THE INFLUENCE OF REPRODUCTIVE HEALTH EDUCATION ON ADOLESCENT GIRLS ON THE LEVEL OF KNOWLEDGE ABOUT DYSMENORRHEA

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ABSTRACT

Background: In adolescence there is a change called puberty. One of the signs of puberty in women is menstruation. As for disorders in menstruation, one of them is dysmenorrhea. Based on the Ministry of Health in 2020, the incidence of dysmenorrhea is 90% and in Central Kalimantan it is 63.64% Dysmenorrhea is caused by hormonal imbalance. One way to reduce the incidence of dysmenorrhea is to provide health education to adolescents.

Purpose: Identifying the effect of reproductive health education on adolescent girls on the level of knowledge about dysmenorrhea in SMPN 5 Selat Kelurahan Murung Keramat.

Methods: This research method is pre-experimental with a one group pretest posttest design. The sampling technique is purposive sampling, taken based on 30 criteria. Data analysis in research using marginal homogeneity test.

Results: The results of the study, pretest 10 people (33.3%) were categorized as good, 14 people (46.7%) were categorized as sufficient and 6 people (20.0%) were categorized as less. Posttest results, 23 people (76.7%) were categorized as good, 7 people (23.3%) were categorized as sufficient. The test result is the value of p value = 0.0001 where p <0.05 means influential.

Conclusion: There is an influence of reproductive health education on adolescent girls on the level of knowledge about dysmenorrhea at SMPN 5 Selat Kelurahan Murung Keramat Kapuas Regency.

Suggestions: It is hoped that more information can be provided about reproductive health, especially about dysmenorrhea, or add reading resources in the library to add insight to students, especially young women.

Keywords: Dysmenorrhea, Health education, Young Women
INTRODUCTION

Adolescence is the transition period from childhood to adulthood, this term indicates that the period from the beginning of puberty to the reach of maturity, usually starting from the age of 14 years in men and 12 years in women (Dewi & Yusri, 2023). Adolescence is divided into two, namely early adolescence and late adolescence (Octavia, 2020). The transition to adulthood varies from one culture to another, but is generally defined as the time during which individuals begin to act independently of their parents (Wood et al., 2017). Adolescence is a very important period of development in adolescence, which begins with the maturation of physical (sexual) organs so that later they will be able to reproduce (Permata, 2020) (de Azevedo et al., 2017). In adolescence there are changes that occur such as hormonal changes, physical changes, psychological and social changes, which is a period of puberty. One sign of puberty in adolescent girls is menstruation. All women expect a normal menstrual cycle, but there are still many of them who feel pain or pain during menstruation, this is called dysmenorrhea. Dysmenorrhea is caused by an imbalance of the hormone progesterone in the blood, prostaglandins and stress factors that can lead to dysmenorrhea (Salamah, 2019) (Núñez-Troconis et al., 2021).

According to WHO data in 2019 there were 1,769,425 people (50%) women experiencing dysmenorrhea (Sari & Hayati, 2020) (Ayuningtyas & Ratnawati, 2021). Meanwhile, data from the Ministry of Health in 2020 recorded the incidence of dysmenorrhea in Indonesia at 64.52% (Idaningsih et al., 2023). Based on data in the Central Kalimantan Health Profile, it was found that dysmenorrhea problems amounted to 63.64% (Bingan, 2021).

The problem of dysmenorrhea that occurs in adolescents is caused by the lack of knowledge of adolescents about dysmenorrhea itself (Pratiwi et al., 2022) (de Sanctis et al., 2020). This can be seen from the results of research conducted by Heni Marliany, Ima Sukmawati, Hani Septiani and Ade Siti Nurhidayah in 2022 in research conducted at SMA Negeri 2 Ciamis showing the results of adolescent knowledge research before being given Health Education with good categories as many as 10 female students (11.5%), sufficient categories as many as 19 female students (21.8%) and less categories as many as 58 female students (66.7%). So from the results of the study, it can be concluded that the knowledge of adolescent girls before being given Health Education is still lacking. The existence of health education can provide benefits in increasing insight, knowledge, and information that can increase adolescent knowledge. Given the low knowledge of adolescent girls about dysmenorrhea, providing health education is one of the right ways to increase knowledge (Marliany et al., 2022) (Frisclia, 2021).

