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# The Relation between Intensity of Running as Exercise and Occurrence of Dysmenorrhea in Teenage Girl in Smpn 2 Jogorogo.

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## ABSTRACT

***Background*** *: Dysmenorrhea is a pain reaction when menstruation occur, with a cramp feeling and localize in lower abdomen. Dysmenorrhea has many symptoms, from mild until severe. Severity dysmenorrhea related with onset and amount of menstrual blood. Prostaglandin can increase pain intensity when menstruation. The incident of dysmenorrhea increase in woman who unregularly exercising.*

***The purpose of this study*** *is to know the relation between intensity of running as exercise and occurrence of dysmenorrhea in teenage girl in SMPN 2 Jogorogo.*

***The method of this study*** *in cross sectional method. The population of this study are 37 teenage girls in SMPN 2 Jogorogo who have occurred menstruation in 2017. Collection of the data is using total sampling technique and questionnaire. Total of the questionnaire are 13 descriptive questions and 5 checklist questions. Analysis of the data is using Pearson correlation.r*

***Result****: The correlation between the intensity of running sport against dysmenorrhea incidence is -0.221 with significance of 0.251*

***Summary*** *: Based on the results of data analysis, the more increased intensity of exercise, the more decreased the occurrence of dysmenorrhea*

**Keyword**: *dysmenorrhea, teenage girl, physical exercise*

## INTRODUCTION

Dysmenorrhea is a menstrual pain which is a sign and not a disease. Dysmenorrhea is a pain right before or when menstruation occur that become one of the most general gynecologic problem in woman at any age. Dysmenorrhea classified into two groups, primer dysmenorrhea and seconder dysmenorrhea (Bobak.I., Lowdermilk. D., Jensen, M. 2005).

In the world, the incidence of dysmenorrhea is high. About 50% woman in every country have dysmenorrhea. Incidence in America is 60% and in Sweden is about 72%. In Indonesia, 55% woman in productive age have dysmenorrhea. Incidence primer dysmenorrhea in Indonesia is 50 – 75% of woman who still have menstruation and the rest have secondary dysmenorrhea type (Marmi. (2012).

One of disruption of menstruation is dysmenorrhea. Not a few women have prolonged pain when menstruation, and cannot even work when menstruation because of unbearable pain. Primer dysmenorrhea is a menstrual pain without being found a pathologic in hip. The character of dysmenorrhea are menstrual pain increased along with the increased of prostaglandin in early 48 hours, vomit, nausea, headache, and diarrhea. Seconder dysmenorrhea is a menstrual pain related with many pathologic condition in genital organ (Bobak.I., Lowdermilk. D., Jensen, M. 2005).

Pain in primer dysmenorrhea and other systemic sign caused by elevation of chemical level, called prostaglandin. Prostaglandin is a chemical substance that manage uterus activity. If the level of prostaglandin increased, the uterus contraction when menstruation period will increased too, then occur severe pain. The pain increase because of stress, lack of exercise, unbalanced nutrition, and the other disease like endometriosis and uterus tumor (Bobak.I., Lowdermilk. D., Jensen, M. 2005); (Tjokronegoro A dan Utama H., 2003).

Incidence of dysmenorrhea will be increased in woman who lack of exercise, as of when a woman had dysmenorrhea, the oxygen cannot be transported to the blood vessel that vasoconstriction in reproduction organ. If woman regularly doing exercise, then she will has oxygen twice times more per minute than woman who not doing exercise, and oxygen can be transported to the blood vessel that vasoconstriction. It will cause dysmenorrhea with irregular exercise (Manuaba, Ida Bagus (2010).

Exercise is a planned and structured physical activity that involve body movement. There are two type of exercise, aerobic and anaerobic. Aerobic is a regularly exercise that the oxygen still can be fulfilled by the body itself. The example are jogging, gymnastic, swimming, and cycling. Anaerobic is an exercise that the oxygen unfulfilled by the body itself. The example are weightlifting, 100m sprint, and badminton (Cholik Mutohir, T. 2002).

A woman who routine doing exercise at least three times for 30 – 60 minutes in a week will increase secretion of endorphin, hormone that reduce pain in blood flow, alleviating dysmenorrhea (Baradero, M and Dayrit, M. 2007).

Systematic, regularly, and directed exercise will assist us to have healthy lifestyle and increase the quality of our life. Effort to promote doing regularly exercise in teenagers is an effective way to establish healthy lifestyle to reach better quality of life. These conditions are needed to increase productivity (Cholik Mutohir, T. 2002); (Baradero, M and Dayrit, M. 2007).

