



WHITE TURMERIC DRINK (*Curcuma Zedoaria*) TO DISMENORRHEA IN ADOLESCENT GIRLS

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A B S T R A C T

Teenagers who experience dysmenorrhea are caused by uterine muscle spasms, dysmenorrhea is a normal condition that occurs in women who are experiencing menstruation, pain dysmenorrhea appears can be influenced by psychological factors and physical factors such as stress and tiredness, because teenagers are stressed, the body will produce adrenaline, estrogen, progesterone and prostaglandin hormones that are excessive. Estrogen can cause an increase in excessive uterine contractions while progesterone inhibits contraction. This excessive contraction causes pain during menstruation. One of the non-pharmacological treatments for dysmenorrhea is by giving white turmeric drink. This study aims to look at the effect of giving white turmeric juice drinks to dysmenorrhea in adolescents of class VIII at SMPN 4 Sarolangun. This type of research is an experimental study with a quasi-experimental design with a research design of one group pretest-posttest. The population was all girls in class VIII as many as 41 people. The number of samples obtained is as many as 8 people. Collection data through question and answer and pain measurement used Wong faces pain rating scale and numeral rating scale (NRS). Univariate analysis showed the average value of the Pre-test is 6.88 and the average value of the Post Test is 4.13. bivariate using Dependent t-Test obtained p-Value 0,000 ($p < 0.05$) means H_0 accepted. So it was concluded that there was an effect of giving white turmeric juice drinks to dysmenorrhea in adolescent girls at Sarolangun Junior High School 4. It is expected that adolescents will apply intervention as a way to deal with the pain of dysmenorrhea during menstruation.

I. INTRODUCTION

Menstruation is the process of releasing blood from the uterus through the vagina every month during the fertile age. During menstruation / menstruation, the problem experienced by most women is discomfort / pain called dysmenorrhoea (Salsa, 2017). Dysmenorrhea is lower abdominal pain that occurs during menstruation, sometimes extending to the waist, lower back and thighs. The reason is the excessive amount of prostaglandins from F2a during menstruation, which stimulates uterine hyperactivity and the occurrence of uterine muscle spasms (Ayu Wulandari, et al. 2018).

According to WHO (2012), an incidence of 1,769,425 people (90%) 10–15% experienced severe dysmenorrhea. The incidence of menstrual pain in the world is quite large, on average more than 50% of women in every country experience menstrual pain. The results of a study conducted in the United States in 2012 to determine the incidence of primary dysmenorrhea in women aged 12-17 years was 59.7% with 49% mild dysmenorrhea, 37% moderate dysmenorrhea, and 12% severe dysmenorrhea. The incidence of dysmenorrhea in Swedish women aged 19 years is 72.42% (Shinta et al. 2014).

Dysmenorrhea is an adverse condition for many women and has a major impact on health-related quality of life. As a result, dysmenorrhea is also responsible for substantial economic losses due to drug costs, medical care, and decreased productivity (Larasati, et al. 2016). Dysmenorrhea causes a very unpleasant feeling that causes irritability, irritability, nausea, vomiting, weight loss, flatulence, back pain, headaches, acne, tension, lethargy and depression. Usually these symptoms come the day before menstruation and last for 2 days until the end of the menstrual period (Eli, 2012). Adolescent dysmenorrhea causes disruption of learning activities at school due to not being able to concentrate on learning and learning motivation will decrease because of dysmenorrhea that is felt in the teaching and learning process (Mia, 2015).

Broadly speaking, there are two ways to treat dysmenorrhea, namely pharmacology and non pharmacology. Pharmacologically with sedatives and analgesics such as paracetamol, piroxicam, diclofenac and mefenamic acid while nonpharmacologically with physical measures (Massage, Vibrator, Warm Compress, Exercise or Gymnastics, Rest or Sleep) and cognitive behavioral actions (Relaxation and Distraction). Herbal products or firofarmaka can also be an alternative therapy to reduce dysmenorrhea in some people (Wahyu, 2017). Herbal products or firofarmaka are currently becoming the main alternative for young women who want to reduce pain without getting side effects. One of the herbal products that are familiar in the community to reduce dysmenorrhea is white turmeric (Eli, 2012).

White turmeric (*Curcuma zedoria roscoe*) is included in the Zingiberaceae family, is a type of medicinal plant of turmeric whose use is one of which is to reduce pain in dysmenorrhea. Data according to the IOT (Traditional Medicine Industry) of 4,187, there are 40% of people using white turmeric as treatment and 10% (Dede, et al. 2016). White turmeric is rich in chemicals such as tannins, curcumin, starch, sugar, essential oils, resins, sponins, flavonoids, and toxic proteins that can inhibit the proliferation of cancer cells (Aulia, 2017).

