



The Effect of Acupressure Massage on Reducing Dysmenorrhea Pain in Female Students at the Darul Hikmah Islamic Boarding School, Medan Islamic Education Park

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ABSTRACT

Dysmenorrhea pain can interfere with a person's productivity, one of which is in teenage students who are still in school, it can have an impact on their productivity in the school environment, not infrequently a student who experiences dysmenorrhea pain has to take a school holiday because of the pain she experiences. One alternative that can be applied when dysmenorrhea pain is acupressure massage. Where this study aims to determine whether there is an effect of Acupressure Massage on Reducing Dysmenorrhea Pain in Female Students of Darul Hikmah Islamic Boarding School, Medan Islamic Education Park in 2024. This study is a quasi-experimental study with a one-group pre-test and post-test approach. The population is all 102 female students of Darul Hikmah Islamic Boarding School, Medan Islamic Education Park, sampling using total sampling with a sample size of 30 people. This research was conducted from June 10 to July 22, 2024. The results of the study showed that the decrease in dysmenorrhea pain in female students before being given acupressure massage at the Darul Hikmah Islamic Boarding School, Medan Islamic Education Park in 2024, the majority experienced moderate pain, and the decrease in dysmenorrhea pain in female students after being given acupressure massage at the Darul Hikmah Islamic Boarding School, Medan Islamic Education Park in 2024, the majority were in mild pain. Based on the results of the paired t test, it was found that the p value = 0.000 < 0.05 so it can be concluded that there is an effect of acupressure massage on reducing dysmenorrhea pain in female students at the Darul Hikmah Islamic Boarding School, Medan Islamic Education Park in 2024. The suggestion that can be conveyed from this study is that everyone is able to inform and apply acupressure massage as an alternative to reducing dysmenorrhea pain.

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1. INTRODUCTION

Acupressure is known as a traditional Chinese massage method, dating back thousands of years. It involves applying pressure or massaging and stimulating specific points on the body. Essentially, acupressure massage is a development of acupuncture techniques, but instead of needles, it uses fingers or a blunt object. The goal is to stimulate the body's natural self-healing ability by restoring

the body's positive energy balance.(Julianti, 2019)Dysmenorrhea prevention is usually achieved through a clockwise massage, performing 30 rotations for three minutes. When massaging, care should be taken not to apply too much force, as this can cause pain. Proper massage should create a sensation of comfort, aches, heat, itching, burning, tingling, and so on. Achieving this sensation not only improves the circulation of chi (energy) and xue (blood), but also stimulates endorphins, a type of morphine produced by the body to provide a sense of calm.(Astiza, 2021).

*World Health Organization*The World Health Organization (WHO) reported in 2020 that approximately 10-15% of the world's population experiences mild dysmenorrhea in every country. The prevalence is higher in young women, ranging from 67% to 90% for women aged 17-24. In European countries, dysmenorrhea occurs in 52%-90% of women, in Africa, it occurs in 44%-95% of women. And in Asia, 45%-90% of women experience dysmenorrhea.(WHO, 2020).

The Central Statistics Agency (BPS) reported that in 2020, the prevalence of dysmenorrhea in Indonesia was quite high, at 62.25%, with the highest number of cases found in adolescents aged 15-24. The incidence of primary dysmenorrhea in Indonesia was 54.88%.(Ministry of Health of the Republic of Indonesia, 2021).

Based on data from North Sumatra from research on dysmenorrhea in Medan City as conductedMastaida (2022), that the prevalence of dysmenorrhea in female students of SMK N.8 Padang Bulan experienced dysmenorrhea pain as many as 20 people (55.6%) out of 36 female students.

According to(Meiranny, 2022)In a study conducted by Ms. Cherian in Gottegere, Bannerghatta Main Road, Bengaluru, entitled "Acupressure on Dysmenorrhea Pain Among Adolescent Girls" with 36 young female students from the midwifery and nursing departments in Iran, acupressure was performed during dysmenorrhea and it was found that acupressure was effective in reducing the symptoms of dysmenorrhea during menstruation.

Based on the initial survey conducted researchers At the Darul Hikmah Islamic Boarding School, Taman Pendidikan Islam Medan, 10 of the 15 female students interviewed by the researcher experienced painful dysmenorrhea during menstruation. Based on this, the researcher was interested in taking the title "The Effect of Acupressure Massage on Reducing Dysmenorrhea Pain in Female Students at the Darul Hikmah Islamic Boarding School, Taman Pendidikan Islam Medan in 2024."

