Original Research Article

RELATIONSHIP OF DAILY PHYSICAL ACTIVITY WITH DURATION OF THE MENSTRUAL CYCLE IN ADOLESCENT WOMEN AT SENIOR HIGH SCHOOL 1 KEDUNGDUNG OF SAMPANG

Faridatul Istibsaroh1*, Devina Wulandari1, Elok Alfiah Mawardi1

1Nursing, Faculty of Health, University of Nazhatut Thullab al-Muafa Sampang

*Correspondence:
Faridatul Istibsaroh
University Of Nazhatut Thullab al-Muafa Sampang
Email: doramantul@gmail.com

Abstract

Background: An important period of life for humans is adolescence with an age range of 10-18 years. At this time, individuals begin to experience growth and development in physiological, psychological, behavioral and sexual maturity. Menstruation is cyclical bleeding from the uterus as an integral part of a woman's biological function in her life. But not all women have normal menstrual cycles, many of them have irregular menstrual cycles (Proverawati and Maisaroh, 2016). Irregular menstruation can have an impact, including the possibility of experiencing infertility and can make it difficult for women to find a fertile period.

Objectives: The aim of the study was to Relationship of Daily Physical Activity with the Duration of the Menstrual Cycle in adolescent women at Senior High School 1 Kedungdung of Sampang.

Methods: This type of research is an observational analytic study with a cross-sectional or cross-sectional study design which was conducted to determine the relationship between daily physical activity and the menstrual cycle in young women.

Results: Almost half of the students at 12 students (44.44%) out of 27 students, are in the light activity category. Most of the respondents had irregular menstrual cycles, namely 19 female students (70.37) out of 27 female students.

Conclusion: Asymp.Sig (2-sided) value of 0.000 <0.05. So it be concluded that there is a relationship between physical activity and the menstrual cycle in adolescent women in Senior High School Kedungdung.

Keywords: ADL, Adolescent Women, Menstrual Cycle

INTRODUCTION

An important period of life for humans is adolescence with an age range of 10-18 years. At this time, individuals begin to experience growth and development in physiological, psychological, behavioral and sexual maturity (Sarwono, 2013). Sexual maturity is characterized by the presence of puberty and experiencing menstruation. Menstruation is cyclical bleeding from the uterus as an integral part of a woman's biological function in her life. But not all women have normal menstrual
cycles, many of them have irregular menstrual cycles (Proverawati and Maisaroh, 2016). Irregular menstruation can have an impact, including the possibility of experiencing infertility and can make it difficult for women to find a fertile period (Nurlaila, et al, 2016).

According to WHO, out of 18 million women aged 18-55 years, the most common menstrual cycle disorder is irregular menstrual frequency of 80.7%. According to the results of Riskesdas (2013), it was reported that women in Indonesia aged 10-59 years experienced irregular menstruation at 13.7%. From a preliminary study conducted at Senior High School 1 Kedungdung, out of 8 students who were given physical activity questionnaires, stress levels and menstrual cycles, it was found that 1 person had light physical activity, 5 students had moderate physical activity, and 2 people had heavy physical activity. From the menstrual cycle data, it was found that 5 people had regular menstrual cycles and 3 female students had irregular menstrual cycles.

Irregular menstruation is caused by hormones or diseases in the reproductive organs such as uterine tumors, ovarian tumors. Disrupted menstrual cycles are influenced by several factors, including genetics, nutrition, age, weight, stress levels and physical activity. Physical activities such as exercise can reduce symptoms that arise before menstruation ends. Currently, the lack of physical activity in adolescents occurs because everything is digital-based which makes it easy and practical to do everything, for example remote control, computers, elevators and escalators. In addition, exercise that is too heavy can also cause disturbances in the physiology of the menstrual cycle (Prawiharjo, 2016).

The results of a study conducted in Turkey by Cakir M et al (2015) explained that dysmenorrhea is a menstrual disorder with the greatest prevalence (89.5%), followed by irregular menstrual cycles (31.2%) and long duration of menstruation (5.3%) which ranges from 8-10 days per cycle.

Objective(s): The aim of the study was to Relationship of Daily Physical Activity with the Duration of the Menstrual Cycle in Young Girls at Senior High School 1 Kedungdung of Sampang.

METHODS
Study Design
This type of research is an observational analytic study with a cross-sectional or cross-sectional study design which was conducted to determine the relationship between daily physical activity and the menstrual cycle in young women.

Setting
This research was conducted at Senior High School 1 Kedungdung of Sampang in January 2022.

Research Subject
The population of this study were all students of class XI and class XII at Senior High School 1 Kedungdung of Sampang, total 30 students, with sample of 27 students.

In this study the sampling technique used a non-probability sampling with a purposive and a criterion test (inclusion and exclusion) was carried out.

Instruments
For the independent variable Daily physical activity using the PAL questionnaire and the dependent variable the duration of the menstrual cycle using a questionnaire.

Data Analysis
The data analysis process in this study includes Editing, namely re-examining whether there are still questions that have not been answered by respondents, Coding, namely changing data in the form of sentences or letters into numeric or numeric data and Tabulating, namely making data tables, in accordance with the research objectives or what the researcher wants.

In this study using Chi-Square Test statistic. Analysis of the results of the Chi-
Square Test test, seeing from the results of this statistical test, it can be concluded that there is a significant or not significant relationship between the 2 variables.

