

1027. The effect of comprehensive  
sexual education on improving  
knowledge, attitudes, and skills in  
preventing premarital sexual behavior  
in adolescents

*By Actavia System*

### **The effect of comprehensive sexual education on improving knowledge, attitudes, and skills in preventing premarital sexual behavior in adolescents**

#### **Abstract**

*Aim:* This study aims to determine the effect of comprehensive sexual education on improving knowledge, attitudes, and skills in preventing premarital sexual behavior.

*Design:* Quasi-experimental pre-post test design with a control group

*Methods:* The participants of this study were SMKN 1 Cibadak students with 60 respondents for two groups (intervention group=30 and control group=30). The purposive sampling technique selected participants with the inclusion criteria grade 9<sup>th</sup> students and already dating/are dating. Comprehensive sexual education was conducted in the intervention group for six sessions consisting of six main topics. The research instrument used was a knowledge, attitudes, and skills questionnaire which had previously been tested for validity and reliability using the Shapiro-Wilk and Levene test. The data collected was processed using SPSS version 25.0 and analyzed by univariate (frequency and percentage), bivariate (paired t-test and independent t-test), and multivariate (linear regression test).

*Results:* There was a significant effect of comprehensive sexual education on improving knowledge, attitudes, and skills in preventing premarital sexual behavior with a  $p$ -value  $< 0.000$ . The difference in each variable's mean and standard deviation significantly occurred between the intervention and control group from the baseline to follow-up with the results of knowledge (17.60±3.86 vs. 11.33±5.96), attitude (53.93±13.92 vs. 28.53±13.13), and skill (34.93±3.78 vs. 16.87±8.13).

*Conclusion:* Comprehensive sexual education has proven to be effective in increasing knowledge, attitudes, and skills in preventing premarital sexual behavior so that it can be used as a special intervention in public health centers for adolescents. This intervention approach can be made by collaborating health services with formal institutions such as schools and communities such as youth organizations.

**Keywords:** attitude, comprehensive sexual education, knowledge, premarital sexual behavior, skill

#### **Introduction**

According to the World Health Organization (WHO), in 2010, 210 million pregnant adolescents were found worldwide every year (Yazdkhasti, et al., 2015). Based on this figure, one hundred twenty-eight million have abortions due to premarital sexual behavior. Abortion resulted in 70,000 adolescent deaths due to the consequences of having unsafe abortions and another 4 million suffered from illness and disability (Singh, 2010). The survey by Indonesian Child Protection and the Ministry of Health of the Republic of Indonesia (2013) described the blurring of the portrait of teenagers in Indonesia due to premarital sex, abortion, and exposure to Human Immunodeficiency Virus (HIV)/ Acquired Immune Deficiency Syndrome (AIDS). The survey results stated that 62.7% of adolescents in Indonesia had premarital sex, 20% of 94,270 adolescents experienced pregnancies outside of marriage and 21% of adolescents who experienced pregnancy outside of marriage had abortions (Badan Kependudukan dan Keluarga Berencana Nasional (BKKBN), 2017).

There are several reasons for premarital sex: their love for each other 46%, curiosity by 34%, 16% for just happening, and being forced by a partner 16%. As much as 62% of adolescents received information about premarital sex from school friends, 42% from teachers, 8.7% from health workers, and 6.8% from parents (InfoDATIN, 2015). 15-19 years old male adolescents liked reproductive health information obtained from peers 26% and teachers 25%, while female adolescents preferred sources of information from mothers 43%, friends and

health workers, and religious leaders (Badan Kependudukan dan Keluarga Berencana Nasional (BKKBN), 2017). The surge in sexual desire forces youth to seek information, but too few youths receive education on sexual and reproductive health from teachers and parents. The influence of global information is increasingly accessible to adolescents to imitate various sexual behaviors. For example, they were having sexual relations with unmarried partners (Irmawaty, 2013). Abusing sexual behavior is caused by a lack of adolescent knowledge about reproductive and occurs due to the influence of mass media and the internet, which provide inaccurate and misinformation (Hagg, Dahinten, & Currie, 2018).

