


Differences In Reproductive Health Knowledge Level About Menstruation Before And After Providing Health Education Through Video

Ni Nyoman Triana Utami Dewi^{1*}, Regina Tedjasulaksana², Ni Wayan Ariyani³

^{1*.2.3}Prodi Sarjana Terapan Kebidanan, Poltekkes Kemenkes Denpasar, Indonesia

Article Info	ABSTRACT
<p>Keywords: Knowledge, Menstruation, Health Education</p>	<p>Menstruation is a natural biological process that occurs in females during their reproductive years. However, many young girls lack adequate knowledge about menstruation, leading to fear and misconceptions. This study aimed to investigate the effectiveness of health education through video on improving knowledge about menstruation among elementary school students. A pre-experimental one-group pre-test post-test design with proportional random sampling was employed. The study involved 38 female students from SD Negeri 2 and SD Negeri 4 Penebel in April 2024. Data was collected using a questionnaire. The Shapiro-Wilk test was used to assess normality due to the small sample size ($n < 50$). The p-value ($p > 0.05$) indicated normal distribution of the knowledge scores. The mean score before health education was 58.68. The mean scores for posttest week 1 and week 2 were 82.89 and 87.24, respectively. Statistical analysis revealed a significant difference in knowledge scores ($p = 0.000$), demonstrating the effectiveness of the health education intervention. The study highlights the importance of health education in improving knowledge about menstruation among elementary school students. Schools should incorporate menstruation education into their curriculum to empower girls with accurate information and dispel misconceptions.</p>
<p>This is an open access article under the CC BY-NC license</p> 	<p>Corresponding Author: Ni Nyoman Triana Utami Dewi Prodi Sarjana Terapan Kebidanan, Poltekkes Kemenkes Denpasar, Indonesia komang.triana0295@gmail.com</p>

INTRODUCTION

Adolescence is defined as a transition period from childhood to adulthood grouped at ages 10-19 years (Novita et al, 2020). As the transition period is experienced, teenagers experience physical, emotional and social adjustments which are signs of puberty. Where the stage where the sexual organs have matured is marked by experiencing menstruation for the first time in adolescent girls (Hendriani et al., 2019).

Menstruation is an event where blood comes out of the uterus through the vagina and out of a woman's body every month during her fertile age. The arrival of the first menstruation actually makes some teenagers afraid and anxious because they think that menstrual blood is a disease. This can cause anxiety in teenagers and make them think that reproductive issues are taboo and sensitive to talk about (Nainggolan and Sukatendel, 2021).

Reproductive problems that teenagers are prone to face are sexually transmitted infections such as HIV/AIDS, unwanted pregnancies, unsafe abortions, early marriages, sexual violence and rape and promiscuity. One of the problems often faced by early adolescents is experiencing bacterial infections during menstruation in teenage girls. Bacterial infections during menstruation are caused because the female area is moister than usual because changes in pH tend to increase during menstruation. This change in pH levels causes the growth of vaginal yeast to increase during menstruation. Bacterial infections do not only occur outside the vagina, but can also enter the vagina, such as the cervix and pelvis, so cleanliness during menstruation must be maintained (Astri et al, 2016).

Hygiene during menstruation is most likely influenced by the level of knowledge about reproductive health. According to Nyamin et al. (2020) someone who does not have adequate knowledge about reproductive health will easily behave in a way that endangers their reproductive health, while someone who has knowledge about reproductive health will choose the right behavior to be able to maintain their reproductive health condition.

The level of knowledge between young women varies, including knowledge about menstruation and how to maintain cleanliness during menstruation. Female students' knowledge of reproductive health has been studied in the classroom learning process, but has not shown maximum results. To increase their knowledge, additional information needs to be provided. There are many ways we can use to get information, one of which is by using video media. Video media is one of the intermediary media or the use of material and its absorption through sight and hearing so as to build conditions that can enable people to acquire knowledge and skills. (Nyamin, 2020).

