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The influence of the habit of consuming sour turmeric drinks on complaints of dysmenorrhea in adolescent at Pebayuran's Senior High School

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ABSTRACT

Adolescent girls are a group that is prone to experiencing dysmenorrhea. Dysmenorrhea can be treated with turmeric acid drink. Curcumine functions as an analgesic which inhibits excessive prostaglandin release, thereby inhibiting uterine contractions and reducing dysmenorrhea pain. Research objective: to determine the effect of sour turmeric drink on dysmenorrhea in young women. Type of pre-experimental research with one group pre-post test design. This research was conducted in March 2023 at SMA N 1 PEBAYURAN Bekasi Regency. The sampling technique was purposive sampling. The sample numbered 39 people. Results: The average value before being given the turmeric acid drink was 6.1760 and after being given the turmeric acid drink the mean value changed, namely 2.7345. The results of statistical tests on the group given the sour turmeric drink obtained a p value of 0.000, meaning that there was an effect of the sour turmeric drink on complaints of dysmenorrhoea in young women at SMA N 1 Pebayuran. It is hoped that health workers can educate young women regarding the management of dysmenorrhea by consuming turmeric acid drinks

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1. Introduction

The incidence of dysmenorrhea according to the World Health Organization (WHO) is 1,769,425 people (90%) women. In Indonesia, there are 107,673 people (64.25%) women, consisting of 59,671 (54.89%) primary dysmenorrhea and 9,496 people (9.36%) secondary dysmenorrhea (*Zshasa Et al.*, 2016). The results of the 2016 Indonesian Demographic and Health Survey (SDKI), the prevalence of dysmenorrhea was quite high, namely 54.98% primary dysmenorrhea and 9.36% secondary dysmenorrhea (Baiti et al., 2021).

It is estimated that 40 to 50 young women experience complaints of dysmenorrhoea, of which around 30% of teenagers need treatment or pain relief. According to Winarso (2017) of all women who experience menstruation, 60% were found to complain of mild to moderate dysmenorrhoea (*Winarso.*, 2017).

Teenage girls are more susceptible to experiencing dysmenorrhoea because their hormonal cycles are not yet stable. This dysmenorrhea will really disrupt the concentration and activities of young women (*Nurul.*, 2017). According to Nur Baiti (2018), many factors trigger primary dysmenorrhea, but

endocrine factors play an important role. During menstruation, endometrial cells will release prostaglandins. Increased levels of prostaglandins have been shown to be found in the menstrual fluid of women who experience severe dysmenorrhea, these levels increase especially during the first two days of menstruation. Prostaglandin has the function of making the uterine wall contract and the surrounding blood vessels narrow which causes tissue ischemia which can cause pain during menstruation. Apart from that, prostaglandin can stimulate pain nerves to increase the intensity of pain. The causes of dysmenorrhea are not only endocrine factors, there are mental factors or psychological disorders, organic disorders, constitutional factors, and allergic factors. Based on research results, there is a relationship between dysmenorrhea and urticaria, migraine, and asthma (Baiti et al., 2021).

Generally, during menstruation, many women complain of pain that lasts 2-3 days, starting the day before menstruation starts. The pain during menstruation (dysmenorrhea) that every woman feels is different, some are a little disturbed but there are also those who are so disturbed that they cannot carry out daily activities and make them have to rest and are even forced to be absent from school (*Misliani*., 2019).

The impact on women during dysmenorrhea is physical weakness, immobility and stress (*Wulandari.*, 2018). Because of menstrual pain, many young women go to the doctor for consultation and treatment. The pain felt before and during menstruation is often accompanied by nausea, dizziness and weakness (*Asroyo*., 2020). This pain is so intense that it forces sufferers to rest, women often leave work, and many young women miss school. away to participate in learning, so that learning activities can be disrupted, the ability to concentrate is weakened or even non-existent, and the material provided during continuous learning should not be skipped by young women suffering from menstrual disorders (*Suri*., 2015)

Dysminorrhoea can also be cured with various herbal medicines, one of which is turmeric acid (*Larasati*., 2016). Turmeric acid drink is a herbal medicine made from turmeric and tamarind which is said to be efficacious for refreshing the body, preventing heartburn or canker sores and making the stomach cool or can relieve pain during menstruation (*Suri*., 2015).

According to Nur Baiti (2018) turmeric or curcuma domestica val, can be used as an anti-inflammatory (anti-inflammatory) activity against reptiulcer, antitoxin, anti-hyperlipidemia, and anti-cancer activity and tamarind (tamarindus indica) including citric acid, elegang acid, tamarind tetrat. Curcumine will work in inhibiting the cyclooxygenase (COX-2) reaction thereby reducing the occurrence of inflammation so that it will reduce uterine contractions. And curcumin as an analgesic will inhibit the release of excessive prostaglandins through the uterine epithelial tissue and will inhibit uterine contractions so that it can reduce the pain of dysmenorrhoea (*Marsaid*., 2017.).

Naturally, turmeric is believed to contain active ingredients which can function as an analgesic, antipyretic and anti-inflammatory, as well as tamarind (tamarind) which has active ingredients as anti-inflammatory, antipyretic and sedative. Turmeric contains curcumin and when consumed by humans, the amount of curcumin consumed by humans is 100 mg/day. Tamarind turmeric drinks to reduce pain in dysmenorrhea have no side effects and no danger if consumed as a habit (*Winarso*., 2017).

