

# The Effect Of Video-Based Health Promotion On Knowledge And Readiness To Face Menarche Among Female Students At MI Nurul Ihsan Buminabung Timur, Central Lampung Regency

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Article Info	ABSTRACT
<b>Keywords:</b> Knowledge Readiness Video-Based Health Promotion Menarche	According to the World Health Organization (WHO) in 2021, around 14% of the 12 billion adolescents in the world aged 10-19 experience anxiety before puberty. The most important event that occurs during puberty for adolescent girls is menarche. Problems facing menarche include anxiety caused by negative perceptions of menstruation that lead to feelings of fear, anxiety, and worry. The purpose of this study was to determine the effect of video-based health promotion on knowledge and readiness to face menarche among female students at Madrasah Ibtidaiyah (MI) Nurul Ihsan Bumi Nabung Timur, Central Lampung Regency in 2024. This research is a quantitative analytic study with a pre-experimental approach using a one-group pretest-posttest design. The population in this study was all female students in grades 5-6 who had not experienced menarche, with a population and sample size of 17 female students using a total sampling technique. Data collection was done using a questionnaire. Univariate data analysis used mean calculations, while bivariate analysis used chi-square. The results showed that the average pretest knowledge was 4.59, and the pretest readiness to face menarche was 18.47. The average posttest knowledge was 9.94, and the posttest readiness was 25.24. There was an effect of video-based health promotion on knowledge about menarche (p-value: 0.000). There was an effect of video-based health promotion on readiness to face menarche (p-value: 0.000). It is recommended that the school can develop a sustainable health promotion program in collaboration with related parties such as the community health center (puskesmas) and other health workers.

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## INTRODUCTION

Adolescence is a transitional period from childhood to adulthood. One sign of physical and sexual maturity in females is the occurrence of menarche. The most important event that occurs during puberty for adolescent girls is the arrival of the first menstruation, called menarche, which is a biological sign of sexual maturity. Ideally, an adolescent girl learns or knows about menstruation from her mother. However, mothers are not always able to provide

information about menstruation because they are hindered by traditions that consider it taboo to talk about menstruation, thus affecting the quality of health during menstruation in adolescents (Romana et al., 2021).

The results of this review and meta-analysis show a significant decrease in the age of menarche in Indonesia from the 1970s to the present. The decrease in the average age of menarche can be predicted to decrease by 0.0245 years (8.9 days) for every 1-year increase (Wahab, et al., 2020). In Indonesia, the overall average age of menarche is 13-14 years, with the incidence of early menarche from the age of 9 years or less being 37.5% (Riskesdas, 2018). The prevalence of early menarche in adolescents worldwide is 14.6% (WHO, 2021). Based on an epidemiological study conducted in Korea, 42% of adolescent girls experienced menarche at the age of < 12 years (Yu et al., 2019). Meanwhile, research in Saudi Arabia reported that 32.1% of adolescent girls experienced early menarche at the age of  $\leq 12$  years (Jamilah et al., 2018).

Problems related to the decrease in the age of menarche are due to disturbances in the hormonal system, nutritional status of children, psychological conditions, and other causes. These changes can have an impact on the reproductive and psychosocial health of adolescents, including many adolescent girls in Indonesia who do not understand the process of menarche, the unpreparedness of adolescents to face discomfort or pain during menstruation, and the physical and hormonal changes during menarche that can affect the mental and emotional health of adolescents in the form of anxiety (Prawirohardjo & Wiknjosastro, 2020).

According to the World Health Organization (WHO) in 2021, around 14% of the 12 billion adolescents in the world aged 10-19 experience anxiety before puberty. The prevalence of adolescent anxiety about puberty in Indonesia is recorded at around 49.1%. According to Cherenack and Sikkema (2021), in Tanzania, 2.9% of the causes of depression and anxiety disorders in adolescent girls are due to negative perceptions of menstruation that lead to feelings of fear, anxiety, and worry during menstruation, and most of them also consider menstruation to be a traumatic event in their lives. In Mexico, around 65.6% of adolescents have a negative response to menstruation (Rahmawati, 2023).

