

The Effect of Knowledge and Attitude to Implement Dysmenorrhea Exercises on Reducing Pain Scale in Midwifery DIII Students at Paluta Husada Gunungtua

Umi Istiqomah

Sekolah Tinggi Ilmu Kesehatan Paluta Husada, Indonesia

Article Info

Article history:

Received May 20, 2026

Revised June 02, 2026

Accepted June 20, 2026

Corresponding Author:

Umi Istiqomah

Sekolah Tinggi Ilmu Kesehatan
Paluta Husada, Indonesia

Email:

Uistiqomah177@gmail.com

ABSTRACT

Adolescence is a phase of life between childhood and adulthood, from the age of 10 to 19 years. Adolescence is a unique stage of human development and is an important time to lay the foundation for good health. This study is a quantitative type with a pre-experimental design that uses the one group pretest-posttest design, because this study aims to compare the results of the pretest of the intervention group and the posttest of the intervention group. The sample in this study were 66 students of the D-III Midwifery Study Program level I and II of STIKes Paluta Husada. Knowledge behavior before carrying out dysmenorrhea exercises had knowledge mostly in the sufficient category and after carrying out dysmenorrhea exercises knowledge was good, and before carrying out dysmenorrhea exercises students had a negative attitude because they felt it would not affect them, but after carrying out the exercises there was a positive attitude. D-III Midwifery Study Program students at STIKes Paluta Husada Gunung Tua can play an active role in helping to reduce menstrual pain problems, especially in female students with dysmenorrhea exercises. As midwifery students, we are expected to implement our role as midwifery care providers by regularly conducting dysmenorrhea exercises to reduce and manage menstrual pain.

Keywords:

Knowledge, Attitude, Dysmenorrhea Exercises, Menstrual Pain

This article is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/).



1. INTRODUCTION

Adolescence is the phase of life between childhood and adulthood, from 10 to 19 years of age. It is a unique stage of human development and a crucial time for laying the foundation for good health [1]. Adolescents experience rapid physical, cognitive, and psychosocial development. This influences how they feel, think, decide, and interact with their world.[2]

The impact of dysmenorrhea can disrupt sleep patterns when resting, and the pain felt causes poor sleep disorders because the body feels uncomfortable with the pain, so the quality of sleep decreases when experiencing dysmenorrhea pain [3]. Furthermore, untreated dysmenorrhea in adolescent girls negatively impacts their quality of life and disrupts their social interactions. Furthermore, these impacts can affect learning activities, limit social interactions, and lead to high school absences, academic performance, and sports activities. Disrupted learning activities can cause adolescents to lose concentration or focus on their studies.

The results of research by Indrayani (2023) showed that there was an effect of exercise during menstruation on reducing dysmenorrhea in female students of SMKN 7 Bengkulu City in 2017, so that the results showed a difference before and after doing exercise during menstruation [5]. The statistical results showed that dysmenorrhea exercise was

effective in reducing dysmenorrhea, and it was hypothesized that dysmenorrhea exercise was effective in reducing dysmenorrhea in female adolescents [6].

From the research results of Ayu Idaningsih (2020), it shows that there is an effect of dysmenorrhea exercises on reducing dysmenorrhea, providing dysmenorrhea exercises is effective in reducing dysmenorrhea in adolescent girls [3]. Research conducted by Amru (2022) also showed that dysmenorrhea exercises reduced menstrual pain in adolescent girls [7].

