Jurnal Keperawatan *Priority*, Vol 9 No.1, Januari 2026
ISSN 2614-4719

The Relationship Between Emotion Regulation and Dysmenorrhea Intensity Pain in Adolescent Girls at SMAN 3 Malang

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ABSTRACT

One of the significant physical changes experienced by adolescent girls is menstruation. Almost every adolescent girl experiences a menstrual disorder, namely dysmenorrhea. Dysmenorrhea is a gynecological disorder caused by an imbalance of the hormone progesterone in the blood, resulting in excessive prostaglandin production that triggers pain during menstruation. The intensity of dysmenorrhea can vary from mild, moderate, to severe. In addition to physical effects, menstrual pain may also cause psychological symptoms, such as uncontrolled emotions. With good emotion regulation, adolescent girls are able to manage, control, and express their emotions appropriately according to their menstrual condition. The purpose of this study was to determine the relationship between emotion regulation and the intensity of dysmenorrhea pain in adolescent girls at SMAN 3 Malang. This study used a quantitative method with a correlational approach and a cross-sectional design. Data were collected using questionnaires distributed via Google Form. The study involved 244 respondents who were students of SMAN 3 Malang in grades X, XI, and XII. Data analysis was conducted using the Spearman test. The results showed a p value of 0.002 ($\alpha < 0.05$) with a correlation coefficient of r=-0.194. These findings indicate a significant negative relationship between emotion regulation and dysmenorrhea pain.

Keywords: emotion regulation, dysmenorrhea, pain intensity

INTRODUCTION

One of the phases in human development is adolescence, which is an important transformation period characterized by changes in hormones, body composition, physical abilities, mental processes, and social interactions (Wahyuni, 2025). In adolescent girls, one of the significant physical changes is the occurrence of menstruation. Almost every adolescent girl experiences menstrual disturbances during this phase. Dysmenorrhea is a gynecological disorder due to an imbalance of the hormone progesterone in the blood producing excess prostaglandins that cause pain during menstruation. Menstrual pain not only has a physical impact, but also causes psychological symptoms such as restlessness, anxiety, decreased concentration, easy crying, and decreased desire to do activities. This condition can make it difficult for adolescent girls to regulate their emotions which will cause stress in the long term, so there needs to be an effort

to influence emotions in themselves and in social interactions known as emotion regulation (Hia, 2025).

According to the data World Health Organization (WHO, 2022), it shows a substantial number of cases of dysmenorrhea worldwide. This incidence of dysmenorrhea affects 1,769,429 women (90%) with different levels of pain. About 60% of women in the United States and about 72% of women in Sweden are also affected by cases of dysmenorrhea (Nurfazriah et al., 2022). The incidence of dysmenorrhea in Indonesia was recorded at 64.25%, which is often a phenomenon in adolescent girls, with percentages ranging from 20% to 90% (Kawalo & Sitompul, 2022), which includes 54.89% of cases of primary dysmenorrhea and 69.36% of secondary dysmenorrhea (Octariyana et al., 2022). Data from the Adolescent Reproductive Health Survey (SKKR) in the East Java region in 2021 showed data of around 4,297 individuals (90.25%) experiencing primary dysmenorrhea, while 365 individuals (9.75%) suffered from secondary dysmenorrhea.

Symptoms of dysmenorrhea appear before or during the menstrual cycle and include those characterized by discomfort, pain or cramping in the lower abdomen, often accompanied by other indicators such as fatigue, excessive sweating, headache, nausea, vomiting, and diarrhea (Maity et al., 2022). Dysmenorrhea can be classified into two types, primary and secondary. Primary dysmenorrhea appears without abnormalities in the pelvic organs. This condition is affected by an increase in prostaglandin and leukotrien levels, which causes an inflammatory process that causes contractions in the uterus and the appearance of cramping pain. While secondary dysmenorrhea occurs due to abnormalities in the pelvis or certain medical conditions, and accounts for about 10% of all dysmenorrhea cases. The most commonly identified etiological factor in patients is endometriosis. Other causative factors include congenital and acquired anatomical abnormalities, both obstructive and nonobstructive masses in the pelvic area, as well as infections (McKenna & Fogleman, 2021).

