

THE EFFECTIVENESS OF ABDOMINAL STRETCHING EXERCISE ON MENSTRUAL PAIN LEVEL IN STUDENTS OF SEMESTER VIII PRODI S1 NURSING UNIVERSITY NU SURABAYA

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***Abstract :** Menstrual pain may interference daily activities. One way of non-pharmakological treatmeant to reduce menstrual pain by doing abdominal stretching exercise. The purpose of this study to find out the effectiveness of abdominal stretching exercise against menstrual pain level. Study design is Pre Experimental approaches One -group pre - post test design, the population 15 students of semester VIII who had menstrual pain and willing to become respondents. Using total sampling technique. analysis of data use the Wilcoxon signed rank test with $\alpha < 0.05$. Study results showed from 15 respondents, most of them 8 (53.3 %) respondents had moderate menstrual pain level before abdominal stretching exercise was given and almost a half 7 (46.7 %) respondents had mild menstrual pain level after abdominal stretching exercise was given. Wilcoxon signed rank test got $P=0.002 < 0,05$ so H_0 is rejected, means abdominal stretching exercise is effective for decreasing menstrual pain levels. Abdominal stretching exercise effective in decreasing menstrual pain level. Expected nurses can participate in providing health education to perform abdominal stretching exercise as a non-pharmacological therapy in reducing menstrual pain .*

Keywords : *Abdominal Stretching Exercise, Menstrual Pain Level, Dysmenorhea*

1. INTRODUCTION

Every woman who has entered puberty will experience menstruation every month. This occurs due to the release of the uterine endometrium layer (Andira, 2010). When the endometrial layer is released, the endometrium releases prostaglandins. Increased prostaglandin hormone stimulates uterine muscle and affects the blood vessels that cause uterine ischemia through myometrial contractions and constriction of blood vessels resulting in the onset of menstrual pain (Anurogo, 2011). Menstrual pain can be blocked by exercising because it can help produce natural ingredients to reduce pain (Proverawati & Misaroh, 2009). Exercise or effective exercise that handles menstrual pain focuses on the abdominal muscles and pelvic muscles, the exercise is abdominal stretching exercise (Thermacare, 2010).

In Indonesia an estimated 55% of productive women are tortured by menstrual pain. The incidence of menstrual pain ranges from 45-95% among women of reproductive age (Proverawati & Misaroh, 2009). In addition, data in Indonesia indicate that, menstrual pain is a lot of primary menstrual pain, puriensi menstrual pain in Indonesia of 64.25% consisting of 54.89% primary menstrual pain and 9.36% secondary menstrual pain (Santoso, 2008) . Primary menstrual pain affects the quality of life of 40-90% of women, of which 1 in 13 who experience

menstrual pain are absent from work and school for 1-3 days per month (Woo and McEneaney, 2010). In general, 50-60% of women require analgesic drugs to overcome the problem of menstrual pain (Annathayakheisha, 2009). In Surabaya, 1.07-1.31% of the total number of visits to midwifery were menstrual pain (Harunriyanto, 2008)

Handling of menstrual pain can be done in two ways: pharmacological therapy and non pharmacological therapy. Pharmacologic therapy is by giving nonsteroidal anti-inflammatory drugs (NSAIDs), herbal medicine while non-pharmacologic is by warm compress or hot bath, massage, distraction, adequate sleep and exercise (Bobak, et al, 2005). Thermacare (2010) one way of exercise to reduce menstrual pain is to perform abdominal stretching exercise. Abdominal stertching exercise is a combination of six stretch paint movements, lower trunk rotation, buttock / hip stretch, abdominal strengthening (curl up), lower abdominal strengthening, and the bridge position. Abdominal exercise stretching exercise is used for muscle stretching, especially in the abdominal and pelvic muscles performed for 10 minutes at the time of menstrual pain. This exercise is specifically designed to increase muscle strength, endurance, and flexibility, so that the muscles will become weak and can reduce menstrual pain.

This research was conducted by Nurul (2012) with the title of research "the difference of menstrual pain level (dysmenorrhea) before and after gymnastics of dysmenorrhea in adolescent girls in sman 2 jember" in the journal not explained the execution of gymnastics or sport like what can decrease ties menstrual pain And not explained how long to do gymnastics of dysmenorrhea, when the gymnastics began not described.

