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The Effect of Health Promotion Using Animation Media and Lessons on Adolescent Knowledge About Reproductive Health at SMAN 1 Suela Lombok Timur

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ABSTRACT

The condition of adolescents who are vulnerable to being the target of risky behavior problems such as unwanted pregnancies, early marriages, and abortions requires serious treatment in preventing these negative behaviors so innovation is needed to carry out health promotion that can attract adolescents' interests. Health promotion using animation media is packaged in the form of short videos with a simple and fun storyline approach. The purpose of this study was to determine the effect of health promotion using animation and lecture media on young women's knowledge of reproductive health at SMAN 1 Suela East Lombok. This type of research is quasi-experimental research, with a pretest-posttest control group design. The population of this study was all female students at SMAN 1 Suela with a sample of 118 people, who were taken using a cluster random sampling technique. The students were divided into 2 groups, the experimental group would be educated with animation media, while the control group would be educated with lectures. Data analysis used in this study was univariate analysis to determine the effect before and after being given animated media and lectures using the Paired Sample T Test, and bivariate analysis to determine differences in the effectiveness of animated media and leaflets using an independent sample T-Test . The results showed that the results of the independent T-test showed that there were differences in the effect of increasing knowledge, when compared to the two media, animation media was more effective than lectures in increasing adolescent knowledge about reproductive health at SMAN 1 Suela East Lombok based on a p-value of 0.0001 <0. 05. The average value (mean) produced by animation media is 24,000, which is higher than the average value (mean) of lectures with a mean value of 13,016.

Keywords: Animation, Knowledge, Promotion, Reproduction Health

1. INTRODUCTION

In young women, the development of secondary and physical sex characteristics develops rapidly. So that physically, adolescents are able to carry out the functions of the reproductive process but the results of the reproductive process cannot be accounted for. Apart from having a physical impact, reproductive health problems will also affect mental and emotional health as well as economic conditions and social welfare in the long term [13] . Unwanted pregnancies, early marriages, and adolescent abortions are some of the consequences of reproductive health problems. This will have an impact on the future of young women as *agents of change*. In Indonesia, around 15 million teenagers aged 15-19 give birth every year, around 4 million have abortions and around 100 million are infected with sexually transmitted diseases that can be cured [10] . Unsafe abortion often results in infection, if not handled properly it will result in death. Unwanted pregnancies in adolescents have a negative impact on the health of adolescents and their babies. Complications of pregnancy and childbirth increase in adolescents such as anemia,

bleeding, preeclampsia, and unsafe abortion which also contribute to death. The number of adolescent deaths due to unsafe abortion is 70,000 deaths while 4 million suffer from illness and disability [24] .

Adolescents are a high-risk group and are the main target for sexually transmitted behavior. Proper knowledge is expected to produce responsible sexual behavior. Therefore an innovation is needed to increase young women's knowledge about reproductive health. One way is to provide health promotion through animated media. Animations that are made using a simple and funny storyline approach and packaged in a video with a short duration can attract adolescents' attention in absorbing all the information they get related to reproductive health.

2. METHOD

The type of research used in this study was a quasi-experimental design with a nonequivalent control group design. This study consisted of 2 groups, the group with video animation media as the experimental group, and the group with lectures as the control. This research was carried out at SMAN 1 Suela, East Lombok Regency, West Nusa Tenggara Province. The time of the research was carried out on August 19, 2022. The population in this study were all young women at SMAN 1 Suela with a total sample of 118 students who were divided into 2 groups, namely 59 respondents with the video animation group and 59 respondents with the lecture group using the purposive sampling technique that fulfilled inclusion and exclusion criteria.

3. RESULTS AND DISCUSSION

Research Result
Univariate analysis
Knowledge Teenager Daughter about Health Reproduction Before done Lecture

Table 1. Distribution Knowledge Teenager Daughter about Health Reproduction Before done Lecture

Knowledge	Frequency (n)	Percentage (%)
Good	29	49,2
Enough	28	47.5
Not enough	2	3,4
Total	59	100

Based on table 1 above can seen that respondents who have knowledge Good that is a number of 29 people (49.2 %), while those who have knowledge not enough as many as 2 respondents (3.4%).

Knowledge Teenager Daughter about Health Reproduction After done Lecture

Table 2. Distribution Knowledge Teenager Daughter about Health Reproduction After done Lecture

Knowledge	Frequency (n)	Percentage (%)
Good	36	61.0
Enough	23	39.0
Not enough	0	0
Total	59	100

Based on table 2 above can seen that respondents who have knowledge Good that is a number of 36 respondents (61%), while those who have knowledge Enough as many as 23 respondents (39%).

Knowledge Teenager Daughter about Health Reproduction Before given Animation

Table 3. Distribution Knowledge Teenager Daughter about Health Reproduction Before given Animation

Knowledge	Frequency (n)	Percentage (%)
Good	0	0
Enough	28	47.5
Not enough	31	52.5
Total	59	100.0

Based on table 3 above can seen that there are 31 respondents (52.5%) have knowledge lacking , while 28 respondents (47.5%) have knowledge enough.