Dysmenorrhea not only causes physical pain, but also has an impact on adolescent psychology such as emotional turmoil, increased stress, and excessive worry. This is because the pain felt can affect comfort and psychological stability, so that adolescents become more susceptible to mood swings. In this condition, emotional regulation is important so that adolescents are able to manage their emotional responses well and reduce the negative impact of pain. This is because the pain felt can affect comfort and psychological stability, so that adolescents become more susceptible to mood swings. In this condition, emotional regulation is important so that

adolescents are able to manage their emotional responses properly and reduce the negative impact of pain.

Attempts to control one's own or others' emotions are known as emotion management or emotion regulation. This includes controlling positive and negative emotions according to regulatory objectives. Positive psychological well-being can help reduce susceptibility to psychological health disorders, such as depressive conditions, anxiety and stress spectrum disorders. Adolescents who exhibit optimal psychological well-being tend to have more effective coping mechanisms and lower rates of mental health problems (Oktoji & Indrijati, 2021).

Gross defines the regulation of emotions as a person's capacity to control, manage, and express emotions in a way that suits the circumstances (Ramadhani, 2023a). Teens are prone to stress, anxiety, emotional outbursts, lethargy, and other behavioral problems when they are unable to manage their emotional dynamics effectively. Emotional regulation can also help form a healthy personality, strengthen social relationships, and increase mental resilience in the face of life's challenges. Therefore, the development of emotional regulation is very important for adolescents, especially adolescent girls during menstruation who experience psychological symptoms.

Some previous studies have shown that emotion regulation is significantly related to the incidence of dysmenorrhea. Individuals with good regulatory abilities tend to experience mild menstrual pain, while individuals with poor emotion regulation tend to experience menstrual pain of higher intensity. However, Amelia (2023) study, which only assessed dysmenorrhea based on the level of pain intensity (mild, moderate, and severe) so that it did not find a significant relationship between emotion regulation and dysmenorrhea. Meanwhile, this study not only assesses the intensity of pain, but also explores aspects of activity disturbances, pain locations, and the length of menstrual pain days, thus providing a more comprehensive picture of the experience of dysmenorrhea. These differences in findings show the inconsistency of research results, thus encouraging the need for further research.

Based on this, the author is interested in conducting a study entitled “The Relationship between Emotion Regulation and Dysmenorrhea Pain Intensity in Adolescent Girls at SMAN 3 Malang”.

METHODS

This research is quantitative based with a correlational focus, applied through a cross-sectional design. The population in this study is students in grades X, XI, and XII at SMAN 3 Malang. The sample was determined using proportional sampling with the sample size calculated using the slovin formula a total of 244 respondents. The characteristics of the sample have been adjusted to the inclusion criteria, such as female students aged 15-18 years, female students who have entered the menstrual period and are willing to participate as respondents. The exclusion criteria are students who have a history of gynecological diseases, students who are undergoing hormonal therapy or taking drugs that affect the menstrual cycle or menstrual pain, and students who are absent or fill out incomplete questionnaires.

The data collection tool is in the form of a questionnaire distributed with Google Form. The questionnaire consisted of general data, emotion regulation, and dysmenorrhea pain intensity. General data includes name, age, age of menarche, gender, and education. This research was carried out during 3 predetermined meetings, namely on August 21, 2025, September 10, 2025, and September 29, 2025. The research is carried out in the classroom in turns and takes about 15-20 minutes in the learning time.

The emotion regulation questionnaire uses questionnaires that have been adopted from research Ramadhani, (2023) that has been developed using aspects from Thompson (1991), such as emotion monitoring, emotion evaluating, and emotion modification. This questionnaire has been tested for validity by showing that the results generally range from (r= 0.3 - 0.7). The categories of emotion regulation in this study are classified into three levels, namely, good, fair, and poor. Measurement of emotion regulation questionnaire based on the Likert scale.

The dysmenorrhea pain intensity questionnaire uses the WaLIDD Score (Working ability, Location, Intensity, Days of Pain, Dysmenorrhea) scale developed by Teheran. The emotion regulation questionnaire was measured using the Likert scale and the Numeric Rating Scale (NRS). The intensity of dysmenorrhea pain is categorized into three levels, namely mild, moderate, and severe.

