
| RESEARCH ARTICLE

The Effect of Abdominal Stretching Exercise on the Intensity of Dysmenorrhea in Adolescence Girls at MA Nurut Taqwa Besuki – Situbondo

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| ABSTRACT

The period of transition from childhood to adulthood is called adolescence. Adolescent girls experience physical changes, namely, starting to menstruate. Complaints that often arise during menstruation are menstrual pain (dysmenorrhea), which can be reduced by doing abdominal stretching exercises that will stimulate the production of endorphins and give a feeling of calm and resistance to painful feelings, especially menstrual pain (dysmenorrhea). This study aimed to determine the effect of abdominal stretching exercise on the intensity of dysmenorrhea in adolescent girls in Ma Nurut Taqwa Besuki-Situbondo. The research design used was pre-experimental with a one-group pre-posttest approach. The population in this study was 83 respondents, with a sample of 37 respondents using purposive sampling, collecting data by questionnaires, and then processing the data using SPSS using the paired t-test. Wilcoxon test analysis results get a sig value Of $0.000 < 0.05$. This proves that giving abdominal stretching exercises affects the intensity of dysmenorrhea in adolescent girls in Ma Nurut taqwa besuki-Situbondo.

| KEYWORDS

Dysmenorrhea, *Abdominal Stretching Exercise*

| ARTICLE INFORMATION

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1. Introduction

Adolescence is a period of transition or change from childhood to adulthood. These changes include several changes, both physical and biological changes. Physical changes are the first changes in adolescence, and then biological changes. Biological changes are usually marked by menstruation or menstruation. (Diananda A, 2018; WHO, 2017).

The menstrual period is a natural phenomenon that occurs throughout the reproductive phase of every woman. Most women experience pain and pressure during their menstrual period (Kaur et al., 2015). Menstruation occurs due to uterine muscle contractions, and the hormone progesterone decreases while the hormone estrogen muscle contractions uterine, resulting in dysmenorrhea (Rahayu et al., 2017).

Dysmenorrhea hurts the quality of life of affected women, such as affecting academic performance and social activities. Therefore menstrual pain or dysmenorrhea must be addressed immediately before it causes other reproductive system disorders. So action must be taken to overcome this, one of which is non-pharmacological action. Actions to deal with menstrual pain non-pharmacologically are safe and easy and do not cause negative impacts. Non-pharmacological actions to reduce dysmenorrhea can be done, such as back massage, warm water compresses on the lower abdomen, light exercise, and abdominal stretching exercises (Priscilla, 2017).

2. Research Method

This study used a pre-experimental research design with a one-group pretest post-test approach. The population and samples in this study were all class X, XI, and XII students at MA Nurut Taqwa with a total sampling technique, collecting data using a questionnaire to determine the effect of abdominal administration. The stretching exercise used statistical tests using the Paired T-test with a significance level <0.05 .

3. Results and Discussion

3.1 Overview of the Research Place

This research was conducted by MA. Nurut Taqwa is an education with an MA level in the village of Bloro, Kec. Besuki, Situbondo Regency, East Java. In carrying out its activities, Ma. Nurut Taqwa is under the auspices of the Nurut Taqwa Islamic Boarding School Foundation. Ma Nurut Taqwa has facilities in the form of 4 classrooms, 20 computers, 1 School Health Unit (UKS), 1 library room, 1 prayer room, 1 teacher's room, and 10 toilets. This school has never done research on 'The Effect of Abdominal Stretching Exercise on the intensity of dysmenorrhea in young women in Manurut taqwa Besuki-situbondo'

3.2 Description of Respondents' Characteristics based on age

3.2.1 Respondents' Characteristics based on age

Table 5.1 Respondents' characteristics based on age

Age	Frequency	Present	Valid Present	Cumulative Present
15 y.o	3	8.1	8.1	8,1
16 y.o	9	24.3	24.3	32.4
17 y.o	9	24.3	24.3	56.8
18 y.o	6	16,2	16,2	73,0
19 y.o	6	16,2	16,2	89.2
20 y.o	4	10,8	10,8	100,0
Total	37	100,0	100,0	

Based on table 5.1 above shows that this study involved 37 respondents where the age of the respondents; the majority of respondents were 16 years old and 17 years old, namely 9 respondents (24.3%), while the minority of respondents were 15 years old, namely 3 respondents (8.1%).

3.2.2 Description of characteristics based on menstrual cycle

Table 5.2 Characteristics of Respondents based on Menstrual

Cycle Menstrual cycle	Frequency	Present	Valid Present	Cumulative Present
< 28 days	-	-	-	-
28-35 days	37	100.0	100.0	100.0
>35 days	-	-	-	-
Total	37	100,0	100,0	100,0

Based on table 5.2 above shows that in the menstrual cycle, information was obtained that all 37 respondents (100%) had menstrual cycles of 28-35 days.

