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# THE EFFECT OF PROVIDING REPRODUCTIVE HEALTH EDUCATION ON THE KNOWLEDGE AND ATTITUDES OF ADOLESCENT GIRLS AT NU DONOMULYO VOCATIONAL SCHOOL

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**ABSTRACT**

*Adolescence is a crucial stage in reproductive health development, characterized by physical, psychological, and social changes. Inadequate knowledge and attitudes regarding reproductive health may increase adolescents' vulnerability to risky behaviors. This study aimed to determine the effect of reproductive health education delivered through video media on the knowledge and attitudes of adolescent girls at SMK NU Donomulyo. This quantitative study employed a pre-experimental one-group pretest–posttest design. A total of 30 adolescent girls were selected using purposive sampling. Data were collected using validated knowledge and attitude questionnaires administered before and after the intervention. The intervention consisted of reproductive health education delivered through educational videos via a WhatsApp group. Data were analyzed using the Paired Sample t-test. The results showed that participants' knowledge improved from predominantly poor (66.7%) before the intervention to predominantly good (80.0%) after the intervention, while attitudes improved from predominantly sufficient (66.7%) to good (96.7%). The Paired Sample t-test demonstrated significant improvements in both knowledge (mean difference = -1.500; t = -7.644; p < 0.001) and attitude (mean difference = -11.400; t = -9.630; p < 0.001) following the intervention. These findings indicate that reproductive health education delivered through video media is effective in improving knowledge and fostering positive attitudes among adolescent girls. Therefore, educational video media can be considered an effective and engaging approach for adolescent reproductive health education.*

***Keywords:*** *Adolescent Girls, Attitude, Educational Video, Knowledge, Reproductive Health Education*

## INTRODUCTION

Adolescence is a transition period from childhood to adulthood, marked by significant physical, psychological, and social changes, requiring a good understanding of the developmental process [1] . In this phase, adolescents are in a stage of self-discovery, characterized by increased curiosity and exploration of various aspects of life, including those related to personal health [2] . The development of reproductive organs that begin to mature during adolescence also makes this phase an important period for understanding body functions correctly in order to support health and well-being in the future [3] .

Adolescent reproductive health issues remain a serious issue, with approximately 11% of all pregnancies occurring in adolescents aged 15–19 years and most occurring in developing countries [4] . In Indonesia, this condition also shows alarming figures, with approximately 10% of adolescents experiencing early pregnancy due to a lack of understanding of reproductive health [5] . At the provincial level, data from East Java shows that cases of early marriage and

adolescent pregnancy are still quite high and are a concern in adolescent health programs, which are closely related to low reproductive health education [6] . Meanwhile, in Malang Regency, a part of East Java, similar problems are still found in adolescents, especially related to limited knowledge and attitudes towards reproductive health which can have an impact on risky behavior [7] .

Based on a preliminary study conducted through semi-structured interviews on April 24, 2026 at SMK NU Donomulyo with 8 out of 30 female students (26.7%), it was found that 5 female students (62.5%) did not understand properly about reproductive health, especially regarding changes during puberty and how to maintain reproductive organ hygiene. In addition, as many as 6 female students (75%) stated that the information obtained so far came from peers and social media which was not necessarily true, and they still felt embarrassed to ask teachers or health workers. As many as 7 female students (87.5%) also stated that the delivery of reproductive health material in schools was still limited and did not use interesting media so that it did not increase interest in learning. This condition shows that the knowledge and attitudes of young women towards reproductive health still need to be improved through more effective educational methods and in accordance with the characteristics of adolescents. This phenomenon was also found in research which stated that limited adolescent knowledge about reproductive health can cause misunderstandings in understanding body changes and influence how adolescents respond to them [3] . Other research reveals that the lack of understanding that teenagers have often makes them feel embarrassed or reluctant to talk about reproductive health issues, which results in a closed attitude [8] . In these conditions, conveying the right information is important, but in reality the educational methods used in schools still tend to be conventional and less interesting for teenagers. Based on these various problems, appropriate efforts are needed to increase knowledge and shape positive attitudes of young women towards reproductive health through educational methods that are appropriate to their characteristics. One approach that can be used is providing reproductive health education using interesting and easy-to-understand media. Video media is considered effective because it is able to present information visually and audibly, thereby increasing adolescents' attention, understanding, and memory of the material presented. This is in line with research stating that the use of video media in health education can help increase adolescent knowledge more optimally than conventional methods [2] . Therefore, research is needed regarding the effect of providing reproductive health education through video media on the knowledge and attitudes of young women at SMK NU Donomulyo.

## RESEARCH METHODS

The method used in this study is quantitative research with an experimental approach. The type of research used is a Pre-Experimental Design with a One-Group Pretest-Posttest Design, namely research conducted on one group without a control group, by taking measurements before and after being given an intervention.

