



Health Promotion Using Animated Videos to Increase Elementary Students' Knowledge and Readiness in Dealing with Menarche

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ABSTRACT

Background: Entering puberty, a young girl will experience various changes. One of them is having menstruation. Menstruation is one of the critical events in life that girls should know. It happens because menstruation does not come once and then disappears in a woman's life, but there is a menstrual cycle that comes every month. Young girls need adequate information to deal with menstruation for the first time. Knowledge should be given to the young girl to deal with menstruation, such as physical and psychic changes. This study aimed to determine the effect of health promotion through animated videos on increasing the knowledge and attitudes of elementary school children facing menarche

Methods: This quantitative study used a quasi-experimental design. The population in this study was all 5th-grade elementary school students who had not had menstruation. The sample size was 38 respondents for each group, intervention, and control

Result: The results showed a difference in knowledge scores between the intervention and control groups with a p-value of 0.000. There was a difference in attitude scores in the control and intervention groups with a p-value of 0.031.

Conclusion: There is an increase in knowledge scores and attitudes before and after the intervention. The difference in the intervention group's knowledge and attitude level scores and the control group and the animated video preparation of menarche influence knowledge and attitude.

Keywords: *Knowledge; Attitude; Menarche; Young girls; Animated video*

BACKGROUND

Puberty is when the human body undergoes various changes in growth and development, including changes in the reproductive organs, while menstruation is one of the critical events in the life span experienced by the young girl. It happens because menstruation does not come just once and then disappears in a girl's life, but there is a menstrual cycle that comes every month. In every process, women must always prepare themselves from the first day to the last day. The menstrual period is also related to other essential matters surrounding menstruation, such as maintaining hygiene and body health (Proverawati & Maisaroh, 2009). The first menstruation or menarche in girls today occurs much earlier than menarche in previous periods (Malinda, Damajanti, & Muljosumarto, 2017). Based on data from the IDHS, it is found that the average age at first menstruation experienced by young girls was 12-15 years old (Indonesia, 2012).

The most critical event in young girls' lives is menstruation as biological signs of sexual maturity that will take place periodically. Sooner or later, sexual maturity depends on the individual's physical condition, which is also influenced by race and life habits (Suryani & Widiasih, 2012). Therefore, young women need to be given adequate information to prepare for their first menstruation. As an important event for young women, they must recognize their bodies, i.e., what will happen not to be surprised more likely to be ready when their first menstruation.

However, research conducted in Asia, Africa, and Latin America describes some of the challenges faced by women, such as poor access to comprehensive information about menstruation, lack of knowledge to manage menstrual blood, insufficient water, inadequate sanitation and facilities, socio-cultural beliefs misleading, and taboos (Sinaga et al., 2017). These impact behavior restriction, discomfort, and risks to reproductive health (UNICEF, 2016). In addition, the lack of knowledge of young women about menarche can lead to various problems. For example, there was a case in an elementary school girl who did not realize that she had just had her first menstrual period. As a result, she did not immediately go to the school health unit to further explain the condition she had just experienced because of her absence of knowledge about menarche (Istikomah & Anggraeni, 2012). Therefore, health education is essential to give to young girls in elementary school students.

The problem is that there is still no specific information media discussing first menstruation for young girls as a medium that can be used as a guide in entering puberty. However, knowledge of menarche is essential (Marliani Rosleny, 2016). Knowledge of menarche is mainly published in journals and books aimed at adults. An explanation of menarche can be accessed via the internet but in the form of an article whose language style is not suitable for girls who have just entered puberty (Asni & Dwihestie, 2018). Based on some of the problems above, it is necessary to create an information media that is friendly and easy to understand for young women aged 9 to 13. Interactive media equipped with attractive illustrations, colors, and layouts have a unique advantage, i.e., that it makes children easier to understand the topic being discussed because the human brain can remember pictures and colors more quickly and easily. One of the interactive learning media is an audiovisual video (animated film). Audiovisual media is an alternative to optimize the learning process and also as a medium for delivering information that has audio (sound) and visual (image) characteristics (Harjanto, 2011).

OBJECTIVE

This study aimed to determine the effect of health promotion using animated videos on increasing the knowledge and attitudes of elementary school children in facing menarche.

METHODS

This quasi-experimental study used a non-equivalent control group approach with a pretest-posttest control group design which was carried out from March to October. The population of this study was grade 5 elementary school students who had not yet had menstruation. The sample of this study is 38 respondents for the treatment group and 38 respondents for the control group.

The data collection technique is primary data in the form of a questionnaire about knowledge and attitudes. Knowledge and attitudes were measured before intervention. Both groups were given 10 minutes to fill out the questionnaire as a pretest assessment. After filling in the questionnaire, the material was provided using an animated video with 14 minutes to the intervention group and 20 minutes of discussion. The control group was given material in leaflets and a question-and-answer session with a total duration of 30 minutes. On the sixth day, the posttest questionnaire sheet was filled in by the treatment and control groups. The posttest sheet was filled in 10 minutes. The data in this study were carried out by statistical tests using the t-test (paired t-test).