Based on research results Hapsari et al. (2021). It was concluded that there was a healthy influence of menarche using the audiovisual method on the level of knowledge and attitudes of adolescents. Other research has been carried out by Ulfa in 2014 in Blitar stated that there were positive benefits between counseling about menstruation and knowledge of dealing with menstruation. Research on menstruation is mostly carried out on junior high school students, but currently menarche often occurs at younger ages, namely in elementary schools, so this research is necessary and important to carry out to find out the benefits of counseling on knowledge about menstruation in elementary schools.

Based on preliminary studies that have been carried out, researchers conducted research in elementary schools because there is a lack of reproductive health knowledge about menstruation, especially during early adolescence and it is still considered taboo by elementary school girls. Providing health education about menstruation through video media to elementary school girls, so that girls understand more about the importance of reproductive health knowledge about menstruation and can maintain their own reproductive health.

Researchers have conducted a preliminary study using open interviews with 10 students from classes V and VI at SD Negeri 2 and SD Negeri 4 in the Penebel Village area. All the female students interviewed had menstruated. Seven female students said they had bad experiences of menstruation, they felt sad, afraid, not confident, uncomfortable using sanitary napkins, did not dare to go to the canteen, sat quietly in class and did not accept their situation. The experiences of three other people said they understood his situation. According

to teachers at the school, the delivery of learning material about menstruation is still very inadequate. Previous experience was that there were female students experiencing menarche at school who did not want to wear sanitary napkins, cried and did not want to attend lessons and were allowed to go home. This school has never received counseling and research. So many female students don't know about menstruation.

Based on this background, there is a research problem formulation, namely "Are there differences level of reproductive health knowledge about menstruation before and after being given health education via video to female students at SD Negeri 2 and SD Negeri 4 in the Penebel Village area?". The research objectives are 1) Identifying female students' knowledge before being given reproductive health education about menstruation for female students at SD Negeri 2 and SD Negeri 4 in the Penebel Village area. 2) Identifying female students' knowledge after being given reproductive health education about menstruation for female students at SD Negeri 2 and SD Negeri 4 in the Penebel Village area. 3) Analyzing the differences in female students' knowledge before and after being given counseling about menstruation to female students at SD Negeri 2 and SD Negeri 4 in the Penebel Village area.

METHODS

This type of research uses a pre-experimental type of research with a one group pre-test post-test design, measurements are carried out before and after treatment, the difference in the two measurement results is considered as a treatment effect. The design is described as follows (Nursalam, 2020):

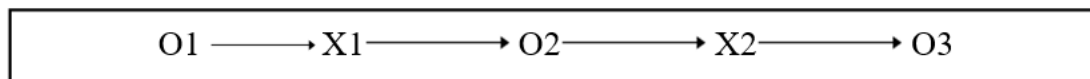


Figure 1. Measurement Design

Information :

O1 : Pre-test knowledge value before carrying out the action.

X1 : Intervention, namely providing health education about menstruation at the first meeting

O2 : Post-test knowledge value after treatment at the first meeting

X2 : Intervention, namely providing health education about menstruation at the second meeting.

O3 : Post-test knowledge value after treatment at the second meeting.

In this design there is no comparison group (control), but a first observation (pre-test) is carried out and a second observation (post-test) is carried out which allows researchers to test the benefits that occur after being given the intervention, namely by providing counseling via video.

Place and Time of Research

This research was carried out at SD Negeri 2 and SD Negeri 4 in the Penebel Village area, Penebel District, Tabanan Regency. This research was carried out from 16 to 24 April 2024.

Research population

Population is a generalized area consisting of objects or subjects that have certain quantities and characteristics that are determined by the researcher to be studied and then draw conclusions.(Ajjah and Selvi, 2021). The population in this study were all female students of SD Negeri 2 and SD Negeri 4 classes IV and VI in the Penebel Village area, totaling 65 people.

1. Inclusion criteria:
 - a. All female students in grades IV and VI of SD Negeri 2 and SD Negeri 4 in the Penebel Village area.
 - b. Willing to be a respondent in research.
 - c. Female students present.
 - d. Female students who have never experienced menstruation.
2. Exclusion Criteria, Students who are sick or have permission during research.
3. Drop Out Criteria, Resigned during research.

