

## Improving knowledge and attitude towards child marriage prevention among senior high school students

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### ABSTRACT

The rate of child marriage worldwide reaches 21%. Indonesia was the 37th country with the second-highest percentage of child marriages in ASEAN. Adolescent knowledge and attitudes affect behavior in child marriages. Therefore, educational media is needed to increase knowledge and form positive attitudes in adolescents related to the maturation of age marriage. This study was to determine the effect of video on the knowledge and attitudes of adolescents about the maturation of age marriage. This research used a quasi-experimental nonequivalent control group design carried out in April-October 2022. The experimental group was given treatment through an educational video and the control group using a pocketbook. High school student was the population. Sampling technique was employed, involving 120 respondents for both groups. The research instrument used was a questionnaire which has been tested. Data analysis using statistical test software. In the video group, the mean difference test results for the level of knowledge were  $p=0.000$  and attitude was  $p=0.006$ . In the pocketbook group, the level of knowledge was  $p=0.003$  and attitude was  $p=0.314$ . Educational video is an effective method to improve adolescents' knowledge and attitude about the maturation of age marriage. It can be used to prevent child marriage among adolescents.

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## 1. INTRODUCTION

Early marriage or child marriage is a marriage performed under the age of 18 years. The rate of early marriage is still high in the world, reaching 21%. In absolute calculations as many as 12 million cases of child marriage in the world every year [1]. In Indonesia, in 2018 child marriages aged less than 18 years occurred in 1 of 9 girls. Women aged 20-24 years who married before the age of 18 in 2018 were estimated to reach around 1,220,900. This figure places Indonesia as the 10th country with the highest absolute number of child marriages in the world [2].

Early marriage is associated with various problems related to reproductive health. Several studies explain that early marriage is associated with unwanted pregnancies. Several studies in a number of South Asian countries, including Bangladesh, India, and Nepal, have shown a direct link between early marriage and unwanted pregnancies [3]. Active sex in adolescents is at risk of unwanted pregnancy in adolescents which is one of the causes of adolescent marriage. The related factors with premarital sex behavior were boyfriend status, pornographic exposure and peer influence [4]. Access to pornography is also done mostly by teenage boys, which is 53.6% [5].

Boys stated that they had more premarital sex than girls. The male respondents explained that the reason was curiosity (57.5%) and the female respondents (38%) stated that it just happened. This reflects the lack of understanding of adolescent reproductive health and adolescent attitudes about life skills and marriage planning that are not yet good [5], [6]. Unwanted pregnancy was associated with a woman's age <20 years. This confirms that unwanted pregnancies are associated with adolescent women and can lead to child marriage [7]. Mothers who experienced unwanted pregnancies had a 1.79 chance of not having prenatal care compared to those who had wanted pregnancies [8]. Child marriage increases the risk of maternal death and complications during the pregnancy to the postpartum period for this adolescent mother. Mothers giving birth who are too young also usually have poor nutritional status and will affect the babies born. Furthermore, the danger of cervical cancer, maternal and infant health, and poverty in families because of not well prepared [9].

The Constitution No. 16 in 2019 which is an amendment to Constitution No. 1 in 1974, article 7 states that marriage is only permitted if a man and woman have reached the age of 19 years. That is one of the government's efforts to prevent child marriage. In addition, it is also necessary to promote and prevent child marriage with programs related to the maturing age of marriage. One of the programs related to the maturation of age marriage is aimed at increasing knowledge, especially for young women, informing and introducing family life in schools and families, as well as creating public awareness and empowering women to be able to make the right decisions when to marry and have children. That program also becomes one of the effective ways to change adolescent attitudes about early marriage. Providing information is very important in increasing knowledge and forming positive attitudes of adolescents toward child marriage. The better a person's knowledge, the more likely they are to have a positive attitude [10].

The method in increasing knowledge and attitudes in several studies that are considered cost-effective and easy to use is video. A study on the effectiveness of video proved to be effective in increasing students' knowledge and attitudes about reproductive health. Video is one of the technology-based educational literacy media that is easy to make but has a big role. Video information about health is also an effective health promotion strategy [11]. The purpose of this study was to determine the effect of video media on the level of knowledge and attitudes of adolescents about the maturation of age marriage.

