

The Relationship Between Menstrual Cycle And Nutritional Status With The Incidence Of Primary Dysmenorrhoea In Adolescent Girls In PKLK Junior High School Kaur District

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ABSTRACT

WHO says that 1,769,425 people (90%) of women experience dysmenorrhoea, 10-15% of whom experience severe dysmenorrhoea. Indonesia the incidence of dysmenorrhoea consists of 72.89% primary dysmenorrhoea and among women of productive age consists of 54.89% primary dysmenorrhoea. Data from Puskesmas Bintuhan Kaur Regency shows that primary dysmenorrhoea cases increase every year. The results of the initial survey at SMP PKLK Kaur Regency were conducted on 10 students, obtained 70% of students experiencing primary dysmenorrhoea. The purpose of the study was to determine the relationship between the menstrual cycle and nutritional status with the incidence of primary dysmenorrhoea in adolescent girls at SMP PKLK Kaur Regency. This research is a quantitative research using cross sectional study design. The number of samples in the study were 64 respondents. The analysis used was univariate and bivariate analysis with chi-square test. The results showed that most of the respondents experienced primary dysmenorrhoea by 53.1%, almost half of the respondents experienced an abnormal menstrual cycle by 43.8%, almost half of the respondents experienced abnormal nutritional status by 37.5%. There is a significant relationship between the menstrual cycle and the incidence of primary dysmenorrhoea ($p=0.020$) and there is no significant relationship between the menstrual cycle and the incidence of primary dysmenorrhoea ($P=0.093$) in adolescent girls at SMP PKLK Kaur Regency. It is hoped that further research can look at other risk factors using multivariate analysis.

INTRODUCTION

Reproductive health for a woman is a very important component. Women have a reproductive system that is very susceptible to disorders that can cause problems with their reproductive health. One of the problems that occurs in adolescent reproductive health during menstruation is dysmenorrhea or pain during menstruation (Sinaga, 2021) . Data from *the World Health Organization* (WHO) obtained 1,769,425 people (90%) of women who experienced dysmenorrhea, 10-15% of whom experienced severe dysmenorrhea. This is supported by research that has been conducted in various countries with surprising results, where the incidence of primary dysmenorrhea in each country was reported to be more than 50%. In Indonesia, the incidence of dysmenorrhea consists of 72.89% primary dysmenorrhea and 21.11% secondary dysmenorrhea and the incidence of dysmenorrhea ranges from 45-95% among women of productive age consisting of 54.89% primary dysmenorrhea. (WHO, 2022). (Pangestu, 2022). The impact of primary dysmenorrhea for adolescents includes pain felt in the stomach and back which causes discomfort so that learning activities at school are disrupted and excessive pain during menstruation can be a symptom of endometriosis which if not treated properly can lead to fertility or infertility (Fajarini et al., 2018).

Dhilon's 2021 study showed that the impact of primary dysmenorrhea was that 76.6% of female students did not attend school due to menstrual pain and 6% of students experienced a decline in academic achievement. Primary dysmenorrhea in adolescents must be treated with appropriate measures to avoid negative impacts that will arise. The symptoms of primary dysmenorrhea felt are pelvic or lower abdominal pain (generally lasting 8-72 hours), which spreads to the back and along the thighs, occurs before and during menstruation. In addition, it is not accompanied by an increase in the amount of menstrual blood and the peak of pain often occurs when the bleeding is still light (Laila, 2021).

The causes of dysmenorrhea are divided into primary dysmenorrhea and secondary dysmenorrhea. Secondary dysmenorrhea can be caused by endometriosis, fibroids, pelvic inflammatory disease, IUD, tumors in the fallopian tubes while the causes of primary dysmenorrhea are often associated with several things, including age <30 years, long menstrual cycles, heavy menstrual bleeding, psychological disorders, low body mass index status, long menstruation, family history of dysmenorrhea and age of menarche less than 12 years (Icemi, 2018). This study researchers conducted a study on the causes of primary dysmenorrhea. Age of menarche less than 12 years causes the uterus to contract more often, resulting in more prostaglandins being produced, causing pain and there is a relationship between age of menarche and dysmenorrhea. (Pundati, et al. 2019) Similar research was also conducted by Suarnisih, et al. in 2021 with the results that there was