Based on an initial survey conducted at STIKes Paluta Husada Gunung Tua, North Padang Lawas Regency, Midwifery Study Program in November 2023, 72.5% of students experienced Dysmenorrhea (58 out of 80 students), and they were unable to cope with menstrual pain [8]. The average pain lasted from the first day to the second day with a frequency of pain 1-2 times a day and the intensity of pain experienced by students during dysmenorrhea was a scale of 4-6 (moderate pain) of 78.2%. The impacts of dysmenorrhea were disruption of activities by 49.0%, permission to be absent from lectures 7.5%, fainting 0.8%, mood swings 39.9%, laziness in activities 0.8%, not focusing during lessons 0.4%, and fever to vomiting 0.4%. The behavior of female adolescents in dealing with dysmenorrhea resulted in consuming painkillers (63.7%), leaving it alone (25.6%), and resting or sleeping (10.7%). This occurs due to the lack of information received by students regarding the non-pharmacological management of dysmenorrhea by adopting healthy lifestyle behaviors that can reduce pain during menstruation, one of which is physical activity (dysmenorrhea exercises). This is what attracted researchers to conduct a study entitled "The Effect of Knowledge and Attitudes on Implementing Dysmenorrhea Exercises on Reducing Pain Scales in Students at STIKes Paluta Husada Gunung Tua, North Padang Lawas Regency in 2026."

2. METHOD

This research is quantitative with a pre-experimental design that uses a one-group pretest-posttest design, because this research aims to compare the pretest results of the intervention group and the posttest of the intervention group [9].

The sample selected for this study comprised first- and second-year midwifery students experiencing dysmenorrhea. The sampling process was as follows.

- Record the population and create numbers 1-66
- Put the numbered rolls of paper into a box.
- A roll of paper was drawn until 33 numbers were obtained as a research sample, while the rest that were not selected were not used as samples.
- If there are potential respondents who refuse, a re-draw will be held to increase the number of respondents that have been determined.

Furthermore, to determine after the draw, a letter of consent was given to become a respondent in this study, after that a questionnaire was distributed about behavior, pain scale, after the results were obtained, a WhatsApp group was created to provide information and when to carry out dysmenorrhea exercises to reduce the pain scale during menstruation for female students.

This research was conducted at STIKes Paluta Husada Gunung Tua, North Padang Lawas Regency in April 2026

3. RESULTS AND DISCUSSION

Table 1. Frequency Distribution of Respondents' Knowledge Before and After Dysmenorrhea Exercises Can Overcome Menstrual Pain

Before				
No		Knowledge	F	(%)
1.	Good		26	39.4
2.	Not enough		40	60.6
	Total		66	100.0
After				
No		Knowledge	F	(%)
1.	Good		47	71.2
2.	Not enough		19	28.8
	Total		66	100.0

Based on the table above, it can be seen that before the implementation of 66 respondents, 40 people (60.6%) respondents were in the category of less knowledge about dysmenorrhea exercises and 26 people (39.4%) with the category of good knowledge about dysmenorrhea exercises is one of the alternative activities that can be done to overcome pain during menstruation. And after the implementation of dysmenorrhea exercises, out of 66 respondents, 47 people (71.2%) respondents were in the category of less knowledge about dysmenorrhea exercises and 19 people (28.8%) with the category of good knowledge about dysmenorrhea exercises is one of the alternative activities that can be done to overcome pain during menstruation

Table 2. Frequency Distribution of Respondents' Attitudes Before Dysmenorrhea Exercises can overcome menstrual pain

Before			
No	Attitude	F	(%)
1.	Positive	28	42.4
2.	Negative	38	57.6
Total		66	100.0
After			
No	Attitude	F	(%)
1.	Positive	40	60.6
2.	Negative	26	39.4
Total		66	100.0

Based on the table above, it can be seen that before, out of 66 respondents, 38 people (57.6%) respondents had a negative attitude category about dysmenorrhea exercises and 28 people (42.4%) had a positive attitude category about dysmenorrhea exercises being an alternative activity that can be done to overcome pain during menstruation. And after carrying out dysmenorrhea exercises, out of 66 respondents, 40 people (60.6%) respondents had a negative attitude category about dysmenorrhea exercises and 26 people (39.4%) had a positive attitude category about dysmenorrhea exercises being an alternative activity that can be done to overcome pain during menstruation

Table 3. Frequency Distribution of Menstrual Pain Scale Experienced by Respondents Based on Pretest Results (Before Intervention) and Posttest Results (After Intervention)

No	Menstrual Pain Scale	F	(%)
<i>Pretest</i>			
1.	Mild Pain	35	53.0
2.	Moderate Pain	24	36.4
3.	Severe Pain	7	10.6
<i>Posttest</i>			
1.	No Pain	27	40.9
2.	Mild Pain	34	51.5
3.	Moderate Pain	5	7.6
Total		66	100.0

The table above shows that during the pretest, most students experienced mild pain (35 people, 53%), those who experienced moderate pain were 24 (36.4%), and those who experienced severe pain were 7 (10.6%). During the posttest, most students experienced no pain (27 people, 40.9%), those who experienced mild pain were 34 (51.5%), and those who experienced moderate pain were five (7.6%).

