

Research Article

The Effectiveness of Dysmenorrhea Exercises to Reduce Pain and Pain Duration During Menstrual Period

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Abstract.

Dysmenorrhea occurs when there is an imbalance of the hormones estrogen and progesterone. It is one of the lower abdominal cramps that almost all women experience during menstruation and is often experienced by women aged less than 20. The purpose of this study was to determine the effectiveness of dysmenorrhea exercises in reducing dysmenorrhea pain and pain duration during menstruation for students of the Faculty of Health Sciences, University of Muhammadiyah Malang. This research design uses a pre-experimental design. The total number of samples used the slovin formula with the results of 92 samples. This research used the purposive sampling technique. The population in this study were 120 students of the Faculty of Health Sciences, University of Muhammadiyah Malang. Analysis of the data was done using the T-test. The period of this study was one month and the measuring instrument used was the Numeric Rating Scale (NRS). The results of the study indicated that dysmenorrhea exercises have an effect on reducing dysmenorrhea pain and pain duration in students of the Faculty of Health Sciences, University of Muhammadiyah Malang. Dysmenorrhea exercises can be done 3-4 times a week for a duration of 30-45 minutes. Through this research, it is hoped that it can be used as a reference or source for female students or young women in overcoming dysmenorrhea pain, in addition to using drugs, with non-pharmacological therapies such as dysmenorrhea gymnastics.

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1. Introduction

The prevalence of problems that are often experienced by women, both adolescents and adults during menstruation, include 89.5% experiencing dysmenorrhea pain, followed by menstrual irregularities 32.1%, and an extension of the duration during menstruation 5.3% (Ammar, 2016). The pain of dysmenorrhea in the world is very large, on average more than 50% of women experience menstruation.

According to the World Health Organization (WHO, 2020) the incidence of dysmenorrhea pain in women is between 16.8% - 81%. In European countries, dysmenorrhea pain occurs in women 45% - 97% with the lowest prevalence in Bulgaria 8.8% and the highest

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reaching 94% in Finland. In addition, a survey was also conducted on 113 women in the United States that dysmenorrhea pain as a cause experienced by adolescent girls with a prevalence of 29% - 44% at the age of 18-45 years. In Indonesia, the incidence of primary dysmenorrheal pain is 54.89% and 9.36% of secondary dysmenorrheal pain. And about 53% to 86% of students experience dysmenorrhea pain. In East Java, the incidence of primary dysmenorrheal pain was 54.89%, while the secondary dysmenorrheal pain was 9.36%.

Dysmenorrhea pain if allowed to continue can lead to endometriosis disorders or there are fibroids (myomas) in the uterus, so it is necessary to treat dysmenorrhea pain such as dysmenorrhea exercise. One of the sports that serves to treat dysmenorrhea pain is dysmenorrhea gymnastics (Ammar, 2016). Dysmenorrhea exercise is carried out routinely for 3-4 days a week with a duration of 30-45 minutes to help smooth blood flow in the muscles around the uterus so that it can reduce pain (Rsu & Tangerang, 2021). Waktu yang paling tepat untuk melaksanakan senam dismenore setiap pagi dan sore hari karena produksi konsentrasi hormone endorphin yang tinggi efektif menurunkan intensitas skala nyeri dismenore **(Yeti Trisnawati, 2020)**.

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flow in the muscles around the uterus so that it can reduce pain (Rsu & Tangerang, 2021).

2. Methods

This research is a pre-experimental design research with quantitative methods. The research subjects were 120 female students who experienced dysmenorrhea pain at the Faculty of Health Sciences, University of Muhammadiyah Malang. This research was conducted virtually through the Google Meet or Google Zoom application. The study was carried out from April to May 2022, the sampling technique used was purposive sampling.

