

THE EFFECT OF ABDOMINAL STRETCHING EXERCISES ON REDUCING DYSMENORRHEA PAIN IN ADOLESCENTS IN PERTUMBUKAN VILLAGE WAMPU SUBDISTRICT LANGKAT REGENCY NORTH SUMATERA PROVINCE IN 2024

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ABSTRACT

Introduction: Quality of life for adolescents is a positive assessment within the life cycle, reflected in their satisfaction with themselves, particularly in terms of both physical and psychosocial health, including a positive self-image. Reproductive health in women is an essential component, as the female reproductive system is susceptible to various disorders that may lead to reproductive health problems. One of the most common reproductive health issues is dysmenorrhea, which can significantly affect quality of life, daily activities, and academic performance. **Objective:** to analyze the effect of abdominal stretching exercises on reducing dysmenorrhea pain in adolescents in Pertumbukan Village, Wampu Subdistrict, Langkat Regency, North Sumatra Province in 2024. **Method:** This research is a quantitative study using a quasi-experimental design with a non-equivalent control group design. The approach applied was the two-group pretest and posttest method. The sampling technique used was non-probability sampling with purposive sampling. **Results:** showed that the group given abdominal stretching exercises experienced a significant reduction in dysmenorrhea pain (p-value = 0.00), while the group that did not receive the intervention had no significant change (p-value = 0.1000). **Conclusion:** Based on these findings, it can be concluded that abdominal stretching exercises have a significant effect on reducing dysmenorrhea pain in adolescents in Pertumbukan Village, Wampu Subdistrict, Langkat Regency, North Sumatra Province, in 2024.

Keywords: Dysmenorrhea Pain, Abdominal, Stretching Exercise

Introduction

Adolescent quality of life is a positive evaluation within the life cycle, characterized by satisfaction with oneself in terms of physical and psychosocial health, including a positive self-image (N. P. Dewi, Solehati, and Hidayati 2018). Reproductive health in women is an essential component, as the female reproductive system is vulnerable to disorders that can cause reproductive

health problems. One of the most common reproductive health issues is dysmenorrhea, which can significantly impact quality of life, daily activities, and academic performance (Astuti 2018). Dysmenorrhea is caused by strong or prolonged contractions in the uterine wall, during menstruation the hormone prostaglandin increases and the cervix widens to expel menstrual blood and myometrium contractions are too strong

during menstrual blood expulsion so that muscle tension occurs which causes dysmenorrhea pain (Syaiful and Naftalin 2019).

The impact of dysmenorrhea on school adolescents can result in disruption of daily activities, lack of concentration in learning, and decreased motivation to learn (Faridah, Handini, and Dita 2019) . Dysmenorrhea pain that results in someone being unable to carry out their daily activities and even women who experience dysmenorrhea to see a doctor or treat themselves by taking pain medication, dysmenorrhea pain that is not treated properly can cause health hazards, so dysmenorrhea pain needs to be treated properly (Isnainy et al., 2021)

METHOD

Type study This is study quantitative quasi-experimental design with design study non-equivalent control group design , the approach used with use method two-group pretest And post-test design that is study ymag done For evaluate group intervention And non- instrument intervention group.

Population in study This that is there are 60 people. For Sample in study This with use technique purposive sampling , namely 30 respondents in accordance with inclusion criteria that is, those who have cycle period regular each month , willing non- pharmacological therapy And willing respondents follow procedure study And willing respondents.

Study This implemented For can know whether There is influence Abdominal stretching exercise to decline menstrual pain on Teenager In Pertumbukan Village, Wampu District, Langkat Regency, North Sumatra Province in 2024 . study This For population around 60 people, teenagers who experienced dysmenorrhea about 40 people, for taking sample done through inclusion And exclusion And sample chosen direct by researchers in accordance with specified characteristics or with purposive sampling. This data collection done primarily and secondary.

