

The Relationship Between Acupressure Therapy And Reducing Menstrual Pain Intensity (Dysmenorrhea) In Adolescent Females At SMA Paba Binjai In 2024

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Abstract. Dysmenorrhea is a disorder characterized by lower abdominal pain that occurs during menstruation. Dysmenorrhea problems in adolescent girls if not treated immediately can have a negative impact on adolescent productivity including learning activities. There are several ways that can be done to reduce menstrual pain (dysmenorrhea). However, this study only carried out Acupressure Therapy to reduce dysmenorrhea to determine whether there was a relationship between acupressure and reducing the intensity of menstrual pain (dysmenorrhea) in adolescent girls at SMA PABA Binjai in 2024. The research method used the Chi-Square test. With the population and sample of this study were adolescent girls with menstrual pain (dysmenorrhea) in grades X & XI SMA PABA Binjai in 2024 as many as 28 respondents using the total sampling technique. The research instrument used a procedure and observation sheet. The data used are primary and secondary data. Data analysis univariate and bivariate using the Chi-Square test. The results of the study indicate that there is a Relationship between Acupressure Therapy and Reducing the Intensity of Menstrual Pain (Dysmenorrhea) in Adolescent Girls at SMA PABA Binjai in 2024 with a degree of significance (α) = 0.05 and $df = 1$, the calculation results are Sig (2-tailed) 0.000 < (α) = 0.05, then H_0 is rejected and H_a is accepted. The conclusion is that there is a relationship between acupressure therapy and reducing the intensity of menstrual pain (dysmenorrhea). It is hoped that adolescent girls with menstrual pain (dysmenorrhea) will routinely carry out acupressure therapy according to the technique to reduce menstrual pain (dysmenorrhea) felt during menstruation.

Keywords: Acupressure Therapy, Menstrual Pain Intensity (Dysmenorrhea), Adolescents.

1. INTRODUCTION

Adolescence is a transition period from puberty to adulthood or a process of growth and development towards mental, emotional, social and physical maturity (Nur Hidayah, et al., 2020). Adolescence is a stage between childhood and adulthood. This term is the period from the beginning of puberty to maturity, usually starting from the age of 14 in men and the age of 12 in women. According to WHO, a child is called an adolescent when they have reached the age of 10-18 years (Nur Hidayah, et al., 2020). Puberty is a stage of development marked by the maturity of sexual organs and the achievement of the ability to reproduce, one of the characteristics of which is experiencing menstruation (Nur Hidayah, et al., 2020).

According to BKKBN 2017, Menstruation is the release of the uterine wall (endometrium) accompanied by bleeding and occurs repeatedly every month except during pregnancy. Menstruation is the shedding of the inner wall of the uterus which contains many blood vessels. This event occurs every month which lasts for approximately 3-7 days, the distance from one menstruation to the next menstruation lasts approximately

28 days (between 21-35 days) but in adolescence this cycle is usually not regular (Asasih Villasari, 2021).

According to August 2014, a few moments before menstruation or on menstrual days, women will experience discomfort or discomfort by feeling symptoms such as: breast pain, a feeling of fullness/bloating in the lower abdomen (dysmenorrhea), feeling very tired, muscle pain especially in the lower back and abdomen, changes in women's wetness, oily face or acne, emotional disturbances: such as irritability, anxiety, difficulty sleeping and headaches (Asasih Villasari, 2021).

According to Prawirohardjo in 2002, Dysmenorrhea is lower abdominal pain that spreads to the waist and thighs. This pain occurs shortly before or at the same time as the onset of menstruation and lasts for several hours. Other associated symptoms are vomiting, headache, anxiety, fatigue, diarrhea, dizziness and bloating or a feeling of fullness in the stomach (Nur Hidayah, et al., 2020). Dysmenorrhea is a painful muscle spasm of the uterus that occurs during menstruation, and is one of the causes of menstrual disorders. Dysmenorrhea greatly interferes with women's daily activities and can have an impact on decreasing work productivity (Asasih Villasari, 2021). Based on its classification, Dysmenorrhea is divided into two, namely: Primary Dysmenorrhea and Secondary Dysmenorrhea. The most common dysmenorrhea is Primary Dysmenorrhea, more than 50% of women experience it and 10-15% of them experience severe pain that interferes with daily activities and activities. Primary dysmenorrhea usually occurs in adolescence, which is around 2-3 years after the first menstruation and occurs at the age of less than 20 years (Sarni Yati, 2019).