2. METHODS

The research design used is quantitative research with Pre Exsperimen design with One-group approach pre-post test design. Population in this research is Population in this research is all student of semester VIII Prodi S1 Nursing University of Nahdlatul Ulama Surabaya who experience menstrual pain and willing to do abdominal stretching exercise that is equal to 15 responder. The sample used total sampling technique that all population members were sampled. The data were collected using NRS (Numerical Rating Scale) questionnaires.

The data were analyzed using Wilcoxon Sign Rank test statistic with $\alpha = 0,05$, with SPSS help when got $\rho < \alpha$ then H_0 is rejected meaning abdominal stretching exercise effective against decreasing of menstrual pain level at student of semester VIII Prodi S1 Nursing Universitas Nahdlatul Ulama Surabaya.

3. RESULTS

4.1 Measurement data

General data contains characteristics of respondents including age, age of first menstruation, duration of monthly menstrual pain, history of use of pain medication mestruasi

a. Characteristics of respondents by age

No.	Age (Years)	Frekuensi	Persentase (%)
1.	21	7	46,7
2.	22	8	53,3
Total		15	100
Mean		21,53	

According to the above table shows that the average age of respondents is 21.53 years

b. Characteristics of respondents by age of first menstruation

No.	Age of first menstruation (Years)	Frekuensi	Persentase (%)
1.	12	5	33,3
2.	13	6	40,0
3.	14	2	13,3
4.	15	2	13,3
Total		15	100

Mean	13.07
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According to the table above shows that the average respondent experienced the first menstruation at the age of 13.07 years

a. Characteristics of respondents based on the length of monthly menstrual pain

No.	Long Pain of Menstruation (day)	Frekuensi	Persentase (%)
1.	1	3	20,0
2.	2	8	53,3
3.	3	3	20,0
4.	5	1	6,7
Total		15	100

According to the above table shows that of 15 respondents most (53.3%) of old respondents menstrual pain every month for 2 days.

b. Characteristics of respondents based on the history of the use of menstrual pain medication

No.	The use of menstrual pain medication	Frekuensi	Persentase (%)
1.	Use	10	66,7
2.	Do not use	5	33,3
Total		15	100

According to the above table shows that of the 15 respondents most (66.7%) of respondents have a history of using drugs when menstrual pain.

4.2 Data Analysis

Data Specific data include the level of menstrual pain and abdominal stretching exercise.

1) The level of menstrual pain before performing abdominal stretching exercise.

No.	Level of pain	Frekuensi	Persentase (%)
1.	No pain	0	0
2.	Mild pain	3	20,0
3.	Moderate pain	8	53,3
4.	Severe pain	4	26,7
5.	Unbearable pain	0	0
Total		15	100

According to the above table shows that from 15 respondents before doing abdominal stretching exercise most (53.3%) of respondents stated moderate menstrual pain.

2) The degree of menstrual pain after abdominal stretching exercise

No.	Tingkat Nyeri	Frekuensi	Persentase (%)
1.	No pain	2	13,3
2.	Mild pain	7	46,7
3.	Moderate pain	4	26,7
4.	Severe pain	2	13,3
5.	Unbearable pain	0	0
Jumlah		15	100

According to the above table shows that from 15 respondents after doing abdominal stretching exercise almost half (46,7%) respondents express mild menstrual pain.

3) The effectiveness of abdominal stretching exercise on decreasing the level of menstrual pain in the students of semester VIII Prodi S1 Nursing at Nahdlatul Ulama University Surabaya March 2015.

No	Abdominal stretching exercise	Level of pain					Total
		No Pain (%)	Mild (%)	Moderate (%)	Severe (%)	Unbearable pain (%)	
01.00	Pre	0	3	8	4	0	15
		0	-20	-53,3	-26,7	0	-100
02.00	Post	2	7	4	2	0	15
		-13,3	(46,7)	-26,7	-13,3	0	-100
Uji statistik Wilcoxon sign rank test							
Asymp Sig (2-tailed)		0,002					
Negative rank		10					
Positive rank		0					
Ties		5					

According to the above table shows that from 15 respondents before doing abdominal stretching exercise most (53,3%) of respondents stated experiencing menstrual pain after and after doing abdominal stretching exercise almost half (46,7%) respondents express mild menstrual pain. Based on Wilcoxon sign rank test test with SPSS for Windows with significance level $\alpha = 0,05$ got $P = 0,002$ where $P < \alpha$ then H_0 is rejected meaning abdominal stretching exercise effective to decrease level of menstrual pain at student of semester VIII Prodi S1 Nursing Universitas Nahdlatul Ulama Surabaya..