2. RESEARCH METHOD

Types of research

This type of research is quantitative research in the form of a quasi-experiment, according to (Sugiyono inTumurang, 2024)explains that this quasi-experiment is one of the methods used in research whose purpose is to find the effect of certain treatments on other things under controlled conditions to find out whether there is an Effect of Acupressure Massage on Reducing Dysmenorrhea Pain in Female Students at the Darul Hikmah Islamic Boarding School, Taman Pendidikan Islam Medan in 2024.

Research Design

The research design that the researcher used was one group pre-test post-test.*design*This research is a research design where participants will be given a pretest before being given treatment and a posttest after receiving the treatment.(Neuman in Fauziah, 2024).

Table 1. one group pretest posttest

Pretest score	Intervention(gift)	Posttest Score
O ₁	X	O ₂

Information:

O₁: Pretest value before giving acupressure massage to reduce dysmenorrhea pain in female students at the Darul Hikmah Islamic Boarding School, Taman Pendidikan Islam.

X : Giving acupressure massage

O₂: Posttest value after acupressure massage on reducing dysmenorrhea pain in female students at the Darul Hikmah Islamic Boarding School, Islamic Education Park

Location and Time of Research

a. Research Location

The research was conducted at the Darul Hikmah Islamic Boarding School, Taman Pendidikan Islam Medan because at the Islamic Boarding School there was a problem of dysmenorrhea pain that included the population and sample of the researcher, references existed and met the requirements to be used as samples, and there had never been any research on the Effect of Acupressure Massage on Reducing Dysmenorrhea Pain in Female Students of the Darul Hikmah Islamic Boarding School, Taman Pendidikan Islam Medan in 2024.

b. Research Time

The research was conducted starting from the initial title submission, initial survey, writing chapters 1, 2, and 3, conducting the proposal seminar, organizing the research letter, conducting the research, writing chapters 4 and 5, and completing the thesis defense. The research design will be implemented from June to July.

Table 2 Research time
Research POA (Planning Of Action)

No	Information	Jan	Feb	Mar	Apr	May	June	July	Ags
1.	Acc title	█							
2.	Initial survey		█						
3.	Create chapters 1,2,3		█	█	█				
4.	Proposal seminar					█			
5.	Organizing research letters					█			
6.	Conducting research						█		
7.	Creating chapters 4 and 5							█	
8.	Research session								█

Population and Sample

a. Research Population

According to(Nursalam, 2020)A population is a subject (e.g., a human) that meets predetermined criteria. The population in this study was all 102 female students at the Darul Hikmah Islamic Boarding School, Taman Pendidikan Islam Medan.

b. Research Sample

The technique used by researchers in sampling is total sampling.(Rofiin, 2021)Total sampling is where all population units are taken as sample units. The sample in this study was all female students at the Darul Hikmah Islamic Boarding School, Medan Islamic Education Park, who were menstruating when the researcher conducted the study, amounting to 30 female students.

Operational definition

An operational definition is a definition whose formula is based on observable properties or things. This operational definition is a definition formulated using operational words, so that the variable can be measured.(Roesmaningsih, 2024).

Table 3. Operational Definitions

No	Variables	Operational Definition	Measuring instrument	Measurement results	Scale
1	Acupressure Massage	Providing massage at certain points to female students who experience dysmenorrhea pain during menstruation	SOP observation	1. Before doing acupressure 2. After being given acupressure	Nominal

2	Dysmenorrhea Pain	Menstrual pain experienced by female students at Islamic Boarding Schools is measured through pain intensity, namely the level of pain felt by adolescents during menstruation.	Numeric Rating Scale (NRS) pain measurement scale sheet with a value range of 0,1,2,3,4,5,6,7,8,9,10	1. Mild pain (1-3) 2. Moderate pain (4-6)	Ordinal
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Research Ethics

a. Informed Consent (consent sheet)

A consent form between the researcher and the respondent or the respondent's family. This consent form is given to the respondent or the patient's family who will be studied. If the respondent or the respondent's family refuses, the researcher will not coerce them and will respect their rights.

b. Autonomy (self-decision)

Respondents have the right to make a conscious decision to accept or decline participation. Researchers explain the research process to participants. Participants are then given the freedom to decide whether or not to participate.

c. Anonymity (without a name)

In this study, the researcher explained to respondents not to include their names but only asked them to write their first initials.

d. Confidentiality

The researcher guarantees the confidentiality of the research results, including information and other matters. The researcher guarantees the confidentiality of all information collected.