**Problems**

Based on introduction then it can be formulated as "What is relation between intensity of running as exercise and occurrence of dysmenorrhea?"

**Objective**

General purpose of this study is to know the relation between intensity of running as exercise and occurrence of dysmenorrhea.

Based on preliminary study in teenage girls in SMPN 2 Jogorogo, researcher decide to have title "Relation Between Intensity of Running as Exercise and Occurrence of Dysmenorrhea in Teenage Girls in SMPN 2 Jogorogo"

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## METHODS

**Design**

This study is using correlational study. A correlational study determines whether or not two variables are correlated. Researcher studying the relation between intensity of running as exercise and occurrence of dysmenorrhea. Cross-sectional, as the design, is a study looks at a population at a single point in time. This approach is used to study the relation between independent variable (intensity of running as exercise) and dependent variable (occurrence of dysmenorrhea) (Notoatmodjo, S. 2010).

**Population and Sample**

Population

The population of this study is 37 teenage girls.

Sample

The subject of this study is 37 teenage girls.

**Place and Date**

This research placed on May 19th, 2017 in SMPN 2 Jogorogo.

**Variable**

Independent variable in this study is intensity of running as exercise and dependent variable is occurrence of dysmenorrhea.

**Collecting Data**

The data is collecting by questionnaire (descriptive and checklist).

**Result and Discussion**

Table 1. The characteristic respondent on dysmenorrhea incident.

| Dysmenorrhea incident | Frequency | Proportion |
|---|---|---|
| Dysmenorrhea | 29 | 90.6% |
| Not dysmenorrhea | 3 | 9.4 % |

Based on the above table all the students of class VII and VIII have dysmenorrhea.

Table 2. The characteristic respondent on type of exercise

| Type of sport | Frequency | Proportion |
|---|---|---|
| Running | 12 person | 41.4 % |
| Walking | 16 person | 55 % |
| Cycling | 1 person | 3.4 % |

Based on the above table students who do walking exercise have the highest proportion whereas those who exercise cycling has the lowest proportion. This study is inline with the previous references that people tend to do more exercise on walking than other type of exercise (Tjokronegoro A dan Utama H., 2003).

Table 3. The Pearson data analysis.

**Correlations**

| | | Intensity of running | dysmenorrhea |
|---|---|---|---|
| Intensity of running | Pearson Correlation | 1 | -.212 |
| | Sig. (2-tailed) | | .251 |
| | N | 29 | 29 |
| dysmenorrhea | Pearson Correlation | -.212 | 1 |
| | Sig. (2-tailed) | .251 | |
| | N | 29 | 29 |

From the results of data analysis with Pearson test found that the second variable correlation is not meaningful. It is not always the person who run will not experience dysmenorrhea and otherwise. This study result is less likely different with the previous references due to the limitation of study which is relatively small in sample because of time restriction for collecting the data (Prawirohardjo,S., 2008; Notoatmodjo, S. 2010).

**Conclusion**

It can be concluded that dysmenorrhea

It is a symptom of menstrual pain can occur before or during menstruation that can affect all ages in women are usually the most frequent primary dysmenorrhea in adolescents. The factors are affect the occurrence of dysmenorrhea one of them is the sport the higher the intensity of the sport the lower the incidence of dysmenorrhea . But not everyone who sports high intensity will not experience dysmenorrhea and otherwise this is because each person always has the same physiological process.

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**References**

Bobak.I., Lowdermilk. D., Jensen, M. (2005).Buku aja keperawatan maternitas. (4thed). Alih bahasa: Wijayarini, M. Jakarta: EGC.

Prawirohardjo,S., 2008. *Ilmu Kebidanan. Jakarta*: Yayasan Bina Pustaka Sarwono Prawirohardjo

Marmi. (2012). Asuhan Kebidanan Pada Masa Nifas. Yogyakar: Pustaka Pelajar

Baradero, M dan Dayrit, M. 2007. Seri Asuhan Keperawatan Pasien Gangguan Sistem Reproduksi & Seksualitas. Jakarta: EGC

Manuaba, Ida Bagus (2010). Memahami Kesehatan Reproduksi Wanita. Arcan. Jakarta

Cholik Mutohir, T. 2002. *Gagasan-gagasan tentang Pendidikan Jasmani dan Olahraga*. Unesa University Press:Surabaya

Tjokronegoro A dan Utama H., 2003. *Buku Ajar Ilmu Penyakit Dalam Jilid II*. Penerbit FK UI, Jakarta

Notoatmodjo, S. 2010. Metodologi Penelitian Kesehatan. Jakarta : Rineka Cipta