

# KNOWLEDGE AND ATTITUDE OF SEXUALLY TRANSMITTED DISEASES AMONG MALE INDONESIAN ADOLESCENTS SENIOR HIGH SCHOOL VS ISLAMIC BOARDING SCHOOL STUDENTS

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**Abstract**–Adolescence is a period that is prone to Sexually Transmitted Diseases (STDs). In Indonesia, students can choose to study in a senior high school or in an Islamic boarding school. Students in the Islamic boarding school are restricted to use cellular phone that can cause difficulties in getting the information related to STDs. Therefore, the aim of this study was to investigate the differences between senior high school students and Islamic boarding school students regarding their knowledge and attitude towards STDs. This is a descriptive study with data collected by an assisted questionnaire. Fisher's exact test was used to analyze the association between categorical variables. A total of 102 male students aged 14-17 years old were included in this study. A good knowledge of STDs was seen in all senior high school students compared to 60.5% in Islamic boarding school students. Almost all students (93%) on both groups have a positive attitude towards STDs. In conclusion, senior high school students have better knowledge than Islamic boarding school students, but no significant difference was found in their attitude towards STDs.

## INTRODUCTION

World Health Organization (WHO) defines adolescents as individuals between 10 to 19-year age group, which can be divided into early stage (10-13-year age group), middlestage (14-17-year age group), and late stage (18-19-year age group). These stages of adolescence roughly correspond with the phases in physical, social, and psychological development in the transition from childhood to adulthood (World Health Organization Department of Child and Adolescent Health and Development, 2014). Adolescents is a heterogeneous developmental period in terms of sexual behavior and therefore increases the risk of acquiring STDs (Kaptanoglu *et al.*, 2013). Moreover, adolescents are more likely to experiment and are vulnerable to friend's influence, but they lack the knowledge and thus the attitude to prevent the STDs (Riono and Jazant, 2004).

High school students in Indonesia can choose to study in a senior high school or in an Islamic

boarding school called 'pesantren'. Students studied in a senior high school usually have their own cellular phone, thus they have easy access to get the information about STDs through internet. On the other hand, students studied in an Islamic boarding school are being restricted to the use of cellular phone that can cause difficulties in getting the information related to STDs. Therefore, the aim of this study was to determine knowledge and attitude of STDs among male Indonesian adolescents, and investigate whether there are some differences between senior high school students and Islamic boarding school students regarding their knowledge and attitude towards STDs. We limit this study to the male adolescents because there might be some differences related gender as it was stated from previous studies that male students scored higher on knowledge and attitude compared to female students (Duong, 2007; Gan *et al.*, 2007). Because the puberty in male usually starts at the age of 13, we choose the middle stage adolescents year age group as the subjects age of this study.

## MATERIALS AND METHODS

This is a descriptive study conducted in a senior high school in Yogyakarta and an Islamic boarding school in Central Java. The study was conducted from November to December 2018. The inclusion criteria for this study is male students aged 14-17 years old that give their consent to participate in this study.

A detailed questionnaire elicited information about knowledge and attitude of the respondents towards STDs was administered to senior high school students and Islamic boarding school students. This assisted questionnaire consisted of 12 questions on knowledge and 12 questions on attitude towards STDs. Respondents were instructed to give a "yes" or "no" answer. Each right and wrong response was given a score of 1 and 0, respectively. Thus the total knowledge score can range between 0-12, as well as the attitude score. Knowledge scores from 0-6 were considered as poor knowledge while knowledge scores more than 6 were considered having a good knowledge on STDs. The same rule was applied to the attitude scores. The questionnaire was filled out in our presence and care was taken that no one missed out from answering any question in questionnaire. Major ethical concern was that of confidentiality of subjects, therefore, questionnaires were completed privately and anonymously.

Data were analyzed using SPSS version 22 statistical software. Descriptive statistics were used to assess characteristic of respondents, as well as knowledge and attitude. Fisher's exact test was used to analyze the association between categorical variables, with  $p$ -value  $< 0.05$  was considered to be statistically significant at 95% confidence interval.