Respondent unit of analysis

The subjects of this research were female students from SD Negeri 2 and SD Negeri 4 in the Penebel Village area who met the inclusion criteria.

RESULTS AND DISCUSSION

Research Results

Characteristics of research subjects

The subjects in this study were female students in grades V and IV at SD Negeri 2 Penebel and SD Negeri 4 Penebel, totaling 38 respondents who met the inclusion criteria and were present at the time of the research.

Table 1. Characteristics of Research Subjects According to Age and Source of Information SD Negeri 2 and SD Negeri 4 Penebel

	Characteristics	Frequency	Percent (%)
Age (years)	11 years old	17 people	45
	12 years old	21 people	55
Amount		38	100
Resources	Social media	7 people	18
	Family	8 people	21
	Not Getting Information	23 people	61
Amount		38	100

Univariate Analysis Results

The results of observations made on 38 respondents before and after counseling about menstruation are described as follows.

Knowledge in the experimental group

Table 2. Knowledge of female students before and after health education through videos at SD Negeri 2 Penebel and SD Negeri 4 Penebel

Knowledge	Average	elementary school
Pre-test	58.68	7,505
Post-test I	82.89	7,766
Post-test II	87.24	7,137

Based on table 2 above, it shows that there is an average increase in the knowledge variable after being given health education about menstruation. The average knowledge at SD Negeri 2 Penebel and SD Negeri 4 Penebel increased from 58.68 ± 7.505 to 82.89 ± 7.766 to 87.24 ± 7.137 . The research results show that the standard deviation value is smaller than the average value, which means that the data distribution is even.

Test the normality of knowledge in the experimental group

Table 5. Test of normality of knowledge on female students before and after health education at SD Negeri 2 and SD Negeri 4 Penebel

Variable	Shapiro Wilk Test	
	Df	p value
Knowledge		
Pre-test	38	0.067
Post-test I	38	0.073
Post-test II	38	0.064

Based on table 5 above, it shows that the pre-test knowledge data ($p=0.067$), post-test I ($p=0.073$) and post-test II ($p=0.064$) can be concluded that the pre-test and post-test data are normally distributed.

Results of bivariate analysis

Differences in female students' knowledge about menstruation in the experimental group before and after being given health education about menstruation

The results of statistical tests on knowledge data before and after being given health education about menstruation in the treatment group are presented in the table. The difference in knowledge in the experimental group before and after being given health education about menstruation was determined by carrying out the Repeated Measure ANOVA test. Repeated Measure ANOVA was chosen because the difference between pre-test knowledge data and post-test knowledge data must have a normal distribution ($p>0.05$). Based on the results of the Repeated Measure ANOVA test, it shows that statistically there is a significant average difference between the pre-test and post-test data on research respondents' knowledge with ($p>0.05$).

Table 3. Results of Pre-Test and Post-Test Knowledge Statistical Tests for Female Students at SD Negeri 2 Penebel and SD Negeri 4 Penebel

	Knowledge	Mean	p value
n=38	Pre-test	58.68	0.067
n=38	Post-test I	82.89	0.073

	Knowledge	Mean	p value
n=38	Post-test II	87.24	0.064

Repeated Measure ANOVA test, 7 students' knowledge scores remained the same, 31 students' knowledge scores increased

Based on table3 above shows that the knowledge of students at SD Negeri 2 Penebel and SD Negeri 4 Penebel has 7 students' knowledge remaining and 31 students' knowledge has increased.

Table 7. Results of differences in average pre-test and post-test knowledge for female students at SD Negeri 2 and SD Negeri 4 Penebel

Pairwise Comparisons			
Knowledge	Mean Difference	Significance value (p<0.05)	Average
The average difference between the first pretest and posttest	-24,211*	0,000	58.68
Average difference between pretest and second posttest	-28,553*	0,000	82.89
Average difference between the first posttest and the second posttest	-4,342*	0,000	87.24

Based on Table 7 above, it shows that the mean score in the pre-test compared to the mean score in the first week's post-test, there was an average increase of -24.211. The mean pre-test value was compared with the mean post-test value in the third week, there was an average increase of -28.553. The mean score on the first week's post-test was compared with the mean score on the second week's post-test, there was an average increase of -4.342. The difference in average increase is real because the p value is 0.000 < 0.05. It can be concluded that providing health education via video can increase the average knowledge of female students at SD Negeri 2 and SD Negeri 4 in the Penebel Village area.

