



## **Reproductive Health Education through Video and Leaflet Increased Knowledge and Attitudes of Junior High School 1 Lobalain Students**

**Ervina B. C. Sinlaeloe<sup>1\*</sup>, Christina R. Nayoan<sup>2</sup>, Amelya B. Sir<sup>3</sup>**

<sup>1</sup>Public Health Study Program, Faculty of Public Health, Universitas Nusa Cendana, Indonesia

<sup>2</sup>Section of Health Education and Behavioral Sciences, Faculty of Public Health, Universitas Nusa Cendana, Indonesia

<sup>3</sup>Department of Epidemiology and Biostatistics, Faculty of Public Health, Universitas Nusa Cendana, Indonesia

\*Corresponding Author: Email: [ervinasinlaeloe@gmail.com](mailto:ervinasinlaeloe@gmail.com), [christina.nayoan@staf.undana.ac.id](mailto:christina.nayoan@staf.undana.ac.id)

### **Abstract**

**Introduction:** Adolescents' knowledge about puberty is very important to prevent health problems such as unwanted pregnancies, early marriage, abortion and Sexual Transmitted Infections (STI's). Thus, health education to increase awareness is really needed. This research aimed to determine the effect of reproductive health education through video and leaflet media on Lobalain 1 junior high school students.

**Methods:** This quasi-experimental study with pre and post-test design approaches was conducted on 184 junior high school students, who were selected using a stratified random sampling technique. Subjects were divided evenly into 2 groups, who received reproductive health education through video and leaflet and the control group. Knowledge and attitude data were collected through questionnaires. Data were analyzed by chi square tests, with a significance level of < 0.05.

**Results:** The subjects were students aged 12-17 years in grades 7 to 9. In the experimental group there was a significant increase in good knowledge scores category from 20% to 77% ( $p < 0.05$ ), while there was no increase (28% to 30%) in the control group. In the experimental group, the positive attitude score category also significantly increased from 64% to 83% ( $p < 0.05$ ), while in the control group the positive attitude score category did not increase significantly (from 59 to 66%).

**Conclusion:** Health reproduction education through video media and leaflet increased knowledge and attitude of Lobalain 1 junior high school students. It is recommended that local governments and schools increased health promotion efforts in adolescents.

**Keywords:** Health reproduction, education, adolescent, Video, Leaflet.

Copyright (c) 2024 The authors. Published by Faculty of Public Health, Universitas Diponegoro.

This is an open access article under the CC BY-SA License ( <https://creativecommons.org/licenses/by-sa/4.0> ).

DOI: <https://doi.org/10.14710/jphtr.v7i3.20455>

Article History: Received: 04<sup>th</sup> October 2024, revised: 29<sup>th</sup> November 2024 accepted: 04<sup>th</sup> December 2024

### **Introduction**

Adolescence is a transition period between childhood and adulthood. Adolescence is also a process of growing towards maturity including mental,

emotional, social and physical maturity.<sup>1,2</sup>

Adolescence is a dynamic developmental phase in a person's life. During this period, biological, psychological and social changes occur.<sup>3</sup> Biological changes in

adolescence is also marked by primary and secondary sexual changes.<sup>4</sup> Skeletal and sexual maturity occurs rapidly, especially in early adolescence.<sup>5</sup> Some of the characteristics are hair growth in genital area and armpits, deepening voice, growing Adam's apple and wet dreams in teenage boys, widening hip circumference and experiencing menstruation among the girls.<sup>6</sup> Adolescence is often filled with many unknowns about their own development which creates problems. The problems that many teenagers face arise from a lack of information about their own changes, especially which are related to reproductive health.<sup>7</sup>

Survey results from the Indonesian Family Planning Association (PKBI) and On Track Media Indonesia (OTMI) found that around 29 to 31% of East Nusa Tenggara (NTT) teenagers had had premarital sexual relations. Based on the results of previous research, which was conducted on 378 high school students in Kupang City, it was found that 29% or 85 teenagers were at risk of premarital sexual behavior.<sup>8</sup> According to the World Health Organization (WHO), around 15% of the world's population or about 7.7 billion were teenagers aged 10-19 years. In Asia Pacific area, where the population constitutes 60% of the world's population, one-fifth were teenagers aged 11-19 years, consisting of 50.9% male and 49.1% female teenagers.<sup>9</sup> Adolescents in developing countries, on average, have their first sexual intercourse under the age of 13 and have an impact on 60% of adverse pregnancy incidents.<sup>8</sup>

