



## EFFECTIVENESS OF LIGHT EXERCISE AND THE USE OF TAMARIND TURMERIC TO DECREASE DYSPMINOREA OF MUHAMMADIYAH UNIVERSITY STUDENTS

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<b>ABSTRACT</b>	<b>Keywords</b>
<p>Dysmenorrhea defined as the pain started right on or before the start of the menstrual periods such as cramps and corrugated pain in the lower abdomen, spread on the rear down waist and you feel a tingling sensation in the pelvic area and surrounding areas. Women who are experiencing pain during menstruation require non-pharmacological therapies such as herbs as turmeric and also exercise such as light sport / light exercise</p> <p>Analyze the effectiveness of light sport / light exercise and the use of tamarind turmeric to decrease dysmenorrhea pain in Muhammadiyah students. This study was an experimental study using a qualitative approach with pre and post-test methods. With the number of respondents 60 respondents. Collecting data using questionnaires, the data were tested using a t-test. The results of the study most respondents experienced a decrease in pain after day 2 and 3 after using tamarind turmeric with <math>P = 0.000</math> and a day I did not decrease pain with <math>P = 0.014</math>. The results of the study do light exercise is more effective from the first day up to day 3 with a <math>P</math> value = <math>0.000</math>. By doing light exercise rather than the use of tamarind turmeric is more effective to decrease dysmenorrhea pain</p> <p>Increasing the awareness of young women about the importance doing light sport / light exercise to reduce pain Dysmenorrhea</p>	<p><i>Dysmenorrhea, Light Exercise, Tamarind Turmeric</i></p>

## INTRODUCTION

Menstruation is the starting time of the release of the uterine lining (endometrium) accompanied by bleeding and can occur repeatedly every month except during pregnancy. Menstruation can occur because there is a fusion between genitalia too and complex hormonal stimulation derived from the chain of hypothalamic, pituitary and ovaries. Therefore some menstrual disorders and menstrual cycle disorders can occur (Pudiastuti, 2012).

There are signs of symptoms before and during menstruation, according to Sukarni (2013) including stomach mules, nausea and fever, cramps in the lower abdomen and vagina, anemia (anemia), flatulence and others. There are several menstrual disorders include premenstrual tension, mastodynia, Mittelschmerz, and Dismore. Dismore defined as pain that starts right at before or after the start of menstrual such as cramping and bumpy pain in the areas under this part of the abdomen, radiating to the lower back waist and legs, and felt a tingling sensation in the pelvic area and the surrounding (Jarvis, 2011).

Dismore occurs evenly 40-80% of women and about 5-10% of women experience heavy and unbearable Dismore (Morgan, 2009). While in Indonesia dismenorea incidence rate is estimated at 64.25% of women with primary Dismore and 9.36% had secondary Dismore (Proverawati, 2009). In general, women who experience menstrual pain requiring medication analgesics to reduce pain during menstruation such as paracetamol and mefenamic acid, some of the treatment of non farmokologi can reduce pain dismenorea such methods homeopathy, acupuncture, biofeedback, relaxation techniques, massage, moderate exercise / light sport, aromatherapy and herbal use (Varney, 2007). One of the herbal products are widely used as a dismenoreapain reliever is tamarind turmeric (Kunyit Asam). Tamarind turmeric (Kunyit Asam) are beneficial for the body of which has antioxidants and phytonutrients in turmeric may help strengthen the immune system. Curcumin in turmeric (kunyit) may

also be used as anti-microbial, anti-inflammatory and also can be trusted as a deduction or even inhibit uterine contractions (Hariana, 2015).

Non-pharmacological therapy more on light sports, warm compresses as well as relaxation. Mild exercise / light sports can increase endorphin which is a pain natural body inhibitor, and increase levels of serotonin (Proverawati, 2009). Sports believed can minimize dismenorea complaints such as to press the prostaglandin production and provide adaptation response against the hormone regulation and make body produces endocrine (Winarko, 2010). Doing regular exercise during menstruation for 10-20 minutes can lower sense of pain due dysmenorrhea when menstruation, blood flow on muscles around the uterus become smooth.

If the dysmenorrhea effect cannot be resolved will disturb daily activity, menstrual which moving backward would result in infertility and sterility, perforation of the uterus (Yates, 2009). Besides the emotional conflict, stress and anxiety experienced can cause an uncomfortable feeling for people with dysmenorrhea. The discomfort can develop into a problem with the accompanying error, so that anxiety, feelings of joy or distress as it is not unusual. Therefore dysmenorrhea must be prevented in order to avoid the impact of the above mentioned (Knight, 2000).