## RESULTS

### Demographic Characteristics

One hundred and two students were participated in this study which is consisted of 59 senior high school students and 43 Islamic boarding school students. The age group of the senior high school students ranged from 15 to 17 years old with the mean age of  $16.32 \pm 0.6$ , while the age group of Islamic boarding school students ranged from 14 to 17 years old with the mean age  $14.67 \pm 1.0$ .

### Knowledge of STDs

Most of the students know what sexual intercourse

is but only 60.5% in the group of Islamic boarding school students that already know about STDs. Knowledge about the transmission of STD through kissing is still low (55.9% in senior high school group vs 44% in Islamic boarding school group), while over half of the respondents already knew that STDs can be transmitted through anal intercourse. The most known STD in senior high school group is HIV-AIDS (100%), followed by syphilis (86.4%), gonorrhea (71.2%), and genital wart (50.8%). In the Islamic boarding school group, the knowledge of diseases that belongs to STDs is still low with only 69.8% know HIV-AIDS, followed by syphilis (51.2%), gonorrhea (48.8%), and genital wart (39.5%) (Table 1).

As many as 76.3% senior high school students and 51.2% Islamic boarding school students gave the correct answer to the topics related with the usage of condoms to prevent STDs. Most of them already knew that changing sexual partners can raise the rate of STDs. Over half of both groups already knew that STDs did not transmit by urinating in public toilet. Most of them agreed that youth should get the education about STDs (Table 1).

The knowledge score in senior high school group varied between 7 and 12 with mean score of  $10.08 \pm 1.36$ . This is higher than the Islamic boarding school group that score varied between 3 and 11 with mean score of  $7.4 \pm 2.23$ . All senior high school students (100%) have a good knowledge on STDs, while only 60.5% of Islamic boarding school students have a good knowledge of STDs. The difference between two groups is statistically significant with Fisher's exact test with  $p < 0.05$  (Table 3).

### Attitudes towards STDs

Almost all students in both groups have the awareness to seek medication if they get STD and most students knew that STD can be dangerous. Negative attitude was seen in both groups related with HIV transmission by sharing cutlery and avoidance of people who have STD. All students have already been circumcised. As many as 81.4% of senior high school students and 16.3% of Islamic boarding school students have already done masturbation. Almost all the students in both groups were attracted sexually to the opposite sex, where 20.9% of Islamic boarding school students also attracted to the same gender. Less than half of both group have a girlfriend and have not kiss a girl. Only one senior high school student already

**Table 1.** Knowledge of Sexually Transmitted Diseases

No.	Knowledge's Questions	Correct Response	Correct Responses (%)	
			Senior High School	Islamic Boarding School
1	Do you know what sexual intercourse is?	Yes	100%	86.1%
2	Do you know what sexually transmitted diseases are?	Yes	96.6%	60.5%
3	Sexually transmitted diseases can be transmitted through kissing	Yes	55.9%	44%
4	Sexually transmitted diseases can be transmitted through anal intercourse	Yes	88.1%	62.3%
5	Gonorrhoea is a sexually transmitted disease	Yes	71.2%	48.8%
6	Syphilis is a sexually transmitted disease	Yes	86.4%	51.2%
7	Genital wart is a sexually transmitted disease	Yes	50.8%	39.5%
8	HIV-AIDS is a sexually transmitted disease	Yes	100%	69.8%
9	Condom can be used to prevent sexually transmitted disease	Yes	76.3%	51.2%
10	Changing sexual partners can raise the rate of sexually transmitted diseases	Yes	98.3%	81.4%
11	Youth should get education about sexually transmitted diseases	Yes	100%	81.4%
12	Urinating in public toilet can transmit the sexually transmitted diseases	No	84.7%	62.3%

**Table 2.** Attitude Towards Sexually Transmitted Diseases

No.	Attitude's Questions	Correct Response	Correct Responses (%)	
			Senior High School	Islamic Boarding School
1	HIV can be transmitted by sharing cutlery with others	No	39.0%	41.9%
2	If someone have a sexually transmitted disease, he/she should go to a doctor	Yes	100%	97.7%
3	Sexually transmitted diseases are not dangerous as they can be treated	No	91.5%	83.7%
4	We have to stay away from people who have sexually transmitted diseases	No	28.8%	30.2%
5	Someone with positive HIV can have the look of a normal person	Yes	67.8%	44.2%
6	Have you circumcised?	Yes	100%	100%
7	Have you ever masturbated?	Yes	81.4%	16.3%
8	Are you attracted sexually to the same gender?	No	100%	97.7%
9	Are you attracted sexually to the opposite sex?	Yes	100%	79.1%
10	Do you have a girlfriend?	No	61.0%	74.4%
11	Have you ever kiss a girl?	No	66.1%	95.4%
12	Have you ever had sex before?	No	96.6%	100%