a relationship between the age of menarche and the incidence of dysmenorrhea in adolescent girls. The next risk factor for primary dysmenorrhea is the length of menstruation related to dysmenorrhea because the longer the menstrual period, the longer the uterus contracts so that more prostaglandins are produced and ultimately can cause pain during menstruation (Mantolas, 2019). Research conducted by Hidayati in 2021, with the results of a relationship between the length of menstruation and the incidence of menstrual pain. Body mass index (BMI) is one of the risk factors for primary dysmenorrhea. Women with a low body mass index (BMI) can experience dysmenorrhea due to insufficient food intake, resulting in anemia which is one of the factors that can cause primary dysmenorrhea, while women who are overweight experience primary dysmenorrhea because the more fat, the more *prostaglandins* are formed, while increased *prostaglandins* in blood circulation are thought to be the cause of dysmenorrhea (Savitri, 2019). Research conducted by Arisani in 2019, with the results that there is a significant relationship between BMI and the incidence of dysmenorrhea. Furthermore, Dewi's research in 2021 showed that there is a relationship between nutritional status and the incidence of primary menstrual pain with the highest incidence of dysmenorrhea occurring in respondents with overweight nutritional status, namely 15 respondents and the least occurring in respondents with normal nutritional status. A history of dysmenorrhea in the family is one of the risk factors that can increase the likelihood of primary dysmenorrhea. Research conducted by Hidayati in 2021, with the results of a relationship between the length of menstruation and the occurrence of menstrual pain related to genetic factors that pass on traits to their offspring, one of which is duplicating itself so that during cell division the genetics will duplicate itself so that the mother's traits can be passed on to her offspring. Two out of three women who suffer from dysmenorrhea have a history of dysmenorrhea in their family (Fatmawati and Aliyah, 2020). Research by Harahap et al. (2021) found that out of 104 respondents of childbearing age (15-30 years), 71% of respondents experienced primary dysmenorrhea.

The results of the study concluded that family history influences the incidence of dysmenorrhea. Meanwhile, variables that do not affect dysmenorrhea are age of menarche and duration of menstruation. Based on data from the Bintuhan Health Center, Kaur Regency in 2020, it showed that there were 34 cases of dysmenorrhea, 26 cases in 2021, and there was an increase in cases in 2022 of 37 cases. The results of an initial survey at SMP PKLK Kaur Regency were conducted on 10 female students, it was found that 70% of female students experienced dysmenorrhea, there were 5 female students who had menstruation at the age of less than 12 years. The complaints experienced by female students were abdominal pain, nausea, and frequent dizziness, as well as irregular menstruation. Junior high school students are at the age of adolescence who are starting to lose confidence with their excess weight, so they start to reduce their food consumption that they only consume snacks.

RESEARCH METHODS

Univariate analysis

Univariate analysis aims to explain or describe the characteristics of each research variable. In this analysis produces the frequency distribution and percentage of each variable.

The data was taken descriptively using the following formula:

$$P = \frac{F}{N} \times 100\%$$

Information :

P : The percentage amount sought.

F : Frequency of correct answers.

N : Number of knowledge items.

From the formula above, the proportions obtained in the form of percentages are interpreted using the scale: (Arikunto, 2009).

0% : None of the respondents

1% - 25% : A small portion of respondents

26% - 49% : almost half of the respondents

50% : Half of the respondents

51% - 75% : Most of the respondents

76% - 99% : Almost all respondents

100% : all respondents

Bivariate analysis

Bivariate analysis is conducted on 2 variables that are suspected to be related or correlated. In addition to univariate analysis, the resulting data is also analyzed bivariately between the independent

variable and the dependent variable with the *Chi-Square test*. To see the significance of the statistical calculation, a significance limit of 5% is used. Looking at the results of this statistical test, it can be concluded that the relationship between the 2 variables is meaningful or not meaningful. From the results of this statistical test, it can happen, for example, between the 2 variables in terms of percentage, they are related but statistically the relationship is not significant. The conclusion of the level of significance can be made if the results are as follows:

1. P value ≤ 0.05 means there is a meaningful relationship between the independent variable and the dependent variable.
2. P value > 0.05 means there is no significant relationship between the independent variable and the dependent variable.

RESULTS

Univariate Analysis

Univariate analysis was conducted to see the frequency distribution of each variable. The frequency distribution analysis is presented in a table accompanied by a narrative.