Currently, the curriculum provided by schools regarding reproductive health does not meet the needs of adolescents' understanding of premarital sex, which results in adolescents seeking knowledge from the internet, which sometimes does not match their age. Besides that, teenagers' curiosity causes them to carry out sexual experiments at risk of health problems (Sari, Darmana, & Muhammad, 2018). Therefore, it is necessary to add insight into sexual education that can meet the needs of sexual information for adolescents. This information can be done by providing a comprehensive sex education curriculum learning model.

The provision of lots and lots of detailed information is the hallmark of the comprehensive sexual education curriculum learning model so that it is different from the current sexual education (United Nations Fund for Population Activities (UNPFA), 2014). Comprehensive sexual education looks at sexuality and sexual behavior holistically, not only focusing on preventing pregnancy and sexually transmitted infections (STIs). Moreover, it is not solely based on the discourse of prohibition, which has been the basis of sexual education in schools (Pakasi & Kartikawati, 2013). Sex education focuses on conveying facts about sexual and reproductive health. However, the content, message, and approach to the delivery of sex education differ from country to country (Horanieh, et al., 2021).

There is a significant effect of comprehensive sex education programs on knowledge of sex health and sexual attitudes (Chi, et al., 2015). Comprehensive sex education can address the reduction and prevention of sexual violence among students (Hubach et al., 2019). Groups that receive comprehensive sexuality education have a higher chance of using contraception in the first relationship than those that do not receive comprehensive sexuality education (Hersh, et al., 2019). Comprehensive sexual education is a curriculum-based education that aims to equip children and youth with the knowledge, skills, attitudes, and values that will enable them to develop a positive view of sexuality in the context of their emotional and social development (United Nations Fund for Population Activities (UNPFA), 2014). This study aims to determine the effect of comprehensive sexual education on improving knowledge, attitudes, and skills in preventing premarital sexual behavior.

## Materials and methods

### Study design

The research conducted is quantitative analytical research with a quasi-experimental pre-post test design with a control group. This study measured the effect of intervention in the form of comprehensive sexual education on knowledge, attitudes and skills in preventing premarital sexual behavior.

### Participants in the study

The participants of this study were SMKN 1 Cibadak students. The number of samples was calculated by a purposive sampling technique as many as 60 people were divided into 2 groups, namely the intervention group and the control group. Randomization was done by simple random sampling, which is student ID numbers are entered into a closed box then taken one by one to be classified. A total of 30 participants were assigned to each intervention group and control group. Included participants were grade 9<sup>th</sup> students and already dating/are dating. The

grouping process of respondents, generally can be seen in figure 1.

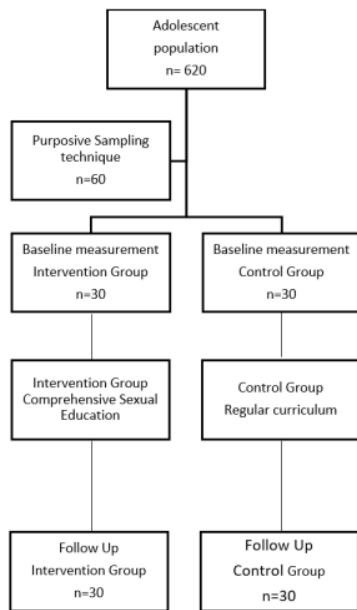


Figure 1. Quasi-experimental research design

### 1.1 Intervention

The intervention carried out for the intervention group was comprehensive sexual education. This intervention is an education conducted for six meetings with different topics. All these topics were comprehensively designed, compiled, combined and discussed by a competent research team with their expertise, so it was decided to be tested through this research. The presented topics, the used methods and the media can be seen in table 1. The explanation of the schedule and activities for each session can be seen in table 2. The intervention was carried out every month (60-minute per/session) so that the total measurement time from baseline to follow-up was six months.

