
THE RELATIONSHIP BETWEEN DYSMENORRHEA AND LEARNING ACTIVITIES IN STUDENTS AT SMA NEGERI 8 BATAM IN 2024

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Abstract

Menstruation is one of the signs of puberty in adolescent girls, where the uterine lining sheds followed by monthly bleeding. Menstruation is often accompanied by dysmenorrhea, which is cramping pain in the lower abdomen. This condition can disrupt daily activities, including learning activities. This study aims to determine the relationship between dysmenorrhea and learning activities among female students at SMA Negeri 8 Batam. The method used was quantitative with a cross-sectional design. The study population consisted of 467 female students from grade XI. The sample selection used a random sampling technique with the Slovin formula, resulting in 82 female students. The research was conducted in July 2024. Data were collected through questionnaires on dysmenorrhea and learning activities, then analyzed using the chi-square statistical test. Based on data analysis, the results showed that out of 72 respondents with dysmenorrhea, 54 (65.9%) experienced impaired learning activities, while 18 (22%) were not affected. None of the respondents without dysmenorrhea experienced activity impairment, and 10 (12.2%) respondents without dysmenorrhea did not experience any impairment. The results indicate a significant relationship between dysmenorrhea and learning activities with a p-value of 0.001 (< 0.05). This study concludes that dysmenorrhea affects the learning activities of female students at SMA Negeri 8 Batam in 2024, highlighting the need for health education about dysmenorrhea in schools.

Keywords : *Adolescents, Dysmenorrhea, Learning Activities*

HUBUNGAN DISMENOREA DENGAN AKTIVITAS BELAJAR PADA SISWI DI SMA NEGERI 8 KOTA BATAM TAHUN 2024

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Abstract

Menstruasi adalah salah satu tanda pubertas pada remaja perempuan di mana terjadi peluruhan lapisan rahim yang diikuti oleh perdarahan bulanan. Menstruasi seringkali disertai dengan dismenorea yaitu nyeri kram di perut bagian bawah. Kondisi ini dapat mengganggu aktivitas sehari-hari, termasuk kegiatan belajar. Penelitian ini bertujuan untuk mengetahui hubungan antara dismenorea dan aktivitas belajar pada siswi di SMA Negeri 8 Batam. Metode yang digunakan adalah kuantitatif dengan desain cross-sectional. Populasi penelitian yaitu remaja putri kelas XI dengan jumlah sampel 467 siswi. Pemilihan sampel menggunakan teknik random sampling dengan rumus slovin diperoleh 82 siswi. Penelitian dilakukan pada Juli 2024. Data diperoleh melalui kuesioner tentang dismenorea dan aktivitas belajar, lalu dianalisis dengan uji statistik chi-square. Berdasarkan analisa data diperoleh hasil dari 72 responden dengan dismenorea yaitu 54 (65,9%) mengalami gangguan aktivitas belajar, sementara 18 (22%) tidak terganggu. Tidak ada responden tanpa dismenorea yang mengalami gangguan aktivitas, dan 10 (12,2%) responden tanpa dismenorea tidak mengalami gangguan. Hasil menunjukkan adanya hubungan antara dismenorea dan aktivitas belajar dengan p-value 0,001 (< 0,05). Penelitian ini menyimpulkan bahwa dismenorea mempengaruhi aktivitas belajar siswi di SMA Negeri 8 Batam pada Tahun 2024, sehingga perlu adanya pendidikan kesehatan tentang dismenore di sekolah.

Kata kunci : Remaja, Dismenorea, Aktivitas Belajar

INTRODUCTION

Adolescence is the stage of life between childhood and adulthood, between the ages of 10 and 19. (WHO, 2023). During this period, adolescents experience physical and psychological changes. In addition, sexual maturity in adolescents also increases, one of which is menstruation (Putri et al., 2022). This period is characterized by bleeding on the uterine wall (endometrium) and occurs repeatedly every month. The menstrual cycle can cause problems for adolescents such as polymenorrhea (10%), oligomenorrhea (25%), and amenorrhea (23.7%). Meanwhile, dysmenorrhea is the most common problem in 40.8% of adolescents (Yulinawati & Rahayu Putri, 2022)..

