

## The Combination of Turmeric and Honey Decoction and Its Effect on the Level of Menstrual Pain in Adolescent Girls at SMK Maju Nusantara Depok in 2022

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### Abstract

**Background:** Adolescents often experience problems during menarche, one of which is menstrual pain. The thing that can be done is complementary therapy by giving turmeric and honey decoction.

**Objectives:** To determine the effect of a combination of turmeric and honey decoction on the level of menstrual pain in adolescent girls at SMK Forward Nusantara Depok.

**Methods:** The quantitative method with the research design used in this research is a quasi-experiment with pre-test and post-test one-group design. The study begins with a pretest, namely filling in observations, then respondents will be given an intervention to consume a combination of turmeric and honey decoction 1 time a day for the first 2 days of menstruation, and in the observation sheet. The pain assessment instrument uses the Numeric Rating Scales to measure pain. The research sample was taken by purposive sampling, in which subjects that included the required criteria would be included in the study until the subjects required in this study were met. Analysis using the Marginal Homogeneity test

**Results:** There is an effect of a combination of turmeric and honey decoction on the level of menstrual pain in young women with a p-value of  $0.000 < 0.05$ .

**Conclusion:** There is an effect of a combination of turmeric and honey decoction on the level of menstrual pain in young women.

**Keywords:** honey, menstrual pain, turmeric decoction, young women

### Introduction

The World Health Organization (WHO) defines adolescents are children who have reached the age of 10-18 years.<sup>1</sup> So it is called the age of puberty in adolescents starting from the ability to reproduce which is marked by the first menstruation and occurs. Process of development of sexual organs Menstruation (menstruation) is cyclic and periodic bleeding from the uterus accompanied by desquamation of the endometrium Pain is an unpleasant emotional and sensory experience caused by actual or potential tissue damage. So women

sometimes experience pain or dysmenorrhea. In Indonesian, dysmenorrhea or dysmenorrhea means pain during menstruation.<sup>2</sup>

According to WHO, in 2016 dysmenorrhea was very high in the world. In young women in Australia, menstruation will feel pain (90-93%), premenstrual symptoms (96%), mood disorders (73%), and cramps (71%). The United States also has an incidence of dysmenorrhea with a percentage of 60%, Sweden 72%. The prevalence of dysmenorrhea was found to be around 90.1%, including never, occasionally, usually, and always individual responses, namely around 9.9%, 38.6%, 31.3%, and 20.2%. Meanwhile in Asia Southeast around 69.4%. In Indonesia, there are also numbers of women with dysmenorrhea consisting of 54.89% having primary dysmenorrhea and 9.36% having secondary dysmenorrhea.<sup>1</sup>

The measurement tool for menstrual pain used is the Numeric Rating Scale (1-10) where the first number is not painful and the last is very painful, and the respondent chooses the degree of pain that corresponds to the respondent's feelings about the pain.<sup>3</sup> Menstrual pain also makes teenage girls feel uncomfortable doing daily activities - daily and frequently interferes with absence from school, academic achievement, sports activities, and limitations on one's social life.<sup>4</sup> One of the management of menstrual pain in teenage girls is using non-pharmacological therapy, one of which is using turmeric herbal drink. Turmeric naturally contains phenolic compounds which are believed to be antioxidants and antimicrobials, analgesics, and anti-inflammatories, and can cleanse the blood. The active ingredients in turmeric are curcumin and essential oil. These active compounds can prevent uterine contractions to reduce inflammation, which reduces the intensity of pain during menstruation. Curcumin as a pain reliever prevents excessive inhibition of prostaglandins in the body through the uterine epithelial tissue and prevents uterine contractions thereby reducing the occurrence of dysmenorrhea.<sup>5</sup>

One of the uses of turmeric itself is usually consumed by boiling, turmeric decoction has phenolic compounds, which are useful as analgesics, antioxidants, anti-inflammatory, antimicrobial, antitumor, anticancer, anti-toxin, as well as blood purifiers, skin beauty, protecting the body from free radicals, and strengthening immune system.<sup>6</sup> In addition, drinking turmeric decoction can be used as a remedy for menstrual cramps in primary dysmenorrhea with minimal side effects. In consuming turmeric for menstrual pain, the safe limit used is 100 ml of turmeric decoction three times a day in the morning, afternoon, and evening.<sup>7</sup>

Honey also helps relieve uterine smooth muscle contractions caused by oxytocin and prostaglandin E2. The honey used in this study is a trademark honey registered with the Food and Drug Supervisory Agency (BPOM) and certified halal by the Indonesian Ulema Council (MUI). Obtained halal certification from the Indonesian Ulema Council (MUI).<sup>8</sup> Tablespoon three times a day in the first 2 days of menstruation which is then mixed with 10% turmeric boiled water. The combination of this herbal drink made from turmeric and honey is quite effective.<sup>9</sup>

The results of previous studies showed changes in pain levels in young women.<sup>10</sup> Previous studies also showed the effect of pure honey at various levels of dysmenorrhea in young women.<sup>11</sup> This study aims to determine the effect of Turmeric and Honey Earthquakes on Menstrual Pain Levels in Young Women at Forward Nusantara Depok.

