Correlation of Sports with Primary Dysmenorrhoea Incidence in X Class Students in Senior High School 01 Kauman Tulungagung

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Abstract

Keywords:
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Introduction

Primary dysmenorrhea is menstrual pain without abnormalities of reproductive organs (without gynecological abnormalities). Dysmenorrhea primer is purely due to the process of uterine contractions without basic illness as the cause. The characteristic of menstrual pain is not reduced in the days that follow. The objective of the study to determine the relationship of sports with the incidence of primary dysmenorrhoea in Senior High School 01 Kauman Tulungagung.

Method

This research uses analytical research design with retrospective approach. The independent variable in this study is sport and the dependent variable is the incidence of primary dysmenorrhea. The population of 273 female student in Senior High School 01 Kauman Tulungagung. The sample size 163 respondents. The Instrumen of this research is questioner. The research was conducted by distributing to respondents at Senior High School 01 Kauman Tulungagung on Monday, June 5, 2017. Analyzed using chi square test with significant level 0,05.

Result

The results showed that of 163 respondents who have routine sport habit as much as 38 respondents (23.3%). From the data of respondents experiencing primary dysmenorrhoeal as much as 120 respondents (73.6%) and respondents who did not sport primary dysmenorrhea as much as 43 respondents (26.4%). After Chi Square test obtained results \( X^2 \) count (93.4) > \( X^2 \) table (5,991). This indicates that \( H_0 \) rejected and \( H_1 \) accepted. While the calculation of contingency coefficient test obtained results 0.6 then obtained the results of correlation values or a strong relationship between sports with the incidence of primary dysmenorrhoea.

Conclusion

Regular sport can increase the production of endorphins (body’s natural pain killers), can increase serotonin levels. Getting regular sport and physical activity such as healthy walking, running, cycling, or swimming, it can make the blood flow in the muscles surrounding the uterus become fluent, so the pain is reduced.
leave work or a daily way of life for several hours or several days. Almost all women experience discomfort in the lower abdomen during menstruation. However, the term dysmenorrhea is only used when pain so intense that interfere with activities and require medication drugs. The uterus consists of muscles that also contract and relax. In general, uterine muscle contractions are not felt, but severe contractions and often cause blood flow to the uterus is disrupted resulting in pain (Aulia, 2009).

The incidence of dysmenorrhea in the world is huge. On average more than 50% of women in every country have dysmenorrhea. Women who experience dysmenorrhea in American figures percentage of about 60% and in Sweden about 72%. The incidence of primary dysmenorrhea in Indonesia is about 54.89%, while the rest are patients with secondary type. Although generally harmless, but often felt disturbing for women who experience it. The degree of pain and levels of disorders is not the same for every woman. Some are still able to move, others are not able to perform any activity and this will degrade the quality of life in each individual (Proverawati and Misaroh, 2009).

The cause of primary dysmenorrhea in adolescents is uncertain, but there are several factors that trigger the occurrence of primary dysmenorrhea diseases such as psychological factors, endocrine factors, prostaglandin factors, hormonal factors, and others. Lack of rest and lack of sport is also a factor in the occurrence of menstrual pain (Proverawati and Misaroh, 2009).

Sports can increase the production of endorphins (natural body pain killers), can increase serotonin levels. Regular sport can reduce stress and fatigue so that indirectly also reduce pain. Getting regular sport and physical activity such as healthy walking, running, cycling, or swimming, it can make the blood flow in the muscles around the uterus becomes fluent, so the pain can be overcome or reduced. This sport is at least 30-60 minutes with a frequency of 3-5 times a week (Proverawati and Misaroh, 2009).

Based on research from Fajaryati (2010) on 10 respondents of 2nd grade students of Yunior High School 2 Miri Kebumen, on 04 December 2010 conducted by interview, found 10 respondents had primary dysmenorrhea every menstruation. Respondents handled primary dysmenorrhea in several ways, such as using eucalyptus oil as much as 3 respondents (30%), by resting 2 respondents (20%), and never handling dysmenorrhea 3 respondents (30%). A small number of female students did sports and there was a decrease of dysmenorrheal as many as 2 respondents (20%), and 8 respondents never sport regularly. The reason they did not sport was because most respondents were 6 respondents (60%) lazy to do sports, and 2 respondents (20%) did not know the benefits of sport that can reduce dysmenorrhea.