The result of previous research showed that consumption of acid extract broth extract can decrease the length of menstrual cycle, reduce symptoms of pre menstrual syndrome (PMS) symptoms both physical and psychological and can reduce pain during menstruation but tamarind turmeric does not affect the length of menstruation. Based on the above background found that the high incidence rate of dysmenorrhea. And herbal or phytopharmacy products today are being a major alternative for a young woman to reduce pain without side effects. Therefore the authors are interested

to conduct research in the form of “Effectiveness of Tamarind turmeric on the Incidence of Dysmenorrhea in The Faculty of Health Sciences Muhammadiyah University of Sidoarjo”

## MATERIALS AND METHODS

This research is an experimental research with a qualitative approach using pre and post method. This research is used as the subject of research is a student who is willing to be a respondent as many as 60 female students. The student used as the respondents adolescent with the same classes for half of 4 Departement of midwifery and 2 classes for half of 4 Departement analyst. It is estimated that data will be taken on 12<sup>th</sup> December 2016 until 28<sup>th</sup> January 2017. Independent variable dysmenorrhea and dependent variable light sport and tamarind turmeric. After collected data is done by using statistical T-test.

## RESEARCH RESULT

### 1. General Data

#### a. Age of Respondent

Age	Frecuency	Percentage (%)
19	20	33,33
20	35	58,34
21	2	3,33
22	3	5
Total	60	100

From the above table state the majority of respondents aged 20 years, while a small percentage of respondents aged 19 years

#### b. Parent’s Job of Respondent

Parent’s Job	Frecuency	Percentage (%)
Swasta	25	41,7
Wiraswasta	13	21,7

PNS	13	21,7
TNI/ Polisi	9	15
Total	60	100

From the table above the majority of respondents parents with job private, while at least a job parents respondents military police.

### 2. Lightweight Sports Effectiveness Against Dysminorehea Pain Reduction.

#### 3.

#### a. Table 2.1 Regularity of Light

Exercise Regulation	Frequency	Percentage (%)
Regularly	12	40
Irregular	18	60
Total	30	100

From the above table, it can be concluded that irregular respondents tamarind turmeric 3 days during menstruation at most that are 60% than regular only 40%

#### b. Table 2.2 Intensity of Dysminorous Pain Before Using Tamarind turmeric

Scale Pain	Frequency	Percentage (%)
Pain mild	5	16,7
Pain moderate	21	70,0
Severe pain	4	13,3
Total	30	100

From the above data, it can be concluded that the most dominant respondent feel moderate pain by 70%, it feel pain disminorhea like cramps in the stomach, feels painful and depressed. While the rest feel a mild pain of 16,7% and severe pain at least by 13,3% it feel pain that interfere with the activity but still can did

c. Table 2.3 Intensity Dysminorea Pain After Day 1 Using Tamarind turmeric

Scale Pain	Frecuency	Percentage (%)
Pain mild	9	30
Pain moderat	18	60
Severe pain	3	10
Total	30	100

P = 0,014

From the above data it can be concluded that the use of tamarind turmeric on H +1 most respondents feel moderate pain of 60%, while mild pain as much as 30% and who feel the pain of 10% weight pain can distrub the daily activity day. From the test T- test performed on the first day of use there is no effect ( $p > 0,005$ )

d. Table 2.4 Intensity Dysminorea After The Second day Using Tamarind turmeric Pain

Scale Pain	Frequency	Percentage (%)
Pain mild	21	70
Pain moderate	9	30
Total	30	100

P = 0,000

From the table above the use of sour days tamarind turmeric 2 respondents mostly said that felt light dysmenorrhea mild pain that is equal to 70%, while the feel that pain is 30% of the T-test in the decrease of pain scale which is proven from the analysis of  $P=0,000$  ( $P < 0,005$ )

e. Table 2.5 Intensity of Dysminorous Pain After Day III Using Sour Acids

Scale of Pain	Frequency	Percentage (%)
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Pain Mild	28	93,3
Moderate Pain	2	6,7
Total	30	100

P = 0,000

From the above table it can be concluded that most respondents on day 3 using tamarind turmeric there is a decrease in pain, that is 93,3% of respondents said mild pain, whereas of respondents who felt the moderate pain of 6,7%. Proven by using tamarind turmeric there is a decrease of pain scale this is proven from the result of analysis  $P=0,000$  ( $P < 0,005$ )

#### 4. The Effectiveness of Mild Exercise to Decrease Dysmenorrhea

a. Table 2.6 Regular Excercise

Regular Mild Excercise	Frecuency	Percentage (%)
Regular	12	40
Irregular	18	60
Total	30	100

From the above table, it can be concluded that irregular respondents carrying out mild exercise 3 days during menstruation at most, that is 60%, rather than 40% regimens only

b. Table 2.7 Intensity of Dysmenorrhea Pain BeforeLight Excercise

Pain scale	Frequency	Percentage (%)
Mild pain	9	30
Moderate pain	18	60
Severe pain	3	10
Total	30	100