## 2. RESEARCH METHOD

The study was conducted in Yogyakarta, Indonesia from April to October 2022. This research was a quantitative study using a quasi-experimental nonequivalent control group design. The respondents divided into two treatment groups, the first group was the experiment group, while the second group was the control group. The variables studied were the provision of information or treatment, the level of knowledge and attitudes of adolescents about the maturation of age marriage.

The population of this study were high school students in Yogyakarta, Indonesia. The sample size was calculated using the mean difference hypothesis test formula with 50 samples minimum for each group. The selection of the sample was by determining the sampling area, namely by drawing two high school from the total high school in Yogyakarta, Indonesia as the treatment group. The number of high school study groups in this study were 30 students. Therefore, each treatment group consisted of 60 students consisting of two study groups. The number of samples for the experiment group and the control group was 120 students. The sample inclusion criteria were students who were willing to be respondents and were willing to be treated with parental consent.

The type of data needed in this study was the primary data. Data were obtained from respondents through filling out the same questionnaire during pretest (before treatment) and post-test (after treatment). The questionnaire has been tested for validity and reliability by researchers. The treatment instruments were educational video in the experimental group and pocketbooks in the control group. Videos and books were divided into four series. The material of each series was: i) When is the right times to get married?; ii) What do we need to prepare before getting married?; iii) What are the effects of early marriage?; and iv) How to improve self-esteem and self-efficacy to maturing age of marriage?

Data analysis was conducted using non-parametric and parametric statistical analysis. The assumption tested before analysis were the normality test and homogeneity test. Data analyzed by statistical testing software. Ethical clearance of this research has been approved by the Health Research Ethics Committee of the Poltekkes Kemenkes Yogyakarta with the number e-KEPK/POLKESYO/0358/IV/2022.

### 3. RESULTS AND DISCUSSION

#### 3.1. RESULT

The adolescents' age was 15-19 years. There was an increasing prevalence of good knowledge levels and positive attitudes towards maturing age of marriage after treatment in both groups. There was a significant difference in knowledge level scores and attitudes after being given educational video media. In the pocketbooks group, there was a significant difference in knowledge level.

This research respondents were senior high school students in XI class. The total number of students was 120 students. Respondents' characteristic based on age, gender, family income, parental education, access to social media, and source of information about reproductive health were described in Table 1. The age range in each group was 15-19 years. The age of students in the study was in the adolescent age range. The age range in the experiment group was 15-19 years. The age of students in the control group was 15-18 years. It was in the adolescent age range.

The educational level of the student's fathers in the experiment group and the control group showed that most of them graduated from secondary education (50%). The percentage occupies the highest level of father education in both groups. This can also be seen in the education percentage of students' mothers where secondary education is the highest level of education in both groups (68.3%).

The social media access, almost all of the students access more than four types of social media. Students in this research got information about reproductive health from various sources. Based on the source of information, the majority of the student's received information from more than four sources. The internet was the biggest source of information about reproductive health for adolescents in both groups. A source of information is anything that can be used to convey information from sender to receiver.

Table 1. Characteristics of respondent

Characteristics		Experiment group		Control group	
		n	%	n	%
Age	Min	15 years old		15 years old	
	Max	19 years old		18 years old	
	Mean	16 years old		16 years old	
Gender	Male	27	45	21	35
	Female	33	55	39	65
Father's education level	Basic	4	6.7	4	6.7
	Middle	30	50	30	50
	High	26	43.3	26	43.3
Mother's education level	Basic	3	5	3	5
	Middle	41	68.3	41	68.3
	High	16	26.7	16	26.7
Access to social media	> four social medias	47	78.3	44	73.3
	< four social medias	13	21.7	16	26.7
Kind of social media					
	Facebook	22	36.7	30	50.0
	Instagram	60	100	58	96.7
	YouTube	53	88.3	52	86.7
	TikTok	49	81.7	51	85.0
	Twitter	37	61.7	36	60.0
	SnapChat	12	20.0	12	20.0
	WhatsApp	59	98.3	59	98.3
	Telegram	42	70.0	43	71.7
Information sources about reproductive health	> four sources	36	60	31	51.7
	< four sources	24	40	29	48.3
Kind of information source					
	Mother	48	80.0	41	68.3
	Father	28	46.7	11	18.3
	Teacher	42	70.0	43	71.7
	Friend	43	71.7	43	71.7
	Internet	54	90.0	48	80.0
	Print media	9	15.0	11	18.3
	Mass media	30	50.0	24	40.0
	Healthcare provider	38	63.3	41	68.3