According to WHO in 2020, it was reported that the incidence of women experiencing severe dysmenorrhea in every country in the world is around 50% of the population and 10-15% of them experience mild dysmenorrhea. The prevalence is generally higher in young women, with estimates ranging from 67% to 90% for women aged 17-24 years. On average in European countries, cases of dysmenorrhea occur in 45-97% of young women of childbearing age, in American countries cases of dysmenorrhea occur in 52-90% of young women of childbearing age, in the African region cases of dysmenorrhea occur in 44-95% of young women of childbearing age, and in the Asian region cases of dysmenorrhea occur in 45-90% of young women of childbearing age (WHO, 2020).

Based on the report of the Central Statistics Agency in 2020, the prevalence of Dysmenorrhea cases in Indonesia is quite large, namely 64.25% with the most cases found in adolescents aged 15-24 years. The incidence of primary Dysmenorrhea in Indonesia is 54.88%, while the secondary type is 9.36% with a mild Dysmenorrhea rate of 49%, moderate 34% and severe 17% which results in 15% limiting their daily activities during menstruation and 8-10% of adolescent girls not attending school (Ministry of Health of the Republic of Indonesia, 2021).

According to Hendarini in 2014, the results of Novia's research in 2012 showed that 84.4% of adolescents aged 16-18 years at SMA St. Thomas 1 Medan experienced dysmenorrhea. With mild pain intensity of 46.7%, moderate pain 30.0%, and severe pain 23.3% (Nadi Aprilyadi, 2018). There are two types of therapy that can be used to treat dysmenorrhea, namely pharmacological therapy and non-pharmacological therapy.

Pharmacological therapy, namely to relieve pain caused by Dysmenorrhea, can use analgesic drugs for pain complaints such as aspirin, mefenamic acid, paracetamol, feminax and non-steroidal anti-inflammatory drugs (NSAIDs). While non-pharmacological therapy for the treatment of Dysmenorrhea that can be done is one of them with acupressure therapy techniques (Mislani, 2019).

According to Hidayat in 2019, acupressure is linguistically derived from the words *accus* and *pressure* which means pressure and needle is the origin of the term acupressure. In the acupuncture healing process, this term is applied by pressing the finger on a certain point instead of a needle. Disorders of the body's system will be disrupted if body functions are disrupted. Our energy gathers at certain acupressure points with the aim of pressing on these points to have an impact on the point and relaunch the blocked energy flow. The smooth movement of energy connects the lymphatic system, nervous system, hormonal system, blood flow, and other body functions (Niken Bayu, et al., 2023).

Acupressure therapy can be used to cure Dysmenorrhea by using massage techniques on certain meridian points of the body. One of the points that can overcome Dysmenorrhea is the *sanyinjiao* point. The *sanyinjiao* point or spleen 6 is the spleen point where one of the functions of the spleen is to reduce pain during menstruation. One of the effects of pressing acupressure points can increase endorphin levels which are useful as pain relievers produced by the body in the blood and endogenous opioid peptides in the central nervous system. The nerve network will stimulate the endocrine system to release endorphins according to the body's needs and is expected to reduce pain during menstruation. (Utami, et al., 2019). This theory is in line with the results of research

conducted by Marbun & Purnamasari (2022) which showed that acupressure therapy is effective in reducing pain during menstruation. The effectiveness of acupressure therapy is in reducing Dysmenorrhea, reduction in Dysmenorrhea can be seen within 1 to 2 days after regular acupressure therapy. Another study by Khotimah (2021) also showed that acupressure is effective in reducing Dysmenorrhea. The acupressure given will make respondents relax and increase immunity. Hasanah's research (2021) also showed that acupressure therapy at the LI 4 point is effective in reducing the intensity of pain during Dysmenorrhea in adolescents.