Adolescent reproductive and sexual health problems are important for national development due to the large adolescent population and the long-term impacts that can arise from the reproductive and sexual health problems.<sup>10</sup> Sexuality problems occur due to teenagers' low knowledge about reproductive health.<sup>11</sup> Lack of knowledge among teenagers regarding reproductive health will be very risky for problems such as unwanted pregnancies (KTD), early marriage, abortion, sexually transmitted diseases (STDs), HIV and AIDS, sexual violence and drugs use.<sup>12-14</sup> According to data from the Central Statistics Agency (BPS, 2019) among the 267,074.6 million total population in

Indonesia, 45,351.3 of whom were teenagers. Among the teenagers, 23,057.1 million aged 10-14 years and 22,294.2 million aged 15-19 years.<sup>4</sup> The large teenage population will influence social, economic and demographic developments now and in the future.<sup>9</sup>

The results of the 2017 Indonesian Demographic Health Survey (SDKI) included data on reproductive health for 23,770 adolescents aged 15-24 years including 13,079 men and 10,691 women.<sup>4</sup> Among them, 8% of the boys and 2% of the girls had premarital sexual relations, mostly starting at the age of 17. Sixteen percents of the girls aged 15-19 years and 8% of those aged 20-24 years experienced unwanted pregnancies. Meanwhile, 23% of girls have had abortions, 15% of the boys and 1% of the girls aged 15-24 years have consumed alcohol and 5% of the boys and 1% of the girls have used illegal drugs. It was known that of the total population of teenagers aged 14-19 years, there were 19.6% of untimely pregnancy cases and around 20% of abortion cases are carried out by teenagers in Indonesia (BKKBN, 2021). This problem occurs due to a lack of knowledge about the reproductive health of adolescents themselves, which will ultimately influence the attitudes of adolescents during puberty.<sup>15</sup>

Knowledge of reproductive health is very important for teenagers because during adolescence there is very dynamic development both biologically and psychologically.<sup>16</sup> Many reproductive health problems that occur in adolescents are caused by a lack of knowledge, understanding and awareness to achieve a healthy state of reproduction. Increasing teenagers' knowledge is an important factor in influencing teenagers' attitudes and behavior in socializing and mingling in society. Good knowledge will encourage teenagers to adapt to a positive environment. One effort to provide reproductive health information to adolescents is by providing promotion, counseling or health education. Effective reproductive health education must be appropriate to the age, culture and context of teenagers' lives so that the information received can be understood well in order to create good relationships in today's

modern era.<sup>9</sup> Several things can be done to provide health education, such as using interesting media, which can be visual or audio visual. One of the visual media is leaflet media and one of the audio-visual media is video.

A number of studies proved that audio-visual media can help teaching.<sup>15</sup> Gunawan's research (2016) stated that health education using videos was more effective in increasing health knowledge compared to using flip chart media. Video is an intermediary medium in which material is absorbed through sight and hearing, thus creating conditions that can enable students to acquire knowledge and skills.<sup>17</sup> Leaflet media is used as a health education media because in this media the target can adapt and learn independently, users can view the contents while relaxing, information can be shared with family and friends, can provide more detailed information regarding information that cannot be given orally and reduces the need to take notes.<sup>18</sup>

This research was conducted at Lobalain 1 Junior High School, because it was based on an initial survey that had been conducted at five schools: Government Junior High School 1, 2 3,4 and 5 in Lobalain District. By distributing questionnaires with 15 questions and taking a sample of 30 students, it was found that the students of SMP Negeri 1 Lobalaian had the lowest level of knowledge about puberty.

Some respondents have received information about puberty at least once, but many are still indifferent about puberty, so this research can increase respondents understanding and awareness of their reproductive health, especially during puberty. The aim of this research was to determine the effect of reproductive health education during puberty through video and leaflets on Lobalain 1 Junior High School students.