Knowledge Teenager Daughter about Health Reproduction Before given Animation

Table 4. Distribution Knowledge Teenager Daughter about Health Reproduction After given Animation

Knowledge	Frequency (n)	Percentage (%)
Good	27	45.8
Enough	32	54.2
Not enough	0	0
Total	59	100.0

Based on table 4 above can seen that Part big respondent that is as many as 32 respondents (54.2%) have knowledge sufficient , while 27 respondents (45.8%) have knowledge ok .

Bivariate Analysis
Results Test Normality

The following are the results obtained after calculating the data normality test:

Table 5. Results Test Knowledge Data Normality with Method Lecture

	Kolmogorov-Smirnov [a]		
	Statistics	**df**	**Sig.**
Pretest Lecture	.115	59	051
Post test Lecture	.115	59	051

Table 6. Results Test Knowledge Data Normality with Method Animation

	Kolmogorov-Smirnov [a]		
	Statistics	**df**	**Sig.**
Animation Pre Test	.102	59	.200 *
Animation Posttest	.102	59	.200 *

The data normality test was carried out using the *Kolmogorov-Smirnor test* in the animation video group. The results of the normality test in this study were p value > 0.05, this indicates that the data is normally distributed so that the analysis of knowledge in the animation group using the *Paired Sample T Test* obtained the following data results:

The Influence of Health Promotion Using Animation and Lecture Media on Young Women's Knowledge of Reproductive Health

Table 7. Distribution of knowledge of young women in the experimental and control groups

No	Group	Means	Min	Max	P Value
1.	Animation (Pre-post)	58,093	55,002	61,184	0.0001
2.	Lecture (Pre-post)	5.155	49,006	54,095	0.0001

Based on table 7, it was found that the knowledge of the group of young women who were given using animation media and lectures had a *p value* of 0.0001 <0.05 so that there was an effect of health promotion using animated media and lectures on the knowledge of young women about reproductive health.

Table 8 Differences in knowledge of female adolescents about reproductive health in the experimental and control groups

Group	Means	Std. Dev	P value	Means diff	Confidence Intervals	
					Min	**Max**
Animation	24,000	.00000	0.0001	10.98305	9.49215	12.47395
Lecture	13.016	5.78193			9.47627	12.48983

Table 8 above shows the results of data analysis using an *independent T-test sample T Test* to find differences in the effectiveness of the use of animation media and lectures on increasing adolescent knowledge about reproductive health. Based on the analysis, it was obtained a *p value of* 0.0001 <0.05, which means that there is a significant difference in the value of knowledge between the two groups of animation media and lectures. So that the average value (mean) produced by animation media is 24.00, which is higher than the average value (mean) of lectures, which is 13.016. This indicates that animation media is more effective than lectures.

Discussion

Knowledge of adolescents about reproductive health before and after the group with Method Lecture

Based on the results of the study, it can be seen that the knowledge of young women about reproductive health prior to the lecture, the respondents had good knowledge, namely 29 people (49.2%), while those who had less knowledge were 2 respondents (3.4%). After the lecture, the respondents who had good knowledge were 36 respondents (61%), while those who had sufficient knowledge were 23 respondents (39%).

The results of Yuliana D's research stated that there were significant differences in knowledge about reproductive health before and after health education lectures [25] . The lecture is the provision of information in one direction, so there are deficiencies in the delivery of information. In the research results, changing the level of knowledge with the lecture method does not have a significant impact on changing knowledge because lectures require a variety of methods in conveying the information that will be given because it is very vulnerable to a decrease in the level of attention of respondents.

Knowledge is the result of knowing and this occurs after someone senses a certain object. This sensing occurs through the five human senses, namely the senses of sight, hearing, smell, taste and touch. Most of human knowledge is obtained through the eyes and ears [11] . Adolescent reproductive and sexual health education using the lecture method is one method that is often used in conveying students' knowledge and attitudes. Both the lecture method and the discussion method show no significant difference in increasing the knowledge and attitudes of students in groups of respondents in reproductive health counseling about premarital sex behavior between the group discussion method and the lecture method with a *P value* = 0.636 for the knowledge variable and a *P value* = 0.102 for the attitude variable [3] .

Knowledge is influenced by education, information/mass media, socio-economic culture, environment, experience and age. Knowledge about reproductive health is obtained from the mass media in the form of the internet, television, radio and social media [5] . Lectures are an easy and inexpensive method that can be used in counseling. The lecture method can increase respondents' understanding of the material presented in counseling, because by applying the lecture method the interaction between respondents and presenters is direct [12].

Knowledge of adolescents about Reproductive Health before and after the Intervention group with Method Animation

Based on the research results it can be seen that knowledge teenager daughter about health reproduction before given animation there are 31 respondents (52.5%) have knowledge lacking , while 28 respondents (47.5%) have knowledge enough . Knowledge teenager daughter about health reproduction before given animation partially obtained big respondent that is as many as 32 respondents (54.2%) have knowledge sufficient , while 27 respondents (45.8%) have knowledge ok .