The average quality of pain after acupressure therapy was significantly different between the group that received acupressure and the group that did not receive acupressure, in other words, acupressure can significantly reduce the average quality of pain by 0.577 points. Research that supports the effect of acupressure therapy on Dysmenorrhea and explains the relationship between acupressure and pain quality conducted by Hasanah (2019), namely, this study conducted acupressure therapy at the Taichong point (LR3) where pressure was applied to the luteal phase. The final results showed that respondents felt reduced menstrual pain, or in other words, acupressure can significantly reduce the average quality of pain by 1.852 points.

Based on the results of an initial survey conducted by researchers at SMA PABA Binjai on July 22, 2024, it was found that the number of female adolescents at SMA PABA Binjai in grades 11 and 10 was 28 female adolescent students experiencing Menstrual Pain (Dysmenorrhea). The duration of Dysmenorrhea or menstrual pain felt based on the results of interviews with these female adolescents is around 2-3 days after the menstrual blood comes out. Based on the background above, I am interested in conducting research on "The Relationship between Acupressure Therapy and Reducing the Intensity of Menstrual Pain (Dysmenorrhea) in Female Adolescents at SMA PABA Binjai in 2024".

2. LITERATURE REVIEW

A. Effects of Acupressure Therapy

Acupressure therapy is part of non-pharmacological measures to reduce the intensity of menstrual pain, because acupressure therapy can help the production of endorphin hormones which can affect feelings of relaxation and comfort in reducing pain. This theory is in line with research conducted by Marbun & Purnamasari (2022) showing that acupressure therapy is effective in reducing pain during menstruation. The

effectiveness of acupressure therapy is in reducing dysmenorrhea, reduction in dysmenorrhea can be seen within 1 to 2 days after regular acupressure therapy is carried out.

Dysmenorrhea prevention can be done through massage done clockwise for 30 rounds for three to five minutes. In the massage, it is important not to be too hard and cause pain to the patient. Proper massage should be able to create a sensation of taste (comfortable, sore, hot, itchy, sore, tingling, and so on), if the sensation of taste can be achieved, in addition to smooth circulation of chi (energy) and xue (blood), it can also stimulate the release of the hormone endomorphine. The hormone endomorphine is a type of morphine produced from within the body to provide a sense of calm (Astiza et al., 2021).

3. METHODS

This study uses a Chi-Square research design with a quantitative approach that uses statistical test data analysis with a p value of 0.05 (Aries Chandra, 2022). This type of research is observed only once and risk factors and impacts are measured according to the condition or status when conducting the observation. The purpose of the study was to determine the Relationship between Acupressure Therapy and Reducing the Intensity of Menstrual Pain (Dysmenorrhea) in Adolescent Girls at SMA PABA Binjai in 2024. The location of the study was carried out at SMA PABA Binjai in 2024, because after the researcher conducted the observation, the population was sufficient and the distance from the place to the researcher was affordable. In this study, the research time needed to collect data and conduct research started from July to December 2024.

4. RESULTS

A. Research result

Based on the results of the study on "The Relationship between Acupressure Therapy and Reducing the Intensity of Menstrual Pain (Dysmenorrhea) in Adolescent Girls at SMA PABA Binjai in 2024" with a sample size of 28 Adolescent Girls with Menstrual Pain (Dysmenorrhea), the analysis used was Univariate and Bivariate.

B. Univariate Analysis

Univariate analysis aims to explain and describe the characteristics of each variable studied. with the dependent variable (Menstrual Pain Intensity) as the variable

to be analyzed univariately with a total of 28 respondents. Frequency distribution based on Acupressure Therapy with Menstrual Pain Intensity.