From the above table, it can be concluded that the most dominant respondents feel the moderate pain of 60%, that is feeling pain

dysmenorrhea such as cramps in the stomach, feels painful and depressed. While the rest feel a mild pain of 30% and severe pain at last by 10% feel the pain that interferes with activity but still tolerable

c. Table 2.8 Intensity of pain Dysmenorrhea After Day I Moderate Exercise

Scale pain	Frequency	Percentage (%)
Mild pain	9	30
Moderate pain	18	60
Severe pain	3	10
Total	30	100

P = 0,004

From the above data it can be concluded that the use of moderate exercise on H+1 most of the respondent feel moderate pain 60%, while light pain 30%, and who feel pain 10% weight, that is a pain can disrupt the daily activity. From the T-test performed on the first day of moderate exercise there is an effect to reduce the pain of dysmenorrhea where P=0,004 (P< 0,005)

d. Table 4.9 Intensity of Dysmenorrhea Pain After Day 2 of moderate exercise

Pain scale	Frequency	Percentage (%)
Mild pain	21	70
Moderate pain	9	30
Total	30	100

P = 0,000

From the data above can be concluded that the use of moderate exercise on the second day most of the respondents feel light pain by 70%, while moderate pain of 30% from the T-test conducted on the second day to do moderate exercise there the effect is to

reduce the pain of dysmenorrhea where P=0,000 (P<0,005)

e. Table 4.10 Intensity of Dysmenorrhea Pain After Third Day of Moderate Exercise

Pain scale	Frequency	Percentage (%)
Mild pain	28	93,3
Moderate pain	2	6,7
Total	30	100

P = 0,000

From the above data, it can be concluded that the use of moderate exercise on day 3 most of the respondents feel mild pain 93,3%, while moderate pain as much as 6,7%. From the test T-test conducted on the second day of moderate exercise, there is an effect that is generated to reduce the pain of dysmenorrhea where P=0,000 (P<0,005)

## DISCUSSION

The effectiveness of Light Exercise And The Use of Tamarind turmeric To Decrease Dysmenorrhea

Beside on the results of the analysis statistic (T-test) conducted before treatment for 3 days can be concluded the decrease if intensity of dysmenorrhea pain where H+1 with value P=0,014, H+2 value P=0,000 and H+3 value 0,000 tamarind turmeric to handling of menstrual pain at students of class XI SMA N 1 Sugihwaras, got the result of students who consumed tamarind turmeric tend to experience menstrual degrees of light scale (score 0-3), because tamarind turmeric useful as an analgesic that can reduce menstrual pain. Dysmenorrhea in this study was primary dysmenorrhea occurring not due to gynecological problems and the onset time when the respondent entered a menstrual period, the pain did not arrive at the menstrual cycle ovulation (William, 2011). Based on the research of

Novia (2008) showed that the degree of dysmenorrhea pain also varied from mild to severe levels, the possibility of primary dysmenorrhea more than 50 and 15% experienced severe pain. The emergence of symptoms of primary dysmenorrhea that some respondents appear 12 hours since menstruation and the time implantation of fertilization becomes whole. All glands kill decreased nutrition and vascular vasospasm in the endometrium (Guyton, 2007). The natural ingredients fo sour turmeric drink can reduce the complaints of primary dysmenorrhea

Many factors that affect the onset of complaints or pain during menstruation include; psychological factors, constitution, blockage of the cervical canal, allergies, endocrine and organic abnormalities including uterine retroflexion, uterine hypoplasia, cervical canal obstruction, stemmed submucosal myoma and endometrial polyps (Prawirohardjo, 2006). In this study H+1 intervention of mild exercise 15 minutes a day was very effective to decrease the intensity of menstrual pain, as the test result showed a T-test value of 0,004 ( $P < 0,005$ ) according to Husin (2014) exercise can cause changes in the hormonal system, a woman exercising in her hormonal balance. Hormones that play a role in menstrual pain are prostaglandins. According to Clitheroe and pickles endometrium in secretion, phase produce prostaglandin F2 thus causing contraction of smooth muscle. If excessive levels of prostaglandins enter the bloodstream, other than dysmenorrhea can also be found other effects such as; nausea, vomiting, diarrhea, flushing, it is clear that increased levels of prostaglandins play an important role in the emergence of dysmenorrhea

## CONCLUSIONS AND SUGGESTION

Conclusions Light exercise is more effective than using saffron acidic, Increased pain levels decreased in respondents who did

moderate exercise that the use of sour turmeric

Suggestion It is expected that other researchers continue this study with larger samples, other researchers are expected to examine with the same variable but performed before menstruation

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