## **Methods**

This research was a quantitative study using an experimental research design. The population in this study was 352 students. The sampling technique used was stratified random sampling technique with a sample size of 184

students, who were divided into two groups so that each group had 92 students. The experimental group received health education through video and leaflets, while the control group did not receive any treatment. The variables studied were teenagers' knowledge and attitudes. The assessment was carried out through a questionnaire. Knowledge was good if the students answered correctly >56% of all questions. The attitude variable was categorized as positive if the student was able to answer >50% of all statements and negative category if the student answered <50% of all statements. Data analysis was carried out using paired sample T tests. P value of  $\leq 0.05$  was considered as significant.

## **Results**

The subjects were students aged 12-17 years in grades 7 to 9 of Junior High School. Table 1 shows that among the subjects, males (54.3%) were more than females.

Table 2 shows the knowledge score category at before and after intervention in the experiment and control groups. This table shows that the knowledge on reproductive health during puberty significantly improved at post-test in the experiment group, but not in the control group.

Table 3 shows the attitude score category at before and after intervention in the experiment and control groups. This table shows that the attitude on reproductive health during puberty significantly improved after the education through video and leaflet at post-test in the experiment group, but not in the control group.

Table 1. Characteristics of respondents

Characteristic	Category	Frequency	Percentage (%)
Gender	Female	84	45.7%
	Male	100	54.3%
Grade	VII	58	32
	VIII	62	34
	IX	64	35

Table 2. Knowledge score category at pre and post-test in the experiment and control groups

Knowledge	Pretest				Posttest				p value
	Experiment		Control		Experiment		Control		
	N	%	n	%	n	%	n	%	
Low	8	8	21	23	0	0	19	21	0.001
Average	66	72	45	49	21	23	45	49	
Good	18	20	26	28	71	77	28	30	
Total	92	100	92	100	92	100	92	100	

Table 3. Attitude score category at pre and post-test in the experiment and control groups

Attitude	Pretest				Posttest				p-value
	Experiment		Control		Experiment		Control		
	n	%	n	%	n	%	n	%	
Negative	33	36	38	41	16	17	31	34	0.001
Positive	59	64	54	59	76	83	61	66	
Total	92	100	92	100	92	100	92	100	

## Discussion

### Knowledge

Before the intervention through video media and leaflets, only 18 (20%) students in the experimental group had a good knowledge in the good category. At school, the students did not receive detailed information about puberty as they only received information about puberty in biology class at grade 8. Their knowledge about reproductive health was limited to experiencing wet dreams and menstruation. They did not know clearly about puberty, the characteristics of puberty, the stages of puberty and the changes that occur during puberty. Several class VII students have sufficient or good knowledge because they have received information about reproductive health from social media, parents and peers.

The results of this research are in line with the study on students at SMK 2 Muhammadiyah Bantul which showed that there was an increase in knowledge among respondents who had received counseling using video media.<sup>19</sup> Anggelia (2021) also found that similar results at SMP N 14 Bengkulu City, which showed that

education through video media increased teenagers' knowledge about puberty. Thus, video media was good to provide effective information.

In this study, after education through a video duration of 10 minutes 44 seconds and leaflets were distributed to students, the knowledge in good category increased to 77%. The video and leaflets contained information on the meaning, characteristics, stages and factors that influence puberty. Video could be easily understood by students and the videos are packaged in an interesting way.<sup>19</sup> Videos can be viewed repeatedly and leaflets can be read anytime and anywhere.

This study also supported by research conducted by Yanti, Mila and Citra, (2020) which showed that there were changes in students' knowledge and attitudes after education through video and leaflet media. There is a significant increase in knowledge in question which indicates that students know the characteristics of physical development experienced during puberty.

Based on the researchers' analysis, providing education through video media

and leaflets could increase students' knowledge about puberty, because video media relies on the senses of sight and hearing, so that students could easily understand material about puberty and leaflet media can be used casually and repeatedly by students. Apart from that, leaflet media could also be taken home by students so that students could discuss it again with them. friends, teachers and parents to increase knowledge about the reproductive health of adolescents during puberty.