Some of the problems that arise require the role of parents and related parties to provide good information for adolescent girls in dealing with these problems, but in reality, currently, society still considers menstruation as a taboo or disgrace to be discussed, which makes adolescents increasingly less likely to get information related to menarche. This condition makes the importance of health education and support for adolescent girls in dealing with menarche (Herawati & Muniarti, 2022).

Health education using video media is currently the most attractive media for audiences, especially teenagers who are currently very familiar with audio-visual media in the form of videos such as those widely used today in social media and other counseling activities. Video media has several advantages, including the combination of sound, images, and text in the video strengthening understanding and making it easier for students to remember information, allowing for more attractive visualizations than text or static images. This helps

clarify concepts and facilitate understanding, and the messages conveyed are easier to remember and understand. Videos also allow for more comprehensive information delivery, and besides that, videos can be accessed anytime and anywhere. (Hutabarat, 2022; Umrah, 2020)

Several studies related to the effectiveness of providing health education using video media in increasing adolescents' knowledge and readiness in dealing with menarche include a study by (Yahya et al., 2024) at SD 1 Paret Bolaaang Mongodow with the result of an overall increase in students' knowledge so that it can be concluded that video media has an effect on students' knowledge (p-value: 0.000). Research by (Angraini et al., 2021) with the result that after health promotion using video media, there was an increase in students' knowledge and attitudes in dealing with menarche, so video media had an effect on increasing students' knowledge and attitudes (p-value: 0.000). Research by (Shavira, 2023) at SD Negeri 1 Wirasaba with the result that there was an effect of health education with animated video media on the level of knowledge and readiness to face menarche (p-value: 0.000). The average level of knowledge before education was 61.25, and after health education was 81.75. The average readiness before health education was 47.39, and after health education was 69.97.

The results of a pre-survey from a preliminary study conducted at MI Nurul Ihsan Bumi Nabung Timur, Central Lampung Regency on female students in grades 5 and 6 showed that out of 54 female students, 37 (68.5%) of them had experienced menarche, while 17 students (31.5) had not yet experienced it, and based on interviews, most of the female students who had not experienced menarche had less knowledge about this condition and stated that they were afraid of experiencing menarche.

Based on the description of the phenomena above, this study intends to conduct a pre-experimental study to determine the effect of video-based health promotion on knowledge and readiness to face menarche among female students at Madrasah Ibtidaiyah (MI) Nurul Ihsan Bumi Nabung Timur, Central Lampung Regency in 2024.

## METHODS

This research is a quantitative study using a pre-experimental design with a one-group pretest-posttest design approach. The population in this study was all female students in grades 5-6 who had not experienced menarche at MI Nurul Ihsan Bumi Nabung Timur, Central Lampung Regency, totaling 17 female students. The sampling technique used in this study was the total sampling technique. The research instrument used a questionnaire. The bivariate analysis in this study used the paired T-test.

## RESULTS AND DISCUSSION

**Table 1** Mean Score of knowledge level about *menarche* before being given video-based health promotion at MI Nurul Ihsan Bumi Nabung Timur Central Lampung Regency in 2024

Variable	N	Mean	SD	Min	Max
Knowledge Level	17	4,59	1,91	2	9

Based on the table above, the average level of student knowledge about *menarche* before being given video-based health promotion was 4.59 with the highest score of 9 and lowest of 2 with a standard deviation of 1.91.

**Table 2** Mean Score of Readiness Level Facing *Menarche* before being given video-based health promotion at MI Nurul Ihsan Bumi Nabung Timur Central Lampung Regency in 2024

Variable	N	Mean	SD	Min	Max
Readiness Level	17	18,47	1,81	16	22

Based on the table above, the average level of readiness facing *menarche* before being given video-based health promotion was 18.47 with the highest score of 22 and lowest of 16 with a standard deviation of 1.81.

**Table 3** Mean Score of knowledge level about *menarche* After being given video-based health promotion at MI Nurul Ihsan Bumi Nabung Timur Central Lampung Regency in 2024

Variable	N	Mean	SD	Min	Max
Knowledge Level	17	9,94	2,11	7	14

Based on the table above, the average level of knowledge about *menarche* after being given video-based health promotion was 9.94 with the highest score of 14 and lowest of 7 with a standard deviation of 2.11.