This research was conducted on May 2, 2026, at SMK NU Donomulyo. During the implementation phase, the researcher coordinated with the health and safety school teacher to facilitate the research activities, including the delivery of information to respondents and the management of the educational media used. The intervention in this study was the provision of reproductive

health education through video media distributed to respondents through the class *WhatsApp group* , considering that the majority of adolescents already have access to mobile phones, facilitating the process of delivering information effectively and efficiently.

The population in this study was all 30 female students at SMK NU Donomulyo. The sample in this study was taken using a *purposive sampling technique* with a non-random sampling approach, namely the deliberate selection of samples based on predetermined criteria. Inclusion criteria in this study included: 1) female students who were willing to be respondents, 2) had access to a mobile phone, and 3) were members of the class WhatsApp group. Meanwhile, exclusion criteria included female students who did not participate in the entire research series or did not complete the questionnaire completely.

This study was conducted using a single intervention. The initial stage involved a pretest to assess the knowledge and attitudes of adolescent girls before receiving the educational intervention. Subsequently, the researchers delivered reproductive health education through an educational video shared via a WhatsApp group. After the participants watched the video, a posttest was conducted to evaluate changes in their knowledge and attitudes following the intervention.

The independent variable in this study was reproductive health education delivered through video media, while the dependent variables were the knowledge and attitudes of adolescent girls. Data were collected using validated questionnaires administered before (pretest) and after (posttest) the intervention.

Data were analyzed using the Paired Sample t-test with the aid of SPSS software. The Paired Sample t-test was employed to compare the mean pretest and posttest scores of knowledge and attitudes and to determine the effectiveness of reproductive health education delivered through video media. A p-value of $< 0.05$ was considered statistically significant.

## RESULTS AND DISCUSSION

### A. General Data of Respondents

**Table 1. General Data of Respondents**

| Variables | Category | Frequency (n) | Percentage (%) |
|---|---|---|---|
| Gender | Woman | 19 | 63.3 |
| | Man | 11 | 36.7 |
| | Total | 30 | 100 |
| Ever Received Information | Yes I have | 30 | 100 |
| | No | 0 | 0 |
| | Total | 30 | 100 |

Based on the table above, the majority of respondents were female, 19 (63.3%), while 11 (36.7%) were male. All respondents (100%) stated they had received information about reproductive health.

### B. Specific Data (Knowledge & Attitude)

**Table 2. Specific Data (Knowledge & Attitude)**

| Variables | Category | Frequency (n) | Percentage (%) |
|---|---|---|---|
| Knowledge Pre-test | Not enough | 20 | 66.7 |
| | Enough | 10 | 33.3 |

| Variables | Category | Frequency (n) | Percentage (%) |
|---|---|---|---|
| | Good | 0 | 0 |
| Post-test Knowledge | Not enough | 6 | 20.0 |
| | Good | 24 | 80.0 |
| Attitude Pre-test | Enough | 20 | 66.7 |
| | Good | 10 | 33.3 |
| Post-test Attitude | Enough | 1 | 3.3 |
| | Good | 29 | 96.7 |

In the pre-test, the majority of respondents were in the poor category, 20 (66.7%). After the intervention, there was an improvement, with the majority of respondents in the good category, 24 (80.0%).
In terms of attitude, before the intervention, the majority of respondents were in the sufficient category (66.7%), then increased to the good category by 29 people (96.7%) after the intervention was given.

**C. Normality Test**

**Table 3. Normality Test**

| Variables | Shapiro-Wilk Sig. | Information |
|---|---|---|
| Knowledge Pre-test | < 0.001 | Abnormal |
| Post-test Knowledge | 0.012 | Abnormal |
| Attitude Pre-test | 0.047 | Abnormal |
| Post-test Attitude | < 0.001 | Abnormal |

The results of the Shapiro-Wilk normality test showed that all variables had a significance value <0.05, thus concluding that the data were not normally distributed. Therefore, the appropriate statistical test to use was a non-parametric test.

**D. Paired Sample T-Test**

**Table 4. Paired Sample T-Test**

| Variables | Mean | Standard Deviation | t count | Sig. (2-tailed) |
|---|---|---|---|---|
| Knowledge (Pre–Post) | -1,500 | 1,075 | -7,644 | < 0.001 |
| Attitude (Pre–Post) | -11,400 | 6,484 | -9,630 | < 0.001 |

The results of the paired sample t-test showed a significant difference between the pre-test and post-test scores for both knowledge and attitude variables. For the knowledge variable, the p-value was <0.001 (p <0.05), indicating that Health Education through Educational Videos had an effect on increasing respondents' knowledge.

Likewise, for the attitude variable, a p-value <0.001 (p <0.05) was obtained, so it can be concluded that the Health Education intervention through the Educational Video provided also had a significant effect on improving respondents' attitudes.