The control group received general intervention in the form of sexual education from the 2013 Curriculum set by the government of the Republic of Indonesia through the Ministry of Education and Culture (Rahmawati, 2013). The topics given are not specifically mentioned, but are explicitly included on the topic of reproductive health in one 90-minute learning session through their teacher in a class.

Table 1. Comprehensive sexual education subject

Meeting Session	Topic	Delivery Method	Lecturer/Media
1	Comprehensive sexual education for adolescents	Lecturing	SB*/PowerPoint
2	Anatomy and function of male and female sexual reproductive organs.	Lecturing	SB*/PowerPoint
3	Reproductive health and the impact of premarital sexual behavior	Lecturing	SB*/PowerPoint
4	Dating and sexual violence	Lecturing	SB*/PowerPoint
5	Unwanted pregnancy	Lecturing	SB*/PowerPoint
6	Equal gender relations and human rights principles	Lecturing	SB*/PowerPoint

\*first author initial

Table 2. Lecturing session

Lecturing Session	Explanation
Opening	In the opening session, the moderator greets and guides education activities by introducing themselves and reading the lecturer curriculum vitae for a maximum of 10 minutes.
Contract	Time contracts are carried out to organize activities so that they are in accordance with the achievement targets. The moderator conveys the purpose of the activity to direct respondents to focus on the activity with a duration of 5 minutes.
Brainstorming	For 5 minutes, the moderator conducts a pre-briefing to the participants by exploring the participants' knowledge of the material or topic that will be delivered by the speakers. This interaction aims to build two-way communication so that respondents are proactive during the activity.
Main lecturing	For 30 minutes, the speaker delivered the topics that had been planned in the educational agenda book using PowerPoint
Question and answer	The moderator gives the respondent the opportunity to provide responses, both questions and criticisms of the material presented. In some sessions, discussions took place between participants and speakers, or between participants. The duration was set in 5 minutes, but can be extended to 2 minutes as needed.
Closing	The conclusion of the topic and the whole discussion was delivered at the same time as the closing of the educational activity session by the moderator.

### Measurements

The questioner was used to measure effect of intervention (comprehensive sexual education) to the outcomes (knowledge, attitudes and skills) consisted of four part namely demographic data (consisting of gender, religion, age at first dating), knowledge, attitudes, and skills. The results of the validity and reliability test of the questionnaire using the Shapiro-Wilk test showed  $t_{\text{results}} > t_{\text{table}} = 0.444$  with  $p\text{-value} > 0.05$ , and Levene test with  $p\text{-value} > 0.05$ .

### Data Collection

Data collection was carried out from baseline (in March 2<sup>nd</sup>, 2021) to follow up (In August 2<sup>nd</sup>, 2021). Data screening was carried out to ensure that the questionnaire was filled out completely so that it could be entered on the computer. The data was coded for analysis using SPSS version 25.0. As a result, all questionnaires were filled out completely and there was no participant dropped out in this study.

### Statistical Analysis

Statistical tests were performed to display univariate, bivariate and multivariate data. Characteristics of participants are displayed by calculating the frequency and percentage of independent variables such as gender, peer influence, and age for the first time meeting. Bivariate analysis was performed using paired t-test and independent t-test to compare the outcomes of the two groups, before and after the intervention. Meanwhile, multivariate analysis was conducted to measure the effect of the intervention on the outcome by using a linear regression test.

### Results

#### Characteristic of participants

Table 1. Describes the sex in the control group, 73.30% is female with the influence of friends in the good category of 93.3%, and the average age of first courtship is 14.53. In the control group, 66.7% were female, with the influence of friends in the good category of 60%, and the average age of first courtship was 14.40.

