

## 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) F<sub>2</sub>-alpha which is *acycloxygenase* (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 (*dismenorhea*) 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 (zingirona), zingiberol, bisabolena, kurkumen, gingerol, filandrena, 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 *dismenorhea*. *Dismenorhea* resulting in decreased activity during menstruation, abdominal pain, nausea, back pain. Students who experience *dismenorhea* 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).

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.

## 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

### 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		
Pain after	23	2.26	.541	1	3	-4,416	0,000

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 (Mubarok, 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 O<sub>2</sub> and CO<sub>2</sub> 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.

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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. Gingerol 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  $\leq 0.05$  (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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