

## THE INFLUENCE OF USING EDUCATIONAL MEDIA WITH ANIMATED VIDEOS ON THE LEVEL OF KNOWLEDGE OF TEENAGE GIRLS ABOUT TEENAGE PREGNANCY

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### ABSTRACT

Teenage pregnancy is a major public health issue in low-and middle-income countries. This issue has a significant impact on health of young mothers, infant development, and society as a whole. Teenage pregnancy can affect the physical, psychological, economic, and social health of women in the long term, so it requires serious attention in healthcare system. To determine the effect of using educational media with animated videos on the level of knowledge of teenage girls about teenage pregnancy at SMK Kesatuan, West Jakarta. This study used a quantitative analytical method with a quasi-experimental design and a pre-test post-test with one group. This study used a non-probability sampling technique of the purposive sampling type. The sample consisted of 67 female students in grades X and XI. The instrument used in this study was an animated video with a pre-test post-test questionnaire as a measuring tool. The average knowledge of the students before the intervention was 18.03, while the knowledge after the intervention was 27.66. In this study, the students experienced a 53% increase in knowledge before and after the intervention. Then, a p-value of  $0.000 \leq 0.05$  was obtained, meaning that it was effective and there was a difference in knowledge increase before and after the intervention. There was an effect of the use of educational media with animated videos on the level of knowledge of teenage girls before and after the intervention on pregnancy.

**Keywords:** Animated Video Media, Teenagers, Teenage Pregnancy

## 1. INTRODUCTION

Teenage Years is a developmental transition phase from childhood to adulthood. The World Health Organization (WHO) defines Teenage as the age group 10-19 years. During this period, various multidimensional changes occur, encompassing hormonal, physical, psychological, and social aspects. Teenage is also marked by the process of behavioral development, the search for self-identity, and a

also experience numerous problems at home, at school, and within their peer groups, which can lead to juvenile delinquency. Many adolescents and minors are already exposed to smoking, drug use, brawls, theft, and casual sex, all of which can lead to unwanted pregnancies. (Moshi F V, 2023)

Teenage pregnancy is a major public health problem in low- and middle-income countries. This issue has a significant impact on the health of young mothers, their infants' development, and society as a whole. (Susanti D, 2023)

Teenage pregnancy has significant health impacts and is a leading cause of death for adolescent girls aged 15 to 19 worldwide. Teenage pregnancy are more susceptible to pregnancy and childbirth complications such as preeclampsia, infections, and puerperal endometritis. They are also more susceptible to preterm birth, low birth weight, and severe

One common prevention effort in developing countries like Indonesia is through reproductive health education, the establishment of teenage integrated health posts (Posyandu), and the formation of teenage health cares. In now modern era, efforts to prevent teenage pregnancy can be implemented through the use of animated video-based information systems, implementing technological features attractively packaged in various formats, such as images, graphics, video, and audio. This is more effective because most teenagers have smartphones that can be used anywhere and anytime. (Purnami CT, Wicaksono FA, Permani FP, 2023)

Health education is one of the initial steps that can be directed at groups, communities, or individuals to resolve health problems or change

tendency to explore new things, including reproductive health. Therefore, this phase is considered a critical time for maintaining and improving reproductive health. (Purnami CT, Wicaksono FA, Permani FP, 2023)

Teenage who have just reached puberty often experience emotional problems that cause them to withdraw from their families. Teenage

neonatal illness. This is because, during teenage, there is competition for nutrients between the mother and her fetus during pregnancy, which often makes it difficult for pregnant women to gain weight and puts them at risk of giving birth to a low birth weight baby. Furthermore, the still-developing pelvic structure increases the likelihood of prolonged labor, which increases the risk of neonatal death. (Sholihah AR, Widiasih R, Solehati T, 2019).