Data Collection Techniques and Research Instruments

a. Data collection technique

The data collection conducted by the researcher in this study began after the researcher received a research permit from the Haji University of North Sumatra Educational Institution, after which the letter will be given to the Darul Hikmah Islamic Boarding School, Taman Pendidikan Islam Medan in 2024, the researcher submitted a letter of approval to conduct the research and provided a research permit and requested permission to conduct the research. When the acupressure massage was carried out, the points were massaged in a clockwise direction, 30 times in a circle with each point for 3 minutes.

b. Research Instruments

According to Sugiyono in Kurniawan (2021) states that research instruments are tools used to observe and measure natural or social phenomena that are observed.

The instrument used by the researchers in this study was an observation sheet. The observation sheet provided contained respondent data on acupressure massage and dysmenorrhea pain. The observation sheet was created based on information on the effect of acupressure massage on reducing dysmenorrhea pain in female students at the Darul Hikmah Islamic Boarding School, Taman Pendidikan Islam Medan, in 2024.

The initial section of this research instrument contains demographic data of the respondents, including: respondent class, respondent age, and respondent's first menstruation. The observation sheet was filled out by performing acupressure massage to reduce dysmenorrhea pain.

The types of data used by researchers in this study are primary data and secondary data.

Data analysis

a. Univariate Analysis

Univariate analysis was conducted to obtain a description of the frequency distribution of respondents which included the variables of class, age and when their first menstruation occurred as well as a description of the independent variables (acupressure massage) and dependent variables (dysmenorrhea pain), then described in tabular form.

b. Bivariate Analysis

Bivariate analysis is carried out if the variables analyzed consist of two variables, namely the dependent and independent variables. Bivariate analysis is used to test whether or not there is an Effect of Acupressure Massage on Reducing Dysmenorrhea Pain in Female Students of the Darul Hikmah Islamic Boarding School, Taman Pendidikan Islam Medan in 2024 using paired sample t-test statistics, a procedure used to test the difference in the average of two paired samples. The paired sample t-test test functions to analyze the pre-post or before and after research model. It is used to evaluate certain treatments on the same sample in two different observation periods.

3. RESULTS AND DISCUSSIONS

Research Site Overview

Darul Hikmah Islamic Boarding School, Medan Islamic Education Park was established based on the deliberation of the Regional Leadership Meeting of Islamic Education Park (Rapimda TPI) since June 1, 1986, which was previously named Arrivaiyah Islamic Boarding School taken from the name of the founder of TPI Drs. KH. Rivai Abdul Manaf Nasution, then changed its name to Islamic Education Park Islamic Boarding School, adjusted to the institution/foundation, after a few years it changed again to Darul Hikmah Islamic Boarding School and finally was determined with the name Darul Hikmah Modern Islamic Boarding School, Islamic Education Park on June 1, 1986 and was made the birthday of Darul Hikmah Islamic Boarding School, Islamic Education Park (PPMDH TPI) which is expected to be a place for fostering a generation of Muslims who are truly capable of producing development cadres who are faithful and pious and have substance, willing to sacrifice for the sake of the country, nation, and religion who are able to be independent and entrepreneurial and socialize in society.

Darul Hikmah Islamic Boarding School, Medan Islamic Education Park, is a formal educational institution that is oriented towards religious and general education, meaning that its learning activities focus on religious education that is integrated with general education.

Research result

After collecting data, researchers obtained several results, which were then processed and analyzed. The following are the results of the study: "The Effect of Acupressure Massage on Reducing Dysmenorrhea Pain in Female Students at the Darul Hikmah Islamic Boarding School, Taman Pendidikan Islam Medan, 2024."

Univariate Analysis

Univariate analysis is an analysis that is usually used to describe data carried out on each variable from research results.

- a. The characteristics of the respondents studied in this study include: Class, Age, Menarche (First Menstruation).

