

**THE EFFECT OF VINYASA YOGA ON REDUCING THE INTENSITY OF
PRIMARY DYSMENORRHOEA IN ADOLESCENTS GIRL
AT MA MANBAIL FUTUH
(In Krajan Hamlet, Beji Village, Jenu District, Tuban District)**

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Abstract

Background: Primary dysmenorrhea is an important problem. In Indonesia, the prevalence of primary type dysmenorrhea in adolescent girls ranges from 60%-90%, while the remainder are sufferers of the secondary type. From the results of a preliminary study, it was found that 7 out of 10 teenage girls at MA Manbail Futuh experienced primary dysmenorrhea. If primary dysmenorrhea is not treated, it will affect the individual mentally and physically, so it is urgent to take immediate pharmacological and non-pharmacological action. Pharmacological treatment can cause side effects, so alternative non-pharmacological therapy is used, one of which is Vinyasa Yoga. Further research is needed to determine the effect of Vinyasa Yoga on reducing the intensity of primary dysmenorrhea pain. **Method:** The study used pre-experimental research with One group pretest-posttest design with 55 Of 64 respondents using a simple random sampling technique. Vinyasa Yoga is done at least 3 times for 1 month before menstruation and the instruments were questionnaires and numerical rating scales. Data analysis using the Wicoxon test. **Result:** The results of the research showed that all respondents experienced a decrease in pain intensity, the test results showed that $p = 0.000$, it was found that $p < 0.05$, so H_0 was rejected. This means that there is a significant effect of Vinyasa Yoga on reducing primary dysmenorrhea scores. Vinyasa yoga, which is done before menstruation regularly and correctly, trains the strength of the core muscles of the abdomen to relax so that it changes the pattern of receiving pain to a more calming pattern so that the intensity of the pain can be reduced. **Conclusion :** Abstract should be informative , and not only explain P value to show the difference t but also mention value of correlation or differences.

Keywords: Primary dysmenorrhea, Vinyasa yoga, Pain intensity.

INTRODUCTION

Dysmenorrhea or menstrual pain is a disorder complained of by most women of reproductive age during the menstrual cycle. According to Rosyida (2022), dysmenorrhea is the most commonly reported, and is the most common cause of reduced daily activities.

Dysmenorrhea is divided into two, namely primary and secondary. Primary dysmenorrhea is felt since the first time menstruation (1-2 days) and no problems with the reproductive organs are found. While secondary dysmenorrhea is usually caused by a problem with the reproductive organs, the pain is felt



longer or during menstruation (Handayani, 2022).

According to data from the World Health Organization (WHO), an average of 16.8% -81% of young women worldwide experience dysmenorrhea. Meanwhile, according to the results of research by Silviani (2019) in Astuti (2022), the prevalence of dysmenorrhea in Indonesia has an average of 45-95% which occurs during the productive period. The data is summarized with the results of primary dysmenorrhea ranging from 60% - 90% occurring in adolescent girls, while the rest are sufferers with secondary types (Setyowati, 2018). In East Java, the incidence of dysmenorrhea is 71.3% in adolescent girls (Ammar, 2016).

Based on a preliminary study conducted at MA Manbail Futuh in Krajan Hamlet, Beji Village, Jenu District, Tuban Regency, data was obtained by interviewing 10 students. out of 10 adolescents, it turned out that 7 out of 10 students stated that they experienced abdominal pain during menstruation. Based on the data revealed above, dysmenorrhea is common among adolescents and is something that is very disruptive to

activities, so a solution is needed, one of which is through yoga which is believed to reduce dysmenorrhea.

There are various factors that cause Dysmenorrhea, such as nutritional status, age of menarche, duration of menstruation, lack of physical activity and stress. According to the results of Kojo's research (2021), the causative factor of dysmenorrhea with the most common problem in adolescents is the level of stress caused by several task demands.

Dysmenorrhea if not treated will affect the individual's mental and physical health so that it is urgent to take immediate action or therapy pharmacologically or non-pharmacologically. Pharmacological therapy with the use of drugs such as Non-Steroid Anti-Inflammation Drugs (NSAIDs) can cause side effects that cause kidney damage, increase the risk of heart disease, or cause allergic reactions, so alternative non-pharmacological therapies are carried out, one of which is yoga. Yoga is one of the recommended therapies to eliminate primary dysmenorrhea. Targeted and continuous training is believed to be

able to cure primary dysmenorrhea and improve overall body health (Khotimah & Lintang, 2022).