#### 3.1.1. Relationship of respondents' characteristics with knowledge level and attitude towards the maturation of age marriage

The relationship of characteristics with the knowledge level and attitudes was tested at the bivariate analysis stage. The statistical test of the relationship was carried out with the chi-square test. If the requirements for using the chi-square test cannot be met, the Fisher Exact test is used. In Table 2, the

relationship of characteristics with the knowledge level and attitude towards the maturation of age marriage were evaluated and presented.

**Table 2. Relationship of respondents' characteristics with knowledge level and attitudes**

Characteristics	Knowledge level				p-value	Attitude				p-value
	Good		Poor			Positive		Negative		
	n	%	n	%		n	%	n	%	
Group										
Video	40	66.7	20	33.3		31	51.7	29	48.3	
Pocketbooks	47	78.3	13	21.7	0.152	30	50.0	30	50.0	0.855
Total	87	72.5	33	27.5		61	50.8	59	49.2	
Gender										
Male	29	60.4	19	39.6		17	35.4	31	64.6	
Female	58	80.6	14	19.4	*0.016	44	61.1	28	38.9	*0.006
Total	87	72.5	33	27.5		61	50.8	59	49.2	
Social media access										
> four social medias	65	71.4	26	28.6		45	49.5	46	50.5	
< four social medias	22	75.9	7	24.1	0.641	16	55.2	13	44.8	0.591
Total	87	72.5	33	27.5		61	50.8	59	49.2	
Source of information										
> four sources	51	76.1	16	23.9		38	56.7	29	43.3	
< four sources	36	67.9	17	32.1	0.318	23	43.4	30	56.6	0.147
Total	87	72.5	33	27.5		61	50.8	59	49.2	
Kind of information source										
Mother										
Yes	70	78.7	19	21.3		47	52.8	42	47.2	
No	17	54.8	14	45.2	*0.011	14	45.2	17	54.8	0.463
Total	87	72.5	33	27.5		61	50.8	59	49.2	
Father										
Yes	31	79.5	8	20.5		22	56.4	17	43.6	
No	56	69.1	25	30.9	0.234	39	48.1	42	51.9	0.396
Total	87	72.5	33	27.5		61	50.8	59	49.2	
Teacher										
Yes	62	72.9	23	27.1		45	52.9	40	47.1	
No	25	71.4	10	28.6	0.866	16	45.7	19	54.3	0.472
Total	87	72.5	33	27.5		61	50.8	59	49.2	
Friend										
Yes	62	72.1	24	27.9		47	54.7	39	45.3	
No	25	73.5	9	26.5	0.874	14	41.2	20	58.8	0.183
Total	87	72.5	33	27.5		61	50.8	59	49.2	
Internet										
Yes	72	70.6	30	29.4		53	52.0	49	48.0	
No	15	83.3	3	16.7	0.392	8	44.4	10	55.6	0.556
Total	87	72.5	33	27.5		61	50.8	59	49.2	
Print media										
Yes	14	70.0	6	30.0		12	60.0	8	40.0	
No	73	73.0	27	27.0	0.784	49	49.0	51	51.0	0.369
Total	87	72.5	33	27.5		61	50.8	59	49.2	
Mass media										
Yes	40	74.1	14	25.9		33	61.1	21	38.9	
No	47	71.2	19	28.8	0.727	28	42.4	38	57.6	*0.042
Total	87	72.5	33	27.5		61	50.8	59	49.2	
Healthcare provider										
Yes	59	74.7	20	25.3		39	49.4	40	50.6	
No	28	68.3	13	31.7	0.457	22	53.7	19	46.3	0.656
Total	87	72.5	33	27.5		61	50.8	59	49.2	

The results showed that gender was associated with knowledge level with a p-value of 0.016. The percentage of female students who have good knowledge reaches 80.6%. Male students who have good knowledge were 60.4%. Female students have a higher percentage of having a good level of knowledge. Students who got information about reproductive health from mothers have a higher percentage of having a good level of knowledge. The students who received information from their mothers had a good level of knowledge with a percentage of 78.7%. The provision of reproductive health information by mothers is related to the knowledge level of adolescents about the maturation of marriage age with a p-value of 0.011.

