



The Effect of Giving Emprit Ginger Boiled Water on Reducing Menstrual Pain in Adolescent Girls Aged 15-18 Years

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ABSTRACT

Menstrual pain is discomfort in the lower abdomen during menstruation caused by uterine spasms that can interfere with activity and require treatment. Emprit ginger boiled water is one of the non-pharmacological therapies that can be used to reduce menstrual pain. Naturally, emprit ginger is believed to contain oleoresin consisting of gingerol and shogaol which can function as an analgesic. The purpose of this study was to determine the effect of giving emprit ginger boiled water on reducing menstrual pain in adolescent girls in Gayaman Village, Mojoanyar Mojokerto. This type of research is an experimental quasy with a one group pre test-post test design approach. The population is adolescent girls aged 15-18 years who experience menstrual pain as many as 82 respondents. The sample size in this study was 68 respondents. Sampling is carried out using accidental sampling techniques. The instrument used in this study was a pain scale observation sheet. The results of the analysis were obtained before being given emprit ginger boiled water, half of the respondents experienced menstrual pain with a moderate pain scale of 34 (50%). After being given emprit ginger boiled water, most respondents experienced menstrual pain with a mild pain scale of 49 (72.1%). The results of the t-test test are obtained $p = 0.00 \leq \alpha = 0.05$ then H_0 is rejected and H_1 is accepted. This means that there is an effect of giving emprit ginger boiled water on reducing menstrual pain in adolescent girls aged 15-18 years in Gayaman Village, Mojoanyar District, Mojokerto. The results of this study can prove that emprit ginger boiled water given to adolescent girls who experience menstrual pain can help reduce menstrual pain. So emprit ginger boiled water can be used to reduce menstrual pain.

Keywords: Emprit Ginger Boiled Water, Menstrual Pain

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INTRODUCTION

Adolescence is the transition from childhood to adulthood. Teenagers will experience physical and emotional changes. In girls, puberty is marked by menstruation. During menstruation, complaints often occur, especially in women of productive age.¹ Demographic data shows that adolescents constitute a large population process of the world's population. about one-fifth of the world's population are adolescents aged 10-19 years, about 900 million are in developing countries. The rapid development during puberty is influenced by sexual hormones. The reproductive organs in puberty have begun to function. One of the characteristics of puberty is the occurrence of menstruation in women.² In general, menstruation occurs following a regular pattern and has no problems, but nevertheless there are some women who experience some abnormalities at certain times. The most common abnormalities are menstrual pain (menstrual pain) and premenstrual syndrome. About one-third of menstruating women will feel some pain that accompanies menstruation.³ Several young women in Gayaman Village, Mojoanyar District, Mojokerto, experienced problems during menstruation, namely experiencing pain during menstruation. Most of these young women in overcoming menstrual pain by using pain relievers such as ibuprofen. However, the use of pain relievers that are consumed continuously or long-term can trigger side effects in the form of digestive disorders, this situation can lead to symptoms of difficulty swallowing, constipation, diarrhea, ulcers, and flatulence.

Data from the World Health Organization (WHO) in 2021 found that 1,869,425 people (90%) of women in the world experienced menstrual pain. The prevalence of menstrual pain in Indonesia is estimated at 107,673 people (64.25%) consisting of 59,571 people (54.89%) primary dysmenorrhea and 9,496 people (9.36%) secondary dysmenorrhea.³ in East Java, the incidence of menstrual pain is 71.3%. In Mojokerto itself, the prevalence of menstrual pain is estimated to be around 63% .¹ Based on a preliminary study conducted by researchers on March 27, 2022, in Gayaman Village, Mojoanyar District, Mojokerto, researchers made observations by conducting interviews with 10 adolescent girls aged 15-18 years who experienced menstrual pain, the results of these observations showed that about 7 (70%) experienced menstrual pain and 3 (30%) did not experience menstrual pain. Of the 7 adolescent girls who experienced menstrual pain, 5 (71.42%) of them experienced menstrual pain that interfered with activities so they could not participate in school activities. The occurrence of menstrual pain due to myometrial contractions resulting in ischemia due to the presence of prostaglandins produced by the endometrium in the secretion phase. Primary dysmenorrhea is pelvic, cramping-like pain that begins shortly before or during menstruation and usually ends one to three days after the first day of menstruation. As for secondary dysmenorrhea, it occurs because there is a relationship between menstrual pain and pathological conditions in the genitalia organs.³ The impact that occurs if menstrual pain (dysmenorhea) is not treated is disruption of daily living activities, menstrual retrograde (menstruation that moves backwards), infertility (infertility), pregnancy or pregnancy is not detected

