



The Effect of Providing Education Through Audio Visual on Knowledge of Handling Dysminorrhea in Adolescent Girls at Kader Bangsa Health Vocational School in Palembang

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ABSTRACT

Dysmenorrhea is a menstrual disorder that is often experienced by young women. Dysmenorrhea is felt as pain in the lower abdomen and can also be felt in the pelvis, lower back or thighs. Dysmenorrhea arises due to disorders of the reproductive organs, hormonal factors and psychological factors which can disrupt daily activities (Lasmawanti et al., 2021). This study aims to determine the effect of providing education via audio-visual on knowledge of treating dysmenorrhea in adolescent girls. This research used a Quasy experiment one group pre and post test design with a sample size of 26 female students. The statistical test used is the Wilcoxon sign rank test. The research results show that there is a significant effect with a p value of 0.000 (<0,05).

INTRODUCTION

Adolescence is a period of transition from childhood to adulthood. This period is the most meaningful period in a person's life, where during this period teenagers will experience many changes. The changes experienced are both physical, psychological, social, intellectual and include the growth of reproductive organs which will reach maturity as indicated by the ability of these organs to carry out reproductive functions in adolescents. (Afdhal & Arsi, 2022b)

Adolescents will experience the most important event during puberty, namely menstruation or menstruation. This is a biological sign of sexual maturity in young women. Menstruation or menstruation is a regular discharge of blood, mucus and epithelial cells from the uterus. This will give rise to various kinds of events in young women, starting from hormonal, biological and psychological reactions (Beverlee Leevia Kawalo & Sitompul, 2022)

Dysmenorrhea or menstrual pain is the characteristic pain before or during menstruation. Occurs from the first day to several days during menstruation. Pain during menstruation is of course very excruciating for women. The pain is stabbing, intense pain felt around the lower abdomen, causing the woman to bend her body or crawl because she is unable to endure the pain. This will certainly greatly disrupt women's daily activities and can have an impact on reducing work productivity, especially for young women, which requires them not to go to school. (Puspitasari & Oktarida, 2022)

Based on Riskesdas data, the prevalence of female adolescents in Indonesia who experience dysmenorrhea is 256,598 or 50 - 60%, consisting of 50.48% primary dysmenorrhea and 9.36% secondary dysmenorrhea. In South Sumatra Province, based on data from the South Sumatra Health Service, in 2020 women who experienced dysmenorrhea reached 59.40% with different complaints. The prevalence of dysmenorrhea in teenagers, especially at the age of 12-17 years, so that dysmenorrhea can be a problem that interferes with activities for people. teenagers, if dysmenorrhea is not faced with a positive attitude. In the Occupational Environmental journal in Indonesia, the prevalence of dysmenorrhea is quite high, namely 54.98% primary dysmenorrhea and 9.36% secondary dysmenorrhea (Sulistiyowati & Popang, 2022)

Menstrual cramps or pain can be felt in the lower abdomen or in the waist and can be like mules, aches or stabbing pain. This could be because young women do not have sufficient knowledge about dysmenorrhea pain and its treatment. Efforts that can be made to increase knowledge of dysmenorrhea pain are by providing education through audio-visual media (Puspita, 2022). The use of audio-visual media is very appropriate for conveying health messages to the public, especially among school-age teenagers. Children and teenagers like pictures that contain sound and moving images, so they can provide examples of good behavior to teenagers (Afdhal & Arsi, 2022a)

Dysmenorrhea shows a fairly high frequency due to lack of knowledge, causing teenagers to think that the pain they feel is a normal condition and will go away because they do not know the impact that will occur (Yuning &

Runiarti, 2019). The results of the pre-test research with knowledge were a median value of 18.00, a median post-test value of 20.00. Influence on knowledge and treatment of dysmenorrhea p-value <0.001. Which means there is an influence on knowledge and treatment of dysmenorrhea in young women (Ni Komang Desian, Ni Luh Putu dina Susanti, 2022)

The results of Fatmawati et al.'s research in 2021 stated that teenagers had poor knowledge, before the intervention 47% of respondents had poor knowledge and after the intervention 73% had good knowledge. The results of the Wilcoxon statistical test showed a p value = 0.000 (p value \leq 0.05). It can be concluded that there is a difference in knowledge before and after doing it through audiovisual media (A. Fatmawati et al., 2021).