Table 4. The characteristics of the respondents studied in this study include: Class, Age, Menarche (First Menstruation).

No	Characteristics	Frequency	%
1.	10	10	33.3
2.	11	10	33.3

3.	12	10	33.3
	Total	30	100.
Respondent Age			
1.	15	10	33.3
2.	16	12	40.0
3.	17	8	26.7
	Total	30	100.0
Respondent's First Menstruation			
1.	Elementary School	21	70.0
2.	JUNIOR HIGH SCHOOL	9	30.0
	Total	30	100.0

(Data source from SPSS 2024 processing results)

Based on table 4.1, there were 30 respondents consisting of 10 respondents (33.3%) in class X, 10 respondents (33.3%) in class XI and 10 respondents (33.3%) in class XII. Respondents also stated that the majority of female students were 16 years old (40.0%), and Respondents also said that as many as 21 female students (70.0%) said that their first menstruation was during elementary school.

- b. Reduction of Dysmenorrhea Pain in Female Students before being given acupressure massage at the Darul Hikmah Islamic Boarding School, Medan Islamic Education Park in 2024.

Table 5. Reduction of Dysmenorrhea Pain in Female Students before being given acupressure massage at the Darul Hikmah Islamic Boarding School, Medan Islamic Education Park in 2024

Reduction of Dysmenorrhea Pain in Female Students Before Being Given Acupressure Massage	Frequency	%
Mild pain	2	6.7
Moderate pain	28	93.3
Total	30	100.0

(Data source from SPSS 2024 processing results)

Table 4.2 shows that the decrease in dysmenorrhea pain in female students at the Darul Hikmah Islamic Boarding School, Medan Islamic Education Park, before being given acupressure massage, the majority of 28 female students (93.3%) experienced moderate pain.

- c. Reduction of Dysmenorrhea Pain in Female Students after being given acupressure massage at the Darul Hikmah Islamic Boarding School, Medan Islamic Education Park in 2024.

Table 6. Reduction of Dysmenorrhea Pain in Female Students after Acupressure Massage at Darul Hikmah Islamic Boarding School, Medan Islamic Education Park in 2024

Reduction of Dysmenorrhea Pain in Female Students Before Being Given Acupressure Massage	Frequency	%
Mild pain	29	96.7
Moderate pain	1	3.3
Total	30	100.0

(Data source from SPSS 2024 processing results)

Table 4.3 shows that there was a decrease in dysmenorrhea pain in female students at the Darul Hikmah Islamic Boarding School, Medan Islamic Education Park after being given acupressure massage, as many as 29 female students (96.7%) experienced mild pain.

- d. The Effect of Acupressure Massage on the Level of Dysmenorrhea Pain in Female Students at the Darul Hikmah Islamic Boarding School in 2024

Table 7. The Effect of Acupressure Massage on the Level of Dysmenorrhea Pain in Female Students at the Darul Hikmah Islamic Boarding School in 2024

Acupressure	Dysmenorrhea Pain			Total
	Light	Currently	Total	

Action	N	%	N	%	N	%
Before	2	6.7	28	93.3	30	100.0
After	29	96.7	1	3.3	30	100.0

(Data source from SPSS 2024 processing results)

Based on table 4.4, the results of the data analysis showed that the majority of respondents before the acupressure massage experienced moderate pain, namely 28 female students (93.3), then after the acupressure massage, the majority of respondents experienced a decrease in dysmenorrhea pain to mild pain, namely 29 female students (96.7).

- e. The Effect of Acupressure Massage on Reducing Dysmenorrhea Pain in Female Students at the Darul Hikmah Islamic Boarding School, Taman Pendidikan Islam, in 2024

Table 8. The Effect of Acupressure Massage on Reducing Dysmenorrhea Pain in Female Students Darul Hikmah Islamic Boarding School Islamic Education Park 2024

Treatment	Mean	p.value	CI	N
Before Acupressure Massage	4.80			30
After Acupressure Massage is Performed	2.40	0,000	2,632	30

(Data source from SPSS 2024 processing results)

Based on table 4.5, the results of the Paired Sample T-Test showed $p=0.000 < \alpha = 0$, so H_0 was rejected, meaning that there was an Effect of Acupressure Massage on Reducing Dysmenorrhea Pain in Female Students at the Darul Hikmah Islamic Boarding School, Medan Islamic Education Park in 2024 with a CI value of 2.632, which stated that acupressure massage was 2.6 times more effective in reducing dysmenorrhea pain.