ectopic rupture, cyst rupture, perforation of the uterus from the IUD and infection. Aside from the above impacts, emotional conflict, tension and anxiety can all play a role and lead to uncomfortable and unfamiliar feelings. Tension usually adds to the severity of a bad situation at any time. A little bit of not feeling comfortable quickly develops into a major problem with all the annoyance that comes with it.

Thus anxiety, feelings of disjoy or also feelings of pressure are all not uncommon. Therefore, in adolescence, menstrual pain (dysmenorhea) must be treated so that there is no impact like the things above. Some efforts can be made to reduce the intensity of menstrual pain by using non-pharmacological therapy. One of the non-pharmacological therapy efforts that can reduce menstrual pain is by consuming herbal drinks such as ginger water decoction.⁴ Ginger has bioactive compounds namely gingerol and shogaol, gingerol has activity inhibiting cyclooxygenase and lipoxygenase enzymes in the synthesis of prostaglandins and leukotrienes. So that it can suppress pain due to dysmenorrhea.⁴ Based on this background description, researchers are interested in conducting research to find out whether there is an effect of giving ginger water on reducing menstrual pain levels.

METHOD

This research design uses quasy experiments with a one group pre test-post test design approach. One group pre-test-post design is a study that is carried out intervention in one group and then observed on the dependent variable after the intervention. Before treatment, the group will measure disminore pain (pre test) then after the treatment of giving ginger boiled water, then the group will be measured disminore (post test).⁵ Young women aged 15-18 years who experienced menstrual pain were 82 respondents in Gayaman Village, Mojoanyar District, Mojokerto. The sample of 68 adolescent girls aged 15-18 years who experienced menstrual pain used sampling techniques: non-probability with accidental sampling techniques. The Research Instrument uses observation sheets and SOP sheets. The independent variable in this study was empirite ginger boiled water. The dependent variable in this study was menstrual pain.

RESULTS

No.	Variable	Total	
		N	%
1	Age		
	15 years	18	26.5
	16 years old	11	16.2
		28	41.1
		11	16.2
2	17 years old	68	100
	18 years old		
	Total	0	0
	Pain before giving empirrit ginger boiled water	14	20.6
	No Pain	34	50
3	Light	20	29.4
	Keep	68	100
	Heavy	14	20.6
	Total	49	72.1
	Pain after being given empirrit ginger boiled water	5	7.3
No Pain	0	0	
		68	100

Based on age, almost half of respondents aged 17 years were 28 respondents (41.1%). mild pain before being given empirrit ginger boiled water as much as 14 (20.6%). After being given ginger boiled water, mild pain increased by 49 (72.1%). The results of the t-test test are obtained $p = 0.00 \leq \alpha = 0.05$ then H_0 is rejected and H_1 is accepted. This means that there is an effect of giving empirrit ginger boiled water on menstrual pain in adolescent girls aged 15-18 years, Gayaman Village, Mojoanyar District, Mojokerto.