Research Discussion

Respondents' knowledge before being given health education about menstruation

The results of this research show that the average knowledge of female students at SD Negeri 2 and SD Negeri 4 in the Penebel Village area is 58.68 with a standard deviation of 7.505. Based on these scores, the number of scores below the average was 19 female students who had knowledge scores below the mean about menstruation due to the lack of information obtained by female students, especially about menstruation. Information obtained from respondents was that SD Negeri 2 and SD Negeri 4 in the Penebel Village area had never been given socialization about menstruation, either through counseling or other media for conveying information from the family or parents.

In fact, the school, in collaboration with the community health center, has provided outreach about health, but education about menstruation has never been provided. Information about menstruation is very important for female students to know because every

female student will experience menstruation so that they can know and understand changes and signs of menstrual symptoms, obtain correct information and care during menstruation.

According to research by Septiani (2019), the average value of knowledge before being given counseling about menstruation was 92.74. The method of delivering information is one of the factors that can influence a learning process so that the targets and material that can be delivered must be in accordance with the information to be provided. Providing appropriate information is expected to increase female students' knowledge about menstruation.

Respondents' knowledge after being given health education

The results of respondents' knowledge after being given health education about menstruation in the first week showed that the mean was 82.89 with a standard deviation of 7.766. Posttest results found that 18 people had scores below the mean and 20 people had knowledge scores above the mean.

The mean score of respondents after being given health education about menstruation in the second week was 87.24 with a standard deviation of 7.137. The results of the second posttest found that 19 people had knowledge scores above the mean. Some respondents experienced an increase in knowledge after being given health education. This shows that providing education via video can increase female students' knowledge about menstruation. Other research results that support this research are research according to Septiani (2019), which obtained an average score on the posttest of 98.39, which means that there was an increase in knowledge after being given health education about menstruation.

Differences in respondents' knowledge before and after being given health education

Statistical test results of knowledge data before and after being given health education about menstruation to respondents, differences in knowledge among respondents before and after being given health education about menstruation by conducting a Repeated Measure ANOVA test. The Repeated Measure ANOVA test was chosen because the difference between pretest knowledge data and posttest knowledge data must be normally distributed ($p > 0.05$). Based on the results of the Repeated Measures ANOVA test, it shows that statistically there is a significant average difference between the pretest and posttest knowledge data of research respondents with a value of $p = 0.000$ ($p < 0.05$).

Based on the research results, it shows that there was an increase in female students at SD Negeri 2 and SD Negeri 4 Penebel after being given health education. This condition occurred due to an increase in the average score of female students' knowledge about menstruation before being given health education, getting an average score of 58.68 with a standard deviation of 7.505, after being given health education in the first week, getting an average score of 82.89 with a standard deviation of 7.766. and after being given the second week of health education, the average score was 87.24 with a standard deviation of 7.137. It can be concluded that there is an average difference between the pretest and posttest of research respondents with $p > 0.05$, so there is an increase after being given health education through video media.

Audiovisual media is an intermediary medium or the use of material and its absorption through sight and hearing so as to build conditions that can enable people to acquire

knowledge and skills. The benefits of using audiovisual media are to make it easier to convey and receive information, encourage the desire to know more information and not feel bored during the learning process.(Arsyad, 2014). Providing health education about menstruation is carried out using videos using language that is easy for respondents to understand, so that respondents not only hear but can also see the material provided. Providing health education about menstruation is provided by utilizing the function of the senses in receiving information.

Based on the results of the research above, providing health education about menstruation via video can make it easier for elementary school girls to understand the information provided so that it can increase girls' knowledge about menstruation. It is concluded that there is an increase in the average score before being given health education and after being given health education through video media. at State Elementary School 2 and State Elementary School 4 in the Penebel Village Area.