Dysmenorrhea is estimated to be high and very variable, ranging between 20% - 94% occurs in women of reproductive age and mostly occurs in teenagers which teenagers feel can cause negative effects, such as absence from school, loss of class concentration, absence from class, loss of class participation. , inability to do housework (Dolang et al., 2023). This study also reported that dysmenorrhea causes adolescent girls. Menstruation is a normal part of the natural cyclical process that occurs in healthy women between puberty and the end of the reproductive years. Menstruation is a physiological thing in women that occurs from menarche to menopause. (Halitopo, 2022)

The negative impact of dysmenorrhea for teenagers is that menstruation can disrupt activities and cause uncomfortable and unfamiliar feelings. Dysmenorrhea not only interferes with regular activities from a physical, psychological and economic perspective for women, for example, they get tired quickly and get angry more often. For psychology, it can be in the form of emotional conflict, tension and anxiety, this can affect skills and abilities (Saputri et al., 2022). Dysmenorrhea treatment is not widely known by young women and lack of knowledge can have a negative impact on quality of life and disrupt social interactions. Apart from that, the impacts that arise can affect academic performance and sports activities (Heni Marliany, Ima Sukmawati, Hani Septiani, 2023).

Based on a preliminary study at the Palembang Kader Bangsa Vocational School, there were 184 female students, 10 of whom were young women experiencing dysmenorrhea and lacked knowledge due to lack of information. Therefore, researchers were interested in examining the effect of providing education through audio-visuals on knowledge of handling dysmenorrhea in young women.

LITERATURE REVIEW

Teenager

Adolescence is a very important period of development for adolescents, starting with the maturation of their physical (sexual) organs so that they will be able to reproduce. During adolescence there are changes that occur such as hormonal, physical, psychological and social changes, where this condition is called puberty. According to the World Health Organization (WHO), teenagers are people aged 10-19 years. The age range for adolescence is usually divided

into three, namely early adolescence, 12-15 years, middle adolescence, 15-18 years, late adolescence, 18-21 years. However, Monks, Knoers, and Haditono differentiate adolescence into four parts, namely pre-adolescence 10-12 years, early adolescence 12-15 years, mid-adolescence 15-18 years, and late adolescence 18-21 years (Salamah, 2019).

Reproductive health is complete physical, mental and social well-being, not only free from disease and disability in all aspects related to the reproductive system, its functions and processes. Puberty-aged adolescents are not only responsible for academic achievement, but also have a responsibility to ensure the maintenance of reproductive function, which includes menstruation. One of the signs that a woman is entering puberty is menstruation. Menstruation is the discharge of the endometrial lining that accompanies the unfertilized ovum from the reproductive tract in the form of fluid, namely blood. One of the reproductive health disorders associated with menstruation is dysmenorrhea (Hayati et al., 2020)

An increase in the hormones progesterone and estrogen causes physical changes such as breast growth, widening and enlarging hips, growth of fine hair in the armpits and pubic area, and the start of the first menstruation. The physical changes that occur in adolescents are the main characteristics of the biological processes that occur during puberty. During this period, rapid physical changes occur, which are not balanced with psychological (mental-emotional) changes. The physical changes that occur include the growth of the reproductive organs to reach maturity so they can carry out reproductive functions (Arsi et al., 2021).

Dysmenorrhea

Dysmenorrhea is a menstrual disorder that is often experienced by young women. Some dysmenorrhea sufferers feel pain in the lower abdomen during menstruation and can also be felt in the pelvis, lower back or thighs. The pain is spasmodic (cramping) which can interfere with activities. . dysmenorrhea can arise due to disorders of the reproductive organs, hormonal factors or psychological factors and can disrupt daily activities (Lasmawanti et al., 2021).

