

## THE EFFECT OF CINNAMON TEA CONSUMPTION ON DYSMENORRHEA PAIN IN ADOLESCENT GIRLS

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### ABSTRAK PENGARUH KONSUMSI TEH KAYU KAYU TERHADAP NYERI DISMENOREA PADA REMAJA

Latar Belakang: Dismenore merupakan gangguan fisik yang sangat menonjol pada wanita yang sedang mengalami menstruasi berupa gangguan nyeri atau kram pada perut. WHO menyatakan tahun 2018 didapatkan kejadian sebesar (90%) remaja mengalami dismenore. Angka kejadian dismenore pada remaja di Provinsi Lampung tahun 2007 diperkirakan 1,12%-1,35%. Nyeri haid jika tidak segera diatasi akan mempengaruhi fungsi mental sehingga mendesak untuk segera mengambil tindakan secara farmakologis atau non farmakologis. Salah satu penanganan non farmakologis untuk mengatasi dismenore adalah dengan menggunakan kayu manis.

Tujuan: pengaruh pemberian teh kayu manis terhadap nyeri dismenore pada remaja putri.

Metode: Jenis penelitian ini menggunakan penelitian kuantitatif. Desain penelitian ini adalah *One Group Pretest-Posttest Design*. Dilaksanakan pada bulan Januari-Juni 2023. Penelitian ini menggunakan sampel sebanyak 27 orang remaja putri dengan nyeri dismenore. Instrumen penelitian menggunakan *Numeric Rating Scale* dan lembar observasi. Teknik sampling menggunakan pra eksperimen. Analisa data menggunakan univariat dan bivariat menggunakan Uji *Wilcoxon*.

Hasil: Rata-rata nyeri dismenore remaja putri sebelum diberi teh kayu manis dengan mean 5,59. Kemudian rata-rata nyeri dismenore sesudah diberi teh kayu manis dengan mean 0,56. Sedangkan berdasarkan hasil uji statistic *wilcoxon* didapat nilai *p-value* 0,000 (<0,05).

Kesimpulan terdapat pengaruh pemberian teh kayu manis pada remaja putri.

Saran: Diharapkan bagi remaja putri yang mengalami nyeri dismenore dapat mengonsumsi teh kayu manis sebagai alternatif untuk mengurangi nyeri dismenore.

Kata kunci: Teh Kayu Manis, Dismenore, Remaja Putri

### ABSTRACT

Background: Dysmenorrhea is a prominent physical disorder in women during menstruation, characterized by abdominal pain or cramps. According to the World Health Organization (WHO) in 2018, 90% of adolescents experience dysmenorrhea. The prevalence of dysmenorrhea among teenagers in Lampung Province was estimated to be between 1.12% and 1.35% in 2007. Untreated menstrual pain can affect mental function, necessitating prompt pharmacological or non-pharmacological interventions. One non-pharmacological approach to manage dysmenorrhea is the use of cinnamon.

Objective: the effect of cinnamon tea consumption on dysmenorrhea pain in adolescent girls.

Methods: This study employed a quantitative research design, specifically the One Group Pretest-Posttest Design. The research was conducted from January to June 2023. The sample consisted of 27 female adolescent experiencing dysmenorrhea. The research instruments used were the Numeric Rating Scale and observation sheets. Pre-experimental sampling technique was utilized, and data analysis included univariate and bivariate analysis using the Wilcoxon Test.

Results: The average dysmenorrhea pain score among adolescent girls before consuming cinnamon tea was 5.59, which reduced to 0.56 after consumption. The Wilcoxon test results yielded a p-value of 0.000 (<0.05), indicating a significant effect of cinnamon tea consumption on dysmenorrhea pain in grade female. It is recommended that adolescent girls experiencing dysmenorrhea consider consuming cinnamon tea as an alternative to alleviate dysmenorrhea pain.

Conclusion: There is an effect of giving cinnamon tea to young girls with the intensity of dysmenorrhea pain with a p-value of 0.000 <0.05.

Suggestion: It is hoped that young women can consume cinnamon tea as an alternative non-

pharmacological treatment for dysmenorrheal pain.

Keywords : Cinnamon Tea, Dysmenorrhea, Adolescent Girls

## INTRODUCTION

The World Health Organization (WHO, 2012 in Nora, 2018) found an incident of 1,769,425 people (90%) adolescents experiencing dysmenorrhea with 10-15% experiencing severe dysmenorrhea. WHO in Sulistyorini's study (2017) stated that the incidence of dysmenorrhea is quite high throughout the world. The average incidence of dysmenorrhea in young women is between 16.8-81% (Sulistyorinin, 2017).