CONCLUSION

The conclusions of the research related to "Differences in Levels of Knowledge About Menstruation Before and After Being Given Health Education Through Video Media" are as follows: 1) Before being given health education through video media, some respondents had insufficient knowledge about menstruation. 2) After being given health education via video media, all respondents experienced significant improvements in the first week's posttest and second week's posttest. 3) There is a meaningful and significant difference between knowledge before and after being given health education and there is an increase in female students' knowledge after being given health education about menstruation via video. Research suggestions that can be given are 1) It is best for female students to seek information regarding reproductive health regarding menstruation, for example seeking information through print, electronic media and health workers directly. 2) As a calm insight into reproductive health, especially for those who have daughters, they can be given an early understanding of reproductive health regarding menstruation. 3) As an effort to prepare and obtain information for female students about menstruation, it is hoped that the school will carry out activities related to reproductive health more actively by providing information in the form of counseling by utilizing self-development and getting more information and knowledge about menstruation.

REFERENCE

- Ajjah, J. H., & Selvi, E. (2021). Pengaruh Kompetensi Dan Integritas Terhadap Kinerja Perangkat Desa. *JESS (Journal of Education on Social Science)*, 5(1), 24. <https://doi.org/10.24036/jess.v5i1.314>
- Arsyad, A. (2014). *Media Pembelajaran*. Raja Grafindo Persada.
- Astri. L. A., Sri. W. dan Yudhy. D. 2016. Pengaruh Pemberian Pendidikan Kesehatan Reproduksi Terhadap Tingkat Pengetahuan Remaja Awal Sekolah Dasar di Daerah Wisata Bandungan Kabupaten Semarang Tahun 2016. *Jurnal Kesehatan Masyarakat*. 4(4). pp. 1–7.
- Hapsari, Y. E., Widyastutik, D., Hapsari, E., & M, M. Y. (2021). *Pengaruh Penerapan Pendidikan*