C. Table 1 Frequency Distribution of Acupressure Therapy in Adolescent Girls at SMA PABA Binjai in 2024

NO	Acupressure Therapy Frequency	Amount	
		f	%
1.	Irregular	8	28.6
2.	Regular	20	71.4
Total		28	100

Based on Table 1 above, it can be concluded that the frequency distribution of Acupressure Therapy in Adolescent Girls at SMA PABA Binjai in 2024, the majority of those who regularly undergo acupressure therapy are 20 respondents (71.4%) and those who do not regularly undergo acupressure therapy are 8 respondents (28.6%).

D. Table 2 Frequency Distribution of Menstrual Pain (Dysmenorrhea) in Adolescent Girls at SMA PABA Binjai in 2024

NO	Menstrual Pain (Dysmenorrhea)	Amount	
		f	%
1.	Mild Pain	20	71.4
2.	Moderate Pain	8	28.6
3.	Severe Pain	0	0
4.	Very Severe Pain	0	0
Total		28	100

Based on Table 2 above, it can be concluded that *Acupressure Therapy* in adolescent girls who experienced menstrual pain (dysmenorrhea) at SMA PABA Binjai in 2024, with a classification of mild pain of 20 respondents (71.4%) and moderate pain of 8 respondents (28.6%).

E. Bivariate Analysis

Bivariate analysis was conducted to determine the Relationship between Acupressure Therapy and Reducing the Intensity of Menstrual Pain (Dysmenorrhea) at SMA PABA Binjai in 2024 with independent variables (Acupressure Therapy) and dependent variables (Intensity of Menstrual Pain). The analysis was carried out using the Chi-Square test. So that if the results of the statistical analysis are determined $p < 0.05$, the variables are stated to be significantly related.

F. Table 3 Relationship between Acupressure Therapy and Reduction in Menstrual Pain Intensity (Dysmenorrhea) in Adolescent Girls at SMA PABA Binjai in 2024

NO.	Acupressure Therapy	Menstrual Pain Intensity (Dysmenorrhea)								Amount		df	Sig (2-tailed)
		Mild Pain		Moderate Pain		Severe Pain		Very Severe Pain					
		f	%	F	%	f	%	f	%	f	%		
1.	Regular	20	71.4	0	0	0	0	0	0	20	71.4	1	0,000
2.	Irregular	0	0	8	28.6	0	0	0	0	8	28.6		
Total		20	71.4	8	28.6	0	0	0	0	28	100		

Based on Table 3 above, it can be concluded that Acupressure Therapy for adolescent girls who experience menstrual pain (dysmenorrhea) at SMA PABA Binjai in 2024, there is a difference between adolescents with the majority who do acupressure therapy regularly experiencing reduced menstrual pain (dysmenorrhea) with a mild pain category of 20 respondents (71.4%) and the minority who do Acupressure Therapy irregularly experiencing reduced menstrual pain (dysmenorrhea) with a moderate pain category of 8 respondents (28.6%) with the Sig. (2-tailed) value of 0.000 < 0.05.

Based on the results of the Chi-Square test of the relationship between acupressure therapy and reducing the intensity of menstrual pain (dysmenorrhea) in adolescent girls at SMA PABA Binjai in 2024 with a degree of significance (α) = 0.05 and df = 1, the calculation results were obtained, namely Sig. (2-tailed) 0.000 < (α) = 0.05, then H_0 is rejected and H_a is accepted. The conclusion is that there is a Relationship Between Acupressure Therapy and Reducing the Intensity of Menstrual Pain (Dysmenorrhea) in Adolescent Girls at SMA PABA Binjai in 2024.

Based on Table 1 above, it is known that out of 28 female adolescents with dysmenorrhea who regularly do acupressure therapy, there are 20 respondents (71.4%) and those who do not regularly do acupressure therapy are 8 respondents (28.6%). From Table 1 above, it can be concluded that female adolescents at SMA PABA Binjai already know and understand acupressure therapy well.