3.2.3 Characteristics Based Overcoming Complaints When Experiencing Dysmenorrhea

Table 5.3 Characteristics of Respondents Based on Overcoming Complaints When Experiencing Dysmenorrhea

	Frequency	Present	Valid Present	Cumulative Present
Silent/sleeping	30	81.1	81.1	81,1
Stretching exercise	1	2,7	2.7	83,3

Others (relaxation)	2	5.4	5.4	89.2
Drinking herbs	4	10.8	10.8	100.0
Total	37	100.0	100.0	

Based on table 5.3 above, the respondents in the group giving abdominal stretching exercises mostly overcame complaints of dysmenorrhea intensity by being silent/sleeping; 30 respondents with percentage (81.1%) knew by means of stretching exercise; 1 respondent with a percentage (2.7%), respondents who coped with other methods (relaxation) were 2 respondents with a percentage (5.4%), and respondents who overcome by drinking herbal medicine were 4 respondents with a percentage (10.8%)

3.3 Description of the characteristics of respondents before giving abdominal stretching exercise

Table 5.4 Distribution of the frequency of dysmenorrhea intensity giving abdominal before women's

	Frequency	Present	Valid Present	Cumulative Present
Mild pain	7	18.9	18.9	18.9
Moderate pain	30	81.1	81.1	100.0
Total	37	100.0	100.0	

Based on table 5.4 above, prior to giving abdominal stretching exercises, information was obtained that respondents who had mild pain were 7 respondents with a percentage of (18.9%), and respondents who had moderate pain were 30, with a percentage of (81.1%).

3.4 Description of the characteristics of the respondents after giving abdominal stretching exercise

Table 5.5 Distribution of frequency of dysmenorrhea intensity before and after giving abdominal stretching exercises to young women

	Frequency	Present	Valid Present	Cumulative Present
No Pain	13	35.1	35.1	35.1
Mild pain	24	64.9	64.9	100.0
Total	37	100.0	100.0	

Based on table 5.5 above, after abdominal stretching exercise, information was obtained that 13 respondents experienced no pain (35.1%), and 24 respondents experienced mild pain (64.9%).

4. Data Analysis

From the results of the data of the normality test using Shapiro Wilk, obtained before an abdominal stretching exercise of 4.2973, the average value after being given an abdominal stretching exercise was 1.0270. The sizeable mean difference is 3.2703. it was based on the table above; the sig value obtained from the pre-test is 0.00 and from the post-test is 0.000, so it can be concluded that the data is not normally distributed. The hypothesis significance test between two sample pairs to determine the effect of giving abdominal stretching exercises on intensity Pain was carried out using the Wilcoxon test and obtained a sig. Value of 0.000 <0.05. Thus it can be concluded that abdominal stretching exercise affects the intensity of dysmenorrhea in young women at Ma Nurut Taqwa Besuki-Situbondo.

5. Discussion

5.1 Characteristics of Respondents in the Age Group, Menstrual Cycle, and Handling When Experiencing Dysmenorrhea Intensity

The statistical results of the characteristics of the respondents in Ma Nurut Taqwa who were classified as in the age group given the abdominal stretching exercise mainly were 16 years old and 17 years old, namely 9 respondents with percentage (24.3%) and a small proportion aged 15 years, namely as many as 3 respondents with a percentage (8.1%). Age 16-17 years is the age of middle adolescence (age range 15-17 years), where adolescents experience changes in themselves at that time. One of the changes in young women is experiencing menstruation, namely bleeding from the vagina due to the decay of the inner uterine wall (Muggiati, 2016).

According to Retno Soesilowati's research, primary dysmenorrhea occurs two to three years after menarche, in the first month or year of menstruation, and usually occurs at the age of 15-25 years. Then the frequency decreases with age and usually stops after giving birth (Retno, S., Yunia, A. (2016).

5.2 Characteristics Respondents Based on Menstrual Cycles in Ma Nurut Taqwa Besuki-Situbondo

Results of statistical characteristics of respondents in MA. Nurut Taqwa, classified in the menstrual cycle in the abdominal stretching exercise, mostly had regular menstrual cycles (28-35 days). As many as 37 respondents with a percentage (100%) in this study had regular menstrual cycles. Usually around 28-35 days. The length of each person's menstrual cycle is different because it is influenced by several things, such as hormones produced by the body, nutritional intake, daily activities, psychological state, and stress levels experienced. Sooner or slower. This is because when you are stressed, the hormones in your body do not work as effectively as usual.