Frequency Distribution of Dysmenorrhea Occurrence

Table 1 Frequency Distribution of Primary Dysmenorrhea Incidents in Adolescent Girls at PKLK Middle School, Kaur Regency in 2023

Dysmenorrhea Occurrence	Frequency (n)	Percentage (%)
Primary Dysmenorrhea	34	53.1
No Primary Dysmenorrhea	30	46.9
Amount	64	100.0

Table 1 shows that of the 64 respondents, the majority of respondents experienced primary dysmenorrhea, namely 34 respondents (53.1%).

Distribution of Menstrual Cycle Frequency

Table 2 Distribution of Menstrual Cycle Frequency in Adolescent Girls at PKLK Middle School, Kaur Regency in 2023

Menstrual Cycle	Frequency (n)	Percentage (%)
Abnormal	28	43.8
Normal	36	56.2
Amount	64	100.0

Table 2 shows that of the 64 respondents, almost half of the respondents experienced an abnormal menstrual cycle, as many as 28 respondents (43.8%).

Frequency Distribution of Nutritional Status

Table 3 Frequency Distribution of Nutritional Status in Adolescent Girls at PKLK Middle School, Kaur Regency in 2023

Nutritional status	Frequency (n)	Percentage (%)
Abnormal	24	37.5
Normal	40	62.5
Amount	64	100.0

Table 3 shows that of the 64 respondents, almost half of the respondents experienced abnormal nutritional status, as many as 24 respondents (37.5%).

Bivariate Analysis

Bivariate analysis aims to determine the relationship between independent variables and dependent variables, using the Chi-square test by paying attention to the *p value* < 0.05 which indicates the significance of the variable.

Relationship between Menstrual Cycle and the Occurrence of Primary Dysmenorrhea
Table 4 Relationship between Menstrual Cycle and the Incidence of Primary Dysmenorrhea in PKLK Middle Schools, Kaur Regency in 2023

Menstrual Cycle	Occurrence of Primary Dysmenorrhea						<i>p</i>
	Dysmenorrhea		No Dysmenorrhea		Total		
	n	%	n	%	n	%	
Abnormal	20	71.4	0	28.6	28	100.0	0.020
Normal	14	38.9	2	61.1	36	100.0	
Total	34	53.1	0	46.9	64	100.0	

Table 4 shows that out of 28 respondents who had an abnormal menstrual cycle, 20 respondents (71.4%) experienced primary dysmenorrhea. Meanwhile, out of 14 respondents who had a normal menstrual cycle, 2 respondents (14.3%) experienced primary dysmenorrhea. *Chi Square Test on Continuity Correction* showed that there was a significant relationship between the menstrual cycle and the incidence of primary dysmenorrhea in female adolescents at PKLK Middle School, Kaur Regency ($p = 0.020 < (\alpha = 0.05)$).

Relationship between Nutritional Status and the Incidence of Primary Dysmenorrhea
Table 5 Relationship between Nutritional Status and the Incidence of Primary Dysmenorrhea at PKLK Middle Schools, Kaur Regency in 2023

Nutritional status	Occurrence of Primary Dysmenorrhea						<i>p</i>
	Dysmenorrhea		No Dysmenorrhea		Total		
	n	%	n	%	n	%	
Abnormal	9	37.5	5	62.5	24	100.0	0.093
Normal	25	62.5	5	37.5	40	100.0	
Total	34	53.1	30	46.9	64	100.0	

Table 5 shows that out of 24 respondents who had abnormal nutritional status, 9 respondents (37.5%) experienced primary dysmenorrhea. Meanwhile, out of 40 respondents who had normal nutritional status, 5 respondents (12.5%) experienced primary dysmenorrhea. *Chi Square Test on Continuity Correction* showed that there was no significant relationship between nutritional status and the incidence of primary dysmenorrhea in female adolescents at PKLK Middle School, Kaur Regency ($p = 0.093 > (\alpha = 0.05)$).

DISCUSSION

Univariate Analysis

Frequency Distribution of Dysmenorrhea Occurrence

The results of this study indicate that out of 64 respondents, most of the respondents experienced primary dysmenorrhea, as many as 34 respondents (53.1%). This study is in line with the results of Uswatun HT's study, 2019, which showed that out of 75 respondents, 30 respondents (40.0%) did not experience *dysmenorrhea* and 45 respondents (60.0%) experienced *dysmenorrhea*. The results of Wahyu Aksari's research in 2022 showed The results almost all female adolescents experience dysmenorrhea.