There are several complications that may occur in sufferers of menstrual pain, namely if the diagnosis of secondary dysmenorrhea is ignored or forgotten, the pathology (underlying disorder or disorder can trigger an increase in mortality). In secondary dysmenorrhea, complications depend on the underlying etiology. Possible complications of secondary dysmenorrhea include infertility, pelvic organ prolapse, heavy bleeding, and anemia. While in primary dysmenorrhea, pathological abnormalities are rarely found. Complications of primary dysmenorrhea are pain intensity that affects quality of life and daily activities. This includes loss of productivity due to reduced work or school time due to having to rest. In general, in primary dysmenorrhea there are no organic complications because the condition experienced is not related to other pathologies or diseases (Nagy, 2023).

Many non-pharmacological therapies include warm compresses,

yoga, relaxation, aromatherapy, acupuncture, acupressure, and others, the more effective is yoga, Yoga which concentrates on physical postures, breathing exercises, and relaxation methods, if practiced regularly for several weeks or months which has been proven to be an effective complementary therapy for managing dysmenorrhea. Meta-analysis studies show that Yoga is a proven effective therapy for reducing dysmenorrhea pain (Kim, 2019).

Yoga is safe to do independently, and not only reduces pain but also reduces anxiety levels. Dysmenorrhea causes a painful and uncomfortable sensation in the abdomen and lower back. How yoga can reduce pain is by reducing the level of prostaglandin production and myometrial ischemia (Kanchibhotla et al., 2023).

Based on the results of previous research by Devi (2018), yoga therapy can be an alternative choice for pain management. Vinyasa yoga is one of the latest yoga, which has special movements that are different from yoga in general. Vinyasa yoga movements optimize the abdominal muscles and breathing

techniques to strengthen the core of the body, create a relationship between movement and breathing, and maintain muscle flexibility. According to Lemay (2019), yoga helps balance hormonal function by relaxing the mind. Regular vinyasa yoga therapy will improve blood circulation so that oxygen is delivered to blood vessels that experience vasoconstriction.

The effect of Vinyasa yoga in overcoming primary dysmenorrhea is thought to be through the mechanism of endorphin release when doing yoga. Endorphin is an endogenous opiate that can block pain transmission so that pain is reduced. In addition, several special movements in Vinyasa Yoga optimize the abdominal muscles to be more relaxed so that when contractions occur in the uterus, the abdominal muscles do not experience a pain response in the lower abdomen which is a symptom of primary dysmenorrhea so that pain intensity is reduced. Based on the description above, the researcher is interested in

conducting research on the effect of vinyasa yoga therapy on reducing the intensity of dysmenorrhea pain at MA Manbail Futuh Tuban.

METHOD

The study was a pre-experiment with a one group pretest posttest design. This design does not have a comparison group (control), this study only has one group, the subject group was observed first (pretest) before the intervention was carried out, then observed again after the intervention was carried out a posttest to measure the intensity of primary dysmenorrhea pain after being given treatment (Munir, 2022).

The population in the study were 64 female adolescents who experienced primary dysmenorrhea at MA Manbail Futuh Tuban in December 2023-February 2024. Samples were taken from 55 female students through simple random sampling. The instrument used was a questionnaire, the data was processed using the Wilcoxon Signan Rank Test

RESULT

Primary Dysmenorrhea Pain Intensity Before Vinyasa Yoga Therapy

Table 1. Frequency distribution of dysmenorrhea levels before providing vinyasa yoga therapy at MA Manbail Futuh in January 2024

Dismenorea Level	Before		<i>p-Value</i>
	<i>f</i>	%	
Non Dismenorhea	0	0,00	0,000
mild	38	69,1	
moderate	14	25,5	
severe	3	5,5	
Total	55	100	

Source: Primary data

Based on the results of this study, the level of dysmenorrhea in table 1 shows that of the 55 respondents before being given vinyasa yoga therapy intervention, the majority experienced mild pain (69.1%) or 38 respondents, a small portion experienced severe pain (5.5%). % or 3 respondents.