This is in line with research conducted by [2], that there is an effect of educational video interventions on early adolescent knowledge and attitudes about reproductive health. (Septimar, Rustami, and Wibisono 2020) . Animation media is a modification of providing information using technology. The advantages of animated media can increase the level of attention of respondents and are very effective because they can be used without space and time limitations and can be repeated or stopped as needed.

Health promotion is an application of the concept of education in the health sector which aims to change behavior from detrimental to beneficial behavior [12]. With health promotion, adolescents can get better insight and knowledge about early marriage. This is in line with Edgar-Dale's cone of learning experience (1946) which says that learning experiences gained by viewing videos and demonstrations will be absorbed in memory by as much as 50%, if added to the participation of participants for discussion and question and answer then the material will be absorbed in memory by 70%.

Research conducted by [5] that animated video media is more effective in increasing the knowledge of young women in dealing with menarche [7] . The use of health education media with animated media attracts the attention of respondents more and the time is not too long and the information conveyed is more easily accepted by young women. Animated videos can increase knowledge in various age groups [19] . Animated videos need to be packaged in a fun way so as to attract the interest of young people so that they can increase young women's knowledge about reproductive health

Audio visual media is able to stimulate the senses of hearing and vision so that the results obtained are maximized [6]. Research by [17] stated that there was a significant increase in respondents' knowledge before and after receiving health promotion through audiovisual media. Audio visual media attracts attention, saves time and can be played repeatedly. This is in line with [1] & [4] with the results before being given knowledge where 13 people (13.7%) were in the good category, 29 people (30.5%) were sufficient and 53 people (55.8%) were lacking and after 12 people (12.6%) were given health education through video media, and 83 people (87.4%) were good.

The effect of health promotion using animation media and lectures on young women's knowledge of reproductive health

The results showed that the results of data analysis used an *independent t-test sample T Test* to find differences in the effectiveness of the use of animation media and lectures on increasing adolescent knowledge about reproductive health. Based on the analysis, it was obtained a *p value of* 0.0001 <0.05, which means that there is a significant difference in the value of knowledge between the two groups of animation media and lectures. So that the average value (mean) produced by animation media is 24.00, which is higher than the average value (mean) of lectures, which is 13.016. This indicates that animation media is more effective than lectures.

This is in line with research conducted by [6] on the effect of health education on adolescent knowledge about reproductive health where the presentation of the results of the difference in the average level of knowledge of adolescents before and after the adolescent reproductive health education was carried out was 23.714 with a standard deviation of 13.684. While the p value is 0.0001 with α = 0.05 so counseling on adolescent reproductive health is effective in increasing respondents' knowledge about adolescent reproductive health [6] .

Research conducted by Anggraeni et al found that there was an effect of educational video interventions on the knowledge and attitudes of early adolescents about reproductive health at Islamic Middle Schools in Tangerang Regency. Health education using videos can provide messages that can be received more evenly by students so as to increase knowledge regarding adolescent reproductive health [2] . Video media using animation is a very effective counseling medium for various age groups. When compared to lectures, animated videos are more applicable in their use, especially in health promotion. Health promotion is an effort to provide information so that for the implementation of good health promotion, of course, using media that is easy to understand.

This research is also in line with the research conducted by Sovia, there is an average difference between the knowledge of respondents who are given health education using *PowerPoint media* and using animated media (*p-value* 0.005 and α 0.05), so that animated media is more effective than *PowerPoint* media in giving information about HIV/AIDS in adolescents [20] .

The researcher assumes that when compared to animated videos and lectures, animation is superior because it is more able to attract the attention of teenagers. The information provided is packaged in a practical way so that information related to reproductive health can be received by teenagers.

4. CONCLUSION

The knowledge of young women about reproductive health before the lecture was held had good knowledge, namely 29 people (49.2%), while those who had less knowledge were 2 respondents (3.4%). After the lecture, the respondents who had good knowledge were 36 respondents (61%), while those who had sufficient knowledge were 23 respondents (39%). Knowledge teenager daughter about health reproduction before given animation there are 31 respondents (52.5 %) have knowledge lacking, while 28 respondents (47.5%) have knowledge enough . Knowledge teenager daughter about health reproduction before given animation partially obtained big respondent that is as many as 32 respondents. The results of data analysis using an *independent t-test sample t test* to find differences in the effectiveness of the use of animation media and lectures on increasing adolescent knowledge about reproductive health. Based on the analysis, it was obtained a *p value of* 0.0001 <0.05, which means that there is a significant difference in the value of knowledge between the two groups of animation media and lectures. So that the average value (mean) produced by animation media is 24.00, which is higher than the average value (mean) of lectures, which is 13.016. This indicates that animation media is more effective than lectures.

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