5.3 Characteristics of Respondents Based on Overcoming Complaints When Experiencing Intensity of Dysmenorrhea in Ma Nurut Taqwa Besuki-Situbondo

Results of statistical characteristics of respondents in MA. Nurut Taqwa, who was classified as dealing with complaints when experiencing the intensity of dysmenorrhea in the group giving abdominal stretching exercises, mostly overcoming complaints by being silent/sleeping as many as 30 respondents (81.1%), respondents who resolved them through abdominal stretching were 1 respondent (2.7%), 2 respondents (5.4%) coped with other methods (relaxation), and 4 respondents (10.8%) treated them by drinking herbal medicine. This shows that most respondents overcome their menstrual complaints by staying silent/sleeping. Pain reduction can be made in two ways: utilizing pharmacology and non-pharmacology. Pharmacological pain can be treated with analgesic therapy. However, using analgesics will have an addictive effect and side effects of drugs dangerous for patients if taken long term. Meanwhile, non-pharmacological treatment of menstrual pain with herbal therapy, yoga, cold or warm compresses, abdominal stretching exercises, massage, or distraction (Suparmi & Musriyati, 2017).

According to research, when a person experiences pain, the body and mind will respond immediately to do something that is considered to reduce the pain. Efforts made by adolescents to deal with pain during menstruation can be in the form of positioning, aromatherapy, abdominal stretching exercises, and rest. Most female students, Ma Nurut taqwa, manage their menstrual pain by resting or sleeping.

5.4 The Effect of Giving Abdominal Stretching Exercise on the Intensity of Dysmenorrhea in Ma Nurut Taqwa Besuki-Situbondo

Based on the results obtained in the therapy group giving abdominal stretching exercise, it showed a value of before being given abdominal stretching exercise 4.2973, while the average value after giving abdominal stretching exercise was 1.0270. The mean difference was 3.2703, and the value was positive. This information was obtained that there was a decrease in the average value from before giving abdominal stretching exercises to after giving abdominal stretching exercises 3.2703. In addition, with the value of Sig. of $0.000 < 0.05$, thus it can be concluded that the average value before and after being given abdominal stretching exercise is different, which means that there is an effect of giving abdominal stretching exercise on the intensity of dysmenorrhea.

This was proven before being given abdominal stretching exercises. Most respondents with mild pain intensity were 7 respondents (18.9%), while moderate pain 30 respondents (81.1%). Furthermore, after being given abdominal stretching exercises, the intensity of dysmenorrhea changed to no pain by 13 respondents (35.1%), and respondents experienced mild pain were 24 respondents (64.9%). Giving abdominal stretching exercises for 10 minutes is effective against the intensity of dysmenorrhea. The results of other studies that are in line are those conducted by Windastiwi et al., who obtained results with a significant value of $P = 0.001 < 0.05$. This means there is a significant effect after giving abdominal stretching exercises on the intensity of dysmenorrhea. (Windastiwi, et al, 2017).

Abdominal stretching is a form of relaxation that can relax muscles that experience spasms caused by increased prostaglandins resulting in vasodilation of blood vessels and will increase blood flow in areas experiencing spasms and ischemia (Windastiwi et al., 2017).

Stretching exercise has been found to reduce menstrual discomfort through increasing spraining and decreasing ischemia, the release of endogenous opiates, specifically beta-endorphins, and suppression of prostaglandins and blocking blood flow from the viscera resulting in persistent pelvic congestion. This reduces pain, so stretching exercises help soften back pain, relieve pain, increase flexibility, restore mobility, improve circulation in bone and joint tissues, soothe tense uterine muscles and maintain good stomach tone based exercises have been found to reduce muscle tension so that the intensity of dysmenorrhea will decrease (Scholz & Campbell, 2015).

6. Conclusion

Based on the results of the study above entitled "The Effect of Stretching Exercise Abdominal Intensity of Dysmenorrhea in Young Women at MA Nurut Taqwa Besuki-Situbondo" which was held from 1 to 31 July 2022 with a total sample of 37 samples that met the inclusion and exclusion criteria that had been analyzed, the following conclusions were obtained:

1. The characteristics of the respondents were that the majority were aged 16 to 17 years and had regular menstrual cycles ranging from 20-30 days. In overcoming complaints during dysmenorrhea, the majority stayed silent/sleeping.
2. The intensity of dysmenorrhea in the abdominal stretching exercise against pain intensity showed that the highest amount of pain decreased in the moderate category in the abdominal stretching exercise.
3. There are differences in the intensity of dysmenorrhea before and after being given the Abdominal Stretching Exercise, so it can be concluded that giving abdominal stretching exercise is effective in reducing the intensity of dysmenorrhea in Ma Nurut Taqwa Besuki Situbondo

6.1 Suggestion

Based on the results of the research above, it can be proposed that students maintain and increase the influence of abdominal stretching exercises on the intensity of dysmenorrhea in young women at Ma Nurut Taqwa Besuki-Situbondo.

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