In Indonesia, the incidence of dysmenorrhea is also quite high, with 107,673 people (64.25%), consisting of 59,671 people (54.89%) experiencing secondary (severe) dysmenorrhea.

The prevalence of dysmenorrhea in Indonesia is 64.25%, consisting of 54.89% primary dysmenorrhea and 9.36% secondary dysmenorrhea. Primary dysmenorrhea is experienced by 60-76% of young women.

The incidence of dysmenorrhea in adolescents in Lampung Province is estimated to be 1.12% to 1.35% of the number of sufferers who go to health workers (Lampung Health Profile, 2007). In Bandar Lampung, the incidence of dysmenorrhea has not been systematically recorded. However, services for adolescent health tend to fluctuate or fluctuate, most recently in 2007 at 13.05%.

Menstrual pain if not treated immediately will affect the mental and physical function of the individual so that it is urgent to take urgent action or pharmacological or non-pharmacological therapy. One of the pharmacological therapies is by administering analgesic drugs. NSAID (Nonsteroidal Antiinflammatory Drugs) class of drugs can relieve this pain by blocking prostaglandins that cause pain. Treatment using NSAIDs has harmful side effects on other body systems (stomach pain, risk of kidney damage). But taking the drug for too long will result in many disadvantages, which can cause stomach irritation, intestinal colic, diarrhea and asthma attacks.

Using a heating pad can help relieve pain. In addition, taking over-the-counter ibuprofen given for 2 to 3 days immediately after your period starts usually helps.

In addition, complementary therapies such as

massage, scraping, acupressure, and breathing exercises can be given to complement pharmaceutical treatment, if needed (Ika Fitria Ayuningtyas, 2021).

Non-pharmacological therapies that can be used to treat menstrual pain include herbal medicine, use of supplements, medical treatment, relaxation, hypnotherapy and acupuncture. Herbal concoction therapy can be done by using traditional medicines derived from plant ingredients. Some plant ingredients are believed to reduce pain, namely, cinnamon, soy, cloves, turmeric, ginger, Chinese herbs (Anurogo & Wulandari, 2011).

One of the non-pharmacological treatments to treat primary dysmenorrhea is to use cinnamon. Cinnamon is one of the therapies that can be chosen for the treatment of primary dysmenorrhea in young women. Cinnamon contains the main components, namely cinnamaldehyde (55-57%) and eugenol (5-18%). Cinnamaldehyde has activity as an antispasmodic which can relieve stomach cramps and eugenol which can prevent prostaglandin synthesis and reduce inflammation (Jaafarpour, 2015).

## RESEARCH METHODS

In this study, researchers used a type of quantitative research. Quantitative research method is research that is loaded with nuances of numbers in data collection techniques in the field. Quantitative research has characteristics namely hard sciences, 'brief' and narrow focus, reductionistic, logical and deductive reasoning, knowledge base: causal relationships, testing theories, control over variables, instruments, basic elements of analysis: numbers, statistical analysis of data, generalization (Andi Fitriani Djollong, 2014).

## RESEARCH RESULTS

From table 1 it can be seen that the average pain of dysmenorrhea in young women before being given cinnamon tea with a mean of 5.59, which means that some young women experience dysmenorrhea from severe pain to pain like a punch.

**Tabel 1**  
**Average Dysmenorrhea Pain in Young Women Before and After Given Cinnamon Tea**

Nyeri Dismenore	N	Mean	St.Dev	S.Error	Min-Max
Pretest	27	5,59	0,888	0,171	4-7
Posttest	27	0,56	0,698	0,134	0-2

Then for the average pain of dysmenorrhea for young women after being given cinnamon tea with a mean of 0.56, which means that some young women experience painful dysmenorrhea that is almost not felt until it is not painful.

The normality test is a prerequisite test before carrying out the difference or influence test (compre means). In this study the researchers used the Shapiro Wilk normality test with the results: the p-value in this study was obtained 0.000-0.005 and 0.000-0.005 <0.05, which means it is smaller than

0.05, the data is not normally distributed, and then experimental testing was carried out by Wilcoxon test.