Based on the research results, the majority of respondents were female (19 people) (63.3%), while 11 were male (36.7%). All respondents (100%) stated they had received information about reproductive health.

In theory, adolescence is a crucial period in the development of reproductive health, particularly for girls who experience physiological changes such as menstruation and reproductive organ maturation. This condition causes girls to tend to have a higher need for reproductive health information than boys. This is in line with research by KM Chandra-Mouli (2021) which states that girls are more vulnerable to reproductive health problems and therefore require more comprehensive education [9] . All respondents in this study also received information related to reproductive health (100%). This indicates that access to information for teenagers today is quite extensive, especially through digital media

such as the internet and social media. However, the source of this information cannot necessarily be accounted for. Research by AA Abiodun (2021) states that although teenagers have high access to reproductive health information, the quality of the information received is often invalid and can lead to misconceptions [10] . This phenomenon is also supported by research by M. Widman (2021) which explains that teenagers more often obtain information from peers and social media than health workers, potentially leading to misunderstandings regarding reproductive health [11] . Although most teenagers have received reproductive health information, their level of understanding is still low to moderate. This is due to less engaging delivery methods and the limited educational media used in schools [12] .

Based on the research results, it was found that in the pre-test, the knowledge of most respondents was in the poor category (66.7%). After receiving educational intervention via video media, this knowledge increased to the good category (80.0%). This indicates a significant improvement after the education was provided.

In theory, knowledge is the result of the sensing process that occurs through the five senses, especially the eyes and ears. Video media combines visual and audio elements so that it can increase the ability to capture information more optimally. Multimedia-based learning allows individuals to process information through two channels at once (visual and auditory), thereby increasing understanding and retention of information [13] . The use of video media in health education can significantly increase adolescent knowledge because the delivery of information is more interesting and easier to understand [14] . Video-based education has been shown to be effective in increasing adolescent reproductive health knowledge because it presents concrete examples from everyday life. [15] . Videos can increase adolescent attention, which is the initial stage in the knowledge formation process. When attention is increased, the process of receiving information becomes more optimal [16] . Furthermore, the effectiveness of video media in improving adolescent knowledge and attitudes is also inseparable from the characteristics of adolescents who tend to be more interested in digital and audiovisual media. Adolescents are a generation familiar with technology, so they are more receptive to information presented in an attractive visual form than conventional lecture methods. Research by JD Rideout (2021) shows that adolescents spend most of their time accessing digital media, making a video-based educational approach more relevant and effective in conveying health messages [17] . Furthermore, the success of videos in improving knowledge and attitudes is also influenced by their ability to present information contextually and applicably. Material delivered through videos is usually accompanied by real illustrations, simulations, and case examples that are close to adolescents' daily lives, making it easier for them to understand and internalize the information. This is in line with research by PJM Best (2022) which states that contextual visual-based learning can improve understanding because students can relate the material to personal experiences [18] . On the other hand, the changes in attitudes that occurred after the intervention also showed that education through video not only provided information but also influenced adolescents' beliefs and perceptions regarding reproductive health [19] . This process occurred due to the integration of cognitive and affective aspects obtained through audiovisual media [20] . When adolescents understand the importance of maintaining reproductive health and

see examples of correct behavior, an internal drive will emerge to change attitudes to be more positive. Research by R. Hornik (2021) explains that health messages delivered through attractive and persuasive media can increase the likelihood of changes in attitudes and behavior in adolescents [21] . Although all respondents had previously received reproductive health information, most still had limited knowledge because the information was provided during elementary school, making it inappropriate for today's adolescents' cognitive maturity. Furthermore, teachers' relatively conventional delivery methods, lacking engaging media, made information difficult to understand and easily forgotten. This suggests that the timing and method of information delivery significantly impact adolescents' understanding. As adolescents age, their information needs become more complex, necessitating a more relevant and contextual approach. The lack of ongoing reinforcement of the material also prevents previously acquired knowledge from developing optimally. Therefore, re-education using more engaging media, such as videos, is necessary to ensure information is more effectively absorbed and enhance adolescents' knowledge.

## CONCLUSION

Based on research results, providing reproductive health education through video media has been shown to improve adolescent girls' knowledge from poor to good. Respondents' attitudes also improved from fair to good after the intervention. Video media is effective because it conveys information visually and audibly, making it easier to understand and remember. Furthermore, videos can capture attention and influence adolescents' emotional aspects, fostering positive attitudes. Although respondents had previously received information, the less engaging delivery method resulted in low comprehension. Therefore, education through video media can be an effective alternative for improving adolescents' knowledge and attitudes toward reproductive health.