**Table 4** Mean Score of Readiness Level Facing *Menarche* After being given video-based health promotion at MI Nurul Ihsan Bumi Nabung Timur Central Lampung Regency in 2024

Variable	N	Mean	SD	Min	Max
Readiness Level	17	25,24	3,96	19	33

Based on the table above, the average level of readiness facing *menarche* after being given video-based health promotion was 25.24 with the highest score of 33 and lowest of 19 with a standard deviation of 3.96..

### Bivariate Analysis

**Table 5.** The Effect of Video-Based Health Promotion on Knowledge about *Menarche* in female students of MI Nurul Ihsan Bumi Nabung Timur Central Lampung Regency in 2024

Knowledge	N	Mean	Min	Max	SD	Sig.
Pretest	17	4,59	2	9	1,906	0,000
Posttest		9,94	7	14	2,106	

In table 5, the results of statistical test *paired samples t test* obtained Sig value is: 0.000 <  $\alpha$ : 0.05, it can be concluded there is an effect of video-based health promotion on knowledge about *menarche* in female students of MI Nurul Ihsan Bumi Nabung Timur Central Lampung Regency in 2024.

**Table 6.** The Effect of Video-Based Health Promotion on Readiness Facing *Menarche* in female students of MI Nurul Ihsan Bumi Nabung Timur Central Lampung Regency in 2024

Readiness	N	Mean	Min	Max	SD	Sig.
Pretest	17	18,47	16	22	1,807	0,000
Posttest		25,24	19	33	3,961	

In table 4.4 above, the results of statistical test *paired samples t test* obtained Sig value is:  $0.000 < \alpha: 0.05$ , it can be concluded there is an effect of video-based health promotion on readiness facing *menarche* in female students of MI Nurul Ihsan Bumi Nabung Timur Central Lampung Regency in 2024.

## Discussion

### Mean Score of Knowledge Pretest

Based on the research results, it can be seen that the average level of student knowledge about menarche before being given video-based health promotion was 4.59 with the highest score of 9 and lowest of 2 with a standard deviation of 1.91. These results indicate that student knowledge before being given health promotion was in the low category.

Generally, knowledge is understanding or awareness obtained through experience, education, or information. This includes facts, information, and skills acquired by someone through learning or teaching. Knowledge is the result of human knowing that merely answers the question 'what'. Knowledge occurs after people perform sensing of a particular object; sensing itself occurs when there is a response or stimulation through the five senses, namely hearing, sight, smell, touch, and taste, and most human knowledge is obtained from eyes and ears (Notoatmodjo, 2018).

This result aligns with Shavira's (2023) research at SD Negeri 1 Wirasaba Purbalingga Regency with an average knowledge level before health education of 61.25. The average readiness before health education was 47.39 and after health education was 69.97. Research by Sari et al., (2023) at SDN Jawa 5 Martapura showed students' knowledge level at pretest had an average score of 16.95 in the poor category.

Based on research results and existing theories, the low student knowledge condition during pretest was related to the lack of information received by students about menarche due to students' lack of interest in seeking or reading such information through text, sound, or visual means because it did not attract their attention.

### Mean Score of Readiness Pretest

Based on the research results, it can be seen that the average level of readiness facing menarche before being given video-based health promotion was 18.47 with the highest score of 22 and lowest of 16 with a standard deviation of 1.81. These results indicate that student readiness facing menarche before being given health promotion was also in the low category.

Readiness facing menarche is a condition that refers to the physical, emotional, and psychological readiness of a girl in facing her first menstruation. Menarche is the medical term for first menstruation marking the beginning of a woman's reproductive capability. Readiness generally refers to several aspects including understanding and knowledge, emotional support, physical preparation and readiness. By preparing comprehensively, girls can face menarche more calmly and confidently, and feel more comfortable with changes happening to their bodies (Husnah, 2021).

This research result aligns with Angraini, Ichwan, & Sari's (2021) research on grade 5 elementary school students with an average pretest readiness score of 6.29 and categorized

as poor. Research by Shavira, N. (2023) at SD Negeri 1 Wirasaba Purbalingga Regency showed an average student pretest readiness score of 47.39 and categorized as not ready.