Table 2 shows that students' attitudes towards the maturation of age marriage were related to gender and sources of reproductive health information. Student attitudes related to gender ( $p=0.006$ ). A total of 61.6% of female students have a positive attitude. Meanwhile, only 35.4% of male students have a positive attitude toward the maturation of age marriage. The students who received information about reproductive

health from the mass media had a positive attitude with a percentage of 61.1%. The provision of reproductive health information through mass media was also associated with positive attitudes of adolescents. Statistical test results showed  $p\text{-value}=0.042$ .

### 3.1.2. Adolescents' knowledge level and attitude towards the maturation of age marriage before and after treatment

The knowledge level and attitudes about the maturation of age marriage in the pretest and post-test of both groups were divided into two categories. The first category for knowledge level was good knowledge level for  $>76\%$  of rights answers. The second category was poor knowledge level for less than  $76\%$  of rights answers. The first category for attitude was the positive attitude for  $>$  mean score. The second category was negative attitudes for less than the mean score. Table 3 shows the statistical data about knowledge levels and attitudes before and after being given the treatment of each group.

Table 3. Knowledge level and attitudes before and after being given the video in the experiment group and pocketbooks in the control group

Variables	Pretest		Post-test	
	n=60	%	n=60	%
Experiment group				
Knowledge level				
Good	40	66.7	52	86.7
Poor	20	33.3	8	13.3
Attitude				
Positive	31	51.7	32	53.3
Negative	29	48.3	28	46.7
Control group				
Knowledge level				
Good	47	78.3	54	90
Poor	13	21.7	6	10
Attitude				
Positive	30	50	35	58.3
Negative	30	50	25	41.7

Our finding in Table 3, it can be seen that adolescents in the control group before being treated as much as 78.3% had a level of knowledge in the good category while after being treated with education through pocketbooks, the knowledge level of adolescents in the good category increased by 90%. Based on the attitude assessment, 50% of adolescents before being given treatment had a positive attitude toward the maturation of age marriage. After being given treatment, adolescents who had a positive attitude showed an increase of 58.3%.

### 3.1.3. The effect of video on adolescents' knowledge level and attitudes about the maturation of age marriage

Differences in the knowledge level and attitudes of adolescents toward the maturation of age marriage before and after treatment were known in this study. The homogeneity test was described in Table 4. It was also carried out first for both research groups.

Table 4. Test of the homogeneity

Measured variables	Sig.	Conclusion
Pretest knowledge	0.153	Homogeneous
Posttest knowledge	0.975	Homogeneous
Pretest attitude	0.760	Homogeneous
Posttest attitude	0.296	Homogeneous

Differences in the level of knowledge on the maturation of marriage age were tested with the Wilcoxon test. The distribution of the data was not normal. In the attitude category with normal data distribution, it was tested with a paired sample t-test. The statistical test results can be seen in Table 5.

Table 5. Effect of video and pocketbooks on knowledge level and attitudes

Variables		Mean	Mean difference	p-value
Knowledge level				
Experiment	Pretest	79.83	8.10	*0.000
	Post-test	87.93		
Control	Pretest	83.12	6.08	*0.003
	Post-test	89.20		
Attitude				
Experiment	Pretest	79.15	3.41	*0.006
	Post-test	82.56		
Control	Pretest	81.53	0.95	0.314
	Post-test	82.48		

The average score of adolescents' knowledge level at the pretest or before treatment in the experiment group was 79.83 while the average post-test score or after treatment was 87.93. The difference in the average value of the pretest and post-test knowledge levels for the experiment group was 8.10. The results of the statistical test obtained a p-value of 0.000 which indicates that there was a significant difference in the value of the adolescents' knowledge level about the maturation of age marriage between before and after treatment with video media education.

