



## THE EFFECT OF HEALTH EDUCATION WITH THE INFORMATION MOTIVATION BEHAVIOR SKILL MODEL APPROACH (IMB) TO ADOLESCENT KNOWLEDGE ABOUT PREVENTING RISKY SEXUAL BEHAVIOR

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**Abstract. Background:** Adolescence is critical period that is transition from children to adults. At the present, age of adolescent dating at a younger, while they do not have adequate life skills. Sexual risk behavior among adolescents is caused by identity crisis, lack of knowledge and lack of parents attention, bad relationships and wrong information. The strategy for avoiding sexual risk behavior in adolescents is give health education. The Information Motivation Behavior Model explains how to make healthy behavior through information, motivation and skills improvement.

**Metode:** The aim of this study was to determine the effect of health education with the Information Motivation Behavior Skill model approach to adolescent knowledge about preventing risky sexual behavior. This research used quasi experiment with pre post test design. The sample was 37 adolescent with 15-18 years old. Paired T-test was used to analyze. Booklet health education with the Information Motivation Behavior Skill model approach was used in this research

**Result:** The results showed that majority of respondents were female, most of respondent had a boyfriend or girlfriend. There was significant differences of knowledge between pre and posttest.

**Conclusion:** Health education with the Information Motivation Behavior Skill model approach had an effect on increasing adolescent knowledge about preventing risky sexual behavior. It can be given to adolescents in extracurricular activities to increase information, motivation and skills to prevent sexual risk behaviors.

Key Words: Health Education, Information Motivation Behavior Skill, Risky Sexual Behavior

### PENDAHULUAN

Adolescents are people with an age range of 10-19 years.<sup>1</sup> The number of adolescents is estimated around 17 percent of the total population of Indonesia.<sup>2</sup>

Hormonal, physical, psychological and social changes occur gradually in adolescents. The dominant physical changes are the occurrence of rapid physical growth, the development of secondary sex signs, changes in behavior and social relations with the environment.<sup>3</sup> In

adolescents there is a stage of development, namely the maturity of sexual organ so that they have reproductive abilities. Characteristics of sexual maturity that is in males with spermatogenesis while ovulation occurs in girls. This is a sign of the functioning of the reproductive organs

In addition, in adolescents there are psychosocial changes both in behavior, relationships with the environment and attraction to the opposite sex. Teenagers' curiosity is very big, one of which is about sex, interest in new values about sexual behavior. Teenagers often talk about sex issues, namely talking about courtship, what is a reproductive organ, love and how to have sex to fulfill their curiosity.

Changes in the emotional, social and personal aspects of adolescents lead to drastic changes in their behavior, including high curiosity. These changes can make the relationship between parents and adolescents difficult, if parents do not understand the process that occurs.<sup>3,4</sup> Rapid physical changes that are not balanced with psychological changes can make teenagers confused, so they need to get guidance and support from the surrounding environment so that they can go through healthy growth and development physically, psychosocially and mentally.<sup>5</sup>

One-fifth of Indonesia's population are teenagers. They have the opportunity to engage in risky sexual behavior without knowing the long-term consequences of that behavior. Risky sexual behavior in adolescents is caused by several things including an identity crisis, low education in schools, lack of family support, unhealthy relationships and undirected information.

Teenagers' knowledge about sexuality is still low, this can be seen from the survey results that about 50% of young women and men know that a woman can get pregnant with just one sexual intercourse. In addition, adolescents start dating at a younger age, namely 25% of male adolescents and 26% of female adolescents starting dating at the age of 12 to 14 years. Some teenagers in dating have had direct physical contact such as holding hands, hugging, kissing and activities that can lead to aggressive actions. Further, such as sexual intercourse. So that counseling and counseling about reproductive health is needed to reduce these problems<sup>7</sup>

Strategy to avoid sexual risk behavior in adolescents is to conduct health education that can increase the knowledge, motivation and skills of adolescents in avoiding sexual risk

behavior. The health education was designed using the information motivation behavioral skills (IMB) model developed by Fisher in 1992-2000.<sup>8</sup>

The difference between health education based on the IMB model and conventional health education (question and answer lectures) is that health education with the IMB model is adapted to the theory of behavioral change, so that it is expected to increase the knowledge, motivation and skills of adolescents in avoiding risky sexual behavior. Based on this background, it is necessary to have health education that can improve the knowledge, attitudes, and skills of adolescents to avoid risky sexual behavior with the Information Motivation Behavior Skill (IMB) Model approach.

## METHOD

Pretest-Posttest Control Group Design was used in this research. The treatment and control groups were given a pretest with the same test. The treatment group was given health education using the IMB model approach, while the control group was given health education using the BKKBN module. After being treated, both groups were given posttest then the results of the tests before and after treatment in each group were compared.

The health education variable with the IMB model is given using the discussion and booklet methods. Variable Knowledge of risk behavior prevention was measured using a questionnaire

The research was conducted at SMA Pasundan 8 and SMAN 15 Bandung, with data collection time from September - October 2019. The sample was young men and women at SMA Pasundan 8 and SMAN 15 Bandung, aged 15-18 years and had never received health education about prevention. risky sexual behavior. The sample is 37 people. The sampling technique used in this study was simple random sampling.