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Table 1. Frequency distribution of participants characteristics

Variable	Intervention Group		Control Group	
	f	(%)	f	(%)
<b>Gender</b>				
Male	8	26.70	10	33.30
Female	22	73.30	20	66.70
<b>Peer influence</b>				
Not good	26	6.70	16	40
Good	4	93.30	14	60
<b>Age for the first time dating</b>				
Mean	14.53		14.40	
Median	15.00		15.00	
Std. Dev	1.25		1.18	
Min	-		-	
Max	13-16		13-16	

## 2.2. Multivariate analysis

Table 2. Distribution of the frequency of knowledge, attitudes, and skills

Variable	Intervention Group				Control Group			
	Mean	Median	Std. Dev	Min-Max	Mean	Median	Std. Dev	Min-Max
<b>Knowledge</b>								
Pre Test	8.60	6.00	6.00	2-20	10.27	8.00	5.93	3-19
Post Test	17.60	19.00	3.80	7-20	11.33	10.00	5.96	3-19
<b>Attitudes</b>								
Pre Test	39.07	26.00	18.59	21-67	35.27	25.00	15.37	21-56
Post Test	53.93	58.00	13.92	23-68	28.53	24.00	13.12	18-55
<b>Skills</b>								
Pre Test	20.20	14.00	11.06	11-39	20.33	16.00	9.48	12-37
Post Test	34.93	34.00	3.788	29-40	16.87	13.00	8.13	11-36

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Table 2 shows that in the majority in the intervention group, the post-test mean scores of knowledge, attitudes, and skills to prevent risky sexual behavior were higher than the pre-test scores, while in the control group, most of the post-test average scores for knowledge and attitude is lower than the pre-test score.

## 2.3. Multivariate analysis

Table 3. The results of the analysis of the average difference in knowledge and attitudes

Variables	Intervention Group	Control Group	p-Value
<b>Knowledge</b>			
Mean	17.60	11.33	0.000
Std. Deviation	3.86	5.96	
<b>Attitude</b>			
Mean	53.93	28.53	0.000
Std. Deviation	13.92	13.13	
<b>Skills</b>			
Mean	34.93	16.87	0.000
Std. Deviation	3.78	8.13	

Table 3 shows that statistical values in the intervention and control groups show a significant difference between knowledge, attitudes, and skills to prevent premarital sexual behavior in the intervention and control groups after receiving comprehensive sexual education about preventing premarital sexual behavior, adolescents with a  $p$ -value  $< 0.000$

## Discussion

### Knowledge

The results showed a significant difference between knowledge, attitudes, and skills in preventing premarital sexual behavior between intervention and control groups after receiving comprehensive sexual education. This result is in line with Boti Negussie's study, which stated a significant difference between the intervention group and the control group after being given a comprehensive sexual education intervention (Boti et al., 2019). Merry Fridha's research concludes that comprehensive sexuality education prevents sexual violence in SMP 8 Surabaya students is evidenced by students having different knowledge before and after being given material related to sexual education (Merry & Haryanti, 2020). In line with Rima's research, there is a difference in knowledge before and after being given comprehensive sexual education to adolescents at SMA N 1 Abepura Jayapura (Banurea & Abidjulu, 2020). Based on these results, knowledge improvement among intervention group shows effectivity of comprehensive sexual education provided through communication, information, and comprehensive education. It is advantageous as a preventive effort against pregnancy, abortion, and other reproductive disorders in adolescents.

Hall (2020) provided a retrospective survey in Niagara Falls with a secondary data analysis method, showed that after implementing the comprehensive sexual education program for three years, it was proven to have reduced levels of sexual activity, high-risk sexual relationships, sexually transmitted infections, and teenage pregnancy. Meanwhile, through a cross-sectional method by asking questions about comprehensive sexual education coverage, knowledge, attitudes, and skills was related to sexual health. Castro et al., (2018) reported that comprehensive sexual education in public and private high school students showed a significant relationship between exposure to each component and sexual health outcomes. In addition, students exposed to the comprehensive sexual education component, which had a partner, had a 20% higher chance of asserting that they could convince their partner to use a condom. Based on these evidences, research with different methods resulted in the same conclusion that comprehensive sexual education is very important in controlling promiscuous sexual behavior in adolescents.

