

The effectiveness of mixing Papaya leaves decoction and Zink tablet to reduce Dysmenorrhea

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ABSTRACT

Most women feel uncomfortable during menstruation in the low stomach along with nausea, dizzy even unconscious. Traditionally Papayas' leaf boiled water and zinc tablet are used for dysmenorrhea therapy. The research aimed to scrutinize the effect of giving papayas' leaf boiled water and zinc tablet towards reducing dysmenorrhea pain level. This research was quantitative research with a quasi method and pretest and posttest control group design with 90 respondents. Using Friedman Test, the effectiveness of boiled water of papayas' leaf and zinc tablet was examined four days before menstruation with the dosage of a glass of boiled water of papayas' leaf and 30 mg/day zinc tablet. The result of the research showed the effectivity of administering papayas' leaf boiled water and zinc tablets in decreasing primary dysmenorrhea pain level at a significant rate. The combination of papayas' leaf boiled water and zinc tablet are more effective compared to giving papayas' leaf boiled water solely. It is advisable to use papaya' leaf boiled water and zinc tablet as an alternative to handle dysmenorrhea pain to female teenagers. From a business perspective, the modern package in forms of the capsule can be applied that the female teenagers can consume it easily whenever they suffer from the pain.

Keywords: papayas' leaf, zinc tablet, pain level, primary dysmenorrhea

Introduction

Dysmenorrhea is a symptom that most often causes women to directly go to the physician for consultation and treatment ^[1] as it causes discomfort in daily physical activity. Almost all women experience discomfort during menstruation in the lower abdomen accompanied by nausea, dizziness and even fainting ^[2]. Coping with dysmenorrhea can be done with pharmacological and non-pharmacological therapy. Non-pharmacological

therapy; among others are warm compresses, exercise, and relaxation. Supplement therapy is widely studied, including the provision of vitamin E, B1, B6, fish oil, or a group of micronutrients such as magnesium, and zinc to cope with menstrual pain ^[3].

The water of boiled papaya leaves and zinc were investigated as a therapy for dysmenorrhea due to its effect that may reduce the synthesis of prostaglandins through its ability as an anti-inflammatory and endogenous antioxidant catalyst that can improve circulation of blood vessels. Women who consumed zinc of 31 mg/day do not experience menstrual pain, compared with women who consumed zinc of 15 mg/day ^[4].

Some research has shown that papaya leaf is effective in reducing pain and as analgesics because it contains the papain enzyme and flavonoids ^[5], and has the same potential effect as paracetamol ^[6]. Based on the description above, the writer is interested in researching the effectiveness of giving boiled water of papaya leaves and zinc tablets on reducing the level of pain in primary dysmenorrhea. From this research, it is expected to be able to find out which treatment is more effective in reducing the level of primary dysmenorrhea pain in adolescents between

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the administration of papaya leaf boiled water and zinc table as well as the combination of papaya leaf water administration and zinc tablets.

Materials and Methods

Type of research is a quantitative study with a method of quasi-experiment and the research design used is pretest and posttest control group design. The number of samples in this study was 90 respondents. The sampling technique was purposive sampling fulfilling the inclusion and exclusion criteria. The statistical test used was the Friedman Test. Provision of boiled water for leaves papaya and zinc was made four days before menstruation with a dose of 1 cup of boiled water for papaya leaves and zinc 30 mg/day.

Results and Discussion

After being given treatment giving boiled water papaya leaves and zinc tablets, all respondents experienced a decrease in the level of pain that 50% of respondents experienced mild pain. Respondents' menstrual cycle is based on 30 respondents that 27 respondents (90%) experienced moderate pain and most experienced in menstrual cycle 28 day as many as 25 respondents (83.3%) while 3 respondents (10%) experienced severe pain experienced in the menstrual cycle 30 days. After being given the treatment of the boiled water of papaya leaf, all respondents experienced a decrease in pain level, namely 19 respondents (63.3%) who experienced mild pain in the 28-day menstruation cycle of 15 respondents (50%) and 11 respondents (36.7%) who experienced no pain were 10 respondents (33.3%) in the 28-day cycle.

The description of the respondent's menstrual cycle from 30 respondents before the treatment of zinc tablets 26 respondents (86.7%) experienced moderate pain, which was mostly experienced in the menstrual cycle 28 days (17 respondents (56.7%) and only 4 (13.3%)) respondents experienced severe pain mostly also experienced in the 28-day cycle of 3 respondents (10.0%) After being given a zinc tablet treatment all respondents experienced a decrease in pain level that is 23 respondents (76.7%) experienced mild pain which was mostly also occurred in the 28-day cycle of 7 respondents (23.3%) and 23 respondents (43.3%) did not experience pain, which mostly occurred in the 28-day cycle of 13 respondents (43.3%). After the treatment of papaya leaf and zinc tablet boiled water treatment, all respondents experienced a decrease in pain level, namely 15 respondents (50%) experienced mild pain, mostly experienced in a 28-day cycle of 14 respondents (45.7%) and 15 respondents (50%) did not experience pain, most of which were also experienced in the 28-day cycle of 13 respondents (43.3%)