Naturally, turmeric contains active ingredients that can function as analgesics, anti-inflammatory, and anti-inflammatory properties. In addition, it is explained that turmeric drinks as a pain reliever in dysmenorrhea. The content of white turmeric that can reduce pain in dysmenorrhea is curcumin which will work in inhibiting the cyclooxygenase (COX-2) reaction so that it blocks or reduces the occurrence of inflammation thereby reducing or even inhibiting uterine contractions. And curcumenol as an analgesic will inhibit the release of excessive prostaglandins through uterine epithelial tissue and will inhibit uterine contractions so that it will reduce the occurrence of dysmenorrhea pain (Dede et al., 2016).

II. METHODS

This is experimental research. The research design was a quasy experiment with a one group pretest posttest research design. The research was conducted in SMPN 4 Sarolangun. The population in this study were all female adolescents who experienced dysmenorrhea in class VIII at SMP N 4 Sarolangun, amounting to 41 students, through the Slovin formula, the sample size was 8 respondents. The sampling technique used nonprobability sampling technique, namely purposive sampling through inclusion criteria, exclusion criteria, and dropout criteria.

The data collection measurement tool used in this study was the observation sheet measuring the level of pain, namely the Wong Baker Faces Pain Rating Scale and the Numeral Rating Scale. Analyzed by using the Shapiro Wilk normality statistical test with the results of normally distributed data and using the Paired T Test with a significance level of $p < 0.05$ in bivariate analysis with SPSS 15 for Windows.

III. RESULT

Table 1. Average height of uterine fundus in the control group after postpartum exercise

Variabe	N	Mean	SD	SE	P- Value
Pre test	8	6.88	1.246	0,441	0.000
Post test		4.13	0,835	0,295	

The average value before being given white turmeric juice drink was 6.88 with a standard deviation of 1.246. The average value after being given white turmeric juice drink is 4.13 with a standard deviation of 0.295. After the statistical test was carried out using the piered T-test, the p-value was 0.000 = p-value <0.05). There is an effect of giving white turmeric juice (*Curcuma Zedoaria*) on desminore in young women at SMPN 4 Sarolangun.

IV. DISCUSSION

Dysmenorrhea is painful spasm of the muscles in the lower back that occurs before menstruation or during menstruation due to uterine contractions. It is thought that it is due to the increased production of the hormone progesterone produced by the connective tissue of the ovaries (corpus luteum) after releasing mature eggs every month (Mia, 2015). This hormone increases the tension of the cervix so that it becomes narrow, as a result of which the uterine muscles are stronger to contract to expel menstrual blood through the narrow cervix. The shedding occurs on the first and second days so that women feel pain or discomfort on that day (Kostania G. 2016).

White turmeric (*Curcuma Zedoaria*) is a type of medicinal plant of turmeric whose use is to reduce pain in dysmenorrhea (Rudita, 2013). Because turmeric contains active ingredients that can function as analgesics, anti-inflammatory and anti-inflammatory properties. The content of white turmeric that can reduce pain in dysmenorrhea is curcumin which will work in inhibiting the cyclooxygenase (COX-2) reaction so that it inhibits or reduces the occurrence of inflammation reducing or even inhibiting uterine contractions. And curcumenol as an analgesic will inhibit the release of excessive prostaglandins through the uterine epithelial tissue and will inhibit uterine contractions, thereby reducing the occurrence of dysmenorrhea pain (Dede et al, 2016). Curcumenol will inhibit the release of excessive prostaglandins (Aulia, 2017).

This research is in line with the research conducted by Dannik Kumala Sari (2012) entitled "The Effect of Turmeric Acid on the Incidence of Dysminorrhea in Young Girls in Dagen Pendowohardjo Sewon Bantul". From the results of this study it can be seen that there is an

effect before and after giving this tamarind drink. The difference in this study is that the researchers used the main ingredient pure white turmeric without any other mixture and the observation time was 15 minutes faster.

According to researchers, white turmeric drinks are drinks whose main ingredients are pure turmeric without any other mixture, so that we can feel the properties contained in turmeric. This turmeric has many benefits contained as an analgesic or reduces pain during menstruation (dysmenorrhea). Because during menstruation, the pain that is felt is very disturbing to the daily activities of adolescents such as interfering with studying, disturbing other school activities. Some even fainted because they could not endure the pain that was felt by the teenager. This pain can be overcome by getting used to regularly consuming white turmeric juice every time menstruation comes.

V. CONCLUSION

The content of white turmeric that can reduce pain in dysmenorrhea is curcumine which will work in inhibiting the cyclooxygenase (COX-2) reaction so that it inhibits or reduces the occurrence of inflammation reducing or even inhibiting uterine contractions. It can be advised to teenager who experience dysmenorrhea to consumption white tumeric as one of non-pharmacologic treatment.

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