



NON-PHARMACOLOGICAL THERAPY OF RED GINGER HUGGING PILLOWS (BAPER) TO REDUCE DYSMENORRHEA IN ADOLESCENTS

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ABSTRACT

In Indonesia, the prevalence of dysmenorrhea reaches 60 to 70%, with three-quarters of the number of adolescents experiencing mild to severe pain and as many as 7-15% do not go to school. The incidence of dysmenorrhea in Indonesia is around 54.89% primary dysmenorrhea, the remaining 45.11% secondary dysmenorrhea. Adolescents who experience dysmenorrhea tend to reduce their activities, especially activities at school and often decide not to go to school. Pharmacological therapy that is too frequent can cause several side effects such as stomach irritation, intestinal colic, diarrhea and asthma attacks. Non-Pharmacological Therapy is an alternative for dysmenorrhea, one of which is the red ginger hug pillow (BAPER). Red ginger is an option because it contains a lot of oleoresin, a bioactive component consisting of gingerol and shogaol which works as an anti-inflammatory and provides a warming effect so that prostaglandins can be blocked and reduce the intensity of pain during menstruation. This type of research uses a quasi-experimental research design with a pretest posttest control group design. In early September 2025, researchers began collecting data on dysmenorrhea history from students at SMA Negeri 2 Kisaran. They were assisted by homeroom teachers and OBGYN doctors to better understand the students' condition. They also conducted interviews with both students and homeroom teachers. During this data collection phase, 60 students with a history of dysmenorrhea were identified. The sampling technique used was purposive sampling with a sample of 60 middle-aged adolescents (aged 15-17 years) at SMAN 2 Kisaran. The statistical test results obtained a P value = 0.000 < 0.05, so it can be concluded that non-pharmacological therapy of red ginger hug pillows can reduce dysmenorrhea. Red ginger hug pillows (BAPER) can be a solution for adolescents who experience dysmenorrhea.

Keywords: dysmenorrhea; hug_pillow; non_pharmacology; red_ginger; teenagers

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INTRODUCTION

In Indonesia, the prevalence of dysmenorrhea reaches 60 to 70%, with three-quarters of the number of adolescents experiencing mild to severe pain and as many as 7-15% do not go to school (Bethari et al., 2022). The incidence of dysmenorrhea in Indonesia is around 54.89% primary dysmenorrhea, the remaining 45.11% secondary dysmenorrhea (Fifi et al., 2022). Adolescents who experience dysmenorrhea tend to reduce their activities, especially activities at school and often decide not to go to school. Pharmacological therapy that is too frequent can cause several side effects such as stomach irritation, intestinal colic, diarrhea and asthma attacks so that non-pharmacological therapy is an alternative to reduce dysmenorrhea by administering red ginger modified into a plaster that is attached to a hug pillow (Miki et al., 2023).

Dysmenorrhea in adolescents should be addressed immediately, either with pharmacological or non-pharmacological treatment. Several previous researchers have used hypnotherapy techniques with breathing relaxation and music, but this can only be done in calm conditions and cannot be done anytime. Other studies have used music and warm compresses, which can only be done at home (Husnul and Santi, 2022) (Kesy et al., 2024) (Ririn and Selvi, 2022) (Yeti, 2023). Red ginger is made into a drug adhesive system that is attached to the skin to deliver a specific dose of medication through the skin at a predetermined release rate, so that it can reach the bloodstream.

Non-pharmacological therapy is an alternative for dysmenorrhea, one of which is the red ginger hug pillow (BAPER). Red ginger is a popular choice because it contains a high amount of oleoresins, bioactive components consisting of gingerols and shogaols, which act as anti-inflammatories and provide a warming effect, blocking prostaglandins and reducing menstrual pain (Annida et al., 2024). The ginger pillow and plaster are designed in a rectangular shape, measuring 30x18cm. They feature a hand-shaped adhesive on the back for use during activities. The heat from this pillow comes from red ginger, packaged in a plaster form, which is attached to the pillow.