From the results of this study it can be concluded that more teenagers with menstrual pain (dysmenorrhea) are willing to do...*acupressure therapy* regularly for the reason that after doing acupressure therapy, teenagers feel more comfortable and the menstrual pain (dysmenorrhea) they experience is reduced.

5. DISCUSSION

A. Reducing the Intensity of Menstrual Pain (Dysmenorrhea)

Based on table 2 above, it can be concluded that the distribution of pain levels in adolescent girls with menstrual pain (dysmenorrhea) at SMA PABA Binjai in 2024, the majority of adolescents with dysmenorrhea experienced a reduction in pain to mild pain as many as 20 respondents (71.4%) and adolescents with dysmenorrhea who experienced a reduction in pain to moderate pain as many as 8 respondents (28.6%). In table 2, it can be concluded that adolescent girls at SMA PABA Binjai have understood, known and carried out *acupressure therapy* according to the technique regularly so that the majority experienced a reduction in pain from severe pain to moderate pain and mild pain. The results of the study showed that there was a relationship between acupressure therapy and the intensity of menstrual pain (dysmenorrhea) in adolescent girls with a p value of 0.000 (p value <0.05). Researchers recommend that adolescent girls who experience menstrual pain (dysmenorrhea) continue to routinely do acupressure therapy for 1-2 days to help reduce menstrual pain (Marbun et al, 2022).

B. 5Bivariate Analysis

Based on the results of the Chi-Square test of the relationship between acupressure therapy and reducing the intensity of menstrual pain (dysmenorrhea) in adolescent girls at SMA PABA Binjai in 2024 with a degree of significance (α) = 0.05 and df = 1, the calculation results were obtained, namely Sig (2-tailed) 0.000 < (α) = 0.05, then H_0 is rejected and H_a is accepted. The conclusion is that there is a relationship between acupressure therapy and reducing the intensity of menstrual pain (dysmenorrhea) in adolescent girls at SMA PABA Binjai in 2024. In acupressure therapy, there are 4 techniques used to reduce menstrual pain (dysmenorrhea), namely the P6 (Pericardium), Li 4 (Hegu), Lr3 / Lr4 (Taichong / Daichong), Sp-6 (Sanyinjiao) techniques which are very important for reducing menstrual cramps, regulating the menstrual cycle, treating pain, and increasing energy because at the strong point qi (energy) and Xue (blood) move. P There are each point massaged/pressed as many as 30 massages/pressures and rotated clockwise for 15-20 minutes. The effect of pressing on the acupressure points above will have an impact on the production of endorphins in the body. (Wirakhmi, et al., 2018).

This study is in line with the study conducted by Hasanah, et al. (2020) using a combination of points, namely Taichong (LR3) and Hequ (LI4), it was found that there was a decrease in menstrual pain (dysmenorrhea) if it was done during the menstrual phase. Supported by research by Marbun & Purnamasari (2022) which stated that non-pharmacological actions to reduce the intensity of menstrual pain with acupressure therapy can help the production of endorphin hormones which can affect feelings of relaxation and comfort in reducing pain including menstrual pain (dysmenorrhea)

6. CONCLUSION

After conducting research on the Relationship between Acupressure Therapy and Reducing the Intensity of Menstrual Pain (Dysmenorrhea) in Adolescent Girls at SMA PABA Binjai in 2024, the following conclusions can be drawn:

- A. From the research results after carrying out acupressure therapy, it was concluded that the majority who took part in acupressure therapy regularly were 20 respondents (71.4%) and the minority who did not regularly were 8 respondents (28.6%).
- B. From the research results, it can be concluded that the level of menstrual pain (dysmenorrhea) in adolescent girls during menstruation decreased, with the majority having mild pain of 20 respondents (71.4%) and the minority having moderate pain of 8 respondents (28.6%).
- C. Based on the results of the Chi-Square test of the Relationship between Acupressure Therapy and Reducing the Intensity of Menstrual Pain (Dysmenorrhea) in Adolescent Girls at SMA PABA Binjai in 2024 with a degree of significance (α) = 0.05 and $df = 1$, the results of the Sig. (2-tailed) calculation were $0.000 < (\alpha) = 0.05$, so H_0 was rejected and H_a was accepted. The conclusion is that there is a Relationship between Acupressure Therapy and Reducing the Intensity of Menstrual Pain (Dysmenorrhea) in Adolescent Girls at SMA PABA Binjai in 2024.

