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# Effect of Physical Activities on Dismenorhea Events in Young Women

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**Abstract:** ***Physical activity is the movement of the body produced by skeletal muscle that requires energy expenditure. The purpose of this research to analyze the effect of physical activity with the incidence of dysmenorrhea in young women girls at Surabaya. The design used in this study is an Analytical Survey with a Retrospective approach. Sampling technique used are proposive sampling. The sample are 202 teenagers. Data collection using a questionnaire. The results, 38 students (18.8%) engaged in mild activities, 71.1% moderate menstrual pain, 15.8% mild menstrual pain. 159 students (78.7%) had moderate activity, 61.6% had moderate menstrual pain, and 24.5% had heavy menstrual pain. 5 respondents (2.5%) had heavy activities, 60% had heavy menstrual pain. The result of the Spearman Correlation test, it is known the value of Sig. (2-tailed) = 0.005 where the value is less than α = 5%. The conclution is physical activity in young women was significantly correlated with the variable incidence of dysmenorrhea (menstrual pain)***

**Keywords:** Physical Activity, Dismeneore

## 1. Introduction

Physical activity is the movement of the body produced by skeletal muscle which requires energy expenditure [1]. Physical activity is very important for maintaining physical, mental health and maintaining quality of life to stay healthy and fit throughout the day. The community is advised to do physical activity regularly at least 30 minutes a day. Physical activity can be in the form of sports such as push ups, light running, tennis, gymnastics, playing ball and basketball [2]. In addition to exercise, physical activity can take the form of daily activities such as walking, gardening, cycling, playing and dancing [1]. Physical activity is the main protection against health problems such as obesity, hypertension and hyperlipidemia for young womens [3].

Cycling is one type of aerobic exercise, in addition to gymnastics, and swimming. Cycling can be done as physical activity, as physical exercise as well as exercise [4]. For students, physical activity has a bad influence. Research states that increased physical activity can increase the suppression of the abdominal muscles getting stronger so that it can affect the incidence of disminorhea during menstruation [5]. Research said that dysmenorrhea is the pain of cramping (tension) in the abdominal area starting to occur 24 hours before the onset of menstrual bleeding and can last for the first 24 hours [6]. However, the influence of physical activity (cycling) with an increase in dysmenorrhoea in young women has not been explained.

In general, women feel complaints of menstrual pain / cramps before menstruation which can last 2-3 days, starting a day before starting menstruation. Abdominal pain during menstruation (Dismenorrhoea) which is felt by every woman is different, some are slightly disturbed but some are very disturbed so they cannot carry out daily activities and make them have to rest and even be forced to miss school / work.
The incidence of menstrual pain in the World is quite large, on average more than 50% of women in each country experience menstrual pain. In America the percentage of the population is around 60%, in Sweden around 72%, while in Indonesia alone there are around 55%.

Menarche is an early sign of the entry of a woman during reproduction. The average age of menarche in general is 12.4 years. Menarche can occur earlier at the age of 9-10 years or later at the age of 17 years. The results of Riskesdas found that from reports of respondents who have experienced menstruation, the average menarche rate in Indonesia is 13 years (20%) with an earlier occurrence in suia less than 9 years and later than 20 years. The national average age of 13-14 years of menarche occurs in 37.5% of Indonesian children.

Dysmenorrhea causes discomfort in daily physical activity. This complaint is related to repeated absences at school, 40-70% during reproduction experience menstrual pain, and by 10% experience it to interfere with daily activities.

Pain in dysmenorrhea can actually be prevented or controlled by medical techniques or therapy or non-medical therapy. Medically, it can be given NSAIDs (Non-Steroid Anti-Inflammatory Drugs) which inhibit the formation of prostaglandins, such as ibuprofen, mefenamic acid and oral contraceptives. While non-medical treatment can be done surgically, improving nutrition and one of them with exercise. This is caused when doing aerobic exercise the body will produce endorphine hormone produced in the brain and spinal cord. This hormone can function as a natural sedative produced by the brain, giving rise to a sense of comfort..

## 2. Research Methods

The results of the study will be divided into 2 parts, namely general data and special data. General data will show the distribution of respondents which includes age, gender, education and menarche. Special data will display the distribution of respondents which includes the activities carried out during menstruation and pain that are felt during menstruation and discussion.

The young women obtained that there are 6 students who use bicycles there are 4 people who experience dysmenorrhea so that it can disturb daily activities. Based on

the conditions described in the background, the authors are interested in conducting research on the effect of physical activity (cycling) on the incidence of disminorhea in young women.

In this study there are two variables that want to measure the relationship between the influence of the independent variable (influence) on the dependent variable (influenced), which is between the activities of young women activities on Genesis Dismenorhae. The statistical method used is cross tabulation (crosstabs) and chi square test analysis. The purpose of cross tabulation (crosstabs) is to describe the distribution of data from two variables, namely activity activities for the incidence of dismenorrhea. Furthermore, crosstabs used contain% total within row in order to find out the frequency percentage value of a category of independent variables for the dependent variable in each category.