According to the research journal Widiatami (2018), drinking tamarind turmeric has become a community habit which is effective for reducing menstrual pain. In the modern era, young women prefer herbal products such as tamarind turmeric. Turmeric tamarind drink is made from turmeric and tamarind as the main ingredients. Turmeric and tamarind contain antipyretic, analgesic and anti-inflammatory active ingredients. The research results show that the p-value is 0.000 <0.05. So it can be concluded that there is a difference before and after giving tamarind turmeric drinks to the intensity of menstrual pain (dysmenorrhea) in young women. This is in accordance with research by Suri (2014), Jamila (2018), Marsaid, et al (2017), and Hamdayani (2018) that there is an effect of sour turmeric drinks on reducing menstrual pain (*Widiatami*., 2018).

This research contributes in terms of strengthening findings from previous research results regarding tamarind turmeric in reducing menstrual pain. In this study, it was confirmed that the habit of consuming tamarind turmeric regularly can reduce menstrual pain periodically, namely by controlling excess prostaglandin production which can cause the uterus to contract during menstruation.

2. Methods

The type of research used was pre-experimental with a one group pre-post test design. In this design, one group of subjects is used. Researchers took initial measurements of the adolescent's menstrual pain scale before being given the turmeric acid drink, then measured the pain scale again after being given the turmeric acid drink.

The population in this study were all young women in Class The sampling technique used purposive sampling, totaling 39 people. The data used are primary data and secondary data. Primary data is data regarding the habit of consuming sour turmeric drinks with complaints of dysmenorrhoea in young women at SMAN 1 Pebayuran. Secondary data is supporting or complementary data taken from the Bekasi Regency Education Office. The research instrument used a questionnaire and a pain scale measurement sheet. Data were analyzed using Paired sample T Test.

3. Result and Discussion

The results of the paired sample T test can be seen in the following table :

Table 1
The results of the paired T test influence the habit of consuming sour turmeric drinks on complaints of dysmenorrhoea at SMA N 1 Pebayuran

No	Group	Standar deviasi		Mean		P value
		Before	After	Before	After	
1	Intervention	1.68622	0,90738	6.1760	2.7345	0.000
2	Control	1.61553	1,44338	5.1200	5.0000	0.083

The statistical test results for the group given the sour turmeric drink obtained a p value of 0.000, which means that there was an effect of the sour turmeric drink on complaints of dysmenorrhoea in adolescent at SMA N 1 Pebayuran.

The results of this research are in line with research conducted by Saputri (2020) that mean pre-menstrual pain given an amount of sour turmeric drink 5.8889 and after being given a drink sour turmeric is 3.4176. Test results statistics obtained a p-value of 0.000 < 0.05 means there is a difference before and after giving drinks tamarind turmeric on pain intensity menstruation (dysmenorrhea) in teenage girl.

Turmeric content is an analgesic and the tamarind content is a non-steroidal prostaglandin drug, so researchers combining turmeric and tamarind as a drink to reduce menstrual pain. Research result Marsaid et al (2017) showed that curcumin acid drinks Very effective in reducing dysmenorrhea. According to Research Journal (Naldi, 2018), teenage girls who consume Tamarind turmeric drink for three months can reduce menstrual cramps (Saputri et al., 2020).

According to Widiatami (2018), drinking sour turmeric has become a social habit, effectively reduces menstrual pain. At the moment, young women prefer herbal products like sour turmeric. Curcumin acid drink made with the main ingredients of turmeric and tamarind. Turmeric and tamarind contains active ingredients which has antipyretic, analgesic and anti-inflammatory properties. The research results show, obtained p-value 0.000 andlt; 0.05. Therefore, it can be concluded that there is a difference in the intensity of menstrual pain (dysmenorrhea) of in adolescent girls before and after drinking pica. According to Suri's research (2014), Jamila (2018), Marsaid et al (2017), and Hamdayani (2018), sour turmeric drink. This has the effect of relieving menstrual pain. Scientists hypothesize that turmeric contains curcumin and essential oils, a combination of anthocyanins and tannins in tamarind serves to suppress production prostaglandins so that menstrual pain is reduced. intensity of menstrual pain (Saputri et al., 2020).

According to Baiti et al (2021), giving sour turmeric decoction has an influence on menstrual pain in young women at Tri Sukses High School, Natar District, South Lampung Regency. The mean of menstrual pain before being given the turmeric tamarind decoction was 6.72, the median was 7.00, the

standard deviation was 0.752, the minimum pain scale was 6 and the maximum was 9. After the treatment was given the mean was 3.67, the median was 4.00, the standard deviation was 0.767, the pain scale was minimal. 3 and a maximum of 6.

Menstruation means the regular discharge of blood and body cells from the vagina through the wall of a woman's uterus (*Februanti*., 2017). Menstruation usually begins between the ages of 10 and 13, depending on factors such as a woman's health, nutritional status, and weight relative to her height (Proverawati,., 2014). Menstruation occurs once a month until a woman is 45-50 years old (*Futri*., 2017). Generally, many women experience complaints of pain during menstruation which lasts 2-3 days from the day before menstruation. Every woman experiences menstrual pain (dysmenorrhea) differently, some are a little annoying, but there are also those who are so disturbed that they cannot carry out daily activities and have to rest and even miss school (Misliani., 2019).

4. Conclusion

Based on research that has been conducted, it can be concluded that turmeric acid drinks can reduce the scale of menstrual pain in young women. Curcumin works as an analgesic which inhibits the release of prostaglandins, thereby inhibiting uterine contractions and can reduce the pain of dysmenorrhoea. The contribution of this research is to develop a theory about complementary therapy using natural ingredients to reduce menstrual pain. This study has limitations in terms of sample size and research design. the number of samples is relatively small. It is recommended that future researchers use a qualitative research design to dig deeper individually regarding the things that cause the success of consuming turmeric tamarind in reducing the scale of pain during menstruation.

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