The reason female students experience dysmenorrhea is that when they get their period they experience lower abdominal pain, 20 people said that on the first day of menstruation they often feel dizzy and nauseous, 24 people said that menstruation was accompanied by lower abdominal pain accompanied by dizziness and 2 others said that on the first day of menstruation it was accompanied by lower abdominal pain and vomiting. Dysmenorrhea is abdominal pain that comes from uterine cramps and occurs during menstruation due to the peeling of the endometrium. Pain usually spreads to the thighs and waist. Pain can be caused by continuous contractions of the abdominal muscles when bleeding. These very frequent contractions then cause the muscles to tense (Dwihestie, 2018) The results of this study are in line with research conducted Margaret and Dash (2016) in India concluded that dysmenorrhea in adolescent girls was 73%. Menstrual pain occurs because in adolescence the reproductive organs are not yet functioning optimally and are not ready to undergo

changes, resulting in pain during menstruation. The intensity of pain will decrease with age. This is thought to occur due to nerve deterioration due to aging.

Distribution of Menstrual Cycle Frequency

The results of this study indicate that out of 64 respondents, almost half of the respondents experienced an abnormal menstrual cycle of 28 respondents (43.8%). This study is in line with the results of Uswatun HT's study, 2019, which showed that out of 75 respondents, 38 respondents (50.7%) experienced a menstrual cycle of <35 days and 37 respondents (49.3%) experienced a menstrual cycle = 35 days. The results of research conducted in class X of SMA Negeri 15 Bandar Lampung in 2020 it was found that there were 32.1% (34 female students) with normal menstrual cycles, 67.9% (72 female students) with an abnormal menstrual cycle. This research is in accordance with Siti's statement (2016), the menstrual cycle is calculated from the first day menstruation until exactly the first day of menstruation the following month.

The menstrual cycle is between one woman is not the same as another woman. This means that the cycle varies, namely from 18 to 40 days and an average of 28 days. However, only about 10-15% of women have a 28-day cycle. Meanwhile, a normal menstrual cycle occurs every 21-35 days, with a day length of Menstruation lasts about 3-7 days. According to expert calculations, women will experience 500 periods of menstruation during his life. Researchers assume that the menstrual cycle occurs periodically every 28 days (sometimes every 21-35 days). days) namely on days 1-14 there is growth and development of primary follicles which are stimulated by FSH hormone. The length of menstruation can be influenced by dysmenorrhea or other symptoms such as premenstrual syndrome. Menstrual bleeding disorders can cause pathological risks if associated with large amounts of blood loss, disrupting daily activities, and indications of ovarian incompatibility at the time of conception or the presence of signs of cancer (Kusmiran, 2014).

The general concept of menstrual dysfunction is the occurrence of disturbances in the bleeding pattern. menstruation such as *menorrhagia* (heavy and prolonged bleeding), *oligomenorrhea* (menstruation that is rare), *polymenorrhea* (frequent menstruation), *amenorrhea* (no menstruation at all). This menstrual dysfunction is based on the function of the ovaries related to anovulation and disorders luteal phase. This ovarian dysfunction can cause menstrual pattern disorders (Kusmiran, 2014).

Frequency Distribution of Nutritional Status

The results of this study indicate that out of 64 respondents, almost half of the respondents experienced abnormal nutritional status, as many as 24 respondents (37.5%). This study is in line with the results of Uswatun HT's study, 2019, which showed that out of 75 respondents, 49 respondents (65.3%) had normal nutritional status and 26 respondents (34.7%) had abnormal nutritional status. The results of Wahyu Aksari's 2022 study found that most young women have a normal BMI. The normal category is a BMI ranging from 18.5 to 25. This is supported by research by Barcikowska, et al that the majority of women who participated in their study had a BMI of 18.5-24.9 kg/m². This value is a normal weight and only a few respondents have a BMI indicating overweight or overweight (Barcikowska et al, 2020).

According to Sibagariang et al (2010), adolescents with nutritional status in the category of overweight and obesity will affect growth and reproductive function. This will have an impact on menstrual disorders including dysmenorrhea, but will improve if nutritional intake is good. This study is in line with Helwa's study (2018) that the majority of participants, 75.4%, had a normal BMI. Women who are overweight have twice the risk of experiencing menstrual pain than women with normal weight. While poor nutritional status can worsen dysmenorrhea (Anurogo and Wulandari 2011). Nutritional status or is said to be good, if the nutrients needed, both protein, fat, carbohydrates, minerals, vitamins and water are used by the body according to needs. Poor or limited nutrition will also affect.