The data analysis in this study was applied through the Spearman test, with an ordinal categorical scale. This research has also received ethical feasibility from the KEPK Institute of Technology, Science and Health Hospital dr. Soepraoen on August 25, 2025, number: KEPK-EC/291/VIII/2025.

RESULTS

The following is an overview of the characteristics of the respondents of SMAN 3 Malang, including class, age, and age of menarche.

Table 1. General Data on Research of Adolescent Girls at SMAN 3 Malang

Characteristic	Respondents (f)	Percentage (%)
Sample Female Students		
Class X	85	35
Class IX	77	32
Class XII	82	34
Age (Years)		
15 Years	80	33
16 Years	82	34
17 Years	69	28
18 Years	13	5
Menarche Age		
Early (<12 Years)	72	30
Normal (12-13Years)	149	61
Late (≥ 14 Years old)	23	9

In Table 1 regarding the characteristics of the respondents, it is known that out of a total of 244 students who were respondents in this study, most of them came from class X with 85 students (35%), class XI with 77 students (32%), and class XII with 82 students (34%). This composition indicates that the distribution of respondents is relatively balanced at each grade level, with the largest number coming from class X. According to age characteristics, most of the respondents were at the age of 16 with a total of 82 respondents (34%). Meanwhile, based on the age of menarche, the majority were in the normal age range (12-13 years) of 149 respondents (61%).

Table 2. Frequency Distribution of Emotion Regulation of Adolescent Girls at SMAN 3 Malang

Emotion Regulation	Respondents (f)	Percentage (%)
Good	29	12
Fair	214	88
Poor	1	0
Total	244	100

Based on Table 2, it shows that the majority of adolescent girls from classes X to XII at SMAN 3 Malang show fair emotional regulation, a total of 214 (88%).

Table 3. Results of Indicators Average Analysis of Emotion Regulation of Adolescent Girls at SMAN 3 Malang

Indicators	Total Score	SD	Mean	Percentage (%)
Emotion Monitoring	48	3,83	33,90	71
Emotion Evaluating	48	3,51	31,48	65
Emotion Modification	48	6,15	30,92	65

Based on Table 3 regarding the results of the average analysis of the emotion regulation indicator, the average score value for the indicator was obtained emotion monitoring by 33.90 (70%). Next, the indicator emotion evaluating achieved an average score of 31.48 (65%). Meanwhile, the emotion modification achieved an average score of 30.92 (65%).

Table 4. Distribution of Dysmenorrhea Pain Intensity Frequency in Adolescent Girls in SMAN 3 Malang

Dysmenorrhea Pain Intensity	Respondents (f)	Percentage (%)
Mild	56	23
Moderate	140	57
Severe	48	20
Total	244	100

Based on Table 4, the data on dysmenorrhea pain intensity in SMAN 3 Malang students is mostly in the moderate level category of 140 respondents (57%).

Table 5. Results of Average Analysis of Dysmenorrhea Pain Intensity Indicators in Adolescent Girls at SMAN 3 Malang

Indicators	Total Score	SD	Mean	Percentage (%)
Working ability	3	0.644	0.96	32
Location of pain	3	0.739	1.66	55
Intensity of pain	3	0.685	1.61	54
Days of pain	3	0.790	1.72	57

Based on Table 5 showing the results of the analysis of the average dysmenorrhea pain intensity indicator, the average score of the indicator scores for working ability was 0.96 (32%). Furthermore, the indicator of the location of menstrual pain reached an average value of 1.66 (55%). The indicator of menstrual pain intensity reached an average score of 1.61 (54%). And the indicator day of pain reached an average score of 1.72 (57%).

Table 6. Results of the Spearman Test Analysis of Emotion Regulation with Pain Intensity Dysmenorrhea in Adolescent Girls at SMAN 3 Malang

Emotion Regulation	Intensity of Dysmenorrhea Pain								p value	r value
	Mild	%	Moderate	%	Severe	%	Total	%		
Good	14	5.7	12	4.9	3	1.3	29	11.9	0.002	-0.194
Fair	42	17.2	127	52	45	18.4	214	87.7		
Poor	0	0	1	0.4	0	0	1	0.4		
Total	56	22.9	140	52	48	19.7	244	100		

Table 6 shows that of the 244 respondents, the majority of female students who have fair emotional regulation, namely 214 (87.7%) experienced moderate dysmenorrhea, which is a total of 127 respondents (52%). The results of the analysis of the Spearman correlation test in the table obtained a p value = 0.002 ($\alpha < 0.05$) and a correlation coefficient r = -0.194. Because the p value < (0.05), it can be concluded that emotion regulation is significantly related to the intensity of dysmenorrhea pain in adolescent girls at SMAN 3 Malang. The negative correlation value also showed that the better the emotional regulation that the respondent had, the milder the intensity of dysmenorrhea pain experienced.