METHOD

This study used a quasi-experimental design with a pretest/posttest control group design. The sampling technique used was purposive sampling, with 60 middle-aged adolescents (aged 15-17) at SMAN 2 Kisaran. Red ginger extract, which has been shown to contain numerous oleoresins, bioactive components consisting of gingerols and shogaols, acts as an anti-inflammatory and provides a warming effect, blocking prostaglandins and reducing menstrual pain. Formulation of the red ginger hug pillow (BAPER): The ginger pillow and plaster are designed in a rectangular shape, measuring 30x18cm. They have a hand-shaped adhesive on the back for use during activities. The heat from this pillow comes from the red ginger preparation, packaged in the form of a plaster attached to the pillow.

RESULT

Respondent characteristics

Table 1.

Frequency Distribution of Respondent Characteristics

Characteristics	f	%
Age		
15 years	12	20,0
16 years	31	51,7
17 years	17	28,3

Based on table 1 above, the characteristics of the respondents state that the majority of respondents are 16 years old, namely 31 people (51.7%), and the minority are 15 years old, namely 12 people (20.0%).

The incidence of dysmenorrhea in adolescents

Data on the incidence of dysmenorrhea in adolescents at SMAN 2 Ranging before using BAPER from 60 respondents can be seen in the table below:

Table 2.

Frequency Distribution of Dysmenorrhea Before Using BAPER

Variables	f	%
The pain is quite severe	22	36,7
Severe pain	31	51,7
The pain is very severe	7	11,6

Based on Table 2 above, it can be explained that of the 60 respondents obtained before using BAPER, the majority experienced severe pain, as many as 31 people (51.7%). Data on the incidence of dysmenorrhea in adolescents at SMAN 2 Kisaran after using BAPER from 60 respondents can be seen in the table below:

Table 3.

Frequency Distribution of Dysmenorrhea After Using BAPER at SMAN 2 Kisaran

Variables	f	%
No pain	7	11,7
A little pain	31	51,7
Painful	22	36,6

Based on Table 3 above, it can be explained that of the 60 respondents obtained after using BAPER, the majority of respondents experienced little pain, as many as 31 people (51.7%). Data on the incidence of dysmenorrhea before and after using BAPER from 60 respondents can be seen in the table below:

Table 4.
Frequency Distribution of Dysmenorrhea Before and After Using BAPER

Dismenore Pretest	Dismenore Posttest						Total		P Value
	No pain		A little pain		Painful		f	%	
	f	%	f	%	f	%	f	%	
The pain is quite severe	6	27,2	14	63,7	2	9,1	22	100	0,000
Severe pain	1	3,2	17	54,8	13	42	31	100	
The pain is very severe	0	0	0	0	7	100	7	100	

Based on the results of the chi-square statistical test, a significant p-value of $0.000 < \alpha 0.05$ was obtained, indicating a difference in dysmenorrhea pain before and after using BAPER in adolescents. These results demonstrate that the use of BAPER to reduce dysmenorrhea pain in adolescents is proven effective.

DISCUSSION

The results of this study indicate that BAPER can reduce dysmenorrhea pain in adolescents with a chi-square statistical test result of $0.000 < \alpha 0.05$. These results are in line with research conducted by Puji et al. that the contents of red ginger such as gingerol, shagaol, and singerone are antioxidants, anti-inflammatory, analgesic, and anti-carcinogenic when viewed pharmacologically and physiologically in the body, working by stopping the cause of pain in prostaglandins (Yelvita, 2022). Red ginger stops the COX cycle by inhibiting the enzyme's activity. The peak effect will be felt in plasma between 15-60 minutes (Nugraha, 2019).

CONCLUSION

The Red Ginger Hug Pillow (BAPER) is a concept tailored to the youthful lifestyle, offering efficiency and portability. It's also a solution for teens taking medication for dysmenorrhea.

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