The steps taken during data collection were as follows: 1) Divide the respondents into two groups, the treatment group at SMA Pasundan 8 and the control group at SMAN 15 Bandung 2) Each respondent in both the treatment group and control group was given information by explaining the purpose and research procedures, then asked informed consent of the respondent that had been provided one day before the intervention was carried out 3) The treatment group and control group were given a questionnaire of knowledge, attitudes and skills

about risky sexual behavior as a pretest 4) The treatment group was given health education with the Information Motivation Behavior Skill (IMB) model on the prevention of risky sexual behavior while the control group was given health education using the BKKBN module on adolescent sexual behavior 5) Health education with the Information Motivation Behavior Skill (IMB) model about prevention of risky sexual behavior is given in three time during 120 minutes each time. While the control group was given health education with the BKKBN module in one time during 120 minutes 6) After the treatment was finished, the respondents in the treatment group and the control group were asked to fill in the same questionnaire as the post test after 1 week of intervention

Data analysis used 1) univariable analysis by describing each of the variables studied. 2) Bivariable analysis, the first step is to test the normality of knowledge, as well as increase knowledges for each group. For data that are normally distributed, paired t-test and unpaired t-test are used. If the data is not normally distributed, then use Wilcoxon and Mannwhitney.

This research has received ethical approval from the Health Research Ethics Committee of the Health Polytechnic of the Ministry of Health Bandung with No. 02/KEPK/PE/VIII/2019

## RESULTS

After collecting data, further analysis is carried out with the following results:

Table 1. Frequency Distribution of Respondents Characteristics

Characteristics	Intervention		Control	
	F	%	F	%
<b>Tingkat Kelas</b>				
Class 10	11	29,8	13	35,1
Class 11	12	32,4	24	64,9
Class 12	14	37,8	0	0
Total	37	100	37	100
<b>Jenis Kelamin</b>				
Male	15	40,6	5	13,5
Female	22	59,4	32	86,5
Total	37	100	37	100
<b>Status Pacaran</b>				
Do not dating	14	37,9	28	75,7
Dating	5	13,5	2	5,4
Ever dating	13	35,1	7	18,9
Approaching	5	13,5	0	0

Characteristics	Intervention		Control	
	F	%	F	%
Total	37	100	37	100
<b>Paparan Informasi</b>				
Parents	5	13,5	1	2,7
Teachers	20	54	24	64,9
Media	10	27	11	29,7
Friends	2	5,4	1	2,7
Total	37	100	37	100
<b>Kegiatan Ekstrakurikuler</b>				
Do not follow	18	48,6	14	37,8
Follow	19	51,4	23	62,2
Total	37	100	37	100

Uji Statistik: *Chi Square*

In table 1 above, it is shown that 37.8% of respondents in the treatment group were students of class XII while in the control group as many as 64.9% were students of class XI. Most of respondent at the control and treatment groups were female, and most of the adolescents received information about sexual education from the teacher. In addition, some respondents follow extra-curricular activities including mosque youth, church youth, math club, science club, english club, karate, PMR, Paskibra, taekwondo, karate, angklung, and some are even active in youth groups.

Table 2. The effect of sexual education with the IMB model approach on adolescent knowledge about prevention of risky sexual behavior

Knowledge	N	Median (minimum-maksimum)	Average ± s.d.	p
Before being given sexual education in the intervention group	37	67 (57-80)	67 ± 6,9	0,0
After being given sexual education in the	37	77 (57-90)	77 ± 7,9	

intervention group

Uji statistik: *Wilcoxon*

Table 2 above shows that the statistical test value of  $p = 0.000$ , meaning that at alpha 5% there is a significant difference in the average knowledge of respondents before and after being given sexual education with the IMB model approach. The average knowledge has increased after being given sexual education.

Table 3. The Effect of Sexual Education on Adolescent Knowledge about Prevention of Risky Sexual Behavior in the Control Group

Knowledge	N	Median (minimum-maksimum)	Ever age $\pm$ s.b	p
Before being given sexual education in the control group	37	77(53-90)	73 $\pm$ 8,1	0,003
After being given sexual education in the control group	37	70(53-90)	71 $\pm$ 8,6	

Uji Statistik: *Wilcoxon*

Table 3 above shows that the statistical test value of  $p = 0.003$ , means that at 5% alpha there is a significant difference in the average knowledge of respondents before and after being given sexual education in the control group. The average knowledge has increased after being given sexual education.

Table 4. Differences in Knowledge about Prevention of Adolescent Risk Behavior in the Intervention and Control Group

Variabel	N	Median (minimum-maksimum)	Rerata $\pm$ s.b	p
<b>Pengetahuan</b>				
Intervention	37	7((-3)-33)	9,8 $\pm$ 8,1	0,000
Control	37	0(0-27)	2,2 $\pm$ 5	

Uji Statistik: *Mannwhitney*

Table 4 above shows that the statistical test of respondents' knowledge in the treatment and control groups has a  $p$  value of  $<0.005$ , meaning that at 5% alpha there is a significant difference in the average knowledge of respondents between the intervention group and the control group. The mean difference in knowledge in the intervention group was 9.8% and in the control group was 2.2%.