Primary data collected with do observation direct on teenager moment experience painful dysmenorrhea as pretest stage, after done pretest on teenagers who experience appropriate dysmenorrhea with characteristics inclusion and exclusion, then the data has been collected shared become two group that is group experiment and group control. Sample obtained in accordance with characteristics of 30 samples into 2 groups of 15 people each group experiment and 15 people for group control, on group experiment will given treat abdominal stretching exercise in accordance with SOP in time one sunday before experience menstruation with term within 3 days, after That done observation return For painful dysmenorrhea experienced teenager said , Next compared to group experiment with group control Then tested with SPSS.

Result

Table 4.1 Characteristics of Respondents Based on Age of Menarche Experiencing Dysmenorrhea in Pertumbukan Village, Wampu Subdistrict, Langkat Regency, North Sumatra Province, in 2024

Variabble	f	Presentation
Menarche Age		
< 12 years	19	63,3
>12 years	11	36,7
Total	30	100

Menstrual Duration		
< 7 days	10	33,3
> 7 days	20	66,7
Total	30	100

Description of Dysmenorrhea Pain Intensity Before Abdominal Stretching Exercise Intervention

Table 4.2 Pretest Distribution of Dysmenorrhea Pain Levels Before Abdominal Stretching Exercise Intervention Among Adolescents in Pertumbukan Village Wampu Subdistrict Langkat Regency North Sumatra Province 2024

Group	Pain Scale	F	Presentation (%)
Control	Mild	1	6,7
	Moderate	4	26,7
	Severe	10	66,7
	Total	15	100
Intervention	Mild	0	0
	Moderate	4	26,7
	Severe	11	73,3
	Total	15	100

Table 4.3 Posttest Distribution of Dysmenorrhea Pain Levels After Abdominal Stretching Exercise Among Adolescents in Pertumbukan Village, Wampu Subdistrict, Langkat Regency, North Sumatra Province, 2024

Group	Pain Scale	F	Presentation (%)
Control	Pain	2	13,3
	Mild	5	33,3
	Moderate	6	50,0
	Severe	2	13,3
	Total	15	100
Intervention	No Pain	1	6,7
	Mild	2	13,3
	Moderate	8	53,3

I. Bivariate Analysis

Table 4.4 Test of Normality

	Test of Normality		
	Statistic	Df	Sig.
Pretest Eksperimen	.667	15	.000
Posttest Eksperimen	.667	15	.000
Pretest kontrol	.799	15	.004
Posttest kontrol	.806	15	.004
Pretest Eksperimen	.667	15	.000

The Effect of Abdominal Stretching Exercise on the Reduction of Dysmenorrhea Pain in the Control Group Among Adolescents in Pertumbukan Village Wampu Subdistrict Langkat Regency North Sumatra Province in 2024

Group	N	Mean Rank	Presentation (%)
Control	15	9,5	12
Intervention	15		0,100
Total	15	15	100
Intervention	No Pain	1	6,7
	Mild	2	13,3

Based on table 4.1 on the age of menarche, it was found that respondents who experienced menarche <12 years were around 63.3% (19 respondents) and those >12 years were 36.7% (11 respondents). It was found that approximately 20 people (66.7%) experienced dysmenorrhea with a menstrual duration of >7 days. Furthermore, approximately 10 people experienced prolonged menstruation, representing 33.3% of those with a menstrual duration of < 7 days.

Based on Table 4.2, it was found that in the control group, the majority of respondents experienced severe dysmenorrhea, with 10 out of 15 respondents (66.7%). Similarly, in the intervention group, most respondents also reported severe pain, totaling 11 out of 15 respondents (73.3%). It is obtained that post test on group control majority respondents experience painful while 6 people (66.7%) and for group intervention majority painful currently as many as 8 people (53.3%).

Based on table on can seen results test statistics obtained pre and post pain group control with value (p-value = 0.100) then can concluded that No There is influence abdominal stretching exercise on group Control in Pertumbukan Village, Wampu District, Langkat Regency, North Sumatra Province in 2024.