The results of a preliminary study that researchers have conducted on November 9, 2023 at SMPN 5 Selat, female students have never received health education or health education, especially regarding dysmenorrhea. Furthermore, researchers conducted a simple discussion about knowledge about dysmenorrhea in 10 respondents, namely female students at SMPN 5 Selat. Based on answers from respondents that 70% of female students stated that they did not know about dysmenorrhea and had never received health education or reproductive health education, especially dysmenorrhea, and 30% of female students stated that they had been exposed to or heard information about dysmenorrhea. Based on the data that has been found and the importance of health education, especially dysmenorrhea for adolescent girls, the author is interested in conducting research on the Effect of Reproductive Health Education on Adolescent Women on the Level of Knowledge About Dysmenorrhea in SMPN 5 Selat Murung Keramat Village, Kapuas Regency.

RESEARCH METHODS

The research method used in this study is quantitative with a Pre-experimental design with One Group Pretest and Posttest design. This research was conducted at SMPN 5 Selat Kelurahan Murung Keramat Kapuas Regency. The population used in this study was all young women or all grade 7, 8 and 9 students at SMPN 5 Selat totaling 39 people. The sample used in this study was 30 respondents, this sampling was in accordance with the inclusion and exclusion criteria determined by the researcher.

The inclusion criteria in this research are teenagers who have menstruated, teenagers / female students at SMPN 5 Selat, willing to be respondents and take part in education provided by researchers and willing to take the pretest and posttest. And the exclusion criteria in this study were those who were not willing to be respondents, teenagers who had not experienced menstruation and did not participate in education provided by researchers and did not take part in the pretest and posttest.

The data collection instrument used in this study was a questionnaire that was distributed directly to respondents before being given an intervention or Pretest and after being given an intervention or Posttest which aimed to determine the level of knowledge before and after the intervention.
Data analysis in this study is univariate and bivariate analysis using the Marginal Homogeneity test. Marginal homogeneity testing is used to find out if there are differences between the two groups of interconnected data. Marginal homogeneity refers to the similarity between one or more rows of marginal proportions and columns of corresponding proportions (Kuniawan & Agustini, 2021) (Syahza & Riau, 2021).

**RESEARCH RESULTS**

**Table 1**

<table>
<thead>
<tr>
<th>Class/Grade</th>
<th>Boys</th>
<th>Girls</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>7th</td>
<td>8</td>
<td>11</td>
<td>19</td>
</tr>
<tr>
<td>8th</td>
<td>13</td>
<td>13</td>
<td>26</td>
</tr>
<tr>
<td>9th</td>
<td>12</td>
<td>15</td>
<td>27</td>
</tr>
</tbody>
</table>

**Table 2**

**Table 3**

Frequency Distribution of Knowledge Level Before Reproductive Health Education About Dysmenorrhea Based on Class at SMPN 5 Selat Murung Keramat Village

<table>
<thead>
<tr>
<th>Knowledge Level</th>
<th>7th Grade</th>
<th>8th Grade</th>
<th>9th Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F (%)</td>
<td>F (%)</td>
<td>F (%)</td>
</tr>
<tr>
<td>Good</td>
<td>2 25.0</td>
<td>3 23.1</td>
<td>5 55.6</td>
</tr>
<tr>
<td>Adequate</td>
<td>4 50.0</td>
<td>6 46.2</td>
<td>4 44.4</td>
</tr>
<tr>
<td>Less</td>
<td>2 25.0</td>
<td>4 30.8</td>
<td>0 0</td>
</tr>
</tbody>
</table>