Other research (Gyan C, 2016) suggests that teenage pregnancy can lead to school dropout because teenage experience feelings of shame, depression, and frustration. However, research conducted by Rosyidah, Hernawaty, and Rafiyah (2019) found that teenage pregnancy causes maternal death (92.6 percent), miscarriage (37 percent), stress (98.8 percent), and anemia (95.1 percent).

behaviors with the goal of achieving optimal health. This can increase knowledge and awareness among teenagers. The use of video media in providing health education can increase adolescents' knowledge and understanding. The benefits of this media include clearer and more engaging learning, more interactive learning, saving time and energy, improving the quality of learning outcomes, being accessible anywhere and anytime, and fostering a positive attitude toward the learning process and materials. (Reza Rohmatun Z F, 2023)

2. METHODS

This research was quantitative with a Quasi-Experimental One Group Pretest-Posttest Design. A pre-test was conducted to determine the initial situation, followed by a post-test to determine the effect of using educational media with animated videos on teenage knowledge of teenage pregnancy. The animated videos provided to respondents covered issues of teenage pregnancy, the impact of information on teenagers, the definition of teenage pregnancy, early marriage, the reproductive system in teenage girls during pregnancy, and the physical, mental, and socioeconomic impacts of teenage pregnancy. The animated videos lasted 4 minutes and 39 seconds. The videos were administered for two days, from the pre-test to the post-test.

This research was conducted at SMK Kesatuan, West Jakarta, among female students in grades X and XI in August 2025. The study used one group, the experimental group, with 67 respondents. The test instrument consisted of 30 questions, scored using the Guttman scale, with correct answers given a score of 1 and incorrect answers given a score of 0.

The questionnaire in this study was tested for validity with a calculated r of 0.734 based on a significance level of 5% with a sample of 30 people, resulting in a table r of 0.349. Therefore, the validity results that have been carried out for all statement items are declared valid because the calculated r value is greater than the table r.

3. RESULTS

**Table 1. Distribution of Characteristics of Female Students in Grades X and XI at SMK Kesatuan West Jakarta in 2025**

Characteristics	N = 67 Percentage %
<b>Age</b>	
Teenage Age:	
1. 15 years old	2 (3,0%)
2. 16 years old	19 (28,4%)
3. 17 years old	39 (58,2%)
4. 18 years old	7 (10,4%)

<b>Parents' Occupation</b>	
Father's Occupation:	
1. Employee	
2. Entrepreneur	18 (26,9%)
3. Civil servant	34 (50,7%)
4. Police/military	0
5. Laborer	0
6. Teacher	14 (20,9%)
7. Other	1 (1,5%)
Mother's Occupation:	
1. Housewife	0
2. Employee	62 (92,5%)
3. Entrepreneur	1 (1,5%)
4. Civil servant	3 (4,5%)
5. Teacher	0
6. Laborer	0
7. Other	1 (1,5%)
<b>Parental Income</b>	
1. High: > Rp. 7,500,000.00	2 (3,0%)
2. Medium: Rp. 5,400,000-7,500,000.00	11 (16,4%)
3. Low: <5,400,000.00 <5.400.000.00	54 (80,6%)
<b>Relationship Status</b>	
1. Yes	6 (9,0%)
2. No	61 (91,0%)
<b>Sources of Information about Early Pregnancy</b>	
1. Social media	31 (46,3%)
2. Family	6 (9,0%)
3. Teachers	11 (16,4%)
4. Peers	1 (1,5%)
5. School Subjects	4 (6,0%)
6. Health Workers	14 (20,9%)
7. Others	0

The results of the analysis in Table 1 above show that 67 respondents were selected based on age category, parents' occupation, parents' income, relationship status, and source of information obtained. The table above shows that the majority of respondents were 17 years old, with 39 respondents or 58.2%. The majority of parents' occupations were entrepreneurs, with 34 respondents or 50.7%, while the majority of mothers' occupations were 62 respondents or 92.5%. In terms of relationship status, the majority of respondents were not in a relationship, with 61 respondents (91.0%). In terms of information sources, the majority of respondents obtained information about teenage pregnancy from social media, with 31 respondents (46.3%).

**Table 2. Level of Knowledge about Pregnancy in Teenage Before the Provision of Animated Video Educational Media Intervention to Female Students in Grades X and XI at SMK Kesatuan Jakarta Barat in 2025**

Knowledge Criteria	frequency	percentage
Very good	0	0%
Good	6	9%
enough	34	50,7%
Less	27	40,3%
Total	67	100%

Table 2 shows that before the animated video intervention, 27 students (40.3%) in grades X and XI at SMK Kesatuan Jakarta Barat had insufficient knowledge about teenage pregnancy.

**Table 3. Level of Knowledge about Pregnancy in Teenage After the Provision of Animated Video Educational Media Intervention to Female Students in Grades X and XI at SMK Kesatuan Jakarta Barat in 2025**

Knowledge Criteria	frequency	percentage
Very good	40	59,7%
Good	27	40,3%
enough	0	0%
Less	0	0%
Total	67	100%

Table 3 shows that after the animated video intervention, 40 students (59.7%) of the 67 students in grades X and XI at SMK Kesatuan Jakarta Barat had excellent knowledge about teenage pregnancy.