Dysmenorrhea is a health problem that is quite frequently complained of by young women, caused by the presence of the hormone prostaglandin which makes the uterine muscles contract, the dysmenorrhea is felt to be so intense that it can make sufferers rest and leave work and activities for several hours or even several days (Ni Komang Desian, Ni Luh Putu Dina Susanti, 2022).

In general, dysmenorrhoea is characterized as being caused by disease (pelvic inflammation), endometriosis, tumors or abnormalities of the uterine hymen or excessive stress or anxiety. Another cause of dysmenorrhoea pain is due to hormonal changes that are unbalanced and have nothing to do with the reproductive organs (Nurfadila, 2020).

Dysmenorrhea is divided into 2 (two) types, namely primary dysmenorrhea and secondary dysmenorrhea. Primary dysmenorrhea usually occurs in adolescent girls who more often feel pain due to dysmenorrhoea

because the hormonal cycle is not yet stable. In addition, primary dysmenorrhea often occurs in adolescent girls because at this age the function of the uterine nerves occurs so that prostaglandin secretion increases which causes pain during menstruation, primary dysmenorrhea or Menstrual pain in general can interfere with daily activities and can also have an impact on decreased productivity such as decreased and reduced ability to carry out normal daily activities both in terms of quantity and quality, in addition to absenteeism or loss of school, college and work hours (Puspita, 2022).

Secondary dysmenorrhea is caused by pathological conditions of the pelvis or uterus, can occur at any time after menarche and is found at the age of 25-33 years. Secondary dysmenorrhea is pain that is felt and is caused by disorders of the reproductive system. Dysmenorrhea is not a disease but a problem that periodically makes a woman uncomfortable during her menstrual period. The pain felt ranges from mild to severe in the lower abdomen, but can also spread to the lower back, waist, hips, upper thighs, to the calves, sweating, headaches, nausea, vomiting, diarrhea, shaking (Febrina, 2021).

According to Rizka Suryani Isnania, 2020, several complications that may occur in dysmenorrhea sufferers are that primary dysmenorrhea can cause several symptoms, including nausea, vomiting, diarrhea, anxiety, stress, headaches, lethargy and even fainting. Even though primary dysmenorrhea is not life threatening, if left unchecked it can have bad consequences for sufferers such as depression, infertility, impaired sexual function, decreased quality of life. If the diagnosis of secondary dysmenorrhea is ignored or forgotten then the pathology (underlying disorder or disorder can trigger an increase in mortality rates, including infertility). Social isolation (feeling isolated or excluded, depression, and decreased quality of life (Nurfadila, 2020).

Dysmenorrhea can be treated in 2 (two) ways, namely pharmacological and non-pharmacological. Pharmacologically, NSAID administration is the initial therapy that is often used for dysmenorrhoea. NSAIDs have an analgesic effect which directly inhibits prostaglandin synthesis and reduces the amount of menstrual blood lost. As is known, prostaglandin synthesis is regulated by two different isoforms of cyclooxygenase (COX), namely COX-1 and COX-2. Most NSAIDs work by inhibiting COX-2. Nonsteroidal anti-inflammatory drugs / NSAIDs work by preventing ovulation and tissue growth thereby reducing the amount of menstrual blood and prostaglandin secretion as well as uterine cramps (Nurfadila, 2020).

Non-pharmacologically by applying several complementary therapies, namely hypnotherapy, acupuncture, relaxation and warm water compresses. The hypnotherapy method is to change thought patterns from negative to positive. The way to do this is before menstruation comes, relax your body in a supine position on the bed with your hands heavy at your sides. Release burdensome thoughts. With your eyes closed, be sure and allow yourself to be free from the pain of menstrual pain. That instruction in itself shows our mindset has changed. Menstruation doesn't have to be painful, all this time our minds have been patterned that menstruation is painful. Acupuncture is a simple technique that only presses certain points that are believed to cause pain

on the energy meridians with needles and has no direct effect. Relaxation that can be used to help reduce dysmenorrhea is hot compresses, massage, distraction, rest and exercise. Warm water compresses are effective for reducing pain or muscle spasms delivered via conduction (warm water bottle). Heat can dilate blood vessels and can increase blood flow (Rizka Suryani Isnania, 2020)