This research has been declared ethical by the health research ethics committee of the Poltekkes Kemenkes Jakarta III with the number KEPK-PKKJ3/191/IV/2019.

RESULTS

The following is a presentation of the data obtained from the respondent consisting of the knowledge and the attitude.

Table 1 The Mean of Respondents' Pretest and Posttest Knowledge

Respondent	Mean	Minimal	Maximal	Standard Deviation	F
Pretest: intervention	12.29	9	16	1.784	38
Pretest: control	11.71	8	16	1.814	38
Posttest: intervention	16.29	13	19	1.354	38
Posttest: control	13.18	9	18	1.814	38

From the table above, the results of knowledge menstrual preparation before the given video in the intervention group were 12.29 with a minimum value of 9 and a maximum of 16 with a standard deviation of 1.784. After the posttest was carried out, the average value of knowledge increased to 16.29 with a minimum of 13 and a maximum of 19 with a standard deviation of 1.354. The pretest average result of the control group was 11.71 with a minimum of 8 and a maximum of 16 with a standard deviation of 1,814. The posttest results of the control group were 13.18 with a minimum value of 9 and a maximum of 18 with a standard deviation of 1.814.

Table 2 The Mean of Respondents' Pretest and Posttest Attitudes

Respondent	Mean	Minimal	Maximal	Standard Deviation	F
Pretest: intervention	6.97	3	11	1.896	38
Pretest: control	6.13	3	9	1.510	38
Posttest: intervention	7.87	4	11	1.597	38
Posttest: control	7.89	3	11	1.871	38

From the table above, the results of attitudes about menstrual preparation before being given video in the intervention group were 6.97 with a minimum value of 3 and a maximum of 11 with a standard deviation of 1.896. After doing the posttest, the average value of knowledge increased to 7.87 with a minimum of 4 and a maximum of 11 with a standard deviation of 1.597. Meanwhile, the mean result of the control group pretest was 6.13 with a minimum of 3 and a maximum of 9 with a standard deviation of 1.510. Finally, the posttest result of the control group was 7.89 with a minimum value of 3 and a maximum of 11 with a standard deviation of 1.871.

Table 3 The mean of knowledge and attitudes before and after being given an animated video for menstruation preparation in the intervention group

	Test	Mean	SD	P-value	N
Knowledge	Pre	12.29	1.784	0.000	38
	Post	16.29	1.354		
Attitude	Pre	6.29	1.431	0.000	38
	Post	8.74	1.349		

The mean knowledge in the first measurement was 12.29, with a standard deviation of 1.784. After being given an animated video of menstruation preparation in the second measurement, the mean knowledge was 16.29, with a standard deviation of 1.354. It can be seen that the mean difference between the first and second measurements is 4, with a standard deviation of 1.507. The statistical test results obtained a value of 0.000. Therefore, it can be concluded that there is a significant difference between pre and post-knowledge. The mean of attitude in the first measurement was 6.29, with a standard deviation of 1.431. In the second measurement, after being given an animated video for menstruation preparation, it was found that the average attitude was 8.74 with a standard deviation of 1.349. It can be seen that the mean difference between the first and second measurements is 2.447, with a standard deviation of 1.446. The statistical test results obtained a value of 0.000, and it can be concluded that there is a significant difference between the pre and post-attitude measurements.

Table 4. The mean of knowledge before and after menstruation preparation leaflets were given to the control group

	Test	Mean	SD	P-value	N
Knowledge	Pre	11.71	1.814	0.000	38

Attitude	Post	13.18	1.814	0.000	38
	Pre	6.03	1.479		
	Post	7.95	1.754		

The average knowledge in the first measurement was 11.71, with a standard deviation of 1,814. In the second measurement, the mean ability was 13.18, with a standard deviation of 1,814. It can be seen that the mean difference between the first and second measurements is 1.474, with a standard deviation of 1.656. The statistical test results obtained a value of 0.000, and it can be concluded that there is a significant difference between pre and post-knowledge. The average attitude in the control group in the first measurement was 6.03, with a standard deviation of 1.479. In the second measurement, the moderate attitude was 7.95, with a standard deviation of 1.754. It can be seen that the mean difference between the first and second measurements is 1.921, with a standard deviation of 1.1.617. The statistical test results obtained a value of 0.000. It can be concluded that there is a significant difference between the pre and post-attitude measurements.

Table 5 The mean knowledge and attitudes after treatment between the intervention group and the control group

	Group	N	Mean	SD	SE	P-Value
Knowledge	Intervention	38	16.29	1.354	0.220	0,000
	Control	38	13.18	1.814	0.294	
Attitude	Intervention	38	8.74	1.349	0.219	0,031
	Control	38	7.95	1.754	0.285	

The mean knowledge in the intervention group was 16.29 with a standard deviation of 1.354, while for the control group, the mean knowledge was 12.18 with a standard deviation of 0.294. The statistical test results obtained a p-value of 0.000, which means that there was a difference between the knowledge of the intervention group and the control group. The mean attitude in the intervention group was 8.74 with a standard deviation of 1.349, while for the control group, the mean knowledge was 7.95 with a standard deviation of 1.754. The statistical test results obtained a p-value of 0.031, which means that there was a difference between the knowledge of the intervention group and the control group.