DISCUSSION

Emotional Regulation in Adolescent Girls at SMAN 3 Malang

According to Hurlock, adolescence is a transitional phase characterized by significant changes in physical aspects, emotional changes, and social interactions. Adolescents begin to experience changes in the way they think, behave, and judge themselves and their environment. During this time, adolescents often experience confusion, doubt, and uncertainty about the changes that occur, making them vulnerable to emotional turmoil. This condition can affect the ability to regulate emotions and deal with stress, including when experiencing dysmenorrhea.

In the results of this study, it shows the existence of adaptive coping skills such as regulating breathing, seeking social support around them, and thinking positively in dealing with dysmenorrhea. However, some respondents also showed maladaptive coping tendencies, such as withdrawing from social environments, irritability, complaining often, and ignoring the pain felt. This regulation of emotions is influenced by several factors, such as gender, age, physical changes, parenting, and social environment.

Based on the results of the study, the level of emotional regulation of respondents was in the categories of good, adequate, and poor. The difference in coping methods used by adolescents

is influenced by factors of emotional experience and pain perception. One of the causes that affect emotional regulation in adolescents is age. One of the causes that affect emotional regulation in adolescents is age. Based on the data obtained on age characteristics, most of the respondents were 16 years old, who were included in the group of middle adolescents with vulnerable ages 14 – 18 years. Adolescent girls at age 16 tend to show moderate levels of emotional regulation, because they are not yet fully able to stabilize emotional reactions to perceived pain. These findings are in line with research Fauziah and Kartini (2021) which revealed that the dominant age group for respondents was 16 years old. This age is included in the category of middle adolescence, which is a phase when individuals are in the process of finding identity and emotional development that is not completely stable.

In the emotion regulation indicator, namely the ability to monitor emotions, respondents stated that they were able to recognize, realize, and understand the emotions they were feeling and those felt by others. This shows that this high percentage of respondents have good emotional monitoring awareness. However, there are still a small percentage of respondents who are not fully able to monitor their emotional changes properly.

In the indicator of the ability to evaluate emotions, respondents stated that they were able to assess, understand, and give meaning to the emotions they experienced, both emotions that they felt themselves and those of others. This shows that the respondents have good emotional reflection skills in understanding their condition when experiencing dysmenorrhea. However, there are still a small number of respondents who are not fully able to understand their emotions. These findings are in line with the research Fauziah and Kartini (2021), namely that in general, research subjects are less able to manage the impact in one or more mechanisms that result in emotion emergence, both consciously and unconsciously.

On the indicator of the ability to modify emotions, respondents stated that they were able to regulate, adjust, or change emotions. However, there are still a small percentage of respondents who are not yet able to fully modify their emotions. These findings are in line with research Fauziah and Kartini (2021), that explains that low emotional control skills in adolescents can be caused by the inability to recognize and understand the conditions that occur in them, both in terms of their feelings and thoughts. This condition can cause negative emotional responses, including irritability, anxiety, or irritation when experiencing dysmenorrhea.

From the results of this study, the regulation of emotions is mostly in the fair category. This finding is in line with a study Hardiyanti and Fitriani (2020) that revealed that 30 respondents showed adequate emotional regulation among adolescent girls at SMKN 6 Jeneponto, while

almost half, namely 12 respondents, reported experiencing primary dysmenorrhea pain. The current level of emotion regulation indicates that there is an effort to regulate and accept emotions, but control and adjustment are sometimes still influenced by emotional fluctuations due to physiological and psychosocial changes in adolescence (Gross in Ramadhani, 2023). In a developmental perspective, adolescence is a transitional period from the younger generation to adulthood, which is accompanied by major changes in hormonal, psychological, and physical aspects (Batubara et al., 2025) In this period, adolescents begin to learn to recognize, express, and regulate their emotions. However, the process of emotional maturation is still ongoing and tends to fluctuate along with the development of identity and social environment (Erikson in Batubara et al., 2025).