- Kesehatan Tentang Menarche Dengan Metode Audiovisual Terhadap Tingkat Pengetahuan Dan Sikap Remaja Di SD N Sukorame 01.*
- Hendriani, D., Adib C. N. dan Rusdiana T. S. 2019. Pendidikan Kesehatan Dengan Media Audiovisual Tentang Menarche Terhadap Pengetahuan Dan Kecemasan Siswa. *Mahakam Midwifery Journal* 3(1), pp. 24-32.
- Nainggolan, B. W. M., & Sukatendel, K. (2021). Hubungan antara Faktor Stres dan Siklus Menstruasi pada Mahasiswi Fakultas Kedokteran Universitas Sumatera Utara. *SCRIPTA SCORE Scientific Medical Journal*, 3(1), 1-7. <https://doi.org/10.32734/scripta.v3i1.6585>
- Novita, D, Purwaningsih, H, dan Susilo, E. 2020. Kesiapan Menghadapi Menarche Pada Siswa Sd Sebelum Dan Setelah Mendapatkan Pendidikan Kesehatan. *Journal of TSCS1Kep*. 5(2), p. 14.
- Nursalam. (2020). *Metodologi Penelitian Ilmu Keperawatan*. Selemba Medika.
- Nyamin, Y., Irda, A. S. , dan Reny, S. 2020. Hubungan Tingkat Pengetahuan Dengan Perilaku Personal Hygiene Saat Menstruasi Pada Remaja Puteri. *Jurnal Forum Kesehatan : Media Publikasi Kesehatan Ilmiah*, 10(2), pp. 1-8.
- Ulfa, M., & Agustina, I. (2014). Pengaruh Penyuluhan Tentang Menarche Terhadap Pengetahuan Dan Sikap Remaja Putri Pra Menstruasi. *Journal of Ners and Midwifery*, 1(3), 196-199. <https://doi.org/10.26699/jnk.v1i3.art.p196-199>
- Setiawati, E. 2019. Pengaruh Pendidikan Kesehatan Terhadap Tingkat Pengetahuan Remaja Sma Tentang Penyakit HIV/AIDS, *Skripsi*. Program Studi Diploma III Keperawatan Institusi Teknologi Sains dan Kesehatan PKU Muhammadiyah Surakarta. Surakarta
- Setyawan, D. A. 2022. *Buku Ajar Statistika Kesehatan Analisis Bivariat Pada Hipotesis Penelitian*. Tahta Media Group. Surakarta.
- Silaban, A. N. 2019. Pengaruh Pendidikan Kesehatan Terhadap Pengetahuan Ibu Tentang Menopause Di Desa Tuntungan II Kecamatan Pancur Batu. *Skripsi*. Program Studi Ners Sekolah Tinggi Ilmu Kesehatan Santa Elisabeth. Medan.
- Sinaga, E., Nonon, S., Suprihatin, N. S., Ummu, S., Yulia, A. M., Agusniar, T. dan Santa, L. 2017. *Manajemen Kesehatan Menstruasi*. Universitas Nasional. Jakarta.
- Sugiyono. 2019. *Metode Penelitian Kuantitatif Kualitatif Dan R&D*. Alfabeta. Bandung
- Tambunan, N. J. 2019. Gambaran Pengetahuan Ibu Tentang Cara Menyikat Gigi Terhadap Kebersihan Gigi Dan Mulut Pada Siswa/Siswi Kelas IV & V SD Negeri No 173547 Tabunan kecamatan Balgie. *Skripsi*. Program Studi Diploma III Jurusan Keperawatan Gigi Poltekkes Kemenkes Medan. Medan.
- Ulfa, M. dan Ika, A. 2014. Pengaruh Penyuluhan Tentang Menarche Terhadap Pengetahuan Dan Sikap Remaja Putri Pra Menstruasi', *Journal of Ners and Midwifery*, 1(3), pp. 196-199.
- Utari, A. D. dan Yanita, T. 2017. Pengaruh Pendidikan Kesehatan Tentang Dismenore Terhadap Sikap Remaja Putri Dalam Menangani Dismenore', *Jurnal Media Ilmu Kesehatan*, 6(1), pp. 63-69.
- Wijayanti, Y. T. 2015. Analisis Faktor Yang Berhubungan Dengan Kejadian Hiperemesis Gravidarum. *Jurnal Kesehatan Metri Sai Wawai*, 2(1), pp. 20-24.

- Wiyono, D. K., Yuli. T. dan Dodik. P. 2015. Pengaruh Penyuluhan Tentang Dismenorea Terhadap Tingkat Pengetahuan Gangguan Haid Pada Siswi SMA Di Kecamatan Semarang Barat. *Jurnal Media Medika Muda*, 4(2), pp. 163–175.
- Yanti. R. D. dan Elin. S. 2022. Pengaruh Peer Education Terhadap Pengetahuan Dan Sikap Mengenai *Premenstrual Syndrom* Pada Siswi Smp. *Jurnal Ilmiah Bidan*, 6(4), p.3.
- Yuanta, F. 2020. Pengembangan Media Video Pembelajaran Ilmu Pengetahuan Sosial pada Siswa Sekolah Dasar, *Trapsila: Jurnal Pendidikan Dasar*, 1(02), p. 91.
- Yudianto, A. 2017. Penerapan Video Sebagai Media Pembelajaran. *Skripsi*. Program Studi Pendidikan Teknologi Universitas Muhammadiyah Sukabumi. Jawa Barat.
- Yuliana, E. 2017. Analisis Pengetahuan Siswa Tentang Makanan yang Sehat dan Bergizi Terhadap Pemilihan Jajanan di Sekolah. *Skripsi*. Fakultas Keguruan dan Ilmu Pendidikan Universitas Muhammadiyah Purwokerto. Jawa Tengah.
- Yusuf, Y., Rina. K. dan Sefti. R. 2014. Hubungan Pengetahuan Menarche Dengan Kesiapan Remaja Putri Menghadapi Menarche Di SMP Negeri 3 Tidore Kepulauan', *Jurnal Keperawatan UNSRAT*, 2(2), p. 7