4.3 Discussion

a. Level of menstrual pain before doing abdominal stretching exercise

The results of the study showed that the level of menstrual pain before abdominal stretching exercise most (53.3%) experienced moderate menstrual pain. Menstrual pain felt by respondents mostly

experienced moderate menstrual pain because most of them have long experienced menstrual pain so that the body of respondents can adapt and get used to the pain felt every month and a small part of respondents are not familiar with the pain so that the perception of respondents have expressed pain Menstruation is being. This is agreed by Sigit (2010) someone who used to feel the pain will be more ready and easy to anticipate the pain of an individual who has little pain experience about pain.

b. The level of menstrual pain after abdominal stretching exercise.

The results of the investigation showed that the level of menstrual pain after abdominal stretching exercise nearly half (46.7%) of respondents experienced mild menstrual pain. Of the 15 respondents, 2 respondents said that when abdominal stretching exercises feel calm and relaxed and after do not feel menstrual pain, while 7 respondents said when abdominal stretching exercise felt abdominal stretching exercise movement makes the abdominal muscles become stretched and after do feel mild menstrual pain Such as sting, twisting or mules that only occur for a few moments, and 4 respondents said when abdominal stretching exercises say the body is lighter and relaxed with moderate pain such as stabbing but not the same intensity of pain before abdominal stretching exercise and 2 respondents experiencing pain level Weight says to feel the same pain before or after abdominal stretching exercise. This research is supported by the opinions of Woo and McEneaney (2010), Bobak, et al. (2005), which states one way to relieve menstrual pain is to exercise. Exercise is a series of organized and planned gestures to maintain the motion (maintain life) and increase the ability of motion to increase the quality of life (Afriadi, 2010).

c. Abdominal stretching exercise effectiveness of against menstrual pain level

The results of the study showed that from 15 respondents before abdominal stretching exercise most (53.3%) of respondents stated experiencing moderate menstrual pain and after doing abdominal stretching exercise almost half (46,7%) respondents express mild menstrual pain. Based on Wilcoxon test result rank sign test with significance level $\alpha = 0,05$ got $P = 0,002$ where $P < \alpha$ then H_0 is rejected meaning abdominal stretching exercise effective to decrease level of menstrual pain at student of semester VIII Prodi S1 Keperawatan Universitas Nahdlatul Ulama Surabaya.

Based on the data above can be concluded that abdominal stretching exercise effective in reducing menstrual pain. Of the 15 respondents who had abdominal stretching exercise 10 respondents

experienced a decrease in menstrual pain rate. After abdominal stretching exercise for \pm 10 minutes the respondents revealed that the movement of the abdominal stretching exercise makes the abdominal muscles become stretched and make the body become relaxed so after doing abdominal stretching exercise respondents feel less pain.

4. Conclusion and Suggestions

5.1 Conclusion

- a. Most of the VIII semester students of Nursing Department S1 of Nahdlatul Ulama University Surabaya experienced moderate menstrual pain before abdominal stretching exercise.
- b. Almost half of the semester student VIII Prodi S1 Nursing University of Nahdlatul Ulama Surabaya experience mild menstrual pain after abdominal stretching exercise.
- c. Abdominal stretching exercise effective against decreased level of menstrual pain in female semester VIII Prodi S1 Nursing at Nahdlatul Ulama University Surabaya

5.2 Suggestions

- a. For the Institution
This study can provide additional knowledge on the discipline of nursing maternity about reproductive health of women or adolescents, especially the way of handling menstrual pain non pharmacologically by using abdominal stretching exercise.
- b. For Respondents
For respondents experiencing menstrual pain should be handled by non-pharmacological way with abdominal stretching exercise because to increase abdominal muscle strength, endurance and flexibility, so that muscles will become weak and can help reduce menstrual pain and respondents can participate in providing health education.
- c. For Further Researchers
The results of this study can be used as a reference, insight, and as a preliminary data that can be used as a basis for further research related to abdominal stretching exercise and attention to factors that affect menstrual pain.

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