Based on the table 3 above, data on the level of knowledge of adolescent girls based on class before being given an intervention or Pretest with the results of 8 students / young women grade 7 who have a good level of knowledge as many as 2 people (25.0%), 4 people (50.0%) have a sufficient level of knowledge and 2 people (25.0%) have a level of knowledge less. Of the 13 grade 8 students/young women who had a good category, only 3 people (23.1%), 6 people (46.2%) had a sufficient category and 4 people had a less category (30.8%). While grade 9 numbered 9 people, those who had knowledge with good categories amounted to 5 people (55.6%) and those who had knowledge with sufficient categories as many as 4 people (44.4%). From the table, it can be concluded that the higher level of knowledge before intervention is given is in grade 9.

**Table 4**

Frequency Distribution of Knowledge Level Before Reproductive Health Education About Dysmenorrhea Based on Age at SMPN 5 Selat Murung Keramat Village

<table>
<thead>
<tr>
<th>Knowledge Level</th>
<th>12 years old</th>
<th>13 years old</th>
<th>14 years old</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F (%)</td>
<td>F (%)</td>
<td>F (%)</td>
</tr>
<tr>
<td>Good</td>
<td>1 14.3</td>
<td>3 25.0</td>
<td>6 54.5</td>
</tr>
<tr>
<td>Adequate</td>
<td>4 57.1</td>
<td>5 41.7</td>
<td>5 45.5</td>
</tr>
<tr>
<td>Less</td>
<td>2 28.6</td>
<td>4 33.3</td>
<td>0 0</td>
</tr>
</tbody>
</table>

Based on the table 4 above, data on the level of knowledge of adolescent girls based on age before being given an intervention or Pretest with the results of 12 years old who have a good level of knowledge
amounting to 1 person (14.3%), have a sufficient level of knowledge as many as 4 people (57.1%), and those who have a level of knowledge less than 2 people (28.6%). At the age of 13 years who have a good level of knowledge there are 3 people (25.0%), who have a sufficient level of knowledge of 5 people and have a level of knowledge of less than 4 people (33.3%), while at the age of 14 years who have a good level of knowledge there are 6 people (54.5%), and those who have a sufficient level of knowledge are 5 people (45.4%).

### Table 5
Frequency Distribution of Knowledge Level After Reproductive Health Education About Dysmenorrhea in Young Women at SMPN 5 Selat Murung Keramat Village

<table>
<thead>
<tr>
<th>Knowledge Level</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good</td>
<td>23</td>
<td>76.7</td>
</tr>
<tr>
<td>Adequate</td>
<td>7</td>
<td>23.3</td>
</tr>
<tr>
<td>Less</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Based on the table 5 above, data on the level of knowledge of adolescent girls after intervention or Posttest were obtained with the results that 23 students / young women (76.7%) were categorized as having a good level of knowledge, and 7 students / young women (23.3%) were categorized as having a sufficient level of knowledge.

### Table 6
Frequency Distribution of Knowledge Level After Reproductive Health Education About Dysmenorrhea Based on Class at SMPN 5 Selat Murung Keramat Village

<table>
<thead>
<tr>
<th>Knowledge Level</th>
<th>7th grade</th>
<th>8th grade</th>
<th>9th grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good</td>
<td>5</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Adequate</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Less</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Based on table 6, data on the level of knowledge of adolescent girls based on class after being given an intervention or Posttest with the results of 8 students / young women in grade 7 who have a good level of knowledge as many as 5 people (62.5%), and 3 people (37.5%) have a sufficient level of knowledge. Of the 13 grade 8 students / young women who have a good category, 9 people (69.2%), and 4 people (30.8%) have sufficient categories. While grade 9 who has a sufficient level of category knowledge is 9 people (100%). From the table, it can be concluded that the higher level of knowledge after intervention is given in grade 9.