Bivariate Analysis

Relationship between Menstrual Cycle and Dysmenorrhea

The results of this study indicate that there is a significant relationship between the menstrual cycle and the incidence of primary dysmenorrhea in adolescent girls at SMP PKLK Kaur Regency ($p = 0.020$) < ($\alpha = 0.05$). This study is in line with the results of other studies that the menstrual cycle has a *sig-p value* of $0.009 < 0.05$, meaning that the menstrual cycle has a significant effect on *dysmenorrhea* in adolescent girls. (Uswatun HT, 2019) This study is also in line with the study conducted by Agustin in 2017 on the Relationship between Menarche Age and Dysmenorrhea in Adolescent Girls, showing that the menstrual cycle regularity group of the respondents studied was

mostly those with regular menstrual cycles of 52 people (55%) and the rest were irregular as many as 42 people (45%). Menstruation is a characteristic of a woman where there are cyclic changes in her reproductive organs in preparation for pregnancy. (A Gustin K, Cahyaningtyas AY., 2019) This study is in line with the study conducted by Juliana in 2019 on the Relationship between Dysmenorrhea and Menstrual Cycle Disorders in Adolescents showing that the Chi Square test with a confidence level of 95% ($\alpha = 0.05$), found a p value = 0.023, which means $p < \alpha = 0.05$ there is a significant relationship between dysmenorrhea and menstrual cycle disorders in adolescents. (Juliana I., 2019) The menstrual cycle is the time from the first day of menstruation until the next menstrual period. Menstrual cycle disorders are problems that occur in women's menstrual cycle patterns, including polymenorrhea (<20 days), oligomenorrhea (>35 days), and amenorrhea (>3 months). Menstrual cycle disorders are problems that are often complained about by adolescents, in addition, other complaints complained about by adolescents are dysmenorrhea or menstrual pain. Menstrual pain or dysmenorrhea is a gynecological complaint due to an imbalance of the hormone progesterone, resulting in pain experienced by women. (Nasrawati, 2020)

According to research assumptions, it shows that the menstrual cycle has an influence on *dysmenorrhea* in adolescent girls. The high incidence of dysmenorrhea and menstrual cycle disorders in adolescent girls can have an impact on various aspects of a teenager's life, for example, dysmenorrhea with a severe pain scale can inhibit daily activities including learning activities, which can also affect adolescent learning achievement. Menstrual cycles that are more than 35 days can experience *dysmenorrhea*. The longer the menstrual cycle, the more the reproductive organs always contract and the more prostaglandins will be released, which will cause pain during menstruation. Menstrual cycle disorders that are also experienced by adolescents can cause anxiety related to reproductive organ health problems, with various assumptions that can arise, lack of exposure to information about reproductive health and menstruation can also be the cause of anxiety that occurs related to menstrual disorders experienced by adolescents.

Relationship between Nutritional Status and the Incidence of Dysmenorrhea

The results of this study indicate that there is no significant relationship between nutritional status and the incidence of primary dysmenorrhea in adolescent girls at SMP PKLK Kaur Regency ($p = 0.093$) > ($\alpha = 0.05$). This study is in line with the results of other studies that nutritional status has a *sig-p value* of 0.118 > 0.05, meaning that nutritional status does not have a significant effect on *dysmenorrhea* in adolescent girls. (Uswatun HT, 2019) This study is in line with the study conducted by Utari in 2016 on the Relationship Between Nutritional Status and the Incidence of Dysmenorrhea in Female Students, showing that the results of the *Gamma Correlation and Somers'd Correlation analysis*, the *Somers'd* correlation coefficient value was -0.176 with a significance level (*pvalue*) of 0.097, so it was concluded that there was no relationship between nutritional status and the incidence of *dysmenorrhea* in female students. (Utari N., 2020) study is not in line with the study conducted by Novita in 2018 on the Relationship between Nutritional Status and Menstrual Disorders in Adolescent Girls, showing that 60.20% of respondents experienced menstrual disorders.