DISCUSSION

Menstrual Pain Before Given Emprit Ginger Boiled Water

The results of a study conducted on 68 respondents in Gayaman Village, Mojoanyar District, Mojokerto, obtained menstrual pain data before being given empirrit ginger boiled water, half of the respondents experienced menstrual pain with a moderate pain scale of 34 people (50%). Menstrual pain is discomfort in the lower abdomen caused by uterine spasms accompanied by other biological symptoms including dizziness, fatigue, sweating, back pain, headache, nausea, vomiting, and diarrhea that occurs during menstruation.⁶ The occurrence of menstrual pain due to myometrial contractions resulting in ischemia due to the presence of prostaglandins produced by the endometrium in the secretion phase.⁷ There are 2 classifications of menstrual pain, namely primary menstrual pain and secondary menstrual pain. Primary menstrual pain is menstrual pain that occurs since menarche and there are no abnormalities in the reproductive organs. Primary menstrual pain has symptoms including lower abdominal pain that radiates to the waist and thigh area, sometimes accompanied by nausea and vomiting, headaches, diarrhea and unstable emotions.⁸ Secondary menstrual pain is also called extrinsic

dysmenorrhea, which is menstrual pain caused by abnormalities in the reproductive organs. Secondary menstrual pain has symptoms including lower abdominal pain that radiates to the lower back and legs, pain that is felt to disappear arising or dull pain that continues to exist, not infrequently those who experience menstrual pain is accompanied by headaches, nausea, vomiting, constipation or diarrhea, and frequent urination.³ Half of respondents who experienced menstrual pain with a moderate pain scale were 34 respondents (50%). If they experience menstrual pain, they usually use pharmacological therapy, namely pain relievers such as ibuprofen. Pain causes a person to feel uncomfortable so it requires treatment, because if left untreated it will interfere with daily activities. Some efforts that can be made to reduce the intensity of menstrual pain are with non-pharmacological therapies such as empirrit ginger boiled water. There is a content of ginger that can reduce menstrual pain, oleoresin content consisting of gingerol and shogaol which has a way of working to stimulate the production of cyclooxygenase (COX) and 5-lipoxygenase. The release of these substances can inhibit vasodilation of blood vessels which can affect the intensity of menstrual pain.⁶

Menstrual Pain After Being Given Emprit Ginger Boiled Water

The results of a study conducted on 68 respondents in Gayaman Village, Mojoanyar District, Mojokerto, obtained menstrual pain data after being given empirrit ginger boiled water, most of the respondents experienced menstrual pain with a mild pain scale of 49 people (72.1%). Menstrual pain can be interpreted as discomfort in the lower abdomen and pelvis during menstruation that can interfere with activities and require treatment.⁹ Most of the symptoms of menstrual pain that often appear are pain or cramps in the lower abdomen, nausea, vomiting, and diarrhea.⁶ There are many ways to reduce menstrual pain that occurs among women ranging from pharmacological therapy to non-pharmacological therapy. Those who use pharmacological therapy usually use analgesic drugs such as ibuprofen, mefenamic acid, and non-pharmacological therapies such as warm water compresses, regular exercise, adequate rest, and consuming herbs. One of these herbs is ginger. The main parts of ginger that can be used to reduce pain and inflammation are gingerol and shogaol compounds.⁴ The release of these substances can inhibit the work of prostaglandins and cause vasodilation of blood vessels resulting in changes in pain scale. After conducting research, it was found that most respondents who experienced menstrual pain experienced a decrease in pain because ginger contained hot and warm feelings that could be used to meet the needs of respondents' comfort. The feeling of comfort in respondents will make the muscles feel relaxed. The value of pain reduction depends on each individual because each individual has a different response to one another.

The Effect of Emprit Ginger Boiled Water on Menstrual Pain

The results of the t-test showed that there was an effect of empirite ginger boiled water on menstrual pain in adolescent girls aged 15-18 years in Gayaman Village, Mojoanyar District, which was shown by $p = 0.00$ and $\alpha = 0.05$ so that $p \leq \alpha (0.05)$ then H_0 was rejected and H_1 was accepted.