### Table 7
Frequency Distribution of Knowledge Level After Reproductive Health Education About Dysmenorrhea Based on Age at SMPN 5 Selat Murung Keramat Village

<table>
<thead>
<tr>
<th>Knowledge Level</th>
<th>12 years old</th>
<th>13 years old</th>
<th>14 years old</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good</td>
<td>4</td>
<td>8</td>
<td>11</td>
</tr>
<tr>
<td>Adequate</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Less</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Based on table 7, data on the level of knowledge of adolescent girls based on age after being given an intervention or Posttest with the results are at the age of 12 years who have a good level of knowledge totaling 4 people (57.1%), and those who have a sufficient level of knowledge as many as 3 people (42.9%). At the age of 13 years who have a good level of knowledge amounted to 8 people (66.7%), and those who had a sufficient level of knowledge amounted to 4 people (33.3%), while at the age of 14 years who had a good level of knowledge amounted to 11 people (100%).
Table 8
Results of Statistical Test of the Effect of Reproductive Health Education on Young Women on the Level of Knowledge About Dysmenorrhea at SMPN 5 Selat Murung Keramat Village

<table>
<thead>
<tr>
<th>Knowledge Level</th>
<th>Sebelum</th>
<th>Sesudah</th>
<th>P Value</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good</td>
<td>10 (33.3%)</td>
<td>23 (76.7%)</td>
<td>0.01</td>
<td>There Are Differences</td>
</tr>
<tr>
<td>Adequate</td>
<td>14 (46.7%)</td>
<td>7 (23.3%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less</td>
<td>6 (20.0%)</td>
<td>0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

From these data, statistical test results were obtained using the marginal homogeneity test with a p value = 0.0001 where p <0.05 which means statistically there is a difference or influence, so it can be concluded that reproductive health education affects the level of knowledge of adolescent girls about dysmenorrhea at SMPN 5 Selat Murung Keramat Village.

DISCUSSION
Level of Knowledge Before Reproductive Health Education About Dysmenorrhea in Young Women at SMPN 5 Selat Murung Keramat Village

Based on the table above, it can be concluded that the dominant age of 14 years has a level of knowledge with a good category. While at the age of 12 years and 13 years there are still many who have enough knowledge and lack. Based on the researchers' assumptions, this is due to the lack of knowledge of adolescent girls about reproductive health, especially about dysmenorrhea. Therefore, the existence of health education can provide benefits in increasing insight, knowledge, and information that can increase adolescent knowledge. Given the low knowledge among adolescent girls about dysmenorrhea, providing health education is one of the right ways to increase knowledge.

There is a study that states that there is no relationship between the age of respondents and how to handle dysmenorrhea, this study grouped the age of adolescents into 2 parts, namely adolescents aged less than 17 years where they are included in the middle age adolescent group, while adolescents aged more than 17 years are included in the late adolescent age group. Early stage adolescents (10-14 years) have only a vague understanding of them. They are unable to attribute their behavior to the consequences of that behavior. Middle-stage adolescents (15-16 years) struggle with feelings of dependency versus independence as peers take the place of parents. They have a greater tendency to show a wide variety of their emotions. Early and secondary stage adolescents learn and receive information but are unable to apply that information in their lives. The late adolescent (17-21 years) understands himself well and can clearly relate abstract information to his life (Marlia et al., 2020).

In adolescence, there is a lot of growth both in terms of physical and psychological and also reproductive organs so it is often referred to as the healthiest period of life. As a person ages, it will be followed by a transformation in physical and psychological aspects. The growth in the physical aspect can be seen by changes in size and shape as a result of the function of the organ that is maturing. While on the psychological aspect, there will be a change in the way of thinking. With increasing age, it will also be followed by more experience and knowledge gained so that it will affect the level of mental and intellectual maturity.