Based on Table 5, the mean score of adolescents' attitudes during the pretest in the experiment group was 79.15 while the mean score increased by 82.56 during the post-test. The difference in the mean pretest and post-test attitude scores for the experiment group was 3.41. Statistical test results obtained a p-value of 0.006 which indicates that there was a significant difference in attitude values before and after treatment with video media education. The provision of education through videos has an effect on increasing the knowledge and attitudes of adolescents about the maturation of age marriage.

The mean score of the adolescents' knowledge level at the pretest in the control group was 83.12 while the mean post-test score increased to 89.20. The difference in the mean score of the pretest and post-test knowledge levels for the control group was 6.08. The results of the statistical test obtained a p-value of 0.003 which indicates that there was a significant difference in the value of the level of knowledge about the maturation of marriageable age before and after treatment with pocketbooks education. Providing education through pocketbooks has an effect on increasing knowledge about the maturation of age marriage.

Our findings also suggest that the average value of adolescents' attitudes during the pretest in the control group was 81.53 while the average post-test score actually increased by an average of 82.48. The difference in the mean pretest and post-test attitudes for the control group was 0.95. Statistical test results obtained a p-value of 0.314 which indicates that there was no significant difference in the mean score of attitudes toward the maturation of age marriage before and after treatment with pocketbooks.

### 3.1.4. Factors influencing the adolescents' knowledge level and attitudes about the maturation of age marriage

The variables with p-value < 0.25 were analyzed for multivariate analysis. Logistic regression was used for multivariate analysis. The final results of the multivariate analysis were presented in table 6. The final results of the analysis in Table 6 shows that the provision of educational media through videos and the existence of information about reproductive health from mothers affect the knowledge level of adolescents regarding the maturation of age marriage.

Table 6. The final model of factor analysis on knowledge level and attitudes about the maturation of age marriage

Variable	B	Sig.	Exp (B)	95% CI	
				Lower	Upper
Knowledge level					
Video intervention	0.809	0.069	0.445	0.186	1.064
Mother's source of information	1.274	0.006	3.676	1.435	8.912
Constant	0.512	0.209	1.669	-	-
Attitude					
Gender	-996	0.011	0.370	0.171	0.797
Mass media as source of information	0.677	0.079	1.967	0.925	4.185
Constant	0.126	0.676	1.135	-	-

The source of information from the mother about reproductive health was the dominant factor that affects the knowledge level of adolescents about the maturation of age marriage  $p=0.006$  (OR 3.68; 95% CI 1.435-8.912). Adolescents who were given information by mothers about reproductive health were 3.7 times more likely to have a good knowledge level toward maturing age of marriage. Adolescent gender and the existence of information about reproductive health from the mass media influence adolescents' attitudes regarding the maturation of age marriage.

## **3.2. DISCUSSION**

### **3.2.1. Respondents' characteristics**

The age range in each group was 15-19 years. It was in the adolescent age range. According to the World Health Organization (WHO), adolescence is a phase of change from childhood to adulthood from the 10-19 years. This phase is uniquely related to human development and an essential period for laying the foundation for healthy behavior [12]. The majority of students were females.

The educational level of the student's fathers and mothers in the experiment group and the control group showed that most of them graduated from secondary education. The social media access, almost all of the student access more than four types of social media. Adolescents are active users of social media [13]. Social media is one of the effective media to provide health information but it can also have a negative impact if not controlled [14]. All of the adolescents in experiment group were accessed Instagram. The other media social that was most accessed by adolescents in the experiment group were WhatsApp and YouTube. In the control group, WhatsApp and Instagram were also the most accessed social media.

Students in this research got information about reproductive health from various sources. Based on the source of information, the majority of the students received information from more than four sources. The internet was the biggest source of information about reproductive health for adolescents in both groups. A source of information is anything that can be used to convey information from sender to receiver. Internet and social media are like a double-edged sword, they can be used as access to information but also become an issue of pornography, provocation, unsafe sex, bullying, and other risky behavior if it's done without parental supervision. Social media has a particular effect on sexual behavior in adolescents [14].