Based on these results and theories, the researcher assumes that the condition of student readiness with a low average score is related to students' still lacking knowledge about menarche where readiness has a connection with knowledge; better knowledge leads to better readiness.

#### **Mean Score of Knowledge Posttest**

Based on the research results, it can be seen that the average level of knowledge about menarche after being given video-based health promotion was 9.94 with the highest score of 14 and lowest of 7 with a standard deviation of 2.11. These results show better knowledge scores compared to pretest knowledge scores.

These results align with theory explaining that providing education through health promotion has good benefits for increasing knowledge related to promoted material. Health promotion is an action carried out with the aim of spreading information in terms of information transfer and knowledge. The main purpose of health promotion is to improve community welfare and quality of life through education and interventions that encourage healthy behavior. Health promotion aims to empower individuals and communities to make informed and healthy decisions, and create environments that support optimal health (Notoatmodjo, 2018).

This result aligns with Shavira's (2023) research at SD Negeri 1 Wirasaba Purbalingga Regency with an average knowledge level after health education of 81.75. Research by Mahadewi (2023) at SD Muhammadiyah Wirobrajan 3 Yogyakarta showed students' knowledge scores after being given education using video media increased to 80.85 or in good category.

Based on research results related to the increase in student knowledge, according to the researcher's assumption, it is related to information absorbed by students through health promotion using video media, where someone's knowledge is related to how much information they have regarding menarche.

#### **Mean Score of Readiness Posttest**

Based on the research results, it can be seen that the average level of readiness facing menarche after being given video-based health promotion was 25.24 with the highest score of 33 and lowest of 19 with a standard deviation of 3.96. These results show better readiness scores compared to pretest knowledge scores.

This research result aligns with theory stating that providing education will increase someone's knowledge where increased knowledge will also increase someone's understanding related to something and that understanding makes someone more ready for something they have known before (Notoatmodjo, 2018). Health promotion provides clear information about menarche, such as physiological changes that occur, and how to manage menstruation will help students understand the process they will experience, reduce confusion and fears that may arise which makes students more mentally, emotionally, and

practically ready to face menarche, making the experience they will have more positive (Sari et al, 2023).

This research result aligns with research by Mahadewi et al. (2023) at SD Muhammadiyah Wirobrajan 3 Yogyakarta with results showing young women's readiness in facing menarche after being given health education about menstruation known from 54 respondents there was an increase in good category to 43 (79.6%). Research by Nara Lintan Mega Puspita et al., (2022) with results after being given health education almost all respondents (94.6%) were ready to face puberty. Research by Shavira (2023) at SD Negeri 1 Wirasaba Purbalingga Regency with average knowledge level before health education was 61.25. Based on results and theories that have been stated, the increase in student readiness in facing menarche according to the researcher's assumption is also related to increased knowledge where good knowledge will increase readiness to face menarche.

### **The Effect of Video-Based Health Promotion on Knowledge about Menarche**

Based on the research results, it can be known that there is an effect of video-based health promotion on knowledge about menarche in female students of MI Nurul Ihsan Bumi Nabung Timur Central Lampung Regency in 2024. These results indicate that video-based health promotion that has been given was able to increase student knowledge about menarche at MI Nurul Ihsan Bumi Nabung Timur.

These results show alignment with theory stating that health promotion is one form of education or learning process for its audience from a state of not knowing to knowing (Notoatmodjo, 2018). Moreover, this health promotion uses video media which has advantages where messages delivered are packaged interestingly so they will be easily remembered by viewers making messages delivered more easily accepted and remembered thus increasing audience knowledge. Based on this theory, health promotion using video is more effective in increasing student knowledge about menarche.

These results align with previous research namely research by Harini & Andini (2021) at SDN I Pakisaji with results based on questionnaire distribution showing that health promotion using video multimedia is effective for increasing adolescent knowledge about menarche with Wilcoxon signed rank test results with significant value 0.000. Research by Shavira (2023) at SD Negeri 1 Wirasaba Purbalingga Regency with results showing there is an effect of health education with animation video media on menarche knowledge level with p-value of 0.000. Research by Villasari et al. (2021) on Elementary and Islamic Primary School students with results showing that health education affects knowledge with significant value 0.028.