3. Results

The results of the description of the student age obtained on average are 21.88 years. The lowest student age is 21 years old and the highest student age is 23 years old. The results of the demographic data description of the age at first menstruation for FIKES UMM students obtained an average of 11.55 years. The lowest age at first menstruation for female students was 9 years and the highest age for first menstruation was 16 years. The results of the description of the duration of menstrual bleeding in FIKES UMM students in 1 cycle obtained an average of 5.68 days. The lowest bleeding time was 3 days and the highest bleeding time was 9 days. The results of the description of the frequency of exercise per month obtained 22 people or 18.3% rarely or never exercise, 65 people or 54.2% exercised 1-2 times per month, 30 people or 25.0 percent exercised 3-8 times per month, and 3 people or 2.5% exercised daily. The results of the description of the family history of UMM FIKES students when menstrual pain was obtained were 28 people or 23.3% had a family history of menstrual pain and 92 respondents or 76.7% did not have a family history of menstrual pain. The results of the description of actions during menstrual pain in FIKES UMM female students were obtained as many as 58 respondents or 48.3% who did not take action or were left alone during menstrual pain, 7 respondents or 5.8% when menstrual pain took action to drink Kiranti, 24 respondents or 20.0% took drugs and 31 respondents or 25.8% took other actions such as warm water compresses as many as 17 respondents or 14.2%, 10 respondents or 8.3% took action to sleep during menstrual pain, 1 respondent or 0.8% drinking warm water, 1 respondent or 0.8% did relaxation techniques, 1 respondent or 0.8% smeared telon oil during menstrual pain and 1 respondent or 0.8% did the act of drinking honey turmeric.

The results of the description of menstrual pain in FIKES UMM female students were 120 female students who interfered with daily activities and the results of the description of activity disturbances during menstrual pain until they did not enter college obtained 18 female students or 15.0% until they did not attend college and 102 female students or 85.0% didn't go to college. The results of the description of pain before or during menstruation showed that all female students stated that they experienced pain before or during menstruation, namely as many as 120 female students. The results of the description of the intensity of pain before doing gymnastics dysmenorrhea obtained an average of 6.16 and the intensity of pain after doing gymnastics dysmenorrhea obtained an average of 2.99. These results indicate a decrease in the average intensity of pain after doing dysmenorrhea exercise as much as 3.17. The results of the description of the duration intensity before doing dysmenorrhea exercise obtained an average of 6.97 and the duration intensity after doing dysmenorrhea exercise was obtained an average of 6.18. These results indicate a decrease in the average duration of intensity after doing dysmenorrhea exercise as much as 0.79.

4. Discussion

The results of research conducted at the Faculty of Health Sciences, University of Muhammadiyah Malang. The average age of the female students obtained is 21.88 years. The lowest student age is 21 years old and the highest student age is 23 years old. This is in accordance with previous research conducted by (Sugiharti, 2020) entitled "Dysmenor Exercises in Reducing Menstrual Pain Scale in Adolescents". It is known that the average age of the respondents is 19 years, the lowest age of the teenager is 18 years and the highest age of the respondent is 21 years.

Based on the results of research conducted at the Faculty of Health Sciences, University of Muhammadiyah Malang. The average age of female students at first menstruating was 11.55 years. The age of first menstruation of the lowest respondent was 9 years old and the highest age of first menstruation was 16 years of age. This is in accordance with previous research conducted by (Diah Ayu Astuti, 2021) entitled "The Effectiveness of Dysmenorrhea Gymnastics Against Menstrual Pain Management in Young Women in Alam Jaya Village, Tangerang City". That the age of adolescents for the first time menstruation is at most 66.7% is at the age of 13 to 16 years, the age at first menstruation is the lowest respondent is aged 10 years and the age at first menstruation is the highest is aged 17 to 20 years.

Based on the results of research conducted at the Faculty of Health Sciences, University of Muhammadiyah Malang. That the results of the description of actions during menstrual pain in FIKES UMM female students were obtained as many as 58 respondents or 48.3% who did not take action or were left alone during menstrual pain, 7 respondents or 5.8% when menstrual pain took action to drink Kiranti, 24 respondents or 20.0% took action to take drugs and 31 respondents or 25.8% took other actions such as warm water compresses as many as 17 respondents or 14.2%, 10 respondents or 8.3% took action to sleep during menstrual pain, 1 respondent or 0.8% drank warm water, 1 respondent or 0.8% practiced relaxation techniques, 1 respondent or 0.8% smeared telon oil during menstrual pain and 1 respondent or 0.8% took the act of drinking honey turmeric. This is in accordance with previous research conducted by (Nurseptiani Syamsiah, Sonya Yulia, 2019) entitled "The Effectiveness of Dysmenorrhea Gymnastics and Ginger Water Combination Against Primary Dysmenorrhea Pain in Students of SMA Negeri 5 Samarinda". That in SMA Negeri 5 Samarinda there are 2 students or 6% how to deal with dysmenorrhea pain by taking pain medication, 4 students or 12.9% doing warm water compresses, 5 students or 16.1% doing relaxation techniques and 12 students or 38.7% perform positioning actions.