Based on this, the level of emotional regulation in the "fair" category is a reasonable condition and reflects the efforts and active adaptation processes made by adolescents in dealing with stressors, including dysmenorrhea pain. Therefore, education and psychological support are needed as effective strategies to optimize the ability of adolescent girls to regulate their emotions, so that they can be more optimal in managing their emotions and minimizing the negative impact of dysmenorrhea pain on psychological conditions.

Intensity of Dysmenorrhea Pain in Adolescent Girls at SMAN 3 Malang

Based on the results of the research that has been conducted, it is known that most of the students of SMAN 3 Malang experience dysmenorrhea pain with a moderate degree. Dysmenorrhea is defined as severe cramping in the uterus or lower abdomen that can be accompanied by pain in the waist, and is a form of menstrual disorders. The pain occurs due to an imbalance of the hormone progesterone which triggers an increase in prostaglandin levels in the body. The intensity of dysmenorrhea pain can be caused by a variety of factors, including biological, psychological, lifestyle, and environmental factors.

The findings of this study show that the intensity of dysmenorrhea among respondents varies from mild to severe, reflecting individual differences in adaptability and pain tolerance. Menstrual pain affects not only physical well-being but can also trigger psychological symptoms such as irritability, anxiety, and difficulty concentrating. Severe pain may disrupt daily activities including studying, school participation, and rest, and can also affect adolescent social interactions with peers. These findings are in line with the study (Widianti et al., 2024), which stated that most participants faced obstacles in learning activities due to menstrual pain.

Therefore, it can be concluded that menstrual pain is a common condition in female students and has the potential to hinder daily activities, including academic processes.

The results of this study show that in the indicators of disturbance to activities during menstruation, most respondents experienced slightly disturbed activities, while some respondents stated that their activities were disturbed a lot. This suggests that although most adolescents are still able to carry out daily activities, dysmenorrhea pain still impacts their comfort and productivity during menstruation.

In the pain location indicator, most respondents reported pain centered in the lower abdomen. In addition, there are respondents who feel pain that radiates to the lower back, and some others experience pain that radiates to the back and thighs. This finding is in accordance with the general characteristics of dysmenorrhea which is characterized by cramping pain in the lower abdominal area that extends to the lower back (McKenna & Fogleman., 2021). In terms of pain intensity, the results of the study indicate that the majority of adolescent girls experience dysmenorrhea in mild to moderate levels, which is still classified as a reasonable limit, but still requires attention because it can affect their learning activities and psychological condition. In line with the study Hardiyanti and Fitriani (2020), it was also reported that most adolescents experienced dysmenorrhea in the mild to moderate category, with the highest frequency of occurrence on the first day of menstruation.

Meanwhile, based on the time of pain, the results showed that the majority of respondents began to feel pain on the first day of menstruation. In addition, some respondents experienced pain from one day before menstruation started, while others had felt pain two days before menstruation or more.

Overall, the results of this study are consistent with the theory that dysmenorrhea pain is caused by increased production of prostaglandins, which is caused by decreased levels of progesterone and estrogen. Because fertilization is unsuccessful, the endometrium swells and sheds which leads to dysmenorrhea pain. Dysmenorrhea pain, this has an impact on the quality of life and productivity of adolescents at school such as, not focusing on studying and absenteeism from school due to excessive menstrual pain. Therefore, there is a need for interventions that are provided from adolescence, namely promotive and preventive efforts in the school environment, such as education on pain management, especially in the age group with the highest prevalence, which is expected to improve reproductive health, quality of life, and productivity of adolescent girls at school.

The Relationship of Emotion Regulation with Dysmenorrhea Pain Intensity

Based on the results of the analysis of the Spearman Test in this study, emotion regulation is significantly related to the intensity of dysmenorrhea pain in adolescent girls at SMAN 3 Malang. These results also show a negative correlation, implying that adolescents who have a good ability to regulate emotions will tend to feel low levels of pain intensity. In line with the research of Ramadhani (2023), as revealed in a study that shows that emotion regulation can affect the intensity of dysmenorrhea pain. This is because adolescence is a transition period characterized by biological, emotional, and social changes that take place rapidly.