DISCUSSION

1. Knowledge

This study provided information through animated video media for the intervention group and leaflets for the control group. This study indicates a difference between the control group and the intervention group with a p-value of 0.000. It suggests that there is increased knowledge in menstrual preparation in both groups. It can be seen that even though these two media show an increase in knowledge, it can be seen from the mean of the intervention group of 16.29 and in the control group 13.18, meaning that the control group with animated video media increased more knowledge about menstrual preparation. This research aligns with Ayu F et al. (2011) research that young girls who get good information about

menstruation will have a better understanding and readiness to face the menstrual process. Providing health education or information can promote better attitudes and behavior (Fajri & Khairani, n.d.)

According to researchers, the increasing knowledge of respondents in this study is influenced by factors that affect understanding, namely providing information. According to Azwar in the book 'Human Attitudes Theory and Measurement,' new information about a matter can offer a new cognitive foundation for forming attitudes towards these new things. Even though a person has low education, if he/she gets good enough information from various media, it can increase one's knowledge (Saifuddin, 2013). It is in line with research conducted by Arora (2013) on 200 young women that providing information about menstruation can increase the knowledge of young women about self-care during menstruation and mentally prepare young women to accept the changes that occur during menstruation (Arora et al., 2013).

In terms of media use, the intervention group's knowledge showed an increase in the knowledge score. This research follows the research conducted by Tarigan (2016) that respondents who were given information using video had a better average readiness score than leaflet media (Tarigan, 2016). In addition, Saban's (2017) research shows that audiovisual media is more effective in increasing adolescent knowledge about health than visual media. In this case, the respondents who are given education with audiovisual media have a better understanding because the information conveyed is easier to understand (Saban, 2017). According to Susilowati in the book Health Promotion, use visual media in health promotion activities can increase target understanding of the information provided up to 3x. At the same time, audiovisual media is considered 6x to advance knowledge of health education targets (Susilowati, 2017).

The results of research conducted by Mediana (2018) revealed that human absorption of the information provided if only relying on the sense of sight is only around 82%. In contrast, depending on the minds of sight and hearing, the human absorption of the information provided is about 93%. Presentation of information using video media is considered more attractive, and the absorption of information is considered better than presenting information using leaflet media. However, this does not mean that leaflet media are unsuitable for use in the learning process or deliver information. In this research, leaflet media can be used as a companion to other media. Respondents can use leaflet media in learning, where respondents must be more prepared so that the desired learning outcomes can be appropriately achieved (Mediana, Simbolon, & Wahyudi, 2018). Appropriate media in providing health information can stimulate interest, overcome time constraints, and deliver experiences that will lead to the same perception, encourage targets to know, deepen and ultimately gain a better understanding, and pass the information obtained to others.

2. Attitude

The results of statistical tests show differences in the mean value of respondents' attitudes before and after health promotion. The mean attitude in the intervention group was 8.74 with a standard deviation of 1.349, while for the control group, the mean knowledge was 7.95 with a standard deviation of 1.754.

The statistical test results obtained a P-value of 0.031, which means that there is a difference between the knowledge of the intervention group and the control group

Attitude is the readiness to react to an object in specific ways. Readiness is meant here as the potential tendency to respond in a certain way when the individual is faced with a stimulus that requires a response. This research is in line with a study conducted by Hastuti (2014), which shows that it was found that most of the students had positive attitudes in dealing with menarche, namely (71.4%) (Hastuti, Widatiningsih, & Afifah, 2014). Attitude is a belief (belief), ideas, and concepts towards an object that allows someone to act or do something. The response that arises can be in the form of support or vice versa. According to Wawan & Dewi (2016), there are six factors in the formation of attitudes, including personal experience, the influence of other people, the impact of culture, mass media, educational and religious institutions, and emotional factors. Based on these factors, the effect of other people considered necessary is the most influential factor in shaping attitudes in dealing with menarche. School-age children are more likely to ask their parents, siblings, and teachers because they do not have experience with menarche. A complete attitude is made up of knowledge, thoughts, beliefs, and emotions (Wawan & Dewi, 2016).

The research results revealed that most of them had positive attitudes in facing menarche, indicated that the attitude formation factors had been fulfilled. In essence, someone will show a positive or negative evaluation response to something new. By Rogers' theory in Notoatmodjo (2013), attitude is a response that appears before action. The initial process is that someone realizes and knows the stimulus given. Then, the subject's attitude begins to arise towards the impulse towards menstrual preparation until finally, a positive attitude is formed to try to do it following the stimulus (Notoadmoho, 2014). Researchers argue that the intervention provides health education using animated video media and Leaflet media in preparation for menstruation, giving new information to respondents. Data from these interventions become a new cognitive foundation for respondents in the form of attitudes. Animated video media used by the researcher provided information about positive attitudes in preventing menstruation so that some of the respondents showed a change in attitude in preparation for menstruation.

CONCLUSION

There is an increase in knowledge scores and attitudes before and after the intervention. There are differences in knowledge level scores and attitudes of intervention groups and with control groups. Menarche's prior animated video influences knowledge and perspective.

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