To determine the most effective of the three treatments, the difference in the level of pain reduction before and after treatment of the three treatments will be examined between

the administration of papaya leaf boiled water, zinc tablets and a combination of boiled water of papaya leaves and zinc tablets. Based on these differences, each difference in the reduction in pain level is tested for normality. Based on the normality test, the following results were obtained (**Table 1**). The results of the analysis showed a decrease in the pain level of the three treatments between boiling papaya leaves and zinc tablets as well as the combination of the boiled water of papaya leaves and zinc tablets showed very useful with a significance value of $0.000 < 0.005$. To see which are most effective in reducing the pain level of the three primary dysmenorrhea the treatment of the combination treatment of administering boiled water of papaya leaves and zinc tablets show the most effective with the mean rank of 2.55, while a decrease in pain levels in the treatment of primary dysmenorrhea. Papaya leaves boiled water only 1.72 and decreased pain levels on zinc tablets 1.73. The results of this study indicate that the combination of papaya leaves and zinc tablets boiled water showed very useful and very significant in reducing the level of primary dysmenorrhea pain. The results of this study are supported by the previous study that the extracted ethanol of papaya leaves has an analgesic effect ^[5, 6].

Table 1: Effectiveness of reduction in respondent's pain

Decrease Pain Level	Mean Rank	Sig.
The decrease rate of pain before and after administration of boiled water of papaya leaf	1.72	0.000
The decrease rate of pain before and after administration of zinc tablets	1.73	
The decrease rate of pain before and after the water decoction of papaya leaves and zinc tablets	2.55	

Also, the effectiveness of papaya leaves in this study strengthens by the previous results that there is an effect of papaya leaf decoction (*Carica Papaya Linn*) on the decrease in the level of menstrual pain (dysmenorrhea) in young women ^[7].

The results of the study were supported by previous research showing the results of menstrual cycles of respondents who experienced primary dysmenorrhea mostly are regular menstrual cycles ^[8]. This finding is consistent with the theory which reveals the length of a regular menstrual cycle or considered a classic menstrual cycle is 28 days ^[9], though some researchers opined that the average woman experiences a menstrual cycle for 21-40 days and only about 15 percent of women experience menstrual cycles for 28 days ^[10]. Based on these results, there was a significant difference between the intensity of dysmenorrhea pain before being given zinc tablets and the intensity of dysmenorrhea pain after being given zinc tablets. This shows that papaya leaf boiled water can reduce the pain level of primary dysmenorrhea respondents. Vitamin E contained in papaya leaves (*Carica Papaya Linn*) can reduce menstrual pain, through inhibition of prostaglandin biosynthesis in addition to calcium and Vitamin C content can be used to

affect contractility, stress and relax the uterine smooth muscle or calm nerves ^[11]. These results are following complaints of dysmenorrhea, which are the most complaints at adolescence to young adulthood. Most adolescents who have dysmenorrhea complaints are caused by psychological factors, namely, emotional instability ^[12]. Based on previous research, the dosage used in this research is considered safe because the maximum dose of zinc for women aged 17-21 years is 150 mg/day. The administration of zinc was carried out for four days before the menstrual cycle based on several previous studies that gave zinc for 1-4 days ^[13]. Side effects of zinc if taken excessively are nausea, bloating, and discomfort in the digestive tract ^[14]. In this study based on the statement of the respondents, none of the respondents experienced nausea, bloating and discomfort in the digestive tract.

The results of the statistical analysis show the level of pain before papaya leaf decoction with the level of pain after papaya leaf boiling water obtained significance level of $0.000 < 0.05$ with 95% confidence level indicating a very effective administration of papaya leaf boiling water in dealing with painful menstruation in primary dysmenorrhea. Likewise in respondents giving zinc tablets before and after administration of zinc tablets obtained significance numbers $0,000 < 0.05$ with the same confidence level of 95% shows also denoting a very effective administration of zinc tablets in dealing with pain. This also happened to the combination of papaya leaf and zinc tablet decoction with pain levels before and after administration of papaya leaf and zinc tablet boiled water obtained significance value $0.000 > 0.05$. Conclusions based on the results of the analysis of the three treatments all showed very effective in reducing pain levels respondents before and after administration of papaya leaf boiled water and zinc tablet, and all three treatments have the same effectiveness in reducing the level of dysmenorrhea pain.

Conclusions

There is an effect of effective reduction in pain levels in papaya leaf and zinc tablet decoction with pain levels before and after administration of papaya leaf boiled water and zinc tablets and among the three treatments. The combined treatment of papaya boiled water and zinc tablets showed the most effective.

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