#### *Attitude*

Attitudes influence an individual's experience and originated from urges or impulses in the heart, desired habits and the influence of the environment around the individual, in other words attitudes result from personal desires and a number of stimuli.<sup>20</sup>

Before health education was given to the experimental group, 59 (64%) students had a positive attitude and 33 (36%) had a negative attitude. The negative attitude of these students was due to environmental factors and low knowledge about puberty. There were still many students who had never received education at school or outside school regarding the reproductive health during puberty. They considered the reproductive health of adolescents during puberty as taboo to be discussed. The positive attitude of some students might be caused by their knowledge about reproductive health, which were received from the teachers and others.

In this study, students' negative attitudes were found in several statements such as students felt that weight gain at their age (adolescent) made their appearance less attractive. The other attitude was they thought that menstruation and wet dreams should occurred at their age, so they felt afraid if they haven't experienced this event while the other friends already had.

In the experimental group, after the health education through video media and leaflets, the positive attitude increased to 83%. This change in students' attitudes occurred because the students had heard, saw, read and understood the content of videos and leaflets about reproductive

health during puberty. Students could easily understand the content of the video as the video influenced the senses of sight and hearing. The students also could easily understand the content of the leaflet media because the sentences used were clear and used simple language. Leaflet also contained interesting pictures. as the reinforcement for the message in the leaflet so that students could understand the content of the message.

Positive student attitudes include statement that students had already know how important it is for teenagers to get information about reproductive health during puberty. The other positive statements regarding understanding that menstruation and wet dreams were the normal things that occurred in teenagers and they had understood that during adolescence they did not need to worry about gaining weight as they were in their growth spurt. The other positive attitude was the students understood the physical changes that would occur during puberty, one of which was the appearance of acne, so the students could accept if acne appears and thought that it was normal.

Attitudes are also influenced by media exposure and peers. By providing information about the reproductive health of during puberty, it is hoped that knowledge will later influence the attitudes. Good knowledge can influence students' attitudes in doing positive things. There were changes in students' attitudes into positive after reproductive health education through video media and leaflets, where students were able to accept the physical changes that occur to them in their teens, responded by eliminating the stigma regarding reproductive health which was taboo for discuss, respect other friends who already had a wet dream or menstruation or vice versa. This is in accordance with the theory that attitudes have 4 levels of accepting, responding, appreciating and being responsible.

Based on the researchers' analysis, video media and leaflets can increase students' knowledge and can change students' attitudes for the better. Because of leaflet media has the advantage of being equipped with illustrations and using simple and easy to understand language and

leaflets can also be read repeatedly by students and can be read anywhere and at any time because they can be taken home. Video media that relies on the senses of sight and hearing, so that students can more easily understand material about puberty and video media that can be played repeatedly by students and can be watched at any time.<sup>21</sup>

## Conclusion

Reproductive health education through video media and leaflets can increase students' knowledge and attitudes of Lobalain 1 Junior High School students. It is recommended that health promotion efforts regarding adolescent reproductive health will be conducted at all junior high school students. This can be done by the teachers through video media and leaflets.

## Ethics approval

This research has received ethical approval from the Health Service, Research Ethics Commission, Faculty of Public Health, Nusa Cendana University, with the number of 2023006-KEPK 2023.

## Availability of data and materials

Available

## Acknowledgment

The researcher would like to thank the principal of Lobalain Government Junior High School, the teachers and all respondents in this research, as well as the two supervisors who took the time to guide the researcher so that this research could be completed well.

## Funding

This research was self-funded by the authors.

## Author Contribution

EBCS collects and analyzes adolescent reproductive health data using video intervention media and leaflets by dividing respondents into two groups. The experimental group received treatment and the control group as a comparison group, to see differences in respondents' knowledge and attitudes regarding the reproductive health of adolescents during

puberty. All three authors contributed equally to writing this manuscript.

