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The Effects of Turmeric Acid Consumption and Yoga on Young Women's Dysmenorrhea

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ABSTRACT

Dysmenorrhea is menstrual pain that occurs for one to several days during menstruation and is the main gynecological problem that women often complain about dysmenorrhea is stiffness or cramping in the lower part before or during menstruation. Dysmenorrhea has a very bad impact on female students because it causes interference in teaching and learning activities, does not pay attention or does not focus in depth when giving explanations, and some sleeping in class during teaching and learning activities affect academic and non-academic achievements. Many female students complain when they feel menstrual pain, so they don't go to college. Management of menstrual pain (dysmenorrhea) can be done through pharmacological and non-pharmacological measures. Efforts to treat menstrual pain (dysmenorrhea) with stretching exercises and drinking water therapy are effective for non-pharmacological measures in reducing pain or menstrual pain. Another non-pharmacological action using herbal plants is sour turmeric drink. This study determined the influence of the habit of drinking turmeric acid and yoga in overcoming dysmenorrhea. Quasi-experimental research method, one group measuring pain level with a Numeric Rating Scale (NRS) for dysmenorrhea using pretest and posttest questionnaires. The only sample who drank turmeric acid and had not done yoga were 30 young women. The results of young women had a significant effect on the treatment of dysmenorrhea before and before taking turmeric acid and doing yoga with p value < 001.

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1. INTRODUCTION

Menstruation is periodic bleeding from the uterine cycle accompanied by the shedding of the endometrium. This cycle often occurs between 15-17 years of age but can also occur between 3-5 years after the onset of menarche[1]. Normal menstrual cycles occur every 21-35 days, although menstruation days can last between 3 and 7 days[2]. During menstruation, a complaint that often arises is menstrual pain or dysmenorrhea which is characterized by lower abdominal pain[3].

According to data from the World Health Organization (WHO), the number of people with dysmenorrhea is very high in the world; on average, more than 50 percent of women in each country experience it, including 72% in Sweden, 85.7% in Saudi Arabia, 85.4% in Ethiopia, 64 % in Mexico, 89.10% in Iran, and an estimated 90% of women in the United States. In Indonesia, 64.25% of women suffer from dysmenorrhea [4][5], of which 54.89% have primary dysmenorrhea and 9.36% have secondary dysmenorrhea [6][7].

Dysmenorrhea is menstrual pain that lasts for one to many days during menstruation[8]. It is the most common gynecological complaint among women. Before or during menstruation, dysmenorrhea manifests as lower back pain or cramps[4].

The predominance of the incidence rate indicates that menstrual pain or dysmenorrhea has a significant impact on the health of women, including female college students. In this instance, the lesson is interrupted both within and outside of the classroom[3]. According to [9] dysmenorrhea has a very negative impact on female students because it interferes with teaching and learning activities, causes inattention or lack of concentration when lecturers give explanations, and causes some students to fall asleep in class during teaching and learning activities, thereby affecting achievement[10]. There are both academic and non-academic students. Many female students complain about menstrual pain until it prevents them from attending college[11].

The most common complaints and effects of dysmenorrhea are limited physical activity, lack of attention, and absence from campus-based teaching and learning[6][12]. It is possible to manage menstruation discomfort (dysmenorrhea) by lowering or blocking the painful stimuli so that it does not reach the nerve system. Every measure adopted to alleviate menstruation pain tries to lower uterine stress by physiological mechanisms, such as dilating blood vessels, blocking pain perceptions, and giving female students with relief[13].

Regarding non-pharmacological remedies, massage is one option. Particularly gentle massage on body parts that have been subjected to warm compresses, which increases blood flow and eases muscle tension[14].

Breathing relaxation techniques have a substantial effect on lowering menstruation pain; at Purwodadi Public High School, six female students (18.8%) with severe pain and thirty-three female students (68.8%) with pain are treated with breathing relaxation techniques[15]. After receiving this action, only 15 female students (31.2%) suffered moderate pain, 17 female students (35.4%) experienced light pain, and 16 female students did not experience pain (33.3%) [16].

Non-pharmacological efforts to treat menstrual pain (dysmenorrhea) using belly stretching exercises and water therapy are successful in reducing the intensity of menstrual pain (dysmenorrhea). In addition, dysmenorrhea can be addressed with exercise, including exercises designed to increase blood flow to the muscles surrounding the uterus in order to alleviate pain [14][9].