**Table 4. Level of Knowledge about Pregnancy in Tannage Before and After the Provision of Animated Video Educational Media Intervention to Female Students in Grades X and XI at SMK Kesatuan West Jakarta in 2025**

Knowledge	Animated Video Media	
	Before	After
Mean	18,03	27,66
SD	1,923	1,719
Median	18,00	28,00
Percentage increase	53%	
NGain Score	79%	
p-Value	0,000	

*NGain Score and Wilcoxon test*

Based on Table 4, it shows that there was an increase in the knowledge of female students in grades X and XI at SMK Kesatuan West Jakarta. Before the animated video intervention, the average knowledge score of the female students was 18.03. Meanwhile, after the animated video intervention, the average knowledge score was 27.66. These results show a 53% increase in students' knowledge about teenage pregnancy. The NGain Score for students who received the animated video intervention was 0.79 (79%). This can be considered effective if the NGain Score is > 76%. Therefore, this study shows that the use of animated video educational media has an effect on increasing knowledge about teenage pregnancy. In this study, a p-value of  $0.000 \leq 0.05$  was obtained, indicating that there was a difference in knowledge improvement before and after the intervention.

**4. DISCUSSION**

The results of the study showed an increase in the knowledge of female students in grades X and XI at SMK Kesatuan, West Jakarta, before and after the animated video media intervention. The average score before the animated video media intervention was 18.03, and after the animated video media intervention, the average score was 27.66. This represents a 53% increase.

Knowledge is the result of the process of sensing an object through the five senses. Increasing knowledge in adolescents aims to help them acquire information and apply it in the future. Research by Marlinda et al. (2020) showed a relationship between knowledge levels and the incidence of teenage pregnancy (p-value = 0.001). One effective way to increase knowledge is through health education. Health education is an effort to provide information and motivate individuals to maintain their health by avoiding risky behaviors and adopting behaviors that support health. The main goal of health education is to change detrimental behaviors into behaviors that align with health norms. One medium that can be utilized in health education is audio-visual media (animated video). Audiovisual media is a form of learning media that can be used simultaneously to incorporate both auditory and visual elements in a learning process or activity.

Based on research by Wijayanti et al. (2023), health education using audiovisual media significantly increased adolescents' knowledge ( $p\text{-value} = 0.000 \leq 0.05$ ). The addition of audio and visual elements to the learning process has been shown to increase memory retention from 14% to 38%. This suggests that the use of video can strengthen adolescents' ability to remember and understand information.

Pregnancy during teenage is a difficult transition due to psychological and social immaturity, making teenage more vulnerable to emotional disorders, depression, and loss of social support (WHO, 2023).

The role of health workers in providing psychological support to pregnant teenage, both through individual and group counseling, is crucial. A youth-friendly service approach is essential, given that adolescents often feel embarrassed, fear judgment, and tend to hide their pregnancies. Therefore, clinical services need to emphasize confidentiality, empathetic communication, and family involvement in midwifery care.

Furthermore, there is a strong social stigma against pregnant adolescents, especially unmarried ones. This stigma can result in low antenatal care (ANC) visits and delays in seeking medical care. Implications for clinical practice include the need for cross-sectoral collaboration, such as with psychologists and social workers, to help pregnant adolescents receive comprehensive support. Therefore, the results of this study are expected to support the belief that adolescents' knowledge about teenage pregnancy is an integral part of midwifery care and should not be overlooked in the management of adolescent pregnancy.

## 5. CONCLUSION

1. The characteristics of the respondents in this study were mostly 17 years old, with the majority of fathers working as entrepreneurs and the majority of mothers working as housewives. On average, the respondents were not in a relationship, and the majority of respondents obtained information about teenage pregnancy from social media.
2. Of the 67 respondents, 34 had sufficient knowledge before being given the animated video media intervention. After the intervention, there was an increase in knowledge among 40 respondents, who were categorized as having excellent knowledge.

3. There was an effect of the health education intervention using animated videos on respondents' knowledge level about teenage pregnancy, as evidenced by the statistical test results above, which yielded a  $p\text{-value}$  of 0.000. Therefore, based on the analysis above, it can be concluded that there was a significant difference in respondents' scores before and after the intervention.

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