**Table 3.** Knowledge and Attitude of Sexually Transmitted Diseases Among Senior High School Students versus Islamic Boarding School Students

School	n	Knowledge		p-value
		Good	Poor	
Senior High School	59	59 (100%)	0 (0%)	< 0.001*
Islamic Boarding School	43	26 (60.5%)	17 (39.5%)	
		Attitude		
		Positive	Negative	
Senior High School	59	55 (93.2%)	4 (6.8%)	0.632
Islamic Boarding School	43	40 (93%)	3 (7%)	

\*Significant result by Fisher's Exact Test (p<0.05)

had sexual intercourse before (Table 2).

Almost all students (93%) in both groups have a positive attitude towards STDs. The attitude score in both groups varied between 5 and 12. The mean attitude score was  $9.32 \pm 1.49$  and  $8.6 \pm 1.45$  for senior high school group and Islamic boarding school group, respectively. The difference of attitude towards STDs between the two groups is not statistically significant (Table 3).

## DISCUSSION

An important finding in this study is nearly 40% of Islamic boarding school students do not know about STDs. This unsatisfactory result might be caused by prohibition of having a cellular phone and never watch television in an Islamic boarding school. Students from Islamic boarding school also live in a special village of "santri". From a previous study conducted in Malaysia, most of the students get the information related to STDs from the internet (77.3%), followed by sex education in school, and family members (Folasayo *et al.*, 2017). Students in Islamic boarding school also being restricted to watch television and listen to the radio although television and radio are another sources to get information related with STDs. A restriction to access electronic media could obstruct the ability of students to get information related with their sexuality and STDs themselves (Shiferaw *et al.*, 2011; Amu and Adegun, 2015).

Both groups also still have the assumption that STDs are not transmitted through kissing, whereas some of the STDs like labial herpes could be transmitted through kissing. Over half of both groups already know STDs could be transmitted through anal intercourse and most of them already aware that changing sexual partners can raise the rate of STD. Nearly half of the Islamic boarding school students still do not know that condom can be used to prevent STDs. These findings on knowledge of STDs highlight the needs of better education related to sex and STDs, especially in Islamic boarding school students, as the students in Islamic boarding school do not have the access to the internet to get information related to STDs.

Generally, both groups have a positive attitude towards STDs, realized that STDs can be dangerous, and have a high awareness to seek a doctor if someone has STDs. All students have already been circumcised. This is a positive attitude towards STDs as circumcision can prevent HIV and other

STDs (Tobian *et al.*, 2013). A little number of students in Islamic boarding school group that already have masturbation should be questioned. It is possible that they already had masturbation but shy to admit it as they believe that masturbation is a taboo thing to discuss. A concern has to be made regarding the negative attitude in both groups related to transmission of HIV through sharing cutleries and avoidance of people who have STDs.

Although nearly half of the Islamic boarding school students have a poor knowledge of STDs, they have a positive attitude towards STDs. This contradictive finding maybe resulted from a poor sex education with a good moral and Islamic value education. In the area of sexuality, young people in Indonesia face a confusing situation. On the other hand, their knowledge of the nature of sexuality and of safe sexual activity is limited because sex education is not widely provided by schools, except in a few cases where the approach to the subject is scientific or technical. Indonesian parents rarely educate their children concerning sex. Consequently, topic of sexuality remains marginal in the health and education agendas. Therefore, students might have advantages through electronic media to get some information related with their sexuality and STDs (Utomo and McDonald, 2009).

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## CONCLUSION

Senior high school students have better knowledge than Islamic boarding school students, but no significant difference was found in their attitude towards STDs. Based on our findings, there is a critical need to evaluate the current sex education program in Islamic boarding schools. A good sexual and STD education in Islamic boarding schools is needed as the students are restricted to access electronic media where they can gather information themselves.

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