This herbal therapy uses traditional medicines that are believed to reduce menstrual pain, one of which is ginger.⁴ Where the rhizome has properties for analgesics, antipyretics, and anti-inflammatory which can reduce pain felt during menstrual pain. Ginger contains oleoresin consisting of gingerol and shogaol which has a way of working to stimulate the production of cyclooxygenase (COX) and 5-lipoxygenase. The release of these substances can inhibit the performance of prostaglandins and leukotrienes which results in vasodilation of blood vessels which can affect the intensity of menstrual pain.¹⁰ It is also known that the oleoresin content in empiric ginger such as gingerol has antioxidant activity above vitamin E. Gingerol in empiric ginger is also anticoagulant, which can prevent blood clots. It is very helpful in the production of menstrual blood. Decreased intensity of menstrual pain due to impulses that suppress pain so that the pain becomes reduced. These impulses are in the form of warmth which is the effect of empirit ginger cooking water which hits the painful part, namely the lower abdomen.⁴

Respondents who have been given empirit ginger boiled water can affect the pain response experienced by respondents and provide a sense of comfort. However, the value of reducing menstrual pain varies, this can be triggered by several factors, namely pain perception, pain tolerance and pain threshold. Judging from the decrease in menstrual pain that occurs, the provision of empirit ginger boiled water shows that there are quite effective changes in the reduction of menstrual pain in respondents. Thus, non-pharmacological therapy with empirit ginger boiled water can be used as an alternative choice to reduce the intensity of menstrual pain in respondents, because this non-pharmacological therapy in addition to its ingredients is easy to obtain and does not cause negative side effects in respondents.

CONCLUSIONS

From the results of the study, it was found that half of the respondents experienced menstrual pain with a moderate pain scale before being given Emprit Ginger boiled water in young women aged 15-18 years. It was found that most experienced menstrual pain with a mild pain scale after being given a decoction of Emprit ginger water in adolescents aged 15-18 years, There was an effect of giving empirit ginger boiled water on menstrual pain in adolescent girls aged 15-18 years. For health workers before giving analgesic drugs for the management of menstrual pain, you should use empirite ginger boiled water.

REFERENCES

1. Wulanda C, Luthfi A, Hidayat R. Efektifitas Senam Dismenore Pada Pagi Dan Sore Hari Terhadap Penanganan Nyeri Haid Pada Remaja Putri Saat Haid di SMPN 2 Bangkinang Kota Tahun 2019. *J Kesehatan Tambusai*. 2020;1(1):1-11.
2. Suryani LSL. Penyesuaian diri pada masa pubertas. *Konselor*. 2013;2(1).
3. Larasati TA, Alatas F. Dismenore primer dan faktor risiko Dismenore primer pada Remaja. *J Major*. 2016;5(3):79-84.
4. Hidayati R. Penurunan Nyeri Haid (Dismenore) Primer Melalui Pemberian Minuman Jahe Emprit. *J Amanah Kesehat*. 2020;2(1):19-27.
5. Nursalam N. Metodologi Penelitian Ilmu Keperawatan. Published online 2016.
6. Lestari NMSD. Pengaruh dismenorea pada remaja. In: *Prosiding Seminar Nasional MIPA*. ; 2013.
7. Wulandari E, Hadisaputro S, Runjati R. Pengaruh Abdominal Stretching Exercise Terhadap Penurunan Kadar Prostaglandin pada Dismenore Primer. Published online 2016.
8. Kusmiyati K. Nyeri Haid, Penyebab, Dan Penanggulangannya. *J Pijar Mipa*. 2011;6(1).
9. Umaiya F. "Penanganan Nyeri Haid (Dismenore) Pada Mahasiswidi Fakultas Keperawatan Universitas Sumatera Utara. Published online 2020.
10. Fransiska AN, Hilmi IL, Salman S. Pengaruh Konsumsi Minuman Jahe (*Zingibers officinale*) Saat Dismeno