Tabel 2

Nyeri Dismenore	Shapiro Wilk		
	Statistic	df	P.Value
Pretest	0,882	27	0,005
Posttest	0,733	27	0,000

Tabel 3  
Average Dysmenorrhea Pain in Young Women Before and After Given Cinnamon Tea

Nyeri Dismenore	N	Mean	St.Dev	S.Error	Min-Max
Pretest	27	5,59	0,888	0,171	4-7
Posttest	27	0,56	0,698	0,134	0-2

From table 3 it can be seen that the average pain of dysmenorrhea in young women before being given cinnamon tea with a mean of 5.59, which means that some young women experience dysmenorrhea from severe pain to pain like a punch.

Then experienced a change in pain after administration of cinnamon tea with a mean of 0.56, which means that some young women experience painful dysmenorrhea that is almost not felt until it is not painful.

The results of the Wilcoxon statistical test obtained a p-value of 0.000 (<0.05), which means that there is an effect of cinnamon tea on reducing dysmenorrheal pain in young women.

## DISCUSSION

The results of the univariate analysis of the mean dysmenorrhea pain in female adolescents before being given cinnamon tea at SMA N 1 Trimurjo, Central Lampung District with a mean (5.59), which means that some female adolescents experience dysmenorrhea pain that is so severe that the pain feels like a punch. Then the average pain after being given cinnamon tea with a mean (0.56) which means that some young women experience painful dysmenorrhea that is almost not felt until it is not painful.

The results of the univariate analysis are in line with research conducted by Nia Aprilla on the effect of giving cinnamon infusion on dysmenorrhea

in young women at RT 01 RW 03 Salo Sipungguk Village in 2020.

The average pain scale before being given cinnamon infusion was 5.08. The average pain scale after being given cinnamon infusion is 2.42. The average decrease in menstrual pain (dysmenorrhea) is 2.66. There is an effect of giving cinnamon infusion on dysmenorrhea in young women.

The results of the bivariate analysis mean that the mean pain of dysmenorrhea in young women before being given cinnamon tea is 5.59 and after giving cinnamon tea with a mean of 0.56, which means that some young women experience pain so severe that the pain is barely felt. The results of the Wilcoxon statistical test obtained a p-value of 0.000 (<0.05), which means that there is an effect of cinnamon tea on reducing dysmenorrhea pain in young women.

Cinnamon has been reported to have prostaglandin effects and reduce inflammation. Cinnamon contains various vitamins such as vitamin A, thiamin, riboflavin, and ascorbic acid. In adults and adolescents, 1.5-4 daily of dry cinnamon bark can be used to reduce dysmenorrhea (Jaafarpour, 2015).

Cinnamon is a member of the Lauraceae family which is one of the oldest plants and spices native to Indonesia. Cinnamon extract has anti-inflammatory properties that help treat menstrual pain and stop bleeding. The taste of cinnamon is spicy, sweet, and warm. The chemicals contained

are essential oils, tannins, calcium oxalate, resin, tanning agents, safrole, cinnamaldehyde and eugenol. Essential oil has the main parts, namely cinnamaldehyde (55-57%) and eugenol (5-18%). Cinnamaldehyde has an antispasmodic effect, which can relieve, prevent or reduce the risk of muscle spasms, and relax muscles. Eugenol reduces inflammation and inhibits prostaglandin biosynthesis (Maharianingsih & Poruwati, 2021).

According to the researchers in this study, all adolescents experienced pain between the range of scores 4 to 7 in the measurement before being given cinnamon tea. This is influenced by the expenditure of blood in the form of clots (tosol) causing unbearable pain in the pelvic area to the symphysis abdomen. Before being given cinnamon tea, some young women could endure the pain while remaining relaxed, but there were some young women who rested and lay in bed. According to researchers the meaning of one's pain will vary greatly depending on the perception of pain itself, in this study some young women experienced a significant reduction in pain after giving cinnamon tea. This can be caused by different levels of pain, so that it will affect the pain in the next hour.

In this study, respondents experienced a very significant reduction in dysmenorrheal pain, due to the cinnamon content which can help treat menstrual pain and cooperative respondents who followed the recommendations for drinking from the researchers. Measurements were taken for 1 day with 3 doses: 0 hours, 8 hours, & 16 hours after menstruation. After that, pain was assessed for 20 minutes using the Numeric Rating Scale (NRS).

## CONCLUSION

There is an effect of giving cinnamon tea to young girls with the intensity of dysmenorrhea pain with a p-value of  $0.000 < 0.05$ .

## SUGGESTION

It is hoped that young women can consume cinnamon tea as an alternative non-pharmacological treatment for dysmenorrheal pain.

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