Education Through Audio Visual

Reproductive health education is one of the government's efforts to overcome reproductive health problems. Through reproductive health education, teenagers will get correct information about their reproductive health, one of which is dysmenorrhea. In health education for teenagers, it is necessary to choose the right methods and media. This is intended so that teenagers can absorb the material provided in health education optimally. Some media that can be used include print media, exhibition/display media, audio media, audiovisual media, and multimedia (Sri Patmawati, Nilam Noorma, 2023).

The aim of education is to increase the community's ability to maintain and improve their level of physical, mental and social health so that they are economically and socially productive, health education in all health programs, including eradicating infectious diseases, environmental sanitation, dysmenorrhea in adolescents and other health programs. Health education is very influential in improving a person's health status by increasing the community's ability to make health efforts themselves (Arsi & Afdhal, 2023)

Audio visual media is media that can display image and sound elements, the combination of these two elements makes audio visual media have better capabilities. Audio visual media is a tool used in learning to assist written and spoken words in conveying knowledge, attitudes and ideas in learning (Rima) in (Risnawati et al., 2022).

Audiovisual makes a huge contribution to changing people's behavior, especially in the aspects of information and persuasion. Audiovisual media has two elements, each of which has a strength that will work together to become a great force. This media provides a stimulus for hearing and vision, so that the results obtained are more optimal. (Marlina & Setyono, 2020).

METHODOLOGY

This research method is quantitative, namely using numerical data and emphasizing the research process on measuring objective results using statistical analysis. The type of research used is Quasy experiment one group pre and post test design. This research was carried out at the Palembang Kader Bangsa Health Vocational School. The population used in this research was the treatment of dysmenorrhea in adolescent girls at the Palembang Kader Bangsa Health Vocational School as many as 184 people. The sample in this study amounted to 26 people. The hypothesis test used in this research is the Wilcoxon Signed Rank Test with a significance value of <0.05.

RESEARCH RESULTS
Univariate Analysis
Respondent Characteristics

Table 1. Respondent Characteristics (N-26)

No	Respondent characteristics	Frequency	Percentage (%)
1	Age		
	15 years old	1	3.8%
	16 years old	20	76.9%
	Age 17 years	4	15.4%
	Age 19 years	1	3.8%
2	Class		
	Grade 10	5	19.2%
	11th class	12	46.2%
	Class 12	9	34.2%
3	Major		
	Pharmaceutical	10	38.5%
	Nursing	16	61.5%
4	Exercise habits		
	Swimming	3	11.5%
	Futsal	1	3.8%
	Jogging	8	30.7%
	Karate	4	15.3%
	Running	2	7.6%
	Gymnastics	2	7.7%
	Volleyball	1	3.8%
None	5	19.2%	
	Total	26	100%

Based on Table 1, the characteristics of respondents based on the highest age are 16 years old, 20 teenagers (76.9%). Based on the class, the most dominated by 11th grade teenagers is 16 teenagers (46.2%). Based on sports habits, the highest number is There were 8 teenagers (30.7%) who jogged.

Knowledge of young women before being given education on treating dysmenorrhea

Table 2. Knowledge of young women before being given education on treating dysmenorrhea

Group	N	Mean	Min	Max	elementary school
Knowledge	26	33.76	14.00	72.00	17.80

Based on table 2 , it can be seen that the value before being given education and treatment, the mean value was 33.76, the minimum knowledge

score was 14.00 and the maximum score was 72.00 so that a standard deviation value of 17.80 was obtained. Meanwhile for the mean pain level value was 5, 30 and a minimum score of 4.00, a maximum score of 6.00 so that a deviation value of 0.73 is obtained.