Based on the results of the research above, it appears that primary dysmenorrhea occurs less in young women who sport regularly compared with teenage girls who do not sport regularly.

To overcome dysmenorrhea can be done with pharmacological and non-pharmacological therapy. Pharmacological therapy, among others, the administration of analgesic drugs, hormonal therapy, nonsteroid prostaglandin drugs, and cervical canal dilatation (Prawirohardjo, 2008). Non-pharmacological therapy, among others, warm compresses, sports, mozart therapy, and relaxation (ProverawatiandM isaroh, 2009).

Based on this the researchers are interested and encourage researchers to conduct research on the relationship between exercise habits with the incidence of dysmenorrhea at a student of Senior High School 01 Kauman Tulungagung.

II. RESEARCH METHODS

The research uses analytic study design to determine the relationship of sport with the incidence of primary dysmenorrhea, with a kind of retrospective approach. Retrospective research is a type of study based on medical records, looking backward until the time of events occurred in the past from the event to be studied (Nursalam, 2011).

Independent variable in this research is sport. Dependent variable in this research is the incidence of primary dysmenorrhea. In this study the population is teenage class X Senior High School 01 Kauman Tulungagung a total of 273 people. The sample size is 163 respondent. In this
study the inclusion criteria are: Students who are agree to become respondents and who have primary dysmenorrhea.

In this research the sampling technique used is simple Random Sampling namely the sample selection method by taking samples from population randomly based on the probability frequency of all members of the population (Arikunto, 2006).

In this research, the instrument used is a questionnaire. In the general data questionnaire as many as 6 questions, specification data is the sports questionnaire amounted to 6 problems and 8 dysmenorrhea problems. After all data collected then the data is processed and presented in the form of tables and percent. The selection of statistical tests is determined based on the objectives of the analysis and the scale of data of each variable. Relationship of Sports With Primary Dysmenorrhea Disease at Senior High School 01 Kauman Tulungagung was analyzed using statistical test with chi square test and to know whether or not the relationship was done by contingency coefficient test.

\( H_0 \) received \((H_i \) rejected) if \( p \) value> \( \alpha \) \((0,05)\) whereas \( H_0 \) is rejected \((H_i \) accepted) if \( p \) value <\( \alpha \) \((0,05)\). The results of closeness of hypothesis testing are categorized as follows:

**III. RESEARCH RESULT**

1) Characteristics of Respondents by Age

Characteristics of respondents by age of respondents can be seen in the diagram below:

![Diagram 4.1 Characteristic of Respondents Based on Age](image)

Based on the diagram above 4.1 that show from of total 163 respondents most respondents aged 16 years is 108 respondents \((66.30\%)\).
2) Characteristics of Respondents by Age Menarche

Characteristics of respondents by age menarche can be seen in the diagram below:

![Diagram 4.2 Characteristics of Respondents by Age Menarche on grade X students at Senior High School 01 Kauman Tulungagung]

Based on Diagram 4.2 above diagram shows that nearly half of the 163 respondents, 74 respondents (45.40%) is 12 years and a small percentage of respondents aged 10 years, 2 respondents (1.20%).

3) Characteristics of Response Based on Long Menstruation

Characteristics of respondents based on the duration of menstruation can be seen in the diagram below:

![Diagram 4.3 Response Characteristics den Based on Lama Menstruation on the class X students at Senior High School 01 Kauman Tulungagung]

Based on Diagram 4.3 above show that from total of 163 respondents got a small part of respondent amount of 1 respondent (0.6 %) that is 4 day and 9 day and almost half of respondent number 67 respondent (41.1%) that is 7 day.
5) Response Characteristics Based on the presence or absence of menstrual disorders

Characteristics of respondents based on the presence or absence of menstrual abnormalities can be seen in the diagram below:

![Diagram 4.4: Response Characteristics Based on the presence or absence of menstrual abnormalities](image)

Diagram 4.4. Response Characteristics Based on the presence or absence of menstrual abnormalities on the class X students at Senior High School 01 Kauman Tulungagung

Based on diagram 4.4 showed that all 163 respondents did not experience menstrual abnormalities (100%).