Discussion

Knowledge of adolescent girls about dysmenorrhea at Paluta Husada Gunung Tua Health College

From the research that has been conducted, it was found that 66 female students, 40 (60.6%) were in the category of having less knowledge about dysmenorrhea exercises and 26 (39.4%) were in the category of having good knowledge about dysmenorrhea exercises, which is an alternative activity that can be done to overcome pain during menstruation [10].

Knowledge is an observation made through direct and scientific observations about the world, which is always passed down through history [8].

The study results show that adolescent girls' knowledge of dysmenorrhea exercises as a pain management tool is still lacking, both in terms of understanding and application of the procedures for performing dysmenorrhea exercises. Dysmenorrhea exercises are a method of treating menstrual pain that involves light exercise and relaxation techniques. Regular practice produces endorphins when the body is relaxed. These hormones act as natural sedatives produced in the brain to provide a sense of comfort and reduce pain during contractions [11].

Attitudes of Young Women about Dysmenorrhea at Paluta Husada Health College, Gunung Tua

From the research results, it can be seen that out of 66 female students, 38 (57.6%) students had a negative attitude category regarding dysmenorrhea exercises and 28 (42.4%) had a positive attitude category regarding dysmenorrhea exercises as an alternative activity that can be done to overcome pain during menstruation [12].

From the research conducted regarding attitudes in dealing with dysmenorrhea, most of them have negative attitudes seen from the majority of respondents who have poor knowledge, negative attitudes occur due to lack of awareness and consider it normal when menstrual pain occurs, without wanting to find out how to handle it both because of the causes, symptoms, and how to handle it, and also these young women have limited access to information such as print and electronic media, they are reluctant to ask health workers coupled with a lack of previous experience in handling dysmenorrhea [13]. Meanwhile, female students with a positive attitude in this study were those with great curiosity, such as looking for information through the Internet, teachers, or having received previous counseling. This is in line with the

opinion of Ma'arip et al. (2022), who stated that a good attitude in handling dysmenorrhea is based on previous knowledge and experience regarding dysmenorrhea [14].

The influence of knowledge and attitudes regarding the implementation of dysmenorrhea exercises on reducing the pain scale due to dysmenorrhea in students before and after carrying out dysmenorrhea exercises [15].

The results of the study on the effect of dysmenorrhea exercises on reducing dysmenorrhea using statistical tests with independent t-test showed a p-value of 0.021 before being given dysmenorrhea exercises and a p-value of 0.000 after being given dysmenorrhea exercise intervention. The results of the statistical test can be interpreted as showing a significant influence of dysmenorrhea exercise behavior on reducing dysmenorrhea in female students of STIKes Paluta Husada Gunung Tua [16].

The results of the above study are in line with a quasi-experimental research type in one group (one group pre-test-post-test design) [17]. The sampling technique was purposive sampling with a sample size of 15 people. The results of the Paired Sample t-test obtained a p-value of 0.000, which is smaller than the error rate (α) of 0.05 [18].

Research has proven the effectiveness of exercise in reducing dysmenorrhea. Exercise is a natural remedy that does not cause side effects on the body because it is a technique for maintaining health and fitness. The body reacts to stress. This stress factor can reduce the pain resistance. The first sign of stress is a reaction that appears, namely muscle tension, and the individual's body is filled with stress hormones, which cause blood pressure, heart rate, body temperature, and respiration to increase. However, when stressed, the body produces excess adrenaline, estrogen, progesterone, and prostaglandins. Estrogen causes excessive uterine contractions, whereas progesterone inhibits them. This excessive increase in contraction causes pain. Furthermore, increased adrenaline causes muscle tension, including in the uterine muscles, which can cause pain during menstruation.