Based on table 4.1 characteristics of respondents based on the age of menarche which can affect the occurrence of dysmenorrhea pain, to reduce the pain of dysmenorrhea, abdominal stretching exercises were carried out on adolescents in Pertumbukan Village, Wampu District, Langkat Regency, North Sumatra Province in 2024. Based on the age of menarche, it was found that respondents who

experienced menarche <12 years were around 63.3% (18 respondents) and those >12 years were 36.7% (11 respondents)

Discussion

According to Savitri (2019), menarche is a sign of entering the reproductive phase. Early menarche is defined as occurring before the age of 12, while the latest typical onset is at age 16, with the average around 12 years old. Based on the study by Pratiwi (2021), there is a relationship between the age of menarche and the incidence of dysmenorrhea, where girls who experience menarche before the age of 12 are at higher risk of experiencing menstrual pain. Similarly, Syafriani (2021) stated that early menarche is one of the risk factors for dysmenorrhea, as girls under 12 may begin producing gonadotropin hormones prematurely. When menarche occurs earlier than normal, the cervix may still be underdeveloped or narrowed, leading to pain during menstruation. Supporting this, Savitri, Citrawathi, and Dewi (2019) found that 88% of women who experienced menarche before the age of 12 reported dysmenorrhea.

Based table 4.2 is obtained that teenagers who experience dysmenorrhea is experienced on average duration menstruation more from 7 days around 30 people (66.7%) which means existence connection duration menstruation with incident Painful Dysmenorrhea

According to the theory proposed by Mau et al. (2020), one of the menstrual disorders involves abnormalities in the duration and volume of menstrual bleeding. Normally, menstruation lasts between 4 to 8 days. In their study, it was found that respondents who experienced

dysmenorrhea with menstrual durations of less than 4 days and more than 8 days accounted for 5.6% and 11.1%, respectively. Respondents with menstrual durations shorter than 4 days or longer than 8 days were more likely to experience moderate to severe dysmenorrhea. The results of this study indicate that there is a relationship between the duration of menstruation and the occurrence of dysmenorrhea (Mau, Kurniawan, & Dewajanti, 2020). According to previous research, the intensity of dysmenorrhea pain will decrease when taking red ginger capsules lowers PGF2a levels. (Simarmata et al., 2018). This is because red ginger as an anti-inflammatory can block Cox-2 from forming PGF2a (Mesrida Simarmata, 2022). In other studies, it was also found that the aroma of lavender can reduce the intensity of dysmenorrhea pain (Manurung, 2022).

In the control group, the majority of respondents experienced severe dysmenorrhea, with 10 out of 15 respondents (66.7%). Similarly, in the intervention group, the majority also experienced severe pain, with 11 out of 15 respondents (73.3%). After the intervention (posttest), most respondents in the control group experienced moderate pain, totaling 6 respondents (66.7%), while in the intervention group, the majority also reported moderate pain, with 8 respondents (53.3%).

Based on Table 4.4, the effect of abdominal stretching exercise before and after the intervention on the reduction of dysmenorrhea pain in the experimental group among adolescents in Pertumbukan Village, Wampu Subdistrict, Langkat Regency, North Sumatra Province, in 2024 was analyzed. The statistical test showed a p-value of 0.00, indicating that there is a significant difference in pain levels before and after the abdominal stretching exercise

in the experimental group. Therefore, it can be concluded that abdominal stretching exercise had a significant effect on reducing dysmenorrhea pain among adolescents in the experimental group.

CONCLUSION

From the results research conducted with sample of 30 teenagers In Pertumbukan Village, Wampu District, Langkat Regency, North Sumatra Province in 2024 concluded that is :

1. Those who experience painful dysmenorrhea after given abdominal stretching exercise on group Experiment experience decline painful dysmenorrhea with value (p-value = 0.00) which means H_0 is rejected And can concluded that there is influence abdominal stretching exercise on group Experiment Teenager In Pertumbukan Village, Wampu District, Langkat Regency, North Sumatra Province in 2024.
2. Those who experience painful dysmenorrhea on group control that is not given treatment abdominal stretching exercise with value (p-value = 0.1000) which means H_0 is accepted , so that can concluded that No there is influence abdominal stretching exercise on group Control in Pertumbukan Village, Wampu District, Langkat Regency, North Sumatra Province in 2024
3. The existence of there is influence abdominal stretching exercise to decline painful dysmenorrhea on teenagers in Pertumbukan Village, Wampu District, Langkat Regency, North Sumatra Province in 2024

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