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Article

THE EFFECT OF GIVING THE REDUCTION OF PAPAYA LEAVES ON REDUCING DISMENORHEA PAIN LEVELS

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A B S T R A C T

In Indonesia, dysmenorrhea incidence is 64.25%, consisting of primary dysmenorrhea of 54.89% and secondary dysmenorrhea of 9.36%. Dysmenorrhea causes 14% of adolescent patients to often absent from school and do not follow daily activities. More women with dysmenorrhea do not report and visit a doctor because of shame. This study aims to determine the effect of papaya leaf decoction on reducing dysmenorrhea pain in class X MAN Model Bukittinggi. The research design was a quasi-experimental design with a one-group pretest-posttest approach. The sample taken in this study was 15 respondents from 30 populations using purposive sampling. Collecting data using the observation sheet was then analyzed by using the paired T-test. The instrument used was the NRS observation sheet when the study was conducted on September 26, 2018. The results showed that before being given papaya leaf stew, the average pain was 4.37 and after being given papaya leaf stew with an average pain was 3.20. In the Paired t-Test, the results showed that p = 0.000, where p <0.05. So it can be concluded that there is an effect of giving papaya leaf decoction on reducing dysmenorrhea pain in class X MAN 1 Bukittinggi Model 2018 students. It is hoped that further researchers can examine other factors that can reduce menstrual pain for respondents.

I. INTRODUCTION

Dysmenorrhea is abdominal pain that comes from uterine cramps and occurs during menstruation. Primary dysmenorrhea and secondary dysmenorrhea happens when the reason is a uterine abnormality. Secondary dysmenorrhea is less common in only about 25% of women. The causes of secondary dysmenorrhea are endometriosis, fibroids, adenomyosis. Inflammation of the fallopian tubes, abnormal adhesions between organs in the stomach, and use of the IUD (Maulana, 2009).

Symptoms and signs of dysmenorrhea are in the lower abdomen, spreading to the lower back and legs. Pain is felt as cramps that go away and come on or as a persistent dull ache. Usually, pain begins just before or during menstruation, reaches a peak within 24 hours, and will disappear after two days. Dysmenorrhea is often accompanied by headaches, nausea, constipation, diarrhea, and frequent urination. Sometimes, vomiting occurs. Increasing age and pregnancy will cause the disappearance of primary dysmenorrhea. the deterioration of the uterine nerves causes aging and partial loss of nerves at the end of pregnancy. (Maulana, 2009).

In America, 30-50% of reproductive age women have dysmenorrhea, 35% of women aged 20-35 years, 25% of adolescents aged 12-19 years). About 10-15% of them are forced to lose their jobs. About 50% of post-puberty women and 10% of them with severe menstrual pain lost work and school time. In high school students, approximately 10% of adolescents cannot attend school because of menstrual pain (Jacoeb et al., 2014).

As in the journal, Saguni et al. (2013) reported that "out of 132 respondents, 121 respondents experienced menstrual pain (91.7%) and 91 people (68.9%) had disturbing activities. Menstrual pain makes it difficult for young women to concentrate because of the discomfort they feel when menstruating pain".

In Asian countries, China in 2010 showed that around 41.9 - 79.4% of female adolescents had primary dysmenorrhea, 31.5-411.9% occurred at the age of 9-13 years, and 57.1-79.4 % at the age of 14-18 years (Mia, 2015). In Malaysia, 58% and 40% of them occur in the first year after their first menstruation or menarche, namely at the age of 17-20 years. In Singapore, the incidence of dysmenorrhea is 51% (Shinta et al., 2014).

In Indonesia, dysmenorrhea incidence was 64.25%, consisting of primary dysmenorrhea of 54.89% and secondary dysmenorrhea of 9.36%. Dysmenorrhea causes 14% of adolescent patients, often absent from school and unable to attend daily activities (Santoso, 2008).

More women with dysmenorrhea do not report or visit a doctor. Shame on doctors and underestimating diseases often make data on patients with specific conditions in Indonesia uncertain. It can be said that 90% of Indonesian women have experienced dysmenorrhea. The

number of sufferers in the field is always more than the reports claimed by the health office and related agencies. The awareness to maintain personal health and protect as soon as possible from the community's disease is still low. Many think that health is the umpteenth affair, and they decide to go to a doctor or hospital when the condition is very severe and likewise for dysmenorrhea sufferers should not be ignored because it will significantly harm women's productivity (Anurogo, 2011)

Ashra et al. (2014) research entitled "The effect of papaya leaf therapy on reducing the level of dysmenorrhea in female adolescent Islamic boarding schools Mualimin Dangka Bukittinggi in 2014". This study used the pre-experiment method with a one-group pretest-posttest design. In this study, the sample was given a pretest (initial observation) before being given intervention. After that, an intervention was given, then carried out posttest (final observation). This research was conducted at the Mualimin Sawah Dangka Bukittinggi Islamic Boarding School. This research was conducted from August 5 to August 20, 2014. Researchers conducted at the Mualimin Sawah Dangka Islamic Boarding School, especially students in class X and XI, totaling 34 students, of which 34 students, there are seven students aged 16 years, five students who have dysmenorrhea.