## BIBLIOGRAPHY

[1] FP Sari and T. Sari, “Knowledge, attitudes and behavior of high school adolescents towards reproductive health in Semanan Village,” vol. 5, no. 2, pp. 281–288, 2023.
[2] SR Apriyanti, “THE INFLUENCE OF HEALTH EDUCATION ON ADOLESCENT GIRLS’ KNOWLEDGE OF PERSONAL HYGIENE OF FEMALE REPRODUCTIVE ORGANS,” vol. 5, no. November, pp. 1419–1426, 2023.
[3] Rahmayani, “The Relationship between Adolescent Reproductive Health Knowledge and Healthy Reproductive Behavior of Adolescent Girls,” vol. 7, no. 4, pp. 856–860, 2024.
[4] R. Husnah, S. Nurhaliza, and AJ Tampubolon, “Efforts to Address Reproductive Health Problems in Adolescents,” vol. 2, no. 6, pp. 1971–1977, 2024.
[5] L. 6, “Lack of Understanding of Reproductive Health Triggers High Teenage Pregnancy.”
[6] IH Lestyoningsih, “IMPLEMENTATION OF A PROBLEM-BASED REPRODUCTIVE HEALTH MODEL IN ADOLESCENT GIRLS IN INDONESIA IN 2018,” pp. 47–54, 2018.
[7] R. Septiani, “RELATIONSHIP BETWEEN KNOWLEDGE ABOUT REPRODUCTIVE HEALTH, ATTITUDES TOWARDS REPRODUCTIVE HEALTH PROBLEMS AND ADOLESCENT SEXUAL MEDIA ACCESS TO ADOLESCENT SEXUAL BEHAVIOR,” vol. 2, no. 1, pp. 13–21, 2019.

[8] YP TAUFIANIE ROSSITA, LIYA LUGITA SARI, "RELATIONSHIP BETWEEN KNOWLEDGE AND ATTITUDES OF ADOLESCENTS ABOUT REPRODUCTIVE HEALTH AT SMK 3 BENGKULU CITY," vol. 13, no. 1, pp. 123–126, 2025.

[9] D. Parameshwaran, S. Sathishkumar, and TC Thiagarajan, "The impact of socioeconomic and stimulus inequality on human brain physiology," *Sci. Rep.* , no. 0123456789, pp. 1–16, 2021, doi: 10.1038/s41598-021-85236-z.

[10] J. George and D. Ph, "NAFLD in Lean Asians," vol. 16, no. 6, pp. 240–243, 2021, doi: 10.1002/cld.930.

[11] W. Fronika, JA Education, FI Education, and UN Padang, "The influence of social media on adolescent attitudes," pp. 1–15.

[12] A. Rosmalina and T. Khaerunnisa, "Social Media Use in Adolescent Mental Health," vol. 4, no. 1, pp. 49–58, 2021.

[13] N. Tanjaya, RI Hakim, DM Rusliani, and M. Pontianak, "The Influence of Video-Based Educational Media on the Level of Adolescent Knowledge Regarding Reproductive Health at Muhammadiyah Pontianak Senior High School, Guna Bangsa Health College, Yogyakarta, Indonesia," vol. 3, 2025.

[14] Mailani, "Reproductive health education through educational videos for adolescents," vol. 4, no. 1, pp. 60–72, 2024.

[15] UK Lilhore *et al.* , "Design and Implementation of an ML and IoT Based Adaptive Traffic-Management System for Smart Cities," 2022.

[16] AA Rohman, U. Aniroh, UN Waluyo, KT Diinginkan, and K. Reproduksi, "Strategies for Increasing Adolescent Reproductive Health Knowledge Through Education Using Animated Video Media," vol. 7, no. 1, pp. 215–223, 2025.

[17] Kurnia, "The Influence of Health Education Through Video Media on Adolescent Girls' Knowledge of the Impact of Early Marriage on Reproductive Health," vol. 6, no. 4, pp. 540–546, 2023.

[18] IR Indri, F. Dyna, and D. Maulinda, "Reproductive Health Education Intervention Through Video Media on HIV/AIDS Knowledge in Adolescents," vol. 5, no. 1, pp. 3951–3957, 2026.

[19] Altmetrics, Articles, and sleep quality in pregnant women with sleep disorders. The effect of listening to music on stress, anxiety, and M. &Chung-HC Yu-Hsiang Liu, MSN , ChihChen Sophia Lee, PhD, MT-BC , Chen-Hsiang Yu, "The effect of listening to music on stress, anxiety, and sleep quality in pregnant women with sleep disorders.," 2016.

[20] BJA Bernard M. Bass, "Improving Organizational Effectiveness Through Transformational Leadership," *J. Acad. Librariansh.* , 1998.

[21] R. Sakwa, "Book Review: Neil Malcolm, Alex Pravda, Roy Allison, and Margot Light, Internal Factors in Russian Foreign Policy (Oxford: Oxford University Press and RIIA, 1996, 356 pp., £40.00 hbk.)," 1996.