Most respondents experienced menstrual disorders in the form of *Premenstrual Syndrome (PMS)* and dysmenorrhea, each at 30%. For nutritional status, there are still adolescent girls who have poor nutritional status, namely 27.55% and over-nutritional status of 16.33%. Based on the statistical test conducted, the results obtained showed that there was a significant relationship between nutritional status and the incidence of menstrual disorders ($p = 0.035$). (Novita R., 2018) Nutritional status is one of the factors of primary *dysmenorrhea*. Being overweight can cause primary *dysmenorrhea*, because in the body of people who are overweight there is excessive fat tissue which can cause hyperplasia of blood vessels (blood vessels being squeezed by fat tissue) in the female reproductive organs so that the blood that should flow during the menstrual process is disrupted and primary *dysmenorrhea occurs*. For normal growth, a teenage girl needs adequate nutrition, energy, protein, fat, and a supply of all the nutrients that are the basis of growth. Highly nutritious and high-fat foods that come from animals cause weight gain in teenage girls, so that estrogen levels increase.

This increased hormone level affects the age of menarche. Nutritional status is said to be good if the nutrients used by the body are in accordance with needs. (Lestari NMSD., 2018). High-nutrition and high-fat foods will cause weight gain in adolescent girls. This will be accompanied by increased cholesterol content. Excess cholesterol can be a precursor to the hormone estrogen. In adolescent girls with higher nutritional status, menstrual disorders can occur. This occurs along with increased estrogen production. Apart from the ovaries, estrogen will also be produced by adipose tissue. The increase in estrogen causes an increase in androgen hormones which can interfere with follicle development so that follicle maturity does not occur. In addition, increased estrogen can also stimulate the hypothalamus and pituitary gland so that the production of *luteinizing hormone (LH)*

increases. LH that comes out too quickly can cause *hyperandrogenism*, low *testosterone* levels so that ovulation does not occur. (Sitoayu L, Pertiwi DA, Mulyani EY., 2022) According to the researcher's assumption, nutritional status has no effect on *dysmenorrhea*.

However, in fact, the fulfillment of nutritional needs can also affect dysmenorrhea. During menstruation, the estrogen hormone increases and the progesterone hormone decreases, which will cause the formation of prostaglandins. Abnormal nutritional status will affect these reproductive hormones. When prostaglandins increase, they cause vasospasm in the uterine arterioles which causes ischemia and cramps in the lower abdomen, causing pain. Adolescent girls with good nutritional status and maintaining ideal body weight will reach puberty normally, experience menstruation normally and without disturbance. The existence of such conditions will support young women in relation to reproduction in the future. The function of the reproductive system can be improved by maintaining nutritional status. Improvement of nutritional status can be done by improving the quality of food consumed. Types of food that affect reproductive function include foods with folic acid, iron, vitamin C, vitamin E, vitamin B6, zinc, aluminum and calcium. These nutrients are abundant in nuts, green vegetables, fruits, meat and also sea fish.

CONCLUSIONS AND RECOMMENDATIONS

Based on the research results, the following conclusions can be drawn:

1. Most of the respondents experienced primary dysmenorrhea in adolescent girls at the PKLK Middle School in Kaur Regency.
2. Almost all of the respondents experienced an abnormal menstrual cycle in adolescent girls at the PKLK Middle School in Kaur Regency.
3. Almost all of the respondents experienced abnormal nutritional status in adolescent girls at the PKLK Middle School in Kaur Regency.
4. There is a significant relationship between the menstrual cycle and the incidence of primary dysmenorrhea in adolescent girls at PKLK Middle School, Kaur Regency.
5. There is no significant relationship between nutritional status and the incidence of primary dysmenorrhea in adolescent girls at PKLK Middle School, Kaur Regency.

Recommendations

Based on the research results, the researcher would like to provide suggestions to several related parties, including:

1. For PKLK Middle Schools in Kaur Regency
It is expected that counseling and education will be carried out for junior high school students about the importance of managing primary dysmenorrhea. This can prevent more severe dysmenorrhea for junior high school students.
2. For Universities
The university should carry out follow-up activities from the results of this research, such as conducting community service at SMP PKLK Kaur Regency.
3. For Further Researchers
The researcher realizes that this study only looked at the aspects of the menstrual cycle and nutritional status. For further research, other risk factors can be looked at using multivariate analysis to determine the factors that have the most influence on the occurrence of primary dysmenorrhea in adolescent girls.

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