In comparison, at 17 years old, five students have dysmenorrhea, aged 15 years, two people have dysmenorrhea, and for students aged 18 years, two people have dysmenorrhea. The conclusion is that the statistical test results using the paired t-test obtained P-value = 0.000 (α = 0.05), which means that the P-value is smaller than α. This comparison indicates that statistically, Ho is rejected or Ha is accepted. There is a difference in the average (Mean) level of dysmenorrhea before and after being given papaya leaf therapy intervention. In other words, there is the effect of papaya leaf therapy on the reduction of dysmenorrhea pain in the 2014 Islamic Boarding School Mualimin Sawah Dangka Bukittinggi.

Based on a preliminary survey that was conducted on MAN 01 Bukittingi Model students, it was found that much experienced menstrual pain or dysmenorrhea during menstruation. They experience unwell, tiredness, nausea, vomiting, diarrhea, back pain, headaches resulting in dehydration, fatigue, disruption of daily activities, which causes them to be unable to participate in learning. It has an impact on reducing concentration in-class learning, and several who consume mefenamic acid have never consumed papaya leaf stew.

II. METHODS

Research conducted using this type of quantitative analysis with a Quasi Experiment research design. This study only used one sample group without using a control group. The sample group is subjected to a pre-test and then given treatment and then a final test (Post-test). The population in this study were all students of class X MAN 01 Bukittinggi Model 2018 as many as 30 people with non-random sampling technique, namely purposive sampling, found a sample of 15 respondents. The measuring instrument used was the menstrual pain observation sheet with a numeric 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.

III. RESULT

Table 1. The Effect of papaya leaves Consumption on Reducing pain level of dysmenorrhea

Variabe	N	Mean	SD	SE	P- Value
Pre test	15	4.37	1.223	0.316	0.000
Post test		3.20	1.424	0.368	

Based on table 1, the average pain scale before the intervention was 4.73, with a standard deviation of 1.223. In comparison, the pain scale after being given intervention was 3.20 with a standard deviation of 1.424. The Paired T-test statistical test results showed that the value of $p = 0.000$ ($0.000 < 0.05$) showed the effect of giving papaya leaf decoction on reducing the level of dysmenorrhea pain in class X MAN students in Bukittinggi Model.

IV. DISCUSSION

Dysmenorrhea usually results from the excessive release of a specific prostaglandin, prostaglandin-F2 α, from uterine endometrial cells. Prostaglandin-F2 α is a potent stimulator of myometrial smooth muscle contraction and uterine vessel constriction. This worsens uterine hypoxia that usually occurs during menstruation, resulting in intense pain (Bobak, 2004).

Papaya leaves have a relatively diverse nutritional content, including vitamin A 18 250 SI, vitamin b1 0.15 milligrams per 100 grams, vitamin C 140 milligrams per 100 grams, calories 79 cal per 100 grams, protein 8.0 grams per 100 grams, fat 2, 0 grams per 100 grams, hydrate

charcoal/carbohydrates 11.9 grams per 100 grams, calcium 353 milligrams per 100 grams, and water 75.4 grams per 100 grams (Setiawan, 2004).

Papaya leaves contain the enzyme papain, karpaina alkaloids, pseudocarpain, glycosides, capsids, saponins, saccharose, dextrose, levulose. Karpaina alkaloids have effects like digitalis. The content in papaya leaves is efficacious to increase appetite and menstrual release (Setiawan, 2004).

The magnesium content in papaya leaves is used as a menstrual pain therapy because magnesium directly affects blood vessel pressure and regulates the entry of calcium into smooth muscle cells, thereby affecting contractility, tension, and relaxation uterine smooth muscle (Delta et al. 2013).

Primary dysmenorrhoea appears as a mild attack, cramping in the middle, is spasmodic, which can spread to the back or inner thighs. Generally, discomfort occurs 1-2 days before menstruation. However, the most intense pain appears on the first day of menstruation. Dysmenorrhea is often accompanied by vomiting, diarrhea, headaches, leg pain, and syncope (Morga et al., 2009).

Papaya leaves (Carica papaya) contain Vitamin E, which can reduce menstrual pain, through inhibition of prostaglandin biosynthesis where Vitamin E will suppress the activity of phospholipase A and cyclooxygenase enzymes by inhibiting post-translational activation of cyclooxygenase, thereby inhibiting prostaglandin production. Conversely, vitamin E also increases the production of prostacyclin and PGE2, which function as a vasodilator that can relax uterine smooth muscle (Dawood, 2006).

This research is in line with the study conducted by Ashra et al. (2014), entitled "The effect of papaya leaf therapy on decreasing the level of dysmenorrhea in adolescent girls in Islamic boarding school mualimin sawah Dangka Bukittinggi in 2014, found p-value = 0.000 (α = 0.05). The average (Mean) level of dysmenorrhea before and after being given papaya leaf therapy intervention. In other words, there is the effect of papaya leaf therapy on the reduction of dysmenorrhea pain in the 2014 Islamic Boarding School Mualimin Sawah Dangka Bukittinggi.

According to researchers, eating papaya leaves before menstruation can reduce and suppress pain during menstruation (dysmenorrhea). Because during menstruation, the pain that is felt is alarming to teenagers' daily activities, 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 consuming it regularly every time menstruation comes.

V. CONCLUSION

Papaya leaves contain the enzyme papain, karpaina alkaloids, pseudocarpain, glycosides, capsids, saponins, saccharose, dextrose, levulose. Karpaina alkaloids have effects like digitalis. The content in papaya leaves is efficacious to increase appetite and menstrual release. It can be advised to the student who experiences dysmenorrhea to consume papaya leaves reduction as one of the non-pharmacologic methods of pain relief.

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