Another non-pharmacological action using herbal plants is turmeric acid drink, which is effective as an alternative in overcoming dysmenorrhea due to the phenolic content in turmeric[17], which is believed to be used as an antioxidant, analgesic, antimicrobial, and anti-inflammatory, and cucurmine in turmeric, which inhibits and reduces the occurrence of cyclooxygenase reactions. Inflammation and inhibition of uterine contractions will alleviate menstruation discomfort [18].

The initial survey was conducted on 10 young women in Pondok Meja village through short questions, namely: 50% of young women experienced dysmenorrhea and 40% of them overcome dysmenorrhea by drinking turmeric acid and have never overcome dysminorrhea with yoga. From the results of the initial survey, it is known that young women have taken action to overcome dysmenorrhea by drinking sour turmeric and have never combined it with yoga. Based on the background and primary data, the researcher is interested in conducting a study with the title, "The Effect of Turmeric Acid Drinking Habits in Nature and Yoga Overcoming Dysmenorrhea in Young Women in Pondok Table Village.

2. METHOD

The pre-experimental research method consists of one group pre- and post-testing. Using the Numeric Rating Scale to assess the level of pain (NRS). Up to 30 young ladies who drank turmeric

acid and had not practiced yoga out of a total of 76 were sampled. This study employed univariate and bivariate data analysis with the Paired Samples T Test.

3. RESULTS AND DISCUSSION

This research was conducted by collecting data for ten days in accordance with the research technique, namely examining the effect of the habit of drinking turmeric acid and practicing yoga on overcoming dysmenorrhea in young women from the hamlet of Pondok Meja, with the following results:

A. Characteristics of Research Subjects

Table 1. Characteristics of Research Subjects

Characteristics	Amount (%)	
	n = 30	%
Age (years)		
15	20	66.7
16	10	33.3
Age of Menarche (years)		
< 11	24	80.0
11-12	6	20.0
Start Dysmenorrhea		
Before	16	53.3
After	14	46.7
Duration Of Dysmenorrhea		
1 Days	8	26.7
2 Days	22	73.3

Table 1. demonstrates that the majority (66.7%) of teenage girls aged 15 years experienced menarche at 11 years of age, the duration of menstruation is most commonly 7 days (73.3%), and dysmenorrhea usually begins before menstruation (53.3%), with the greatest duration of dysmenorrhea being 2 days (73.3%).

B. Univariat Analysis

Table 2. Dysmenorrhea Before Drinking Turmeric Acid and Yoga for Teenage Girls

No	Degree of Dysmenorrhea	F	%
1	Mild Pain	2	6.7
2	Moderate Pain	14	46.7
3	Severe Pain	14	46.7
	Total	**30**	**100**

Table 2 demonstrates that the severity of mild pain prior to taking turmeric acid and practicing yoga was 6.7%, whereas moderate and severe pain were 46.7%, respectively.

Table 3. Dysmenorrhea After Drinking Turmeric Acid and Yoga for Teenage Girls

No	Degree of Dysmenorrhea	F	%
1	No Pain	12	40,0
2	Mild Pain	14	46,7
3	Moderate Pain	4	13,3
	Total	**30**	**100**

Table 3. shows that after handling dysmenorrhea by drinking tamarind turmeric and yoga, it was found that 40.0% became painless and no more severe pain.

C. Bivariat Analysis

Table 4. The Effects of Drinking Turmeric Acid and Practicing Yoga on Teenage Dysmenorrhea in Pondok Tinggi Village

Dysmenorrhea Treatment	Drink Turmeric Acid and Yoga		P Value
	Before	After	
	(n=30)	(n=30)	
Mean	2,40	0,73	< .001*
Standar Deviation (SD)	0,66	0,69	
Minimum	1.0	0.0	
Maximum	3	2	

Based on Table 4. it was found that the female adolescent who experienced dysmenorrhea before drinking tamarind and yoga had the mean value of pain of 2,40 and after 0,73, the SD value before 0,66 and after 0,69, with a minimum value before and after 1.0 – 0,0, while the maximum value before and after 3 – 2, there is a significant effect on the choice of treatment for dysmenorrhea before and after taking turmeric acid and doing yoga with p-value < 001.