6) Sports

Based on the results of research conducted known that exercise habits on the class X students in SMAN 01 Kauman Tulungagung can be seen in the following table:

<table>
<thead>
<tr>
<th>Sports Habits</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Sports</td>
<td>3</td>
<td>1.8</td>
</tr>
<tr>
<td>Not a routine</td>
<td>122</td>
<td>74.9</td>
</tr>
<tr>
<td>Routine</td>
<td>38</td>
<td>23.3</td>
</tr>
<tr>
<td>Amount</td>
<td>163</td>
<td>100</td>
</tr>
</tbody>
</table>

Based on table 4.1 above shows that most of the sports habits of schoolgirls is not routine ie 122 respondents (74.9%) and a small number of sports habits of schoolgirls is not a sport that is 3 respondents (1.8%).

7) Primary Dysmenorrhea

Based on the results of research conducted it is known that the incidence of primary *dysmenorrhea* in grade X students at Senior High School 01 Kauman Tulungagung can be seen in the following table:
Table 4.2 Distribution Frequency of primary dysmenorrhea occurrence in grade X student at Senior High School 01 Kauman Tulungagung

<table>
<thead>
<tr>
<th>Incidence of primary dysmenorrhea</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Primary Dysmenorrhea</td>
<td>43</td>
<td>26.4</td>
</tr>
<tr>
<td>Experiencing Primary Dysmenorrhea</td>
<td>120</td>
<td>73.6</td>
</tr>
<tr>
<td>Amount</td>
<td>163</td>
<td>100</td>
</tr>
</tbody>
</table>

Based on table 4.2, it shows that of the total 163 respondents, most of them are found in the result that the students have primary dysmenorrhea, that is 120 respondents (73.6%) and the primary dysmenorrhea are 43 respondents (26.4%).

Based on the results of research conducted it is known that the cross-tabulation of sports relationships with the incidence of primary dysmenorrhea in Sman 01 Kaumantulungagung can be seen in the following table:

Table 4.3 Cross-tabulation of sports relationship with primary dysmenorrhea incidence in Senior High School 01 Kauman Tulungagung

<table>
<thead>
<tr>
<th>Sports Habits</th>
<th>Dysmenorrhea</th>
<th>Not Dysmenorrhea</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N %</td>
<td>N %</td>
<td>N %</td>
</tr>
<tr>
<td>Not OR</td>
<td>3 1.8</td>
<td>0 0</td>
<td>3 1.8</td>
</tr>
<tr>
<td>Not a routine</td>
<td>112 68.7</td>
<td>10 6.2</td>
<td>122 74.9</td>
</tr>
<tr>
<td>Routine</td>
<td>5 3.1</td>
<td>33 20.2</td>
<td>38 23.3</td>
</tr>
<tr>
<td>Amount</td>
<td>120 73.6</td>
<td>43 26.4</td>
<td>163 100</td>
</tr>
</tbody>
</table>

Based on Table 4.3 it is shown that from 163 respondents found that most of the respondents were with routine sport habit and experienced primary dysmenorrhea as much as 112 respondents (68.7%), respondents who routinely sport and experienced primary dysmenorrhea as many as 5 respondents (3.1%), respondents who did not sport and experienced primary dysmenorrhea as many as 3 respondents (1.8%), routine respondents of sports and did not experience primary dysmenorrhea as much as 33 respondents (20.2%), and respondents who did not sport regularly and did not experience primary dysmenorrhea of 10 respondents (6.2%).

After Chi Square test obtained the value of $x^2$ counted 93.4 and $x^2$ tables of 5.991, then $x^2$ count (93.4) > $x^2$ table (5.991). This indicates that $H_0$ rejected and $H_1$ accepted which means there is a relationship between sport and the incidence of primary dysmenorrhea.