Discussion

The results of the study on students of Darul Hikmah Islamic Boarding School, Medan Islamic Education Park showed that the decrease in dysmenorrhea pain before being given acupressure massage was 30 respondents (6.7) experiencing mild pain and (93.3) experiencing moderate pain, then after acupressure massage 30 respondents (96.7) experiencing mild pain and (3.3) experiencing moderate pain, this states that there was a decrease in dysmenorrhea pain in respondents after acupressure massage. With $p.value = 0.000$ obtained. This means $p < 0.05$ which shows there is a significant difference between before and after being given acupressure massage.

The results of this study are in line with research conducted by (Tinar, 2021) about the Effect of Acupressure Therapy on the Intensity of Menstrual Pain in Female Adolescents of SMP N 4 Simangalam, Kualuh Selat District, North Labuhan Batu Regency in 2021, where the results of this study showed that menstrual pain in adolescents before acupressure massage was obtained an average value of 5.55, then after acupressure massage was obtained an average pain value of 1.70.

In the research conducted by (Andi, 2022) with the title The Effect of Acupressure on Dysmenorrhea in Adolescents, there was an average value of 5.17 in female adolescents who experienced dysmenorrhea before acupressure massage, then after being given acupressure massage, an average value of 2.13 was obtained so that there was an effect of acupressure on dysmenorrhea in female adolescents with a p value of 0.000.

Research conducted by (Khamidah, 2023) with the title Acupressure to Overcome Dysmenorrhea in Adolescent Girls is also in line with this study, where the pretest before acupressure massage obtained an average value of 3.95, and the pretest after acupressure massage

obtained an average value of 1.68. There is a significant effect of acupressure to overcome dysmenorrhea in adolescent girls, this is indicated by a p value = 0.000.

Researchers have assessed that acupressure therapy can significantly reduce dysmenorrhea pain. This suggests that acupressure massage can be beneficial for women experiencing dysmenorrheal pain. Besides having virtually no side effects, acupressure massage is also very easy to perform, requiring only a massage on specific areas. This makes it particularly convenient for both students and non-students experiencing dysmenorrheal pain during menstruation.

According to theory (Roza, 2019) Dysmenorrhea treatment can be pharmacological or non-pharmacological, one of which is acupressure. Acupressure is the application of strong, continuous pressure to specific points on specific areas of the body, with the aim of relieving nausea, pain, addressing health issues, fitness, or simply for relaxation. Acupressure has the advantage of being less risky, easy to learn and understand, and easier to perform on one's own. It also has positive effects on pain reduction and increased relaxation.

According to the researcher's assumption, acupressure massage with the LI4, SP6, and ST36 techniques has an effect on reducing dysmenorrhea pain. This proves that providing acupressure massage has a positive impact on adolescent female students who have a habit of suffering from dysmenorrhea pain during menstruation. This way, various obstacles experienced during menstruation, such as dysmenorrhea pain, can be reduced. This certainly provides benefits for students, because before they knew acupressure massage, the dysmenorrhea pain they felt during menstruation was very disturbing to their learning process. Therefore, when they learned acupressure massage and applied it, it could be a solution when facing dysmenorrhea pain.

Research Limitations

In this study, the researchers realized that there were still many limitations. For example, the researchers were aware that the menstrual cycles of adolescents were not regular every month, sometimes they could be earlier or later. The researchers also realized that each student's menstrual cycle was different, making it somewhat difficult for the researchers to visit and provide acupressure massage to them. Therefore, the researchers made repeated visits to the Islamic boarding school to provide acupressure massage.

4. CONCLUSION

Based on research conducted at the Darul Hikmah Islamic Boarding School, Medan in 2024, the following conclusions were obtained. The majority of students' dysmenorrhea pain before being given acupressure massage was on a moderate scale, as many as 28 people (93.3%). The majority of students' dysmenorrhea pain after being given acupressure massage was on a mild scale, as many as 29 people (96.7%). There was an effect of acupressure massage on reducing dysmenorrhea pain in female students at the Darul Hikmah Islamic Boarding School, Medan in 2024 with a p-value < 0.000.

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