Dysmenorrhea is pain in the lower abdomen that occurs during and after menstruation, which often starts with cramps and can spread to the thighs or lower back. (Shafa et al., 2021). There are two types of dysmenorrhea: primary and secondary. Primary dysmenorrhea is pain or cramps that occur without any abnormalities in the body, usually felt in the lower abdomen before or during menstruation. Secondary dysmenorrhea is caused by abnormalities in the pelvis or conditions such as uterine fibroids and endometriosis (adenomyosis), among others. (Issabella et al., 2022).

Common symptoms include malaise, fatigue, nausea, vomiting, diarrhea, low back pain, headache, and sometimes vertigo or falling sensation, anxiety and restlessness, and fainting. (Wildayani et al., 2023).. The impact of dysmenorrhea on activities according to Setyowati (2018) in (Nofeni et al., 2023) is that it affects sports (51%), socialization (46%), level of participation in class (50%), concentration in class (59%), skills tests (36%), grades (29%), and homework (35%). (Nofeni et al., 2023).

According to the World Health Organization (World Health Organization, 2023), the incidence of dysmenorrhea is high in the world. The average incidence of dysmenorrhea in adolescent girls is between 16.8 to 81%. According to the Basic Health Research (Riskesdas), the prevalence of dysmenorrhea in Indonesia reached 64.25%, with 54.89% primary dysmenorrhea and 9.36% secondary dysmenorrhea. This data shows that the incidence of dysmenorrhea in Indonesia is still high (Riskesdas, 2018).

Some risk factors associated with dysmenorrhea include menarche, age, irregular menstrual cycle, prolonged menstruation, obesity, malnutrition, physical inactivity, and family history of dysmenorrhea. In addition, smoking and alcohol consumption are also associated with dysmenorrhea. (Gunawati & Nisman, 2021).. Dysmenorrhea can be treated with pharmacological therapies, such as analgesic drugs, hormonal therapy, and anti-prostaglandin drugs, as well as cervical dilatation. Non-pharmacological therapies include gentle exercise, warm compresses, relaxation, aromatherapy, and massage. This condition is common in adolescent girls and can interfere with daily activities, including studying. (Yuliyani & Susilowati, 2022)..

Factors that affect learning activities according to Slameto (2015: 54-71) include internal factors, such as physical conditions (health and disability), psychological factors (intelligence, attention, interest, talent, motivation, maturity, and readiness), and fatigue factors (both physical and mental). In addition, external factors also play a role, including family, school, and community factors. (Siti Nur'aini, 2021).

According to data from the Central Bureau of Statistics (BPS), by 2022, the number of adolescents aged 10 to 19 in Indonesia will reach 44.25 million. (Central Bureau of

Statistics, 2022). In the Riau Islands in 2023, this number will reach 348,941 out of a total population of 2.15 million (Badan Pusat Statistik Provinsi Riau Kepulauan, 2023). (Central Bureau of Statistics of Riau Islands Province, 2023).. While in Batam city, the number of teenagers in the same age group reached 99,740 out of a total of 204,950 teenagers (Central Bureau of Statistics of Batam City, 2024)..

Based on a survey at SMA Negeri 8 Batam on April 25, 2024, the School Health Unit (UKS) reported that in 2023 there were 201 visits to the UKS, with 36 girls complaining of menstrual pain, while from January to April 2024, there were 46 visits with 8 girls experiencing similar symptoms. The UKS also reported that every week, several girls apply for permission to visit the UKS with common symptoms such as lower abdominal pain, dizziness, and back pain. Girls who experience dysmenorrhea often lose their enthusiasm for learning, have difficulty concentrating, and some choose to be absent from class. The UKS overcomes this problem by providing analgesic drugs, warm water compresses, and eucalyptus oil. Based on this explanation, the researcher is interested in examining "The Relationship between Dysmenorrhea and Learning Activities in Female Students at SMA Negeri 8 Batam City Year 2024."

RESEARCH METHODS

This study was conducted at SMA Negeri 8 Batam City in 2024 on July 23, 2024. This study used *analytic survey* research design with *cross-sectional* approach. The population in this study amounted to 467 female students from class XI at SMAN 8 Batam City. The sample was taken using *Random Sampling* technique

RESULTS AND DISCUSSION

1. Research Results

based on the inclusion and exclusion criteria made by the researcher, the sample size was calculated using the *slovin* formula and the results were obtained as many as 82 students.

