



OVERVIEW OF RED GINGER BOILED WATER ADMINISTRATION FOR REDUCING PRIMARY DYSMENORRHEA PAIN IN ADOLESCENT GIRLS IN KARANGCENGIS VILLAGE

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Abstract

Primary dysmenorrhea is menstrual pain commonly experienced by adolescent girls and can disrupt daily activities. One alternative non-pharmacological pain management option is herbal therapy, such as boiled red ginger (*Zingiber officinale* var. *rubrum*), which is known to have anti-inflammatory and analgesic properties. Red ginger contains gingerol, an anticoagulant that can inhibit the release of enzymes into prostaglandins, which contribute to inflammation and reduce uterine contractions, thus relieving menstrual pain. To determine the effectiveness of red ginger decoction on adolescent girls with primary dysmenorrhea in the Karangcengis Village area. This study uses a descriptive case study with respondents of adolescent girls with primary dysmenorrhea focusing on the administration of red ginger decoction as a complementary therapy. This study was conducted in Karangcengis Village for 3 days starting from June 23-25, 2025. After administering red ginger decoction for 3 days once a day from the first day of menstruation to the third day of menstruation, the results of the pain scale before being given red ginger decoction reached 6 (moderate pain). After administering 200ml of red ginger decoction once daily in the morning for three days, from the first day of menstruation to the third day, the pain scale decreased to a level 1 (mild pain). Administering red ginger decoction to adolescent girls experiencing dysmenorrhea can reduce the pain.

Keywords: Primary Dysmenorrhea, Red Ginger, Adolescent Girls, Pain Scale

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1. INTRODUCTION

Adolescence refers to the period between 12 and 24 years old when an individual transitions from childhood to adulthood. During this phase 3 aspects undergo changes: cognitive development, psychosocial development, and physical growth. Puberty in girls is marked by the onset of menstruation, which typically occurs between the ages of 10 and 16 (Betty & Ayamah, 2021).

Menstruation is the shedding of the uterine lining, resulting in bleeding, and is experienced regularly by women. Menstruation usually lasts 3-8 days, with a 28-day cycle, although irregular cycles can occur. Many women experience physical discomfort during menstruation, both before and during their periods. They may also experience problems such as premenstrual syndrome (PMS), irregular menstruation, and painful menstruation or dysmenorrhea (Hamranani, 2020).

Dysmenorrhea, also known as menstrual cramps, is a gynecological problem that can affect women of all ages and ethnicities. Caused by uterine contractions or related to menstruation, dysmenorrhea is typically centered in the lower abdomen before and during menstruation (Gustina, 2022). There are two types of dysmenorrhea: primary and secondary.

Globally, the incidence of dysmenorrhea is high, with an average of over 50% of women affected. In Indonesia, the incidence of dysmenorrhea is 106,167 people (64.25%), with 86,671 people (54.89%) experiencing primary dysmenorrhea and 19,496 people (9.36%) experiencing secondary dysmenorrhea (Herawati, 2021).

Based on a survey conducted on January 2, 2025, among 10 adolescent girls in Karangcengis Village, the results showed that 3 girls experienced cramping and lower abdominal pain, 1 girl experienced breast pain, 2 girls experienced moderate dysmenorrhea, and 1 girl experienced mild dysmenorrhea. The average duration of pain was 3 days during menstruation, with a pain duration of 10-15 minutes, which was intermittent. According to the girls, the pain significantly disrupted their activities and concentration in learning. There are two ways to reduce dysmenorrhea pain: pharmacological and non-pharmacological therapies (Baiti et al., 2022). One non-pharmacological approach is using red ginger (*Zingiber officinale*) (Fransiska et al., 2023).

Red ginger contains gingerol, which can block serotonin, a neurotransmitter involved in the central nervous system and gastrointestinal tract. Red ginger, in particular, contains gingerol with anticoagulant properties that can inhibit the release of enzymes that contribute to



inflammation. Gingerol also helps reduce uterine contractions, thereby relieving menstrual pain. Red ginger is rich in essential oils and oleoresin, making it valuable in traditional medicine, especially as a beverage (Maulida et al., 2023).

A study by Prasetyowati (2024) titled "The Effect of Red Ginger Boiled Water on Reducing Dysmenorrhea Pain Intensity in Adolescents" showed a significant difference in pain intensity before and after administering red ginger boiled water. Among the 20 respondents, the majority experienced moderate pain before treatment. However, after receiving the red ginger boiled water, the number of respondents who did not experience pain increased to 10. The Wilcoxon Signed Rank Test results showed a P-value of 0.000, indicating a significant effect of red ginger boiled water on reducing dysmenorrhea pain intensity (Utami et al., 2024).

Based on the above description, the author aims to conduct research titled "Overview of Red Ginger Boiled Water Administration for Reducing Primary Dysmenorrhea Pain in Adolescent Girls in RT 03 RW 09, Karangcengis Village".