Based on these results, the researcher assumes that the increase in student knowledge is related to the absorption of information about menarche given through health promotion using video media to students. The use of video media is more attractive to students so information given is more easily absorbed and remembered by the students.

### **The Effect of Video-Based Health Promotion on Readiness Facing Menarche**

Based on the research results, it can be known that there is an effect of video-based health promotion on readiness facing menarche in female students of MI Nurul Ihsan Bumi

Nabung Timur Central Lampung Regency in 2024. These results show that after being given video-based health promotion about menarche makes the students better understand the condition they will face thus eliminating their anxiety and fears related to the condition they will experience.

These results align with theory related to health promotion which is all planned efforts to influence others whether individuals, groups, or society so they do what is expected by education actors (Notoatmodjo, 2018). Health promotion is a community empowerment process that aims to maintain and improve health so it can change behavior. Changes in someone's behavior are influenced by several factors, namely health education factors, methods used, educators or officers, and educational props used. Health promotion as providing information, instruction, or increasing understanding related to health. Health promotion for individuals aims to increase individual skills to increase awareness, willingness and ability to maintain and improve their health quality (Herawati & Muniarti, 2022).

The influence of promotional media about menarche in this research can also be related to information included in the video containing descriptions about menarche definition, menarche cycle, menstruation stages, disorders that can appear during menstruation, factors that accelerate menstruation and how to behave in facing menstruation. With information included in this video media that makes this media can increase readiness facing menstruation because it contains information that causes students to better understand the condition they will experience and makes them more ready to face menstruation.

Moreover, students' understanding related to conditions they will experience regarding menarche becomes better with health promotion media given in video form, where in childhood and adolescence video media is more attractive to their attention because there are several advantages including being rich in visual and audio. Video combines moving images, bright colors, music, sound, and dialogue, which can stimulate many senses at once. This makes video an interesting and memorable medium. Many videos are designed to tell interesting stories or narratives, which can trigger children's and adolescents' imagination and emotions. More interactive especially on digital platforms, allowing forms of interaction educational video can teach complex concepts in simple and interesting ways. Children and adolescents often find it easier to understand lesson material through video compared to written text. Because of the combination of these factors, video media is very effective in attracting and maintaining attention, especially among children and adolescents (Jatmika et al., 2019).

This research result aligns with research by Mahadewi (2023) at SD Muhammadiyah Wirobrajan 3 Yogyakarta with results showing there is an effect of health education about menstruation on young women's readiness in facing menarche with Sig. value (2 tailed) of 0.000. Research by Puspita (2022) with results showing there is an effect of health education using video multimedia on adolescent reproductive health knowledge in preparing for puberty. Research by Sari (2023) with results showing there is an effect of health education using video media on readiness in facing menarche with p-value 0.001. Research by Mahmudah and Daryanti (2021) by conducting literature review on 7 scientific journals



obtained results showing that all journals mention counseling or pre menarche class affects elementary school students' readiness in facing menarche.

Based on these results, the effect of health promotion using video media on student readiness in facing menarche is related to advantages of video media that attracts students' attention so information delivered is more easily absorbed and understood which makes students more ready in facing menarche.

## CONCLUSION

Based on the research results, the following conclusions can be drawn: The average level of student knowledge about *menarche* before being given video-based health promotion was 4.59. The average level of student readiness facing *menarche* before being given video-based health promotion was 18.47. The average level of student knowledge about *menarche* after being given video-based health promotion was 9.94. The average level of student readiness facing *menarche* after being given video-based health promotion was 25.24. There is an effect of video-based health promotion on knowledge about *menarche* in female students of MI Nurul Ihsan Bumi Nabung Timur Central Lampung Regency in 2024 with *p value*: 0.000. There is an effect of video-based health promotion on readiness facing *menarche* in female students of MI Nurul Ihsan Bumi Nabung Timur Central Lampung Regency in 2024 with *p value*: 0.000.

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