Based on the results of research conducted at the Faculty of Health Sciences, University of Muhammadiyah Malang. That the results of the description of the impact of menstrual pain on FIKES UMM female students were 120 female students who interfered with their daily activities and female students who did not attend class during menstrual pain were 18 female students or 15% and 102 or 85% female students during college did not interfere with their activities. This is in accordance with previous research conducted by (Nurseptiani Syamsiah, Sonya Yulia, 2019) entitled "The Effectiveness of Dysmenorrhea Gymnastics and Ginger Water Combination Against Primary Dysmenorrhea Pain in Students of SMA Negeri 5 Samarinda". That in SMA Negeri 5 Samarinda as many as 7 students or 10.4% of disturbed activities, the impact of menstrual pain 3 or 4.5% of students experienced a lack of appetite, 10 students or 14.% had difficulty concentrating while studying, 8 students or 11.9 % of the body felt weak and 5 students or 7.5% of SMA Negeri 5 Samarinda students felt headaches during the menstrual cycle.

Based on the results of research conducted at the Faculty of Health Sciences, University of Muhammadiyah Malang. That the results of the description of the body part experiencing pain obtained an average of 71 female students or 59.2% experiencing pain in the lower abdomen, 36 female students or 30.0% experiencing pain in the lower back, 21 female students or 17.5% experiencing pain in the female part and 7 female students or 5.8 % experienced pain in the pelvis. This is in accordance with

previous research conducted by (Nurseptiani Syamsiah, Sonya Yulia, 2019) entitled "The Effectiveness of Dysmenorrhea Gymnastics and Ginger Water Combination Against Primary Dysmenorrhea Pain in Students of SMA Negeri 5 Samarinda". That the body part experienced pain was obtained on average 16 female students or 23.9% experienced cramps in the lower abdomen and 17 female students or 25.4% experienced pain radiating to the back.

Based on the results of research conducted at the Faculty of Health Sciences, University of Muhammadiyah Malang. That the results of the description of the intensity of pain before doing gymnastics dysmenorrhea obtained an average of 6.16 (moderate pain) and the intensity of pain after doing exercise dysmenorrhea obtained an average of 2.99 (mild pain). This shows a decrease in the average pain intensity by doing dysmenorrhea exercise of 3.17. This is in accordance with previous research conducted by (Diah Ayu Astuti, 2021) entitled "The Effectiveness of Dysmenorrhea Gymnastics Against Menstrual Pain Management in Young Women in Alam Jaya Village, Tangerang City". That the average respondent's menstrual pain level before being given the dysmenorrhea exercise intervention was 6.73 with a standard deviation of 0.961. The range of menstrual pain felt by respondents ranged from five (moderate pain) to eight (controlled severe pain). The average decrease in menstrual pain occurred after being given dysmenorrhea exercise, from 6.73 to 4.67 with a standard deviation value of 1.047. The range of menstrual pain felt by respondents ranged from four (moderate pain) to seven (controlled pain). The data in this study showed that there was a decrease in the range of menstrual pain felt by female adolescents in the Alam Jaya District, Tangerang after being given the dysmenorrhea exercise intervention.

Based on the results of research conducted at the Faculty of Health Sciences, University of Muhammadiyah Malang. The duration intensity during menstruation before doing dysmenorrhea exercise was obtained on average 6.97 and the duration intensity after doing dysmenorrhea exercise was 6.18. This shows a decrease in the average pain intensity by doing dysmenorrhea exercise by 0.79. But in previous studies, no other research has been found that discusses the intensity of duration.

5. Limitations of the study and implications

In a study there must be limitations in conducting research. The following are some of the limitations experienced by researchers when conducting research: In this study, they only did 1 exercise meeting with respondents who experienced dysmenorrhea pain

after which respondents could do dysmenorrhea exercises at home with notes filling out the observation sheet that had been given by the researcher.

6. Conclusion

Based on the results of the study, it can be concluded that the intensity of dysmenorrhea pain before doing dysmenorrhea exercise is 6.16 (moderate pain) and after doing dysmenorrhea exercise is 2.99 (mild pain). The intensity of the duration of dysmenorrhea before doing dysmenorrhea exercise was 6.97 and after doing dysmenorrhea exercise was 6.18. This shows that the average decrease in the intensity of dysmenorrhea pain by doing dysmenorrhea exercise can reduce the pain of dysmenorrhea by 3.17 and the intensity of the duration of dysmenorrhea by doing dysmenorrhea exercise can reduce the intensity of the duration by 0.79. This shows that giving dysmenorrhea exercise has an effect on reducing dysmenorrhea pain and duration in students of the Faculty of Health Sciences, University of Muhammadiyah Malang.

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