2. RESEARCH METHOD

This research uses a descriptive design. The subject of this scientific paper is one adolescent girl aged between 12 and 19 years old who lives in Karangcengis Village and experiences dysmenorrhea with a pain scale of 4 or more on a 1-10 scale on the first day of menstruation to the third day. The tools and materials used in this study are a Numeric Rating Scale (NRS) questionnaire sheet, measuring cup, glass, gram scale, pan, red ginger, brown sugar, and water. The study was conducted for 3 days, once a day. The research took place in Karangcengis Village, Bukateja District, Purbalingga Regency.

In this study, pain scale measurements and questionnaire sheets with the Numeric Rating Scale (NRS) were used before administering the red ginger boiled water. To prepare the red ginger boiled water, 10 grams of red ginger were peeled and washed with clean water, then sliced and boiled with 400 ml of water and brown sugar at a temperature of 30°C. The mixture was boiled until the water was reduced to 200 ml, then removed from heat and left to cool for about 20 minutes. The pain scale was measured again 2 hours after administering the red ginger boiled water.

3. RESULTS AND DISCUSSION

A. RESULTS

The author took one respondent, Nn.R, an 18-year-old girl, and administered red ginger boiled water once a day for 3 days. The respondent met the established criteria, experiencing primary dysmenorrhea with moderate pain (scale 4-6), and was willing to participate. Day 1 (June 21, 2025) Pretest pain scale: 6 (moderate pain), Administered 200ml of red ginger boiled water, Post-test pain scale (2 hours after administration): 5. Day 2 (June 22, 2025) Pretest pain scale: 5 (moderate pain), Administered 200ml of red ginger boiled water, Post-test pain scale (2 hours after administration): 4. Day 3 (June 23, 2025) Pretest pain scale: 4 (moderate pain), Administered 200ml of red ginger boiled water, Post-test pain scale (2 hours after



administration): 1 The results showed a decrease in pain scale from moderate to mild pain after administering red ginger boiled water

B. Discussion

From the case study conducted, data was obtained from the client. The assessment of Nn. R was carried out on June 21, 2025, in Karangcengis Village. The general identity of Nn. R is an 18-year-old female adolescent, Muslim. Before administering the red ginger boiled water therapy, the client was given health education on non-pharmacological management of dysmenorrhea, including the use of red ginger boiled water. The client was also educated about the potential side effects of long-term pharmacological therapy, such as analgesic use.

The initial pain assessment using the Numeric Rating Scale (NRS) questionnaire revealed a pain scale of 6 (moderate pain) on the first day of menstruation, with the client reporting lower abdominal pain like cramping. Based on the interview, Nn. R experienced menarche at 12 years and 3 months old and reported experiencing pain during menstruation. Previously, she managed her dysmenorrhea symptoms by taking analgesics.

Theoretically, pain can be reduced or eliminated through pharmacological and non-pharmacological methods. However, long-term use of pharmacological treatments, such as analgesics, can have negative side effects like gastrointestinal problems, nausea, vomiting, and kidney and liver damage. Therefore, the client was willing to try non-pharmacological approaches, such as consuming red ginger boiled water, which is considered a safer and more natural remedy.

Dysmenorrhea is caused by an increase in prostaglandin production, leading to uterine contractions. These contractions can reduce blood supply to the endometrium, resulting in menstrual pain. Excessive uterine contractions due to high prostaglandin production can cause dysmenorrhea in adolescents.

In addition to prostaglandins, high levels of adrenaline and estrogen hormones also play a role. Estrogen triggers stronger uterine contractions, while adrenaline tightens the uterine muscles, leading to excessive contractions that cause abdominal pain during dysmenorrhea.

Dysmenorrhea is characterized by physical and psychological symptoms, which can vary among women. Some may experience both physical and psychological symptoms, while others may experience only one type. Physical symptoms include fatigue, lower back pain, dizziness, nausea, vomiting, and diarrhea. Psychological symptoms include anxiety, restlessness, mood swings, and loss of patience.

The author implemented an intervention by boiling 10g of red ginger and 10g of brown sugar in 400ml of water until 200ml remained. This mixture was administered once daily in the morning for three days, starting from the first day of menstruation. Consuming red ginger water causes a spicy sensation in the mouth and a warm sensation in the body, which helps improve blood circulation. The gingerol in red ginger also has anticoagulant properties, supporting the smooth flow of menstrual blood.

Results: Day 1 (June 21, 2025): Pretest pain scale: 6 (moderate pain); post-test pain scale (2 hours after administration): 5 Day 2 (June 22, 2025): Pretest pain scale: 5 (moderate pain); post-test pain scale (2 hours after administration): 4 Day 3 (June 23, 2025): Pretest pain scale: 4 (moderate pain); post-test pain scale (2 hours after administration): 1 (mild pain).

Based on the measurement results of pain scale in Nn. R before and after administering red ginger boiled water, there was a decrease in pain scale on: Day 1: pretest 6, post-test 5



(decrease of 1) Day 2: pretest 5, post-test 4 (decrease of 1) Day 3: pretest 4, post-test 1 (decrease of 3).