After Chi Square tested then to know the closeness of relationship between two variables then continued with contingency coefficient test. The result of calculation of contingency coefficient test obtained result 0.6 where if value is interpreted with table of guidance to contingency coefficient hence got result of correlation value or strong relation between sport with incident of primary dysmenorrhea.

Based on the distribution table 4.3 shows that of the 163 respondents found that most of the respondents were with routine exercise habit and experienced primary dysmenorrhea as much as 112 respondents (68.7%), respondents who regularly sport and experienced primary dysmenorrhea as much as 5 respondents (3.1%), respondents who did not sport and experienced primary dysmenorrhea as much as 3 respondents (1.8%), routine respondents of sports and did not experience primary dysmenorrhea as much as 33 respondents (20.2%), and respondents who did not sport regularly and did not have dysmenorrhea primary respondents as much as 10 respondents (6.1%).
After Chi Square test, the value of \( x^2 \) counted 93.4 and \( x^2 \) table equal to 5,991, then \( x^2 \) count (93.4) > \( x^2 \) table (5,991). This indicates that \( H_0 \) is rejected and \( H_1 \) is accepted which means there is a relationship between sport and the incidence of primary dysmenorrhea. While the calculation of contingency coefficient test obtained results 0.6 where if the value is interpreted with the table guidance against the coefficient contingency then obtained the results of correlation value or a strong relationship between sports with the incidence of primary dysmenorrhea.

Based on research conducted by Noorvita, Aulia (2014) with the title of sports habit relationship with the incidence of primary dysmenorrhea in SMPN 02 Demak. Results showed that 83 respondents were more than half of the regular exercise, 46 respondents (55.4%) and more than half of the respondents did not have primary dysmenorrhea as many as 48 respondents (57.8%).

The results of this study are in line with research conducted by Fajaryati (2012) on the relationship of sport habits with the incidence of primary dysmenorrhea which states there is a relationship between sport with the incidence of primary dysmenorrhea. The more routine sport, the less incidence of primary dysmenorrhea in young women. The results of this study are also in line with the research conducted by Dewa Agung (2014) on the relationship between physical fitness with primary dysmenorrhea and the results obtained p p value 0.000 so p <0.05 known there is a significant relationship. Sport is a physical activity carried out in a planned manner for various purposes, including health, fitness, recreation, education and achievement. Efforts to increase physical quality can be done by improving the work efficiency of muscle fitness and fitness energy. Because motion is a manifestation of the occurrence of muscle contraction, while to be able to contract, muscle requires energy (Ngadenan, 2013).

According to Ngadenan (2013), a person who does not sport regularly can cause muscles to become weak, at night less sleep soundly, decreased appetite, irregular. Sport can also reduce anxiety and may reduce menstrual pain or dysmenorrhea (Proverawati and Misaroh, 2009).

Sport like walking times, cycling, or swimming helps produce natural ingredients that can block pain. Use hot or cold compresses on the abdominal area if pain is felt. Ensure adequate sleep before and during the menstrual period. Relaxation or yoga exercises can help with the pain. Hormonal drugs are intended to suppress ovulation and its use only on the advice of a physician. The special medical treatment is the last option based on the results of a doctor's examination (Proverawati and Misaroh, 2009).

IV. CONCLUSION

Of all the explanations that have been presented and based on the results of data analysis and discussion of Sports Relationships with the Genesis of Primary Dysmenorrhea at Senior High School KaumanTulungagung, then taken the following conclusion:

1) Respondents class X at Senior High School 01 KaumanTulungagung a number of 38 respondents (23.3%) have regular exercise habits.

2) Most of the class X respondents in Senior High School 01 KaumanTulungagung a total of 120 respondents (73.6%) experienced primary dysmenorrhea.

3) After Chi Square test obtained \( x^2 \) count (93.4) > \( x^2 \) table (5,991). This shows that \( H_0 \) is rejected and \( H_1 \) is received ima. While the calculation of coefficient coefficient obtained results 0.6 where if the value is interpreted with table guidance to the coefficient contingency then obtained the results of correlation value or a strong relationship between sports with the incidence of primary dysmenorrhea.
V. REFERENCE