Then proceed with the Chi Square test to examine the effect of the variable activity of adolescent girls on the variable incidence of dismenorrhea. The Chi Square test criteria is by looking at the Sig. from Pearson chi Square. If the value of Sig. <significance level (α) of 5%, it can be concluded that there is a significant effect of the variable activity of adolescent girls on the variable incidence of dismenorrhea.

## 3. Result and Discussion

This general data describes the characteristics of respondents which include Age, Menarche (First time menstruation) and Education. Distribution of sample data from 202 respondents for each research variable in the form of frequency and percentage values.

Variable activities of young women activities, overall their activities are grouped into three categories, namely mild, moderate and severe activities. Based on the findings it is known that the majority of 78.7% of young women have activities in the moderate category. Furthermore, as many as 18.8% were active in the mild category, and 2.5% had heavy activities. This explains that the types of physical activity in young women are mostly moderate activity categories (78.7%), where activities such as jogging, cycling, brisk walking and washing clothes.

Variable incidence of dysmenorrhea, overall the incidence of dysmenorrhea is grouped into three groups, namely the incidence of mild, moderate and severe pain. Based on the findings it is known that the majority of 62.4% of young women experience the incidence of dysmenorrhea in the moderate pain category. Furthermore, as many as 23.3% experienced the incidence of dysmenorrhea in the category of severe pain, and 14.3% experienced the incidence of dysmenorrhea in the category of mild pain. This explains that based on the findings it is known that the menstrual pain scale in the majority of girls is on the moderate pain scale.

Bivariate analysis is a simultaneous analysis of two variables. This analysis is done to see if one variable is related to another variable. Bivariate analysis consists of inferential statistical methods used to analyze data from two research variables. Research on two variables usually has the purpose of describing the distribution of data from two variables, to examine differences and measure the relationship between the two variables studied.

**Physical activities related to dysmenorrhea**

Physical activity is any bodily movement produced by skeletal muscles that requires energy expenditure. Absence of physical activity (lack of physical activity) is an independent risk factor for chronic diseases, and overall is expected to cause death globally [7].

Sports that are recommended during menstruation are mild and soothing. Here are some recommended exercises during menstruation:

1) Brisk walking is the most recommended exercise to reduce stomach cramps is cardio exercise in low intensity and speed. One way is by brisk walking. This activity will help build muscle and increase heart rate. You can walk casually while circling the home environment for 30 minutes.
2) Run, now is becoming a trend among young people. If you are a fan of this sport, then you can still do it during menstruation. It's just that, don't push yourself so much that you get too tired. Before running, try to drink lots of water. This will help increase blood pumping and increase body metabolism quickly. In addition, the energy level will also increase so that it will help naturally experienced menstrual syndrome.
3) Swimming is one of the most appropriate ways to exercise during menstruation. Do relaxed and slow movements. Avoid doing aggressive movements or distances that are too far away. One of the best ways to relax, avoid abdominal cramps, while exercising, is with a back style. This will definitely increase blood flow and increase your energy.
4) Yoga is one of the sports that is very suitable to reduce pain. Perform movements that focus on stretching the abdomen and abdomen. Breathing exercises can also help improve blood circulation.
5) Aerobics can also be done to sweat, while having fun with its energetic movements. You can feel fresher and more energetic.
6) Plank use by lie on your stomach on the floor in a straight position, then fold your arms and elbows under your chest. Lift your body slowly using your forearm and big toe. Hold this attitude for a long time and repeat it several times.
7) Dancing maybe this doesn't sound like exercise, but this method can help you burn fat while reducing symptoms of abdominal pain.

Menstrual pain can cause disruption of daily activities from school to other work, so this causes laziness in young women and increased emotions, that often grows the belief that menstruation is something that is unpleasant, painful and frightening [8].

Characteristics of young womens in female children are usually characterized by a body that changes from time to time from birth. Significant changes occur when young womens enter the age of 9-15 years, at that time they not only become taller and bigger, but also changes in the body that allow for production or offspring. The more age a person has, the more experience gained because the more

mature a person is, the better the way to prepare or respond to a problem [9]. Changes from childhood to adulthood or often known as puberty are marked by menstruation in girls. The arrival of the first menstruation is not the same for everyone. Many factors cause these differences, one of which is nutrition. At present there is a daughter who gets her first menstruation at the age of 8-9 years. But in general it is around 12 years. Young women, before menstruation will be very sensitive, emotional, and worried for no apparent reason [10].

## 4. Conclusion

Girls significantly affects the variable incidence of dismenorrhea but the variable activity of adolescent girls does not significantly affect the variable incidence of dismenorrhea. Their overall activities were grouped into three categories, namely mild, moderate and severe activities. Based on the findings it is known that the majority of young women have activities in the moderate category. This explains that the types of physical activity in young women where activities such as jogging, cycling, brisk walking and washing clothes. This is in accordance with the theory which explains that the type of physical activity will affect the degree of someone's dysmenorrhea.

## 5. Suggestion

The physical activities suggested during menstruation are mild and calming. Some recommended exercises during menstruation.

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