

## Knowledge and Attitude of Senior High School Students in Jatinangor towards Sexually Transmitted Infections in 2013

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### Abstract

**Background:** Sexually transmitted infections (STIs) are major health problem. Until today, the prevalence of STIs is still high and the incidence is increasing. Almost half of STIs new cases occur in adolescents and young adults. It is assumed that there is a positive correlation of knowledge about STIs with attitude and practices; therefore, giving proper information of STIs to adolescents could influence their safe sexual practices, and further, it can prevent STIs to occur. The objective of this study is to discover knowledge and attitude of senior high school students in Jatinangor towards STIs.

**Methods:** This descriptive study was conducted in Sekolah Menengah Atas Persatuan Guru Republik Indonesia (SMA PGRI) Jatinangor and Sekolah Menengah Atas Negeri (SMAN) Jatinangor from May to September 2013. Questionnaires were completed by 278 respondents selected by stratified cluster random sampling.

**Results:** More than half respondents had poor knowledge about STIs (56.5%) while 53.2% of the respondents had positive attitude towards STIs. Most mentioned choices as the information source of STIs were teacher (66.5%), followed by television/radio (45.3%), friends (37.8%), newspaper/magazine (21.2%), mother (16.2%), sibling (7.2%), and father (6.5%).

**Conclusions:** More detail information about STIs is needed by adolescents as a way to encourage safe sexual practices. Teacher and parents are expected to be the source information of STIs while mass media can also be used to educate adolescents. Education on STIs for teachers is also needed since they are as the main source for educating the adolescents. [AMJ.2015;2(4):568-74]

**Keywords:** Adolescent, attitude, knowledge, sexually transmitted infections

### Introduction

Sexually transmitted infections (STIs) are major health problem because of its effects on reproduction health and its role on increasing risk of Acquired immunodeficiency syndrome (AIDS) for five to ten times.<sup>1,2</sup> Sexually transmitted infections other than Human immunodeficiency virus (HIV)/AIDS are neglected and do not become priority in public health concern.<sup>1</sup> Additionally, the prevalence of STIs is high; the estimated prevalence is 360.1 million across the globe, and the incidence of STIs increases from time to time.<sup>3</sup> Almost half of the new cases of STIs are found in adolescents and young adults.<sup>2</sup> The high incidence of STIs in adolescents is caused by

the rapid development in sexual maturity and the increasing of sexual drive in adolescents.<sup>4</sup> The last two factors lead the adolescents to begin sexually active behavior.<sup>5</sup>

The high prevalence of STIs can be caused by lack of knowledge about STIs.<sup>2</sup> A study conducted by Kurkowski<sup>6</sup> discovered that adolescents had low knowledge about STIs. The knowledge has a positive correlation with attitude and practice, so proper given information could influence adolescents' safe sexual practice.<sup>7,8</sup> The objective of this study was to discover knowledge and attitude of senior high school students in Jatinangor towards STIs. Jatinangor, where Universitas Padjadjaran is located, is a rapid