The results of the research conducted are in line with the research conducted by Cut Baiti et al. in 2019 about tamarind turmeric reducing menstrual pain in adolescent girls. Quantitative research. The research design used was pre-experimental with a one-group pretest-posttest design. The number of samples was 30 female adolescent respondents who experienced menstrual pain. Sampling using a purposive sampling technique. Data analysis by T-test. Statistical test results obtained p value < 0.000, meaning H0 is rejected, and Ha is accepted, which means that giving sour turmeric decoction affects menstrual pain in adolescent girls at Tri Sukses High School, Natar District, South Lampung Regency.

Reinforced by the results of research by Ayu Wulandari et al. in 2018 on the Effect of Giving Turmeric Extract (Curcuma longa Linn) in Overcoming Dysmenorrhea Effect of Turmeric Extract (Curcuma longa Linn) in Reducing Dysmenorrhoea[19], with the result that herbal products or phytopharmaca can be used as the main alternative for women who want to reduce the pain of dysmenorrhea without getting side effects, one of which is a turmeric-based drink. To treat

dysmenorrhea, you can use turmeric or the Latin name Curcuma Longa Linn. The content of phenolic compounds in turmeric is believed to be used as an antioxidant, analgesic, anti-microbial, and anti-inflammatory. More specifically, the curcumin content in turmeric can inhibit the cyclooxygenase (COX) reaction, inhibiting and reducing inflammation and uterine contractions that cause menstrual pain.

One of the other non-pharmacological treatments is hypnotherapy which is the application of hypnosis to cure mental and physical (psychosomatic) problems such as pain, anxiety, etc. Following Nadi Aprilyadi et al. in 2018 regarding the Effectiveness of Hypnotherapy in Reducing Dysmenorrhea Pain in High School Students[20]. This research is pre-experimental, with a quasi-experimental design, one group pre-post and post-test without control. The sampling technique used in this research is a total sampling of as many as 17 respondents. The instrument used in this study was a Visual Analog Scale (VAS) pain assessment questionnaire with a Numeric Rating Scale (NRS) scale. Univariate analysis of the majority of students who experienced a decrease intensity of dysmenorrhea pain aged 16-17 years and 100% of respondents experienced a decrease in the intensity of dysmenorrhea pain after receiving hypnotherapy, bivariate analysis with t-test showed a significant effect of hypnotherapy on decreasing the intensity of dysmenorrhea pain (p-value 0.,000).

The same research was also conducted by Yulita Elvira Silviani et al. in 2019 about the effect of breath relaxation techniques on dysmenorrhea[21]. Quantitative research with a pre-experimental method uses a one-group pre-test and post-test design approach consisting of groups that are given the same intervention. The population is all 2nd and 3rd-grade students who experience dysmenorrhea at Purwodadi Public High School, Musi Rawas Regency, South Sumatra, with as many as 92 students. Sampling using a proportional random sample of as many as 48 people. Using a questionnaire in the form of a checklist and also an observation sheet. The results showed that 33 female students (68.8%) experienced moderate dysmenorrhea pain before the breath relaxation technique was applied, 19 female students (39,6%) did not experience dysmenorrhea pain after the breath relaxation technique was performed, and there was a significant effect between the breath relaxation technique and dysmenorrhea. at Purwodadi Public High School, Musi Rawas Regency, South Sumatra.

According to the researchers, the results and discussion show that the non-pharmacological treatment of dysmenorrhea, namely drinking tamarind and doing yoga, is very influential in overcoming dysmenorrhea in adolescent girls. It is expected that young women can do drinking tamarind and yoga to overcome dysmenorrhea.

4. CONCLUSION

Research conclusions can be conveyed that (1) The characteristics most (66,7%) adolescent girls aged 15 years experienced the first menarche at the age of <11 years, the majority (88%), the duration of menstruation was mostly <7 days (73,3%), the most dysmenorrhea started before menstruation (53,3%), with the longest period of dysmenorrhea > 2 days (72,3%). (2) The degree of mild pain before drinking tamarind turmeric and yoga (6,7%) and moderate and severe pain was 46,7%, respectively. After handling dysmenorrhea by drinking tamarind turmeric and yoga it was obtained 40,0% became painless and no more severe pain. (3) There is a significant effect on the choice of treating dysmenorrhea before and after taking turmeric acid and doing yoga with a p-value < 001.

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