**Ethical Consideration**

In this study, the researcher first gave informed consent to the respondent as a sign of approval to conduct the research by not including the respondent's name. Confidentiality of information provided by respondents guaranteed by researchers. Only certain data (mandatory) will be listed as research results.

The researcher asked permission from the school principal and also applied for permission to the research and community service division at Nazhatut Thullab Al-Muafa University, Sampang.

**RESULTS**

Table 1. Characteristics Respondent of Age

<table>
<thead>
<tr>
<th>Age (year)</th>
<th>Quantity</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>1</td>
<td>3.70</td>
</tr>
<tr>
<td>16</td>
<td>2</td>
<td>7.41</td>
</tr>
<tr>
<td>17</td>
<td>10</td>
<td>37.04</td>
</tr>
<tr>
<td>18</td>
<td>10</td>
<td>37.04</td>
</tr>
<tr>
<td>19</td>
<td>4</td>
<td>14.81</td>
</tr>
<tr>
<td>Total</td>
<td>27</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Based on the data in table 1, it can be seen that the age range of the respondents was between 15-19 years with the majority of respondents aged 17-18 years amounting to 20 people (74.08%).

Table 2. Daily Physical Activity

<table>
<thead>
<tr>
<th>Daily Physical Activity</th>
<th>Quantity</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light</td>
<td>12</td>
<td>44.4</td>
</tr>
<tr>
<td>Moderate</td>
<td>7</td>
<td>25.93</td>
</tr>
<tr>
<td>Severe</td>
<td>8</td>
<td>29.63</td>
</tr>
<tr>
<td>Total</td>
<td>27</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Based on data from table 2 it shows that almost half of the respondents had light physical activity as many as 12 people (44.44%).

Table 3. Menstrual Cycle

<table>
<thead>
<tr>
<th>Menstrual Cycle</th>
<th>Quantity</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>8</td>
<td>30</td>
</tr>
<tr>
<td>Abnormal</td>
<td>19</td>
<td>70</td>
</tr>
<tr>
<td>Total</td>
<td>28</td>
<td>100</td>
</tr>
</tbody>
</table>

Based on data from table 3 shows that almost all respondents had abnormal menstrual cycles as many as 23 people (85.19%).

Table 4. Relationship of Daily Physical Activity with Duration of The Menstrual Cycle

<table>
<thead>
<tr>
<th>Daily Physical Activity</th>
<th>Menstrual Cycle</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Normal</td>
</tr>
<tr>
<td>Light</td>
<td>3</td>
</tr>
<tr>
<td>Moderate</td>
<td>5</td>
</tr>
<tr>
<td>Severe</td>
<td>0</td>
</tr>
</tbody>
</table>

Based on data from table 4, it can be seen that young women have cycles normal menstruation as many as 8 female students (29.63%), while 19 adolescents (70.39%) had abnormal menstrual cycles. Of 27 teenagers with category of light physical activity that experienced an abnormal cycle as much as 9 female students (33.33%). In the category of moderate physical activity of 27 young women, who experienced menstrual cycle abnormalities as many as 2 female students (7.41%). On There are 8 people in the category of moderate physical activity and their menstrual cycle is not normal.

**DISCUSSION**

Based on the results of the respondent's data, the majority of respondents had light activity as many as 12 people (44.44%), had moderate activity as many as 7 people (25.93) and had heavy activity as many as 8 people (29.63%). The results of the independent variable study of physical activity and the menstrual cycle obtained a p value of 0.001, which means that there is a relationship between physical activity and the menstrual cycle in young women at Senior High School Kedungdung In Sampang where 9 female students (33.33%) had light activity and irregular menstrual cycles, while respondents with moderate physical activity and irregular menstrual cycles were 2 female students...
Almost half of the students at 12 students (44.44%) out of 27 students, are in the light activity category. Most of the respondents had irregular menstrual cycles, namely 19 female students (70.37) out of 27 female students. Based on the results of the study, physical activity and the menstrual cycle obtained a p value of 0.001, which means there is a relationship between physical activity and the menstrual cycle in young women.

**SUGGESTIONS**

For respondents need to adopt a healthier lifestyle such as doing regular physical exercise because this can also maintain reproductive health. For educational Institutions it is hoped that this can add references to the literature, especially regarding information related to the menstrual cycle and daily physical activity.

**ACKNOWLEDGMENT**

Thank you to the director of Kedungdung Senior High School in Sampang who have helped collect data from students.

**DECLARATION OF CONFLICTING INTEREST**

There is no conflict of interest.

**FUNDING**

Personal funding.

**AUTHOR CONTRIBUTION**

Author 1: Master of plan and collecting data
Author 2: Arrange the content and write the article
Author 3: Arrange the content

**ORCID**

Author 1: Faridatul Istibsarah
https://orcid.org/0000-0002-3528-4993

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doi:10.25077/jka.v5i3.570


doi:10.1017/CBO9781107415324.004


Cite this article as: Istibsaroh, F., et al. (2022). Relationship of Daily Physical Activity with Duration of The Menstrual Cycle in Adolescent Women at Senior High School 1 Kedungdung of Sampang. International Conference of Kerta Cendekia, 2 (1), 119-123.