Based on table 1 it shows that the characteristics of respondents based on age at MA Manbail Futuh are known, namely 55 respondents,

the majority of young women aged 15 years, namely 69.1% or totaling 38 respondents, a small number of young women aged 17 years, namely 7.3% or 4 respondents. Based on table 5.2, the majority of respondents (63.6%) managed primary dysmenorrhea by leaving it alone, namely 35 respondents, while a small number of respondents (7.3%) managed primary dysmenorrhea by taking medication, namely 4 respondents.

Primary Dysmenorrhea Pain Intensity After Vinyasa Yoga Therapy

Table 2 Frequency distribution of dysmenorrhea levels after providing vinyasa yoga therapy at MA Manbail Futuh in January 2024

Dismenorea Level	After		P-value
	f	%	
Non Dismenorhea	29	52,7	0,000
mild	23	41,8	
moderate	3	5,5	
severe	0	0,0	
Total	55	100	

Source: Primary Data

Based on table 2 it shows that after being given vinyasa yoga therapy intervention, the majority experienced a reduction in pain to no pain as much as (52.7%) or 29 respondents, a small percentage experienced moderate pain as much as (5.5%) or 3 respondents. Based on table 2, it shows that the statistical test results obtained with the Wilcoxon p-value test were $0.000 < 0.05$, so H1 was accepted and H0 was rejected, so it can be concluded that there is an effect of vinyasa yoga therapy on reducing the intensity of dysmenorrhoea pain in young women at MA Manbail Futuh.

DISCUSSION

Based on the frequency distribution of scores after giving vinyasa yoga therapy to young women, it shows that the majority experienced a reduction in pain to no pain, a small percentage experienced mild pain. This is a difference in the level of dysmenorrhea experienced by class X teenage girls at MA Manbail Futuh Tuban after providing vinyasa yoga therapy.

Dysmenorrhea is pain before or during menstruation. This disorder usually begins to occur 24 hours before menstruation or on the first day of menstruation and can be felt for 24-

48 hours. The cramps are felt mainly in the lower abdomen and spread to the back or inner surface of the thighs. In cases of severe dysmenorrhea, cramping pain can be accompanied by vomiting and diarrhea. If dysmenorrhea is not treated, it will affect the individual mentally and physically, making it urgent to immediately take pharmacological or non-pharmacological action or therapy (Khotimah & Lintang 2022).

According to researchers, menstrual pain often occurs in young women, because they have not yet reached biological and psychological maturity. Menstrual pain usually starts when the cycle has become ovulation in the years of reproductive age and regular cycles. At the age of 15-17 years, this is a period of adolescence which is relatively young, so teenagers at this age are still less able to understand their own

problems and also do not really care about how to overcome the problems they experience. Most teenagers who experience menstrual pain tend to overcome it by going to sleep. , no one handles it with sports or exercise.

In this study, vinyasa yoga movements were carried out for 10-15 minutes with the aim of increasing physical fitness, increasing mental and physical relaxation, facilitating the supply of oxygen to blood vessels that experience vasoconstriction, reducing prostaglandins, stimulating endorphins so that dysmenorrhea is reduced. The intensity of menstrual pain will decrease because vinyasa yoga therapy is able to improve blood circulation throughout the body, including the reproductive organs, so that menstrual pain is reduced.

Vinyasa yoga therapy is recommended to be carried out continuously with a minimum

frequency of 3 times a month. Treating dysmenorrhea using non-pharmacological methods is safer to use because it does not cause side effects that cause kidney damage, increase the risk of heart disease, or cause allergic reactions, so alternative non-pharmacological therapies are used, one of which is yoga. Yoga is one of the therapies recommended to eliminate primary dysmenorrhea (Khotimah & Lintang, 2022).

When doing Vinyasa yoga therapy to overcome primary dysmenorrhea through the mechanism of releasing endorphins when doing yoga. Endorphin is an endogenous opiate that can block pain transmission so that the pain is reduced. Apart from that, several special movements in Vinyasa Yoga optimize the abdominal muscles to become more relaxed so that when contractions occur in the uterus, the

abdominal muscles do not experience a pain response in the lower abdomen which is a symptom of primary dysmenorrhea, resulting in a reduction in pain intensity (Kaminoff, 2017). The results of research from Devi (2018), stated that the intensity of dysmenorrhea pain after doing vinyasa yoga therapy, there were no respondents with severe dysmenorrhea pain.

