

The Effect of Health Education on the Knowledge of Class XI Adolescent Girls About Dysmenorrhea at SMAN 2 Cimalaka Sumedang Regency

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ABSTRACT

Menstruation is the process of blood discharge from the uterus that occurs due to the shedding of the inner uterine wall which contains many blood vessels and unfertilized eggs, Dysmenorrhea is abdominal pain in the lower part that generally occurs before or during menstruation. This study aims to determine the effect of Health Education on dysmenorrhea. The type of research used is pre-experiment with one group pretest-posttest design. The sample in this study is all grade XI young women at SMAN 2 Cimalaka, Sumedang Regency in 2024. A total of 88 people (total sampling) will be held on April 26, 2024 at the Hall of SMAN 2 Cimalaka. Univariate analysis uses a central tendency distribution and bivariate analysis uses paired t-tests. The results showed that the average knowledge of adolescent girls about dysmenorrhea before Health Education was 57.70 and after Health Education was 92.16. Providing Health Education is one of the efforts to increase knowledge both using electronic media and social media. There is an influence of Health Education on the knowledge of grade XI adolescent girls about dysmenorrhea at SMAN 2 Cimalaka, Sumedang Regency in 2024 with a value of $\rho = 0.000$ or $\alpha < 0.05$. As for suggestions for respondents to be more active in seeking health information both from social media, electronics and so on to add insight and know how to handle dysmenorrhea, for educational institutions and health workers need to work together to hold health education activities regarding dysmenorrhea

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INTRODUCTION

According to the World Health Organization (WHO) definition, adolescence is the age range from 10 to 19 years. It is a transitional phase in which individuals are between childhood and adulthood, with various changes in terms of physical, behavioral, cognitive, biological, and emotional (WHO, 2020). Pubertal development is where the age of an individual merges with adulthood. During puberty, several hormones, especially estrogen and progesterone, begin to play an active role, resulting in changes in the female body. These

changes include: Enlarged breasts, widened hips, and many more. In addition, women who enter puberty also experience menstruation (Fatkhiyah, Masturoh and Atmoko, 2020).

Menstruation or menstruation is a phenomenon in which blood comes out of the uterus because the uterine lining, which is rich in blood vessels and unfertilized eggs, is released. The uterus undergoes thinning and sloughing, so blood is expelled through the female reproductive tract (Astuti, 2023). The menstrual cycle usually lasts between 21 to 35 days with the volume of blood lost ranging from 10 to 80ml each day. Menstruation usually lasts 2 to 7 days, but this varies from individual to individual. The age at which a woman experiences her first menstrual period is called menarche, and this usually occurs between the ages of 9 and 16, but can vary from person to person. Women often experience physical and emotional changes during menstruation, such as abdominal pain (dysmenorrhea), cramps, mood changes, increased breast sensitivity. Some women may experience symptoms of headaches to fatigue (Narsih, Rohmatin and Widayati, 2021).

Menstruation is one of the important indicators of reproductive health in women. Regular menstrual cycles without excessive symptoms are generally considered a sign of good reproductive health. Menstruation plays an important role in family planning. Ovulation occurs in the middle of the menstrual cycle when an egg is released and can be fertilized. Dysmenorrhea or menstrual pain, is a symptom of pain or discomfort experienced by most women during or before menstruation (Endyka, 2019).

Dysmenorrhea is also known as lower abdominal pain, according to the world health organization (WHO). Primary dysmenorrhea usually starts 1-2 days before menstruation and lasts for 2-4 days. In general, dysmenorrhea or menstrual pain is not considered a dangerous condition, according to medical experts (WHO, 2020). Dysmenorrhea is a physiological symptom that most women experience during their menstrual cycle. However, many medical experts recognize that dysmenorrhea can have a significant impact on the quality of daily life and mental health of some people (Arini, 2020).

The National Institute for Health and Care Excellence (NICE) recognizes that dysmenorrhea is usually functional and not considered a serious illness, but can have a negative impact on quality of life. However, dysmenorrhea can affect women's daily activities and quality of life, but is generally not considered a dangerous condition (Waluyo *et al.*, 2022).

The high incidence of dysmenorrhea greatly affects the quality of life of adolescent girls, hindering their daily activities, especially in the field of education. Dysmenorrhea is a major cause of decreased overall well-being, leading to limitations in daily activities and frequent school absences (Wibowo and Nadhilah, 2020).

Participating in learning activities at school while experiencing dysmenorrhea has the potential to hinder the learning process of adolescent girls, causing a decrease in concentration and enthusiasm for learning. This, in turn, may impact on their ability to engage effectively with learning materials. In addition, some young women may even choose not to attend school at all, resulting in decreased academic and non-academic achievement (Susanti, 2017).

There are several methods to treat dysmenorrhea, both through drug and non-drug treatment. Drug treatment includes the administration of analgesics, hormonal therapy, and the use of NSAIDs. Meanwhile, non-drug approaches include using warm water compresses, exercising, doing yoga, massage, deep breath relaxation techniques, and so on (Nova *et al.*, 2023).

World Health Organization (WHO) in 2020, the incidence of dysmenorrhea in women reached 1,769,425, with 90% of them experiencing this condition. Of these, approximately 10-16% experience severe dysmenorrhea, indicating a significant incidence rate worldwide. More than half of women, more than 50%, experience generalized dysmenorrhea (WHO, 2020). In Indonesia, the prevalence of dysmenorrhea reached 64.25%, with 54.89% experiencing primary dysmenorrhea and 9.36% experiencing secondary dysmenorrhea (Kementerian Kesehatan RI, 2023).

In West Java, a study revealed that 54.9% of women experienced dysmenorrhea. Among them, 24.5% reported mild dysmenorrhea, 21.28% experienced moderate dysmenorrhea, and 9.36% suffered from severe dysmenorrhea. The incidence rate with dysmenorrhea in Sumedang Regency has not been documented by the Sumedang Regency Health Office in 2023. To address the gap, the researcher conducted a preliminary study at SMAN 2 Cimalaka. The findings showed a low incidence of dysmenorrhea in adolescent girls in the class, with a significant percentage having knowledge about the benefits of warm compress therapy (Dinas Kesehatan Provinsi Jawa Barat, 2023).

With comparative data in class X, the results of the preliminary study were 15 people and the results showed that those who experienced dysmenorrhea with mild categories were 7 people (46.7%), moderate pain was 5 people (33.3%), to severe pain was 3 people (20%), with knowledge about warm compress therapy with good dysmenorrhea incidence. Comparison data in class XII as many as 15 people obtained data as many as 10 people (75%) experienced moderate dysmenorrhea and 5 people (25%) were only limited to mild pain. With knowledge about warm compress therapy with very good dysmenorrhea incidence.

The effect of health education on the knowledge of female students about dysmenorrhea at MA- Al-Ishlah Persis 92 Majalengka in 2023. The results of this study indicate that the average knowledge of adolescent girls before being given a health education program is 65.65 with sufficient knowledge category, after being given health education about dysmenorrhea increased by 88.11 including the good knowledge category (Saputri, Astuti and Rizky, 2022).

The American College of Obstetricians and Gynecologists (ACOG) recommends the use of heat therapy or warm compress therapy as an option to reduce pain intensity in dysmenorrhea. They mentioned that local application of heat can provide assistance in overcoming pain. Based on the case study, the researcher is interested in examining "The Effect of Health Education on the knowledge of class XI adolescent girls about dysmenorrhea at SMAN 2 Cimalaka in 2024.

METHODS

The type of research used in this study is a pre-experiment with a one-group pretest-posttest design. This study focuses on two variables, namely the effect of health education on the level of knowledge of adolescent girls about dysmenorrhea. The population in this study was class XI students of SMAN 2 Cimalaka, Cimalaka District, Sumedang Regency as many as 88 people and the sample was 88 people or total sampling. The data were collected using questionnaires. Data analysis included univariate analysis with frequency distribution and bivariate analysis with chi square test.

RESULTS AND DISCUSSION

Research that has been conducted to determine the effect of health education on the knowledge of class XI adolescent girls about dysmenorrhea that has been carried out at SMAN 2 Cimalaka Sumedang Regency with 88 respondents.

Table 1 Central Tendency Distribution of Knowledge Of Class XI Adolescent Girls About Dysmenorrhea Before Being Given Health Education At SMAN 2 Cimalaka Sumedang Regency

Adolescents' Knowledge of Dysmenorrhea	Mean Median	S.D	Minimal- Maximal	95% CI
Before Health Education	57,70 56,00	10,32	34-78	55,52- 59,89

The average knowledge of grade XI adolescent girls about dysmenorrhea before being given a health education program is 57.70 with a median of 56.00, the standard deviation is 10.32. Based on the 95% CI value, it is believed that 95% of the knowledge of grade XI adolescent girls about dysmenorrhea before health education at SMAN 2 Cimalaka, Sumedang Regency ranged from 55.52-59.89.

Table 2 Central Tendency Distribution Of Class XI Adolescent Girls' Knowledge About Dysmenorrhea After Being Given Health Education At SMAN 2 Cimalaka Sumedang Regency

Adolescents' Knowledge of Dysmenorrhea	Mean Median	S.D	Minimal- Maximal	95% CI
After Health Education	92,16 94,00	7,55	67-100	90,56- 93,76

The average knowledge of grade XI adolescent girls about dysmenorrhea before being given a health education program is 57.70 with a median of 56.00, the standard deviation is 10.32. Based on the 95% CI value, it is believed that 95% of the knowledge of grade XI adolescent girls about dysmenorrhea before health education at SMAN 2 Cimalaka, Sumedang Regency in 2024 ranged from 55.52-59.89.

Table 3 The Effect of Health Education on the Knowledge of Class XI Adolescent Girls About Dysmenorrhea at SMAN 2 Cimalaka Sumedang Regency

Adolescent girls' knowledge about	Mean	Mean	N	t	P
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The Effect of Health Education on the Knowledge of Class XI Adolescent Girls About Dysmenorrhea at SMAN 2 Cimalaka Sumedang Regency—Tresna Komalasari et.al

dysmenorrhea		Difference		Value
Before Health Education	57,70			
After Health Education	92,16	34,46	88 29,186	0,000

There was a significant difference in the knowledge of grade XI adolescent girls regarding dysmenorrhea before and after receiving health education. Previously, their average knowledge was 57.70, which increased to 92.16 after receiving health education, with a difference of 34.46. The statistical test using paired t-test showed a p value of 0.000, which is significantly smaller than 0.05. This shows that health education has a significant effect on the knowledge of grade XI adolescent girls about dysmenorrhea at SMAN 2 Cimalaka, Sumedang Regency.

Based on the results of the study, it is proven that there is an effect of health education on the knowledge of adolescent girls in class XI regarding dysmenorrhea at SMAN 2 Cimalaka, Sumedang Regency, in 2024, with a value of $p = 0.000$ or $\alpha > 0.05$. This indicates that there is a significant effect of health education on the knowledge of grade XI adolescent girls about dysmenorrhea at SMAN 2 Cimalaka, Sumedang Regency, in 2024.

Adolescent girls' knowledge about dysmenorrhea will affect how they deal with the condition. Adolescent girls tend to be able to accept well or positively any complaints and symptoms they experience if they are given accurate and appropriate information. Conversely, a lack of correct knowledge may cause them to feel excessive stress and anxiety when dealing with dysmenorrhea symptoms, which could then lead to a negative attitude. Therefore, providing accurate and complete information to adolescent girls about dysmenorrhea is important (Djama, 2018).

The lack of knowledge was due to the fact that most of the girls did not have sufficient understanding about dysmenorrhea, moreover, the use of media such as leaflets and PowerPoint presentations in the health education program encouraged the girls to be more active in asking questions and seeking information about dysmenorrhea, which in turn helped them to better understand the condition either through health education at school or other media. In addition, the reluctance of adolescent girls to seek information and their tendency to shut down and lack of openness in receiving information also played a role in this (Karmila, Hermanto and Rosela, 2024).

Health education is an effort to influence individuals, provide assistance, and protection so that they have the ability to behave in accordance with expectations. The effectiveness of health education is influenced by several factors, including motivation to learn, the ability to meet learning needs, the learning environment, and the resources available for learning (Susanti, 2017).

Providing health education about dysmenorrhea has a significant impact on adolescent girls' knowledge levels. This education provides benefits in increasing insight, knowledge and information that can improve adolescent girls' understanding of dysmenorrhea. Since their knowledge is still limited regarding this issue, providing health education is considered the right step to increase their understanding (Faridah, 2019).

The results of research conducted by (Idaningsih and Oktarini, 2020) show that health education about dysmenorrhea has a significant effect on increasing the level of knowledge of adolescent girls, with the results of a significant p-value of 0.000 which is smaller than 0.05. This indicates the effect of health education about dysmenorrhea on the knowledge of adolescent girls.

CONCLUSION

The results of the study on health education on knowledge of adolescent girls class XI can be concluded that the average knowledge of adolescent girls class XI about dysmenorrhea before given health education at SMAN 2 Cimlaka Sumedang Regency in 2024 amounted to 57.70, the average knowledge of adolescent girls class XI about dysmenorrhea after given health education at SMAN 2 Cimalaka Kab. Sumedang in 2024 amounted to 92.16 and the influence of health education on knowledge of adolescent girls class XI about dysmenorrhea at SMAN 2 Cimalaka Sumedang Regency in 2024.

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