## Methods

This study used a quantitative method and the research used in this study was a quasy experiment with a pretest-posttest one-group design.<sup>12</sup> Population is the object of the entire research or subject being studied. In this study, the population was female students in grades

10 and 11 of Skin Cosmetology (TKK). The sample in this study was 23 female students who experienced mild and moderate menstrual pain during menstruation. The research sample was taken through purposive sampling with a total of 23 female students. Purposive sampling is a sample based on previously known population characteristics.<sup>13</sup> Instruments for menstrual pain using Numeric Rating Scales (NRS) and observation sheets.<sup>14</sup>

Research Tools and Materials. Glass, container for boiling, grater, water 100 ml, 1 segment Turmeric 10 grams, honey, tablespoon, knife, strainer. Procedure for making a decoction of turmeric and honey. Clean the turmeric and then grate it, then boil it in 100 ml of water until it boils. If it's boiling, pour it into a glass, then mix a tablespoon of honey, then stir until mixed. Analysis using the Marginal Homogeneity test. Results

### Univariate analysis

**Table 1.** Frequency distribution is based on the level of menstrual pain before and after being given intervention.

Respondent Characteristics	Frequency (N)	Percentage (%)
<b>Before Being Given an Intervention</b>		
Mild Pain	6	26,1
Moderate Pain	17	73,9
<b>After Being Given an Intervention</b>		
No Pain	6	26,1
Mild Pain	17	73,9

Frequency distribution in [table 1](#) based on the level of menstrual pain before being given intervention, found that the majority of young female respondents experienced moderate levels of menstrual pain as many as 17 students (73.9%), and those who experienced mild menstrual pain were as many as 6 female students (26.1%). Based on the level of menstrual pain after being given intervention, it was found that 17 students (73.9%) had experienced changes in the level of pain with mild pain, and 6 students (26.1%) had no pain.

### Bivariate Analysis

**Table 2.** The effect of a combination of turmeric and honey herbal decoction on the level of menstrual pain in young women at SMK Forward Nusantara Depok.

Before	After		Total	P-Value
	No pain	Mild pain		
Mild pain	6	0	6	0,000
Moderate pain	0	17	17	
Total	6	17	23	

Based on the Marginal Homogeneity test in [table 2](#), it was found that there was an effect of a combination of herbal decoction of turmeric and honey on the level of menstrual pain in female adolescents with a p-value = 0.000, which means sig < 0.05. Based on the hypothesis H0 means rejected, and the hypothesis Ha means accepted. It was concluded that there is a significant influence between the independent variables and the dependent variable.

### Discussion

This study found the effect of a combination of turmeric and honey herbal decoction on the level of menstrual pain in young women. This finding is also supported by research.<sup>15</sup> Where consumption of turmeric affects reducing the degree of menstrual pain, the results of the analysis show that there is a significant difference before and after consuming turmeric (p < 0.01), and other results are also supported by research Simamora (2017) where there is an effect of giving pure honey on menstrual pain with a p-value of 0.00 < 0.05.<sup>16</sup> The statistical

results obtained in this study are in line with research conducted by Wulandari (2018) that giving turmeric affects the level of menstrual pain.<sup>17</sup>

According to the assumption from Suciani (2012) that turmeric decoction can reduce menstrual pain scale, its powerful properties as an analgesic can reduce pain intensity, one of which is menstrual pain.<sup>18</sup> According to other studies, menstrual pain is caused by uterine contractions, which can range from mild to severe pain.<sup>19</sup> Honey has a high osmotic pressure, so honey can work to reduce inflammation as well as reduce more serious inflammation. This research is also supported by Silaban (2019) with a p-value <0.05 which is considered statistically significant. The results of this study indicate that pure honey affects changes in the degree of dysmenorrhea p=0.000. In conclusion, fewer young women experience dysmenorrhea after consuming pure honey.<sup>11</sup>

This research is supported by Bustamam (2021) with a value (p = 0.000) and a dysmenorrhea score (p = 0.001). In addition to reducing pain levels, honey also reduced the duration of menstrual cramps from 2 days to 1 day (p = 0.001).<sup>8</sup> This study is also supported by Erejuwa (2012), that honey reduces painful edema in inflamed tissues by inhibiting excessive prostaglandin production.<sup>20</sup>

## Conclusion

Based on the results of the study, it was found that the effect of a combination of turmeric and honey herbal decoction on the level of menstrual pain in young women at SMK Forward Nusantara Depok.

## Conflict of interest

This research is independent and not bound by individual or group interests.

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