### **3.2.2. Relationship of respondents' characteristics with knowledge level and attitude towards the maturation of age marriage**

Gender was associated with knowledge level with a p-value of 0.016. Female students have a higher percentage of having a good level of knowledge (80.6%). This is in line with a study in 2020 that adolescent girls have a good level of knowledge about the maturation of marriage age [15]. Students got information about reproductive health from various sources. Students who got information about reproductive health from mothers have a higher proportion of having a good level of knowledge (78.7%). The provision of reproductive health information by mothers was related to the knowledge level of adolescents about the maturation of marriage age with a p-value of 0.011. Previous research supports the results of this study where the highest communication between parents and children about reproductive health occurs between mothers and children [16]. Mothers with daughters and sons communicate better than fathers with their children. Mothers who provide information about reproductive health to their child were related to the adolescents' knowledge level about reproductive health, p-value 0.001 [17].

The results showed that students' attitudes towards the maturation of age marriage were related to gender and sources of reproductive health information ( $p=0.006$ ). Similar research also mentions that there are contrasting attitudes between male and female adolescents about the age of marriage. Females have ambivalence and reluctance to marry young. Females are more concerned that young marriage will thwart their aspirations and ambitions about education and work. Males, with their fantasies want to marry young. Nevertheless, males also have concerns if they are unable to support their families economically [18]. The provision of reproductive health information through mass media was also associated with positive attitudes of adolescents. Statistical test results showed p-value=0.042. Mass media is one of the sources of information that is useful for increasing the knowledge and attitudes of adolescents.

### **3.2.3. Adolescents' knowledge level and attitude towards the maturation of age marriage before and after treatment**

There was increasing coverage of good level knowledge and positive attitudes in the experiment group after being treated with education through video. It also can be seen in the increasing coverage of good level knowledge and positive attitudes in the control group after being treated with pocketbooks. There was an increasing prevalence of good level knowledge and positive attitudes of adolescents about the maturation of age marriage in both groups. Our findings were in line with another study about the effectiveness videos

and pocketbooks to the knowledge level and attitudes. There was increasing in good level knowledge and positive attitudes about the stigma of people living with HIV/AIDS or PLWHA and cervical cancer screening in both groups [19], [20]. Video and pocketbooks can be health promotion media to increase good level of knowledge and positive attitudes on health reproductive education.

In the knowledge questionnaire, almost some respondents still answered incorrectly during the post-test on numbers 2 and 10. A total of 20% of respondents answered incorrectly on number 2. Respondents who answered incorrectly on number 10 reached 30%. Question number 2 relates to regulations and rules for early marriage in Indonesia. Question number 13 regarding the risks of early marriage. Previous research related to the determinants of the maturation of age marriage states that adolescents with knowledge of age should be women giving birth to their first child (AOR=4.930; CI: 4.610-5.272) and adolescents who have knowledge of age should marry males (AOR=3.145; CI: 2.962-3.338) have a better propensity for the planning of marriage age. This proves that the strengthening of regulations and the dangers of early marriage must still be done [21].

#### **3.2.4. The effect of video on adolescents' knowledge level and attitudes about the maturation of age marriage**

Knowledge level scores before treatment and after treatment increased. There was a significant difference in the mean score of the adolescents' knowledge level about the maturation of age marriage before and after treatment with video media education ( $p=0.000$ ). Research by Bond and Ramos on the treatment of educational videos about the health behavior of people living with HIV/AIDS states that 89% of respondents' knowledge increases after being given the video. Respondents rated videos as better for providing health information [22]. Audiovisual media as health promotion media increases adolescents' knowledge level about HIV [23].

Our findings suggest that there was a significant difference in attitude values before and after treatment with video media education with a  $p$ -value of 0.006. The provision of education through videos has an effect on increasing the knowledge and attitudes of adolescents about the maturation of age marriage. Video is an audiovisual educational medium that can display image and sound elements simultaneously when communicating with messages or information so that they can reveal an event and object with the actual situation. Audiovisual health education is considered more interesting and understandable. A previous study stated that the video-giving treatment group showed a result of 0.001 meaning that there was a difference in the value of adolescent knowledge and attitudes about the maturation of age marriage during the pretest and post-test [24].