Knowledge and behavior are closely related. Knowledge of the benefits and bad consequences of something will form an attitude, then from that attitude will emerge intentions (Notoatmodjo, 2014). The next intention will determine whether the activity will be carried out. So the better the knowledge about reproductive health, the better the sexual behavior. The higher the knowledge of reproductive health possessed by adolescents, the lower their premarital sexual behavior (Kumalasari, et al., 2020).

### Attitude

Based on the data obtained, there are still many teenagers who do not know the problems caused by premarital sex that they should know. This problem can occur due to the lack of information obtained by adolescents. Teenagers must obtain broad and in-depth information and insight regarding reproductive health, premarital sex, and the impact of premarital sex. Adolescent self-control will lead to a commitment not to have premarital sex to produce sustainable and sustainable health promotion behavior.

The difference in attitudes towards premarital sexual behavior in the two groups after being given comprehensive sexual education strengthens. New knowledge on the subject can cause

an inner response in the form of the subject's attitude towards the object he knows (Setiawan, et al., 2021a; Setiawan, et al., 2021b). The difference between the two groups, namely the intervention group and the control group, has never received a comprehensive education. However, after the comprehensive education intervention group, attitudes toward premarital sex were more disagreeable than the control group.

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Adolescents who have received sex education are less likely to have sex, but those who have never received sex education are more likely to experience unwanted pregnancies (Sarwono, 2019). There is an influence of knowledge on premarital sexual attitudes. The higher adolescents' knowledge about reproductive health, the better their attitude of adolescents toward premarital sex (Safitri, 2018). Comprehensive sexual education is curriculum-based education that aims to equip teenagers with knowledge, skills, attitudes, and values that can prepare themselves for physical and social maturity (Venketsamy & Kinnear, 2020). Following the objectives of the National Medium-Term Development Plan IV Year 2020-2024, in line with the Sustainable Development Goals (SDGs), namely improving the quality of youth, one of which is preventing risky behavior in adolescents, including preventing the spread of HIV/AIDS and sexual infectious diseases (Hanen, 2019). So, one model of promotive and preventive efforts that can be applied to prevent premarital sexual behavior in adolescents is comprehensive sexual education.

Adolescents who have better knowledge, attitudes, social skills, and emotional skills become the basis for their behavior and health in the future so that quality adolescents are formed as expected. The increase in knowledge and understanding received by respondents shows that comprehensive sexual education given to adolescents is very quickly accepted and understood. The questionnaire contained knowledge, attitudes, and skills regarding the prevention of premarital sexual behavior, which previously did not know, turned into knowledge after being given comprehensive sexual education materials. This statement is under the theory that cognitive development reaches its peak in adolescence (Patricia A. Potter & Perry, 2011). These results align with Chi and Xinli, who concluded that comprehensive sex education programs significantly affect knowledge of sexual health and sexual attitudes (Chi et al., 2015).

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#### *Limitation of the study*

The limitation of this research is the uneven internet connection for the respondents, so the effort made is to replace the online method with offline method. However, when the researchers conducted data collection in the field, they found difficulties where the school did not allow it to be done online, considering that the network constrained many students, so researchers had to prepare a strategy by setting a schedule. Meetings with respondents followed what was agreed with the school, namely four times, and researchers tried to bring two materials in 1 meeting considering the unfavorable conditions, namely the outbreak of the COVID-19 pandemic.

#### **Conclusion**

Comprehensive sexual education has proven to be effective in increasing knowledge, attitudes, and skills in preventing premarital sexual behavior so that it can be used as a special intervention in public health centers for adolescents. This intervention approach can be made by collaborating health services with formal institutions such as schools and communities such as youth organizations. The results of these studies can be used as input for the management of nursing care in adolescents for health services, especially in public health centers. In addition, it can be used as a consideration for the schools to improve religious understanding. We



recommend for further researchers to examine the effect of comprehensive sexual education on premarital sexual behavior in junior high school students that are already familiar with courtship.

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### **Conflict of interest**

The authors declare no conflict of interest, financial or otherwise.

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