4. CONCLUSION

Based on the results of the discussion described previously, the research conducted on female students of STIKes Paluta Husada Gunung Tua, the following conclusions can be drawn: Knowledge behavior before carrying out dysmenorrhea exercises had knowledge mostly in the sufficient category and after carrying out dysmenorrhea exercises the knowledge was good, and before carrying out dysmenorrhea exercises the students had a negative attitude because they felt it would not affect them, but after carrying out the exercises there was a positive attitude. The average level of menstrual pain before dysmenorrhea exercises was 2.5758 (moderate pain), and after dysmenorrhea exercises, the average level of pain decreased to 1.6667 (no pain). The results of the statistical test obtained a value of $p = 0.000$, $\alpha = 0.05$ ($p < \alpha$), which indicates that there is a significant effect of dysmenorrhea exercises on reducing the scale of dysmenorrhea pain in female students at STIKes Paluta Husada Gunung Tua. For Students of Paluta Husada Health College, Midwifery Diploma III students at Paluta Husada Gunung Tua Health College can play an active role in helping reduce menstrual pain, particularly in female students, through dysmenorrhea exercises. As midwifery students, they are expected to implement their role as midwifery care providers by conducting regular dysmenorrhea exercises to reduce and manage menstrual pain. For Researchers, The results of this study add to the knowledge and insight regarding non-medical treatments for reducing and managing menstrual pain. However, further research is needed to refine the discussion and related interventions over a longer period with a larger sample size.

ACKNOWLEDGEMENTS

The author thanks all the people and institutions. In most cases, the acknowledgments of the sponsor and financial support are included.

REFERENCES

- [1] O. David, D. E. M. Ndung'u, and D. J. P. Egunjobi, "Stress Coping Mechanisms and Psychological Distress among Adolescents in Informal Settlements in Tororo Municipality, Tororo District," *Int. J. Res. Innov. Appl. Sci.*, vol. X, no. VII, pp. 1553–1566, 2025, doi: 10.51584/IJRIAS.2025.100700141.
- [2] WHO., "Kesehatan Remaja. <https://www.who.int/health-topics/adolescent-health>," 2023.
- [3] A. Idaningsih and F. Oktarini, "Pengaruh Efektivitas Senam Dismenore Terhadap Penurunan Intensitas Nyeri Dismenore Pada Remaja Putri di SMK YPIB Majalengka Kabupaten Majalengka Tahun 2019," *Syntax Lit. ; J. Ilm. Indones.*, vol. 5, no. 2, p. 55, Feb. 2020, doi: 10.36418/syntax-literature.v5i2.923.
- [4] D. D. Wijayanto, K. Wiwik Indrayanti, and D. A. Wisnu W, "Personal Data Protection in Digital Business Based on the Law on Personal Data Protection," *Int. J. Res. Soc. Sci. Humanit.*, vol. 06, no. 08, pp. 06–12, 2025, doi: 10.47505/IJRSS.2025.8.2.
- [5] Z. Shaheen, M. S. Ullah, S. Imran, N. Akram, M. Alorini, and U. Sarwar, "Clinical Correlation between Cervical Cancer Screening Using Pap Smear Test," *Pakistan J. Med. Heal. Sci.*, vol. 16, no. 7, pp. 900–902, Jul. 2022, doi: 10.53350/pjmhs22167900.
- [6] T. Indrayani, "Pengaruh Senam pada Remaja Putri untuk Mengatasi Primary Dysmenorrhea," *J. Ilm. Permas J. Ilm. STIKES Kendal*, vol. 13, no. 3, pp. 1145–1150, Jun. 2023, doi: 10.32583/pskm.v13i3.1237.
- [7] D. E. Amru and A. Selvia, "PENGARUH SENAM YOGA TERHADAP PENURUNAN NYERI HAID PADA REMAJA PUTRI DI INSTITUT KESEHATAN MITRA BUNDA," *Midwifery Care J.*, vol. 3, no. 1, pp. 22–29, Jan. 2022, doi: 10.31983/micajo.v3i1.8191.