7. SUGGESTION

A. For Respondents

With this research, it can provide information, motivation and insight to young women about the relationship and benefits of acupressure therapy with reducing the intensity of menstrual pain (dysmenorrhea) during menstruation.

B. For PABA Binjai High School

The results of this study are expected to be useful for SMA PABA Binjai as input and consideration or as teaching materials to be able to inform female students who experience menstrual pain (dysmenorrhea) about the relationship between acupressure therapy and reducing the intensity of menstrual pain (dysmenorrhea) and can disseminate information through the website and other social media at SMA PABA Binjai.

C. For Educational Institutions

The results of this study are expected to be input and reference material in the library to increase knowledge, especially for lecturers, education staff and D-III Midwifery students regarding the relationship between acupressure therapy and reducing the intensity of menstrual pain (dysmenorrhea).

REFERENCES

- Aminatussyadiah, A., Widiatami, T., & Amanda, A. V. (2024). The effectiveness of SP6 and LR3 acupressure on reducing dysmenorrhea pain in DIII midwifery students of STIKES BCM. *Borneo Cendekia Health Journal*.
- Argaheni, N., et al. (2023). *Complementary therapy for adolescents* (1st ed.). Kita Menulis Foundation, Surakarta.
- Dartiwen, & Aryanti, M. (2022). *Textbook of midwifery care for adolescents and perimenopause* (1st ed.). Deepublish, Yogyakarta.
- Fibrila, F., Ridwan, M., & Widiyanti, S. (2023). The effect of acupressure therapy in reducing dysmenorrhea pain in adolescent girls. *Journal of Multidisciplinary Research*.
- Hidayah, N., et al. (2020). *Textbook of menstrual pain management in adolescents* (1st ed.). Yuma Pustaka, Surakarta.
- Hikmandayani, et al. (2023). *Psychology of adolescent development* (1st ed.). Eureka Media Aksara, Central Java.
- Novianti, A., & Rusady, Y. P. (2023). Acupressure therapy assistance to overcome dysmenorrhea pain in adolescents in Samatan Village. *Journal of Community Service*.
- Puteri, K. T. A., Gurnita, F. W., & Palupi, B. A. A. (2023). Effectiveness of dysmenorrhea gymnastics and Sanyinjiao point acupressure on reducing dysmenorrhea pain in adolescents at the Al-Islah Putri Mangkang Islamic Boarding School, Semarang. *Jayapura Health Polytechnic Journal*.

- Sarmanah, N., & Anggraini, N. (2023). The effect of acupressure on reducing the intensity of dysmenorrhea in young women at SMP Negeri 6 Banjarsari Lebak Regency. *Scientific Journal of Nursing*.
- Strisanti, I. A. S., Rastiti, I. A. A., Harditya, K. B., & Dharmapatni, N. W. K. (2024). Combination of acupuncture and moxibustion in reducing primary menstrual pain scale in nursing students. *MAHESA: Malahayati Health Student Journal*.
- Suryana, E., Hasdikurniati, A. I., Harmayanti, A. A., & Harto, K. (2022). Early and middle adolescent development and its implications for education. *Mandala Education Scientific Journal*.
- Villasari, A. (2021). *Physiology of menstruation* (1st ed.). Strada Press, East Java.
- Walidaini, R. (2022). The effect of acupressure on menstrual pain in adolescents at SMA 08 Pekanbaru. *Indonesian Health Scientific Journal*.