The use of video media facilitates the delivery of information, facilitates understanding of concepts and absorption of material. Video can speed up the process of receiving information in life and influencing one's emotions through the senses. This media also allows individuals to remember 50% of the information seen and heard, so that they can increase knowledge and change attitudes in a positive direction. The other study also found that audio-visual media have a significant role in increasing sexual-reproduction health knowledge among adolescents [25].

The results of the statistical test in the control group's knowledge level obtained a  $p$ -value of 0.003 which indicates that there was a significant difference in the value of the level of knowledge about the maturation of marriageable age before and after treatment with pocketbooks education. The results of our study were in line with research by Murtiyarini *et al.* [26] that there was a significant difference in the mean scores before and after treatment with pocketbooks. Pocketbooks are light and concise information media. Pocketbooks are able to disseminate information with attractive packaging and appearance so as to make readers pay close attention to their readings. This can increase the reader's knowledge.

The other study about the implementation of the medical research module to the medical student's knowledge stated that there were significant changes in students' knowledge about medical research from before to after the research module implementation [27]. Use of textbook ( $p=0.12$ ,  $p<0.001$ ) has a significant effect on academic achievement in the school [28]. From the study above, it can conclude that providing education through pocketbook at school has an effect on increasing knowledge.

Statistical test results obtained a  $p$ -value of 0.314 which indicates that there was no significant difference in the mean score of attitudes toward the maturation of age marriage before and after treatment with pocketbooks. The provision of education through pocketbooks has no effect on adolescents' attitudes about the maturation of age marriage. Our finding was in line with a previous study in 2020 that discusses the influence of the media on changes in knowledge and attitudes about free sex in adolescents. The researcher's assumption that there was no effect on providing education through the media because of the ability to absorb different information from each respondent and the lack of intention and willingness of respondents to pay close attention to information from the media [29].

### 3.2.5. Factors influencing the adolescents' knowledge level and attitudes about the maturation of age marriage

The provision of educational media through videos and the existence of information about reproductive health from mothers affect the knowledge level of adolescents regarding the maturation of age marriage. The source of information from the mother about reproductive health was the dominant factor that affects the knowledge level of adolescents about the maturation of age marriage. Adolescents who were given information by mothers about reproductive health were 3.7 times more likely to have a good knowledge level toward maturing age of marriage. Parents' self-confidence was the most influential factor in reproductive health education for adolescents (OR=3.052, CI=1.534-6.071). Lack of skills to explain the topic of sexuality, lack of knowledge of the material that will be given, and the shame when conveying sexuality material is something that affects parents' self-confidence [30].

During the period of adolescent development, the intensity of communicating with friends increases. Although adolescents can increase their time to spend with friends, the bounding relationship between father and mother with adolescents will help adolescents to increase their self-confidence and self-esteem. There was a positive correlation between parent adolescent communication and self-esteem. Self-esteem is related to self-acceptance which affects the tendency to behave positively [17], [31]

Adolescent gender and the existence of information about reproductive health from the mass media influence adolescents' attitudes regarding the maturation of age marriage. Health promotion for adolescents has a significant impact on knowledge, attitudes, and health behavior. Health promotion can use various media to make it easier [32]. Interventions in adolescents regarding the maturation of marriage age prevent child marriage and increase adolescent maturity in deciding to marry [33]. Exposure to reproductive health information through the media, gender, and the functioning of reproductive functions in the family can help adolescents to plan for maturing age at marriage. The method of giving videos is effective to increase the knowledge level and attitudes of adolescents about the maturation of age marriage.

## 4. CONCLUSION

There was a significant difference in mean and an increase in the knowledge level and attitudes of adolescents after being given educational video media  $p < 0.05$ . The method of giving videos is effective to increase the knowledge level and attitudes of adolescents about the maturation of age marriage. Video can be used as an educational medium to improve adolescent reproductive health as the maturing of marriage-age education programs at school. However, the role of the mother and information media also support in increasing adolescents' knowledge and attitudes about the maturation of age marriage. Therefore, the integration of the marriage-age maturation programs is needed to improve it. Our findings can become reference material for the development and improvement of future research.

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