The independent variable in this study was dysmenorrhea, while the dependent variable in this study was learning activity. The instrument in this study used a dysmenorrhea and learning activity questionnaire filled out by the respondent,

Data analysis used univariate analysis to determine the frequency distribution of independent or dependent variables and bivariate analysis to see the relationship between independent and dependent variables. Data analysis was processed with SPSS version 27 with the *Chi Square* test. This study uses data collection techniques that include 3 stages which include preparation for implementation and the final stage.

Based on the results of a study entitled "The Relationship between Dysmenorrhea and Learning Activities in Students at SMA Negeri 8 Batam City in 2024". Frequency distribution data of respondents were obtained based on the results of the study, as follows:

A. Univariate Analysis

In this study, there were two characteristics of respondents, namely dysmenorrhea and learning activities, as shown in the following table:

Table 4.1
Frequency Distribution of Dysmenorrhea in Female Students at SMA Negeri 8 Batam City in 2024

No.	Dysmenorrhea	Frequency (<i>f</i>)	Percentage (%)
1.	Dysmenorrhea	72	87,8%
2.	No Dysmenorrhea	10	12,2%
	Total	82	100

Based on table 4.1, it can be seen that 72 respondents (87.8%) experienced dysmenorrhea and 10 respondents (12.2%) did not experience dysmenorrhea during menstruation.

Table 4.2
Frequency Distribution of Learning Activities in Girls at SMA Negeri 8 Batam City in 2024

No.	Learning Activity	Frequency (<i>f</i>)	Percentage (%)
1.	Distracted	54	65,9%
2.	Not Distracted	28	34,1%
	Total	82	100

Based on table 4.2, it can be seen that 54 respondents (65.9%) experienced interference with learning activities during dysmenorrhea, while 28 respondents (34.1%) did not feel disturbed in their learning activities.

B. Bivariate Analysis

Bivariate analysis is used to identify the relationship between two variables, namely the independent variable and the dependent variable. In this analysis, two measurements are taken for each observation. In bivariate analysis, the samples used can be paired or independent of the treatment. Bivariate analysis is the type of analysis used according to the conditions of the number of variables. This seemingly simple analysis can produce very useful tests. Bivariate analysis in this study aims to determine the relationship between dysmenorrhea and learning activities in students at SMA Negeri 8 Batam City in 2024. The statistical test used was chi-square test.

Table 4.3
Relationship between Dysmenorrhea and Learning Activities among Girls in SMA Negeri 8 Batam City 2024

Dysmenorrhea	Learning Activity						P-value
	Distacted		Not Distacted		Total		
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	
Dysmenorrhea	54	65,9	18	22,0	72	87,8	0,001
No Dysmenorrhea	0	0,0	10	12,2	10	12,2	
Total					82	100	

Based on table 4.6 of the research results after the *Chi Square Test*, it was found that out of 72 respondents who experienced dysmenorrhea and disrupted learning activities were 54 respondents (75%), experiencing dysmenorrhea but not disrupted learning activities were 18 respondents (25%). Of the 10 respondents who did not experience dysmenorrhea and disrupted their learning activities were 0 respondents (0%), did not experience dysmenorrhea and did not disrupt their learning activities were 10 respondents (100%). *Chi Square* test analysis shows a *p-value* of 0.001 ($p < 0.05$) so that H_a is accepted, which means there is a relationship between dysmenorrhea and learning activities at SMA Negeri 8 Batam City.

DISCUSSION

A. Dysmenorrhea

Based on the results of the study of 82 respondents experiencing dysmenorrhea, 72 respondents (87.8%), while 10 respondents (12.2%) did not experience dysmenorrhea during menstruation. This shows that most respondents experience dysmenorrhea which is generally characterized by pain in the lower abdomen caused by uterine contractions. The strong contractions in the uterus can cause oxygen supply to the uterus to not run smoothly, causing cramps or pain. According to Hidayat (2020) According to Hidayat (2020), contractions that occur during menstruation function to help push and remove the lining of the uterine wall which sheds into menstrual blood. Painful sensations during menstruation usually appear before or during the menstrual period, lasting from a few hours to a few days. The pain is often accompanied by a throbbing sensation in the lower abdomen, radiating to the waist and thighs, and can be intermittent or persistent. Other symptoms such as nausea, dizziness,

fatigue and irritability are also common, interfering with daily activities. According to Saalino (2021) menstrual pain is a common problem experienced by almost all women, often requiring time off to relieve symptoms.