- [8] N. H. Kojo, T. M. D. Kaunang, and A. J. M. Rattu, "Hubungan Faktor-faktor yang Berperan untuk Terjadinya Dismenore pada Remaja Putri di Era Normal Baru," *e-CliniC*, vol. 9, no. 2, p. 429, Jul. 2021, doi: 10.35790/ecl.v9i2.34433.
- [9] S. Arikunto, "Prosedur Penelitian: Suatu Pendekatan Praktik. Jakarta: Rineka Cipta, 2017," 2017.
- [10] D. Tepy, E. M. Afrilia, A. Faadhilah, and W. Damayanti, "Holistic Approaches in Women's Reproductive Health Care: Integrating Conventional Medicine and Complementary Therapies," *MSJ Major. Sci. J.*, vol. 3, no. 4, pp. 38–45, Nov. 2025, doi: 10.61942/msj.v3i4.479.
- [11] R. Apriyanti, F., Harmia, E., & Andriani, "Hubungan status gizi dan usia menarche dengan kejadian Dismenore pada remaja putri di SMAN 1 Bangkinang kota tahun 2018. *Jurnal Maternitas Kebidanan*, 3(2), 49-58," 2018.
- [12] I. Friscila, "NYERI DESMINORE PADA REMAJA PUTRI DENGAN KOMPRES HANGAT," *Proceeding Sari Mulia Univ. Midwifery Natl. Semin.*, vol. 2, no. 1, Mar. 2021, doi: 10.33859/psmumns.v2i1.258.
- [13] E. T. Susanti and U. Indrajati, "Tingkat Pengetahuan Tentang Menopause dengan Kesiapan Menghadapi Menopause pada Ibu Premenopause," *J. Keperawatan Karya Bhakti*, vol. 8, no. 2, pp. 78–84, Jul. 2022, doi: 10.56186/jkkb.107.
- [14] I. Nurjanah, Y. Yuniza, and M. F. Iswari, "PENGARUH SENAM DISMENORE TERHADAP PENURUNAN NYERI MENSTRUASI PADA MAHASISWI ASRAMA STIKes MUHAMMADIYAH PALEMBANG," *Syifa' Med. J. Kedokt. dan Kesehat.*, vol. 10, no. 1, p. 55, Sep. 2019, doi: 10.32502/sm.v10i1.1749.
- [15] Y. Purnamasari, "Pengaruh Masase Effleurage Abdomen Terhadap Penurunan Skala Nyeri Dismenorea Primer Pada Remaja Putri Di SMP Muhammadiyah Terpadu Kota Bengkulu. *Keperawatan Sriwijaya*, 5(2355), 8–15," 2018.
- [16] A. Trisnawati, Y., & Mulyandari, "Pengaruh Latihan Senam Dismenore terhadap Penurunan Nyeri Dismenore pada Mahasiswa Kebidanan." 3.2 (2020): 71-79. *Gorontalo Journal of Public Health*, 3(2), 71–79," 2020.
- [17] R. O. Umboro, F. Apriliany, and R. P. Yunika, "Konseling, Informasi, dan Edukasi Penggunaan Obat Antinyeri pada Manajemen Penanganan Nyeri Dismenore Remaja," *J. Abdidias*, vol. 3, no. 1, pp. 23–33, Feb. 2022, doi: 10.31004/abdidias.v3i1.525.
- [18] R. F. Ulfa and A. K. Mustikawati, "PENGARUH KUNYIT ASEM TERHADAP INTENSITAS NYERI HAID PADA MAHASISWI SEMESTER 3 DI AKBID HARAPAN MULYA PONOROGO TAHUN 2020," *J. Delima Harapan*, vol. 8, no. 1, pp. 86–90, Feb. 2021, doi: 10.31935/delima.v8i1.121.