencing pain due to post sectio caesarea.

CONCLUSIONS

The characteristics of the respondent are known that most of the respondents were 20-35 years old as many as 49 people (81.7%), the respondent parity had mostly 39 children (65.0%), most of the respondents had 39 high school education (65, 0%) and most of the respondents are housewives of 39 people (65.0%).

The average pain scale before being given a deep breath relaxation in postoperative patients sectio caesarea is 6.53 with a standard deviation of 0.629, while the average pain scale after breath

relaxation in post operational caesarean is 5.37 with a standard deviation of 0.765.

The average pain scale before being given a hand massage in postoperative patients sectio caesarea is 6.53 with a standard deviation of 0.629, while the average pain scale after hand massage in post posting sectional post operations is 5.37 with a standard deviation of 0.765.

Hand massage is more effective in reducing the Postoperative Pain Scale Sectio Caesarea than deep breathing relaxation (decreased pain scale in the hand massage by 2.20 while a decrease in pain scale in the relaxation of deep breath is 1.16).

SUGGESTIONS

Research that gets the influence of non - pharmacological therapy on decreased postoperative caesarea postoperative pain, can be used as one of the policies about the application of non -pharmacological therapy to reduce pain, especially deep breath relaxation and hand massage. Services in Hospital X especially in the Cempaka room can apply non -pharmacological therapy such as deep breathing and hand massage to reduce pain in postoperative patients sectio caesarea. For the research site, in order to use non -pharmacological therapy such as deep breathing relaxation and hand massage to reduce the pain of post -cesarean postoperative patients before being given pharmacological therapy.

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