According to researchers, exercise is a non-pharmacological management that is safe to use because it uses physiological processes in the human body itself. Therefore, vinyasa yoga therapy can reduce dysmenorrhea experienced by young women. The results of the study did not show that there were no respondents who experienced severe dysmenorrhea pain intensity. The level of severe pain becomes non-existent and reveals that continuous

yoga makes muscles stronger because creatine, which is a chemical element found in muscles, is activated, so that muscle growth is triggered, this is very good for supporting adolescent growth. Yoga can improve the brain's ability to function optimally in teenagers, because it can stimulate blood circulation so that it can bring more oxygen to the brain.

Vinyasa Yoga is a form of relaxing stretching designed as an effective solution for overcoming or reducing the intensity of pain during menstruation. This relaxation technique can reduce pain by relaxing the muscles experiencing spasm caused by prostaglandins so that vasodilation of blood vessels occurs, increasing blood flow during ischemia. Apart from that, this relaxation is useful for increasing abdominal muscle strength, abdominal flexibility, body

endurance as well as relaxing breathing to relax, release tension and increase lung ventilation so that blood oxygen reduces the scale of dysmenorrhea (Kaminoff, 2017)

By carrying out a series of careful and concentrated physical movements, a yoga practitioner is taught to develop all parts of his body and soul. Sharing the movements in Vinyasa yoga has a positive effect on blood circulation, makes it easier to absorb nutrients, and cleanses toxins from various parts of the body. This is a factor that helps someone in health therapy, either to overcome or alleviate the pain they are suffering from. The special postures in Vinyasa Yoga are more intense in flexing the abdominal muscles, thereby helping prevent muscle cramps, reducing muscle tension and helping the body feel relaxed. The influence of Yoga in overcoming primary dysmenorrhea is

through the mechanism of releasing endorphins when doing yoga. Endorphins are compounds produced by the pituitary gland and hypothalamus during certain activities, including yoga. Endorphin is an endogenous opiate that can block pain transmission so that pain is reduced (Pramardika, 2019).

This is in accordance with previous research by Devi (2018), vinyasa yoga therapy, a total of 19 people (100%) experienced a decrease in the pain intensity of primary dysmenorrhoea, which can be interpreted as vinyasa yoga therapy being able to reduce the intensity of pain in primary dysmenorrhoea. However, there is a gap in Devi's (2018) research, namely using different vinyasa yoga movements.

This research is in accordance with research by Kojo (2021) which

states that there is a significant relationship between physical activity habits and the incidence of dysmenorrhea. Respondents who rarely do routine physical activity in a week have a 1.2 times greater risk of experiencing dysmenorrhea than respondents who do it regularly. The existence of a relationship between physical activity and the incidence of dysmenorrhea can be caused because physical activity is a relaxation technique that can be used to reduce pain.

According to researchers, vinyasa yoga therapy can reduce the intensity of primary dysmenorrhea pain because this therapy is designed to increase muscle strength, endurance and flexibility so that it can reduce dysmenorrhea pain. However, it all depends on the individual's own patience in carrying out this therapy.

In this study, researchers have provided information about vinyasa yoga therapy exercises, where in the research process vinyasa yoga therapy was practiced and participated by respondents.

Vinyasa yoga, which is done before menstruation regularly and correctly, trains the strength of the core muscles of the abdomen to relax so that it changes the pattern of receiving pain to a more calming pattern so that the intensity of the pain can be reduced. According to the results of this study, there is an effect of vinyasa yoga therapy in reducing pain intensity in primary dysmenorrhea.

CONCLUSION

Vinyasa Yoga therapy can reduce the level of dysmenorrhea pain in young women at MA Manbail Futun Tuban. can provide additional information about vinyasa yoga

which can be used as a non-pharmacological treatment that can reduce the intensity of dysmenorrhea pain as a reference material and complementary therapy intervention.

ACKNOWLEDGMENT

Thank you to the principal of MA Mambail Futuh Jenu and all the female students who participated in this research activity to fill the questionair.

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