Each individual feels different intensities of pain influenced by their personal images, experiences and perceptions of pain. As pain is a subjective feeling, only the individual can assess the level of pain they feel, so reactions and opinions towards pain vary between individuals.

B. Learning Activity

Based on the results of 82 respondents, 54 respondents (65.9%) experienced learning activity disorders and 28 respondents (34.1%) did not feel disturbed in their learning activities. Disruption of learning activities is evident that most adolescents have difficulty in following learning, understanding teacher explanations, asking questions about material that is not understood, participating in group discussions, remembering subject matter, making graphs or schemes, and

participating in sports and extracurricular lessons.

This is in line with the theory put forward by Setiawan (2018) which states that learning activities can be disrupted by various factors, both physical and psychological. Physical factors such as body health greatly affect learning ability, when someone is sick they tend to be weak, lackluster, and easily dizzy which hinders the learning process. Meanwhile, psychological factors such as stress and anxiety also play a major role in affecting concentration during learning.

According to Slameto (2015), factors that influence learning activities can be divided into two categories: internal factors and external factors. Internal factors include fatigue, lack of sleep, anxiety, stress, and lack of motivation, which can reduce one's ability to concentrate. While external factors include an uncondusive learning environment, such as noise or uncomfortable temperatures, as well as distractions from cellphones and social media, which can distract and hinder concentration while studying.

C. Relationship between Dysmenorrhea and Learning Activities among Girls in SMA Negeri 8 Batam City

Based on the research results in table 4.3 using the *Chi Square* Test, it shows that $p < 0.05$ ($p = 0.001$) which means that the H_0 hypothesis is rejected and the H_a hypothesis is accepted so that it can be said that there is a relationship between dysmenorrhea and learning activities in female students at SMA Negeri 8 Batam City.

This shows that menstrual pain experienced by female students can

hinder daily activities, including learning activities. Discomfort such as abdominal pain, vomiting, fatigue, headaches, and anxiety reduce learning enthusiasm and concentration. This also makes it difficult for students to understand the teacher's explanation, ask about material that has not been understood, and actively participate in group discussions. According to (Sanday et al., 2019) dysmenorrhea harms women's quality of life, interferes with normal activities, and reduces motivation and concentration to learn due to the pain felt.

In addition, 18 respondents (22.0%) experienced dysmenorrhea but did not experience interference with learning activities. Of these, 15 respondents (83.3%) continued to attend lessons, 13 respondents (72.2%) did assignments seriously, 11 respondents (61.1%) participated in group discussions, read materials, and 10 respondents (55.5%) gave answers to teacher questions. This shows that students can still carry out learning activities and school activities well despite experiencing pain.

CONCLUSIONS AND SUGGESTIONS

1. Conclusion

Based on the results of research conducted on "The Relationship between Dysmenorrhea and Learning Activities in Students at SMA Negeri 8 Batam City in 2024" can be concluded as follows:

- a. Most of the respondents who experienced dysmenorrhea were 72 respondents (87.8%).
- b. Respondents who experienced interference with learning activities during dysmenorrhea were 54 respondents (65.9%).
- c. There is a significant relationship between dysmenorrhea and learning activities at SMA Negeri

8 Batam, with a p-value of 0.001 ($p < 0.05$).

2. Advice

a. For students of SMA Negeri 8 Batam City

Girls who experience dysmenorrhea are advised to manage their symptoms with relaxation techniques, warm compresses, or painkillers, and exercise regularly. If symptoms are severe, consult a doctor and ask for school support. Creating a flexible study plan and managing stress can also help girls stay focused and comfortable during menstruation.

b. For Educational Institutions

It is hoped that the results of this study can increase knowledge and increase attention to factors associated with dysmenorrhea. In addition, this research can also be used as an additional reference that is useful for further learning.

c. For Future Researchers

It is hoped that the results of this study can be a reference for further research with more diverse variables and factors, including psychological factors that may affect menstrual pain (dysmenorrhea) and learning activities. Future researchers are advised to use a different target group from this study.

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