

Correlation Between Sport Activity and Pre–Menstrual Syndrome on XI Grade Female Student of SMAN 1 Sentolo

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Abstract

Pre-menstrual syndrome is an emotional and physical symptoms experienced before menstruation caused by increased estrogen level. Physical exercise is one of treatment in order to decrease pre-menstrual syndrome, because it causes increased endorphin which can prevent the increasing of estrogen. The aim of this study is to know the relation between physical exercise or sport activity with pre-menstrual syndrome.

The research used cross-sectional method. Sample of this research was 66 respondent who filled out questionnaires on one time, then determine univariat analysis and bivariat analysis, using chi square.

The result of research show that 7 respondents who exercise regularly experienced a moderate pre-menstrual syndrome. Besides, 31 respondents who are not regularly doing physical exercise experienced severe premenstruation syndrome, the p value is 0,008 (<0,05) with odd ratio on irregular exercise has risk to suffer moderate-severe pre menstruation syndrome 3,786 times bigger than they who did physical exercise regularly and 3,167 experinced pre-menstruation syndromemilder than who done exercise regularly. In conclusion, there is a relation between physical activity with pre-menstrual syndrome on grade XI female student at SMAN 1 Sentolo.

Keywords: Pre-menstrual syndrome, Physical Exercise

Introduction

Adolescence is one of human development period. This period is a change or transition from childhood to adulthood biologically, psychologically and socially. Most of the people and culture, adolescence commonly begins at 10-13 years old and ended at the age of 18-22 years (Notoatmojo, 2007). According to the World Health Organization (WHO) in 2005, said that the problems of women in Indonesia are premenstrual syndrome disorder (38.45%), nutritional problems related with anemia (20.3%), learning disabilities (19,7%), psychological disorders (0.7%), and obesity (0.5%) (WHO, 2005).

Premenstrual syndrome is a cycle disorders commonly experienced by young and middle aged women marked by physical and emotional symptoms consistently, occurring in luteal phase of menstrual cycle. Premenstrual syndrome will disappear when menstruation begins until a few days after menstruation (Saryono, 2009). The incidence of premenstrual syndrome in Indonesia is 70% - 90% and 2% - 10% experienced severe symptoms of premenstrual syndrome (Adelina, 2010 cit Delfi Lutan, 2007).

Sport is able to maintain the women reproductive organs health. Women who exercise will have a good heart system, healthy blood vessels and hormones, so the impact is good blood flow on reproductive organs. If the hormones are balanced, then the control center of the brain reproductive hormone also works well (Ifana Nashruna, et al., 2012).

Research methods

This research is an analytic study to find out the causes and the relationship between the two variables (Nursalam, 2011). This study using cross sectional approach. Population in this study is 96 XI grade female students at SMAN 1 Sentolo. Selection of the sample in the study using total sampling method is a way of sampling by taking all members of the population to be sampled (Hidayat, 2012). The sample was 96 respondents.

Research result

When data collection, there are 6 absent respondents, 1 respondent had no menstrual period yet and 23 female students do not exercise. Therefore, 30 of 96 respondents included within the exclusion criteria in the study so it is not included in the results. So who meet the criteria for inclusion in this study were 66 respondents.

The results of this research is divided into two parts, namely univariate and bivariate analysis. Univariate analysis is an analytical look at the frequency distribution and presentation of data. Bivariate analysis to test the variable suspected having a connection or relationship between the two variables.

Table 1. Frequency Distribution of Sport Activity and Premenstrual Syndrome on Female Students in Class XI SMAN 1 Sentolo 2015

Sport activity	n	%
Regularly	9	13,6
Not Regularly	57	86,4
Premenstrual Syndrome	n	%
Mild	6	9,1
Moderate	29	43,9
Severe	31	47,0

Table 2. Correlation Between Sport Activity and Premenstrual Syndrome on Female Students in Class XI SMAN 1 Sentolo 2015

Variable	Premenstrual Syndrome			X²	P
Sport activity	Mild	Moderate	Severe	9,587	0,008
Regularly	22,2%	77,8%	0%		
Not Regularly	6%	38,6%	54,4%		

Based on Table 2. Known that 9 of the respondents who regularly exercise experienced premenstrual syndrome, 2 students (22.2%) experienced mild premenstrual syndrome, 7 students (77.8%) experienced moderate premenstrual syndrome, and no respondents who experienced severe premenstrual syndrome and 57 respondents who do not regularly exercise experienced premenstrual syndrome, 4 students (7.0%) with mild premenstrual syndrome, 22 students (38.6%) with moderate premenstrual syndrome, and severe premenstrual syndrome experienced by 31 students (54.4%). This conclusion is in accordance with the value of significant/probability (P Value) in the amount of 0.008 which, when compared with P values <0.05, so the research hypothesis is accepted. It

means there is a correlation between sport/physical activity with premenstrual syndrome on grade XI female student at SMAN 1 Sentolo with Odd Ratio irregular Sport suffer from moderate-severe premenstrual syndrome 3.786 times and 3.167 suffer premenstrual syndrome milder than the routine one.

Discussion

Based on Table 1, the majority age of respondents in this study is 16 years old as many as 38 students or 57,6%. Adolescence ages that is 12 to 21 years old is an important period because this period is the transition into adulthood. In adolescence, person has a rapid physical changes and intensive intellectual development so that the child's interest on what is happening in the world is very large and do not want to be considered as a child anymore (Shaliha, 2010). Based on Table 2, It is known that they who are experienced severe premenstrual syndrome as many as 31 students or 47.0%. Based on research conducted by Adelina (2010) who conduct analytical studies on female students who do sports activities with premenstrual syndrome, show that 48 of 73 (66%) young women who experience premenstrual syndrome. Based on an analysis conducted by the author during the research found that most teens experience premenstrual syndrome because teens do not know the symptoms of premenstrual syndrome and did not know how to resolve or prevent it. According to the table 2 noted that the majority of respondents do not exercise regularly as many as 57 people with prosentse 86.4%. Schoolgirl mostly had once aweek exercise and long work up a sweat or within 20 minutes. Sports activities were measured by routine every week and how long the exercise. Based on measurement issued by the Ministry of Health of the Republic of Indonesia sport that can be done is 2-3 times a week sports, within 20-30 minutes. Based on research conducted by Ifana Nashruna toward 119 respondents in Klaten, Tulung Pucungmikiran village obtained 68 respondents (57.1%) did not exercise regularly.

Regular and continuing exercise contribute to improve the production and release of endorphins. Endorphin has a role on estrogen control. Women who experience premenstrual syndrome occurs due to excess of hormone estrogen. Excess of estrogen can be prevented by increasing endorphin. This is prove that regular exercise prevent or reduce premenstrual syndrome, women who do not exercise regularly will has higher estrogen which causing severe premenstrual syndrome (Nurlela et al, 2008). Based on

research conducted by Nurlaela et al (2008), who conducted a descriptive study on women who do aerobics with premenstrual syndrome showed 68 of 119 (57.1%) women who routinely perform aerobic exercise every week has easier premenstrual syndrome than who is not routinely perform aerobic exercises.

Conclusion

The results of this study can be concluded that there is a correlation between sports activities/physical exercise with premenstrual syndrome in grade XI female student at SMAN 1 Sentolo with P value = 0.008 (<0.05).

Suggestion

From this study, the researcher suggest for further researcher should be interested in making further research in a more complex and detailed about premenstrual syndrome.

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