Level of Knowledge After Reproductive Health Education About Dysmenorrhea in Young Women at SMPN 5 Selat Murung Keramat Village

After conducting research where it was found that the highest level of knowledge is in adolescent girls aged 14 years and grade 9 which is because they enter the middle adolescent stage (Middle Adolescence) where at this stage their curiosity is great, have thoughts that have begun to mature, at this stage also intellectual development is getting better by knowing and starting to explore their abilities.

And adolescence is a period of rapid growth and development both physically, psychologically and intellectually. The unique nature of teenagers who have a high curiosity, like adventure and challenges and tend to dare to bear risks for the actions they do without careful consideration (Hapsari, 2019). After being given health education, students' knowledge increases. This is because reproductive health education, especially about dysmenorrhea in adolescents, is one strategy to increase adolescent knowledge about dysmenorrhea. This health education or education can have a good effect on the level of knowledge of adolescents (Meylawati & Anggraeni, 2021).

The information obtained by adolescents will affect the knowledge they have and also because of their level of education. Events that occurred privately in earlier times can also be an informal
source of knowledge. The level of knowledge of respondents is also influenced by age, that is, the more mature the age, the better their thinking ability will be.

The Effect of Reproductive Health Education on Young Women on the Level of Knowledge About Dysmenorrhea at SMPN 5 Selat Murung Keramat Village

From the results of research conducted at SMPN 5 Selat Murung Keramat Village on adolescent girls, after a Pretest, Intervention, then Posttest and then the data obtained were tested statistically, results were obtained with a value of p value = 0.0001 where p <0.05 which means there is an influence of reproductive health education on the level of knowledge of adolescent girls about dysmenorrhea. This research shows that the provision of health education has succeeded in increasing the knowledge of female students or young women at SMPN 5 Selat. Through health education, they get important information about reproductive health, especially dysmenorrhea that was not previously obtained from other sources. Basically, young women's curiosity about dysmenorrhea is very large, so that every information given by them can be received well and fulfill their curiosity during this time. Plus the provision of reproductive health education about dysmenorrhea which is delivered using video media containing interesting animations so that their curiosity increases. Health promotion is an effort to improve the ability of an individual or community through a learning process so that it is expected that someone can be able to maintain and improve their health status.

Health education affects adolescent attitudes about reproductive health. It is characterized by a change in attitude between before and after intervention in the form of health education. The results of this study are also in accordance with Rofi’ah S’s research that there was a change in adolescent attitudes between before and after being given health education from 50% less supportive attitudes to 94.1% having supportive attitudes (Rofi’ah, 2017). Based on the results of Agustina and Ulfa’s research, it is stated that there are differences in attitudes from before and after health education is given, where positive attitudes are higher than before health education was carried out (Agustina & Ulfa, 2014).

CONCLUSION

Based on the results of research and discussion conducted at SMPN 5 Selat Murung Keramat Village with a sample of 30 people regarding the Effect of Reproductive Health Education on Young Women on the Level of Knowledge About Dysmenorrhea at SMPN 5 Selat Murung Keramat Village, Kapuas Regency, the following results were obtained, Knowing the Frequency Distribution of Knowledge Level Before Reproductive Health Education About Dysmenorrhea Based on Class and Age at SMPN 5 Selat Murung Keramat Village. The Effect of Reproductive Health Education on Young Women on the Level of Knowledge About Dysmenorrhea at SMPN 5 Selat Kelurahan Murung Keramat. From the results of the marginal homogeneity test, results are obtained with a value of p value = 0.000 where p <0.05 which means statistically there are differences between variables. This states that there is an influence of reproductive health education on adolescent girls on the level of knowledge about dysmenorrhea in SMPN 5 Selat Murung Keramat Village.

SUGGESTIONS

It is hoped that more information can be provided about reproductive health, especially about dysmenorrhea, or add reading resources in the library to add insight to students, especially young women.

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Epidemiology Biostatistics and Public Health, 14(1). https://doi.org/10.2427/12156