## References

1. Agustina M. The Effectiveness of Audio Visual Education Media in Increasing Attitudes About Risky Behavior on Adolescent Reproductive Health.
2. Arisani, G., Sukriani W. Adolescent Reproductive Health Education using My Health Report Book. *Sci J Community Serv.* 2021;21(1):130–9.
3. Oktaviani, N., Jasmawati., & Setiadi R. The Influence of External Genital Organ Care Behavior on the Incidence of Vaginal Discharge in Adolescent Girls at MTS Darul Ihsan Anggana 2018.
4. M, R., & Fatmawati T. Knowledge about Reproductive Health on the Use of Youth Information and Counseling Centers (PIK-R). *Batanghari Univ Jambi Sci J.* 22(1):427.
5. Hadiwardjo, YH, Citrawati, M., & Aprilia C. Effectiveness of Leaflet and Film Media in Increasing Puberty Knowledge at SMP N 226 Pondok Labu. *Dis Prev Public Heal J.* 14(1):46–50.
6. Handayani, L., Kurnaesih, E. & S. The Influence of Education Through Video Media and Leaflets on Personal Hygiene Behavior During Adolescent Menstruation. *J Aafiyah Heal Res.* 1(1):92.
7. Sulistyowati, A., & Efri AY. Tingkat Pengetahuan Remaja Tentang Kesehatan Reproduksi di SMA PGRI 1 Sidoarjo. 5(1):1–4.
8. Junita, S., Hastuti, S., & Meilan N. The relationship between knowledge and attitudes about reproductive health and premarital sexual behavior among students who take part in PIK-R activities at SMA Kab. Bantul; 2017. 1–4 p.
9. Thaha, RY, & Yani R. Factors That Influence Adolescents' Knowledge About Reproductive Health at SMPN 1 Buntao, North Toraja Regency. 3(2):53–4.
10. Korah, H., & Lontaan A. Factors That Influence Adolescents'

- Knowledge About Reproductive Health. *Midwife Sci J (Jidan)*,. 3.
11. Sukmaningsih, WR, Nugraheni, A., & Kartini A. The Influence of Short Films through Peer Educators on the Behavior of High School Adolescents regarding Reproductive Health in Semarang City. *Indones J Heal Manag.* 6(1).
  12. Mariani, NN, & Murtadho S. The Relationship Between the Role of Parents, Peer Influence, and Attitudes Towards Premarital Sexual Behavior in Students of SMA Negeri 1 Jombang, Cirebon Regency, 2017. *Care Sci J Heal Sci.* 2017;6(2):116.
  13. Isyroofanaa, E., Faizah, Z., & Utomo M. The Effect of Mass Media Exposure on Reproductive Health Literacy of Islamic Boarding School Adolescents. *Indones Midwifery Heal Sci J.* 3(4):341–8.
  14. Juariah, J., & Irianto J. The Role and Factors Associated with Teacher Behavior in Reproductive Health Education for Junior High School Adolescents in Subang Regency. *J Reprod Heal.* 2019;11(1):11–24.
  15. Purba, A., & Rahayu R. Factors Associated with Reproduction at SMU Gema Buana Bandar Khalipah. *J Reprod Heal.* 6(2):41–8.
  16. Dwimawati A. Factors Associated with Adolescent Reproductive Health Knowledge at SMK YAK 1 Bogor, Tanah Sareal District, Bogor City, West Java Province. *Promot Public Heal Student J.* 2018;1(2):80–1.
  17. Reggy A. The Influence of Video Education about Reproductive Health on Knowledge of Puberty in Adolescent Girls at SMP N 14 Bengkulu City in 2021. 2021.
  18. Saraha R. The Relationship between Access to Mass Media and Knowledge of Adolescent Reproductive Health in SMA Negeri 5 Ternate City in 2016. *Ternate Heal Polytech Heal J.* 2016;9(1):16–21.
  19. Agustin P. Knowledge of Providing Counseling Using Video and Booklet Media on the Level of Knowledge of Adolescent Reproductive Health at SMK 2 Muhammadiyah Bantul.
  20. Sariyati S. Factors that Influence the Attitudes of Young Women about Flour Albus at SMP Negeri 2 Trucuk, Klaten Regency. *Indones J Nurs Midwifery.* 2(3):117–121.
  21. Marlina, N, N, A, S., Sarniti, N, W., & Surati, I, G A. The Effect of Increasing Knowledge About Menstruation Before and After Being Given Counseling Using Video Media. *Midwifery Sci J.* 9(1).