## DISCUSSION

### 1. Characteristics of Respondents

Rapid physical changes that are not balanced with psychological changes can make teenagers confused, so they need to get guidance and support from the surrounding environment so that they can go through healthy growth and development physically, psychosocially and mentally.

This study involved 37 respondents, based on table 1 shows that 37.8% of respondents in the treatment group were students of class XII while in the control group as many as 64.9% were students of class XI. Most of them in the control and treatment groups were female. Most of the adolescents received information about sexual education from teachers by 54% in the treatment group and 64.9% in the control group.

Teachers are the closest people to teenagers after their parents. Teachers have an important role in adolescent sexual education. He stated that adolescent reproductive health education in schools is very important as a preventive measure in providing alternative solutions to overcome student reproductive health problems. This fact makes teachers a more appropriate choice to provide an understanding of reproductive health in adolescents. Beside from teachers, teenagers received information about reproductive health from the internet by 27-29.7%. Teenagers' curiosity is very big, one of which is about sex, interest in new values about sexual behavior. Teenagers often talk about sex, namely talking about dating, what is a reproductive organ, love and how to have sex to fulfill their curiosity. Changes in the emotional, social and personal aspects of adolescents lead to drastic changes in their behavior, including high curiosity. These changes can make the relationship between parents and adolescents difficult, if parents do not understand the process that occurs<sup>3,4,9</sup>

In this study, some respondents participated in extra-curricular activities including mosque youth, church youth, math club, science club, english club, karate, PMR, Paskibra, taekwondo, karate, angklung, some were even

active in youth organizations. Positive adolescent activities will improve life skills and make adolescents healthier and more positive. The results showed that extracurricular activities and reading interest together had a significant effect on student achievement at MAN-2 Tanjung Pura<sup>4</sup>

The results of other studies can say that extracurricular activities that are integrated with life skills components are better than extracurricular activities without integration of life skills components in the program. Life skill components can be implemented in everyday life to face the needs and challenges of life in accordance with the benefits of life skills

## 2. The Effect of Sexual Education with the IMB Model on Increasing Knowledge in Prevention of Risky Sexual Behavior in Adolescents

Education with the IMB model in behavior change was initially applied to adherence to condom use, adherence to ARV drug consumption in HIV patients, and adherence to diet and exercise in diabetic patients. This IMB model facilitates education through information, motivation and skills to form healthy behavior in the hope that research subjects can maintain their health.<sup>11</sup>

Based on the previous IMB model studies which have similarities with cases of risky sexual behavior in adolescents. In this case, risky sexual behavior in adolescents requires information about sexual behavior and its impact, motivation and skills to prevent risky sexual behavior in adolescents so that adolescents avoid bad behaviors and become healthy adolescents. Therefore, this IMB model is used in sexual education to prevent risky behavior in adolescents.

In this study, a sexual education booklet was developed based on the IMB model. The process of making booklets goes through the consultation stage of reproductive health experts. Booklet as a support in providing health education to adolescents.

Table 2 shows that there is a significant difference in the average knowledge of respondents before and after being given sexual education using the IMB model approach. The average knowledge has increased after being given sexual education. Likewise in the control group can be seen in table 3, it is shown that there is a significant difference in the average knowledge of respondents before and after being given sexual education in the control group. This happened because both groups received health

education. The control group received standard sexual education while the treatment group received sexual education based on the IMB model. However, the average increase in knowledge was higher in the treatment group than the control group.

After being tested between two groups, the treatment and control groups, the results of statistical tests on the knowledge of respondents in the treatment and control groups had p value of <0.005, meaning that at 5% alpha there was a significant difference in the average knowledge of respondents between the treatment group and the control group. The average difference in knowledge in the treatment group was 9.8% and in the control group was 2.2%.

The IMB model identifies the determinants of the initiation and treatment of health through behavior. Accurate information can increase knowledge and be transformed into healthy behavior; motivation that supports information and skills can make the subject become confident in implementing health behavior.<sup>12</sup> Motivation can be influenced by factors from intrinsic and extrinsic. Intrinsic factor is the motivation from within the teenager to make a healthy teenager. While extrinsic factors are obtained from the surrounding environment such as parents, teachers, peers, health workers. In this study, the expected behavior is prevention of risky sexual behavior. When a person is given precise information about behavior, health and also motivated to make behavioral changes.<sup>12</sup>

The impact of providing sexual education will also increase awareness about the impact of risky behavior, so that attitudes are formed to overcome and prevent these behaviors. According to Yusuf Madani, sexual education for children needs to be given as a preventive measure and prepare children to face physical changes

## CONCLUSION

Health education with an information approach, motivation behavior skill model has an effect on increasing adolescent knowledge of the prevention of risky sexual behavior, so that it can be given to adolescents through extracurricular activities to increase knowledge in preventing risky sexual behavior

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