The average decrease in pain scale after administering red ginger boiled water for 3 days was 1.67. The average pain scale before treatment was 5 (moderate pain category), and after treatment was 3.33, indicating a consistent decrease in pain every day after intervention.

The decrease in pain can be attributed to the bioactive compounds gingerol and shogaol present in red ginger, which work by inhibiting the enzymes cyclooxygenase and lipoxygenase, thereby suppressing the formation of prostaglandins and leukotrienes that trigger pain. The oleoresin in red ginger also contains gingerol, which has high antioxidant activity and anticoagulant properties, helping to improve blood flow during menstruation.

These findings are consistent with previous research (Utami Prasetyowati, 2024) that red ginger boiled water is effective in reducing the intensity of dysmenorrhea pain in adolescent girls. Red ginger is a potential alternative therapy for dysmenorrhea due to its bioactive compounds and antioxidant properties.

This is also supported by research conducted by Betty & Ayamah (2021) on the effect of red ginger boiled water on reducing dysmenorrhea. The results showed that 15 respondents (50%) experienced mild dysmenorrhea, while 14 respondents (46.7%) were in the moderate category. The data analysis using the Wilcoxon test with a significance level of ≤ 0.05 showed a mean value of 1.100 and $p = 0.000$, indicating that red ginger boiled water has a significant effect on reducing dysmenorrhea. Therefore, it can be concluded that administering red ginger boiled water to adolescent girls is effective in reducing primary dysmenorrhea pain.

4. CONCLUSION

In the study conducted from June 23-25, 2025, on Nn. R, the administration of red ginger boiled water to reduce primary dysmenorrhea pain in adolescent girls in Karangcengis Village had a significant effect in reducing dysmenorrhea pain. The pain scale before administering red ginger boiled water was 6 (moderate pain). After administering the intervention once a day, 200ml in the morning, for 3 days from the first day of menstruation to the third day, the results showed a decrease in pain scale to 1 (mild pain).

5. REFERENCES

- Alatas, F., & TA, L. (2020). *Dismenore Primer dan Faktor Risiko Dismenore Primer pada Remaja Primary Dysmenorrhea and Risk Factor of Primary Dysmenorrhea in Adolescent*. Majority, 5(3). Diakses pada tanggal 10 Juli 2025
- Betty, B., & Ayamah, A. (2021). *Pengaruh Pemberian Air Rebusan Jahe Merah Terhadap Penurunan Dismenorea Pada Mahasiswi Semester 8 Stikes Widya Dharma Husada Tangerang*. Edu Dharma Journal: Jurnal Penelitian Dan Pengabdian Masyarakat, 5(2), 61. <https://doi.org/10.52031/edj.v5i2.177> Diakses pada tanggal 9 Januari 2025



- Hamranani, Nur anisa, A. (2022). *Pengetahuan penatalaksanaan dismenore remaja putri*. Jurnal Ilmu Kebidanan Universitas Muhammadiyah Klaten 12 (2), 48-54, 2022. <https://share.google/PgUpGuM69E5br56Tu>. Diakses pada 5 Juli 2025
- Herawati,. (2021). Faktor-Faktor Yang Mempengaruhi Kejadian Nyeri Haid (Dismenorea) Pada Siswi Madrasah Aliyah Negeri Pasir Pengaraian. <https://E-Journal.Upp.Ac.Id/Index.Php/Akbd/Article/View/1382>. Diakses pada 6 Juli 2025
- Karlinda, B., Oswati Hasanah, & Erwin. (2022). *Gambaran Intensitas Nyeri, Dampak Aktivitas Belajar, dan Koping Remaja yang Mengalami Dismenore*. Jurnal Vokasi Keperawatan (JVK), 5(2), 128-137. <https://doi.org/10.33369/jvk.v5i2.23310>. Diakses pada tanggal 6 Juli 2025
- Kesehatan, J. I., Prasetyowati, U., & Triani, Y. (2024). *Pengaruh Air Rebusan Jahe Merah terhadap Penurunan Intensitas Nyeri Dismenorea pada Remaja di Desa Semangau*. 5(2), 25–31. <https://doi.org/10.5455/mnj.v1i2.644xa>. Diakses pada tanggal 9 Januari 2025
- SARI, H., & Hayati, E. (2021). *Penurunan Tingkat Nyeri Dismenorea dengan Pemberian Jus Wortel Pada Remaja Putri*. Jurnal Kesehatan Komunitas, 6(3), 281-284. <https://doi.org/10.25311/keskom.vol6>. Diakses pada tanggal 5 Juli 2025
- Tsamara, G., Raharjo, W., & Ardiani Putri, E. (2020). *Hubungan Gaya Hidup Dengan Kejadian Dismenore Primer Pada Mahasiswi Program Studi Pendidikan Dokter Fakultas Kedokteran Universitas Tanjungpura*. Jurnal Nasional Ilmu Kesehatan (JNIK), 2(3), 130-140. Diakses pada tanggal 6 Juli 2025