In the data of this study, emotion regulation was mostly in the moderate category with a total of 214 respondents where the respondents also felt dysmenorrhea with most of them in the medium level category. This suggests that fair emotional regulation may help reduce the perception or intensity of menstrual pain, though not enough to lower it to a mild level.

This study shows that emotion regulation has an important role in the intensity of menstrual pain experienced by adolescent girls. In other words, adolescents' ability to manage their emotions can help reduce the intensity of pain during menstruation. Theoretically, this is supported by Gross's (2015) theory, which states that the regulation of emotions is a process by which individuals manage their experiences and emotional expressions in various situations. The ability to regulate emotions, such as calming the mind, speaking positively to oneself, and using adaptive coping techniques, can affect perception of pain and increase psychological resilience when dealing with stressors such as dysmenorrhea (Gross in Ramadhani., 2023).

In addition to the psychological aspect, a good emotional management mechanism can also reduce the physiological response to stress, thereby reducing sensitivity to menstrual pain. This is also corroborated by the Gate Control theory put forward by Melzack and Wall, that the perception of pain is influenced by the interaction between physiological and psychological factors. In the results of this study, the ability to regulate emotions is sufficient to withstand negative emotional reactions, such as anger, anxiety, or stress, so that the perception of pain becomes more controlled. In contrast, adolescents who are less able to regulate their emotions tend to experience increased pain intensity due to higher physiological and psychological responses to stress.

Thus, it can be concluded that emotion regulation plays a significant role in influencing the intensity of dysmenorrhea pain in adolescent girls at SMAN 3 Malang. Adolescents who are

able to monitor, evaluate, and modify emotions well tend to have higher psychological resilience in the face of menstrual pain.

CONCLUSION

It can be concluded that the regulation of emotions is significantly related to the intensity of dysmenorrhea pain in adolescent girls at SMAN 3 Malang. There is a negative correlation between emotion regulation and dysmenorrhea pain intensity, namely adolescent girls who have good emotion regulation ability, so the intensity of dysmenorrhea pain is getting lower. On the other hand, if the ability to regulate emotions is lacking, then the intensity of dysmenorrhea pain experienced tends to be heavier. Most students in grades X, XI, and XII of SMAN 3 Malang have a fairly good level of emotional regulation when experiencing dysmenorrhea pain with dysmenorrhea pain levels mostly experiencing moderate pain.

This study reinforces previous studies that stated that good emotion regulation can reduce the intensity of dysmenorrhea pain, while less emotion regulation can increase the intensity of dysmenorrhea pain. Therefore, it is recommended that educational institutions integrate materials on emotional management and menstrual pain management into learning, for example in PJOK subjects, so that students understand the relationship between emotional regulation and reproductive health and are able to apply emotional regulation effectively. In addition, it is hoped that SMAN 3 Malang will hold regular reproductive health and emotional management education programs for female students, that students have knowledge and skills in managing emotions and handling pain during menstruation in a healthy and adaptive way.

LIMITATION

This study was limited by the lack of quantitative data on gynecological disease history. Therefore, the researchers were unable to differentiate between dysmenorrheal pain and gynecological pain experienced by the respondents.

REFERENCES

Amelia, A. S. (2023). *Hubungan regulasi emosi dengan tingkat nyeri menstruasi (dismenore) pada remaja puteri di MTsN 1 Sumedang*. Universitas Pendidikan Indonesia.

Batubara, N., Arifianingsih, A., Bdn. Selvia, Erningsih, E., Santioso, L. L., Nurfitri, T., Setiyani, S. E., & Rompis, O. (2025). *Kesehatan reproduksi pada remaja*. Yayasan Tri Edukasi Ilmiah.

Fauziah, P., & Hikmah, K. (2021). Hubungan regulasi emosi dengan intensitas nyeri dismenore primer di SMA Negeri 7 Tangerang. *Jurnal IMJ: Indonesia Midwifery Journal*, *5*(1), 23–27. https://doi.org/10.31000/imj.v5i1.6009.g3110

Hardiyant, S., & Fitriani. (2020). Hubungan regulasi emosi dengan dysmenorea pada remaja putri di SMKN 6 Jeneponto. *Jurnal Berita Kesehatan*, *XIII*(2), 1–7. https://doi.org/10.58294/jbk.v13i1.43

Hia, M. H. (2025). Hubungan manarche, kebiasaan olahraga, dan lama menstruasi dengan kejadian dismenore primer pada remaja putri Kelas X di SMAN 1 Sindangbarang Kabupaten Cianjur. *Indonesian Scholar Journal of Nursing and Midwifery Science (ISJNMS)*, *4*(06), 203–209. https://doi.org/10.54402/isjnms.v4i06.677

Kawalo, B., & Sitompul, M. (2022). Tingkat pengetahuan remaja putri tentang dismenore di SMA Advent Tompaso. *Jurnal Kesehatan*, *10(1):15-2*. https://doi.org/10.55912/jks.v10i1.47

Maity, S., Wray, J., Coffin, T., Nath, R., Nauhria, S., Sah, R., Waechter, R., Ramdass, P., & Nauhria, S. (2022). Academic and social impact of menstrual disturbances in female medical students: A systematic review and meta-analysis. *Frontiers in Medicine*, *9*(February), 821908. https://doi.org/10.3389/fmed.2022.821908

McKenna, K. A., & Fogleman, C. D. (2021). Dysmenorrhea. *American Family Physician*, *104*(2), 164–170. https://doi.org/10.5005/jp/books/12515_3

Nurfazriah, I., Selian, R. N., & H, A. N. (2022). Analisis faktor – faktor yang berhubungan dengan kejadian dismenore pada siswi SMK Negeri 3 Kota Cilegon Tahun 2022. *Jurnal Riset Rumpun Ilmu Kesehatan*, *1*(2), 278–285. https://doi.org/10.55606/jurrikes.v1i2.1063

Octariyana, Lestari, D., & Aprilani. (2022). Faktor-faktor determinan dismenorea primer pada remaja putri di Sekolah Menengah Atas (SMA) Boarding School Aziziah Palembang. *Jurnal Surya Medika (JSM)*, *8 No 3*, 243–250. https://doi.org/10.33084/jsm.v8i3.4518

Oktoji, T. P., & Indrijati, H. (2021). Hubungan strategi koping dan kesejahteraan psikologis pada remaja yang mengalami kekerasan dalam rumah tangga. *Buletin Riset Psikologi Dan Kesehatan Mental*, *1*(1), 560–568. https://doi.org/10.20473/brpkm.v1i1.26725

Ramadhani, R. D. P. (2023a). *Hubungan regulasi emosi dengan perubahan suasana hati pada wanita yang mengalami menstruasi di Universitas Medan Area Jurusan Psikologi* [Universitas Medan Area]. https://repositori.uma.ac.id/jspui/bitstream/123456789/21534/1/188600214%20-%20Rofi%20Dwi%20Putri%20Ramadhani%20-%20Fulltext.pdf

Ramadhani, R. D. P. (2023b). Hubungan regulasi emosi dengan perubahan suasana hati pada wanita yang mengalami menstruasi di Universitas Medan Area Jurusan Psikologi. *Universitas Medan Area*.

Wahyuni, T. H. T. (2025). Hubungan pengetahuan dengan perilaku personal hygiene saat menstruasi pada remaja putri di SMK Negeri 1 Sirapit Kabupaten Langkat Tahun 2025. *Jurnal Praba: Jurnal Rumpun Kesehatan Umum*, *3*(2), 40–49. https://doi.org/10.62027/praba.v3i2.355

Widianti, S., Herliana, I., & Gunardi, S. (2024). hubungan dismenore primer dengan aktivitas belajar siswi SMK Bina Putra Nugraha Kadupandak Cianjur Jawa Barat Tahun 2023. *Journal Riset Rumpun Ilmu Kesehatan (JURRIKES)*, *3*(1), 176–188. https://doi.org/10.55606/jurrikes.v3i1.2746

World Health Organization (WHO). (2022). *Sexual and reproductive health and research*. https://www.who.int/teams/sexual-and-reproductive-health-and-research-(srh)/overview