Knowledge of young women before being given education on treating dysmenorrhea

Table 3. Knowledge of young women before being given education on treating dysmenorrhea

Group	N	Mean	Min	Max	elementary school
Knowledge	26	85.26	78.00	92.00	5.76

Based on table 3, it can be seen that the value after being given education and treatment, the mean value is 85.26, the minimum knowledge score is 78.00 and the maximum score is 92.00 so that a standard deviation value of 5.76 is obtained. Meanwhile for the mean pain level value of 1, 76 and a minimum score of 1.00, a maximum score of 3.00 so that a deviation value of 0.81 is obtained.

Bivariate Analysis

Normality test

Table 4. Normality test

Variable	p-value pre	p-value post	Conclusion
Knowledge	0.002	0.003	Not normally distributed

Based on Table 4, it can be seen that the results of the data normality test using Shapiro Wilk showed that the data was not normally distributed because the p value was <0.05. Shapiro Wilk's results showed that the pretest knowledge p-value was 0.002 <0.05 and in the posttest knowledge the p-value was 0.003 <0.05, which means that the pretest and posttest knowledge values were not normally distributed so the Wilcoxon Signed Range Test was used.

Table 5. The Effect of Providing Education Through Audiovisuals on Knowledge of Dysminorrhea Management in Adolescent Girls

Group	Parameter	Difference	P-Value
Knowledge	Pretest	33.76	0,000
	posttest	85.26	

From table 5, data obtained from the Wilcoxon Signed Rank Test can be seen that the calculated difference in pretest knowledge level is 33.76 and

posttest 85.26 with a p-value of 0.000 (<0.05). So it can be concluded that there is an influence on the results before and after providing education via audio-visual on knowledge of treating dysmenorrhea.

DISCUSSION

Respondent Characteristics

Age

The research results showed that the highest age of respondents was based on the highest age characteristics, namely 16 years old, 20 teenagers (76.9%), at least 15 years old, 1 teenager (3.8%) and 19 years old, 1 teenager (3.8%).

In line with research (Puspitasari & Oktarida, 2022), it was found that 59.40% of women experienced dysmenorrhoea with different complaints. The prevalence of dysmenorrhoea in adolescents, especially at the age of 12-17 years, means that dysmenorrhoea can be a problem that interferes with activities for female students.

Class

Research conducted at the Kader Bangsa Vocational School in Palembang found that the class most dominated by grade 11 teenagers was 16 teenagers (46.2%). And those with at least 10th grade were 5 teenagers (19.2%).

Major

After conducting research at the Kader Bangsa Health Vocational School in Palembang, it was found that the most majors were pharmacy majors, 16 teenagers 61.5% and the fewest majors majored in nursing, 10 teenagers 38.5%.

Exercise Habits

The research results showed that 8 students (30.7%) took up the habit of jogging. Lack of exercise causes blood and oxygen circulation to decrease, as a result blood and oxygen flow to the uterus becomes less smooth and causes pain and brain endorphin production decreases which can increase stress so that it can indirectly increase dysmenorrhoea (Puspitasari & Oktarida, 2022).

Regular exercise is useful for helping reduce dysmenorrhea because it triggers the release of endorphins which are considered a natural killer for pain. Some women achieve lighter conditions through exercise. With exercise, the results obtained not only reduce the stress that usually arises during PMS and menstruation, but can also increase the production of brain endorphins and the body's natural painkillers. Regular exercise will help you carry out daily activities and routines without interference from menstrual pain (Sri Patmawati, Nilam Noorma, 2023).

Knowledge of dysmenorrhea treatment before and after being provided with audio-visual education

Based onThe research results showed that the average knowledge before receiving education on treating dysmenorrhea was 33.76. After being given education the average level of knowledge became 85.26.

Reproductive health education is one of the government's efforts to overcome reproductive health problems. Through reproductive health

education, teenagers will get correct information about their reproductive health, one of which is dysmenorrhea. In health education for teenagers, it is necessary to choose the right methods and media. This is intended so that teenagers can absorb the material provided in health education optimally. Some media that can be used include print media, exhibition/display media, audio media, audiovisual media, and multimedia. In line with research (Agustina, 2016), the better the level of female students' knowledge about dysmenorrhea, the better the treatment of dysmenorrhea, so that they make efforts to treat dysmenorrhea.

Knowledge about dysmenorrhea is very influential in the first treatment in dealing with dysmenorrhea. The first treatment in dealing with dysmenorrhea is a young woman's reaction or response to menstrual pain. Knowledge about dysmenorrhea will make young women think and try to overcome dysmenorrhea. In this context, the trust component becomes the background to the thinking patterns of young women, so that young women intend to overcome the dysmenorrhea that occurs before and during menstruation every menstrual cycle they experience and the problems that may arise, in this case young women have a positive attitude in dealing with dysmenorrhea. This can be done by feeling relaxed, accepting this situation as physiological, wanting to increase activity and enthusiasm outside the home,

The influence of education through audio visuals on knowledge of treating dysmenorrhea in adolescent girls at Kader Bangsa Health Vocational School

Based on the results of the level of knowledge tested using the Wilcoxon Sign Rank Test statistical test, the p-value from the research is 0.000, where the significance value is <0.05 , then H_a is accepted, which means that there is an influence of providing education via audio-visual on knowledge of treating dysmenorrhea in teenagers at Kader Bangsa Vocational School. Palembang.

This research was conducted at the Kader Bangsa Vocational School in Palembang which was carried out for 1 week on 2 August - 9 August by providing education through audio visual media and demonstration methods where each female student practiced how to treat dysmenorrhea using a towel, hot water and nails. basin.

Reproductive health education is one of the government's efforts to overcome reproductive health problems. Through reproductive health education, teenagers will get correct information about their reproductive health, one of which is dysmenorrhoea, by providing education that teenagers do not tend to ignore dysmenorrhea. It is also necessary to choose the right methods and media so that teenagers can absorb the maximum media that can be used, namely audiovisual media. (Ningrum, 2022)

Video is an audible (audio-visual) learning material that can be used to convey messages. The function of video media is to be interesting, clarify, make delivery easier and direct the attention of students to concentrate. Showing lesson material accompanied by visualization helps understanding and remembering the content of the material for female students who are weak in reading (Ningrum, 2022).

This is also supported by research from (Sri Patmawati, Nilam Noorma, 2023) with a value (p value) = $0.000 < \alpha 0.05$, H_0 is automatically rejected, which means that there is an influence of dysmenorrhea education using videos on the knowledge of young women in state junior high schools. 3 Grogot Land. In line with research (Ningrum, 2022) there is an influence of providing dysmenorrhea education on the level of knowledge of female students at SMP Negeri 6 Loa Kulu which can be seen through the Wilcoxon statistical test with a value of $0.000 < 0.05$.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The highest characteristics of respondents based on age were 16 years old, 20 teenagers (76.9%), based on the class which was mostly dominated by class II teenagers, there were 16 teenagers (46.2%), based on the major which was mostly pharmacy, 16 teenagers (61.5%), and the most common sports habits are teenagers who jog as many as 8 teenagers (30.7%). The average knowledge before receiving education was 33.76. After being given education the average level of knowledge became 85.26. There is an influence of providing education through audio-visuals on knowledge of handling dysmenorrhea in young women at SMK Kader Bangsa Palembang with a p-value of $0.000 (< 0.05)$.

Recommendations

It is hoped that women, especially young women, will increase their knowledge regarding dysmenorrhea and how to treat dysmenorrhea, especially complementary therapies which are easy to do compared to pharmacological ones which have side effects. For health workers to always provide education in the form of counseling using methods that are easy for teenagers to understand and remember, such as audio-visual.

ADVANCED RESEARCH

This research has several research limitations, namely the time for the post test which was only 2 days after the pretest was carried out so it was not optimal. Suggestions for future researchers are when the post test is carried out in the following month during the menstrual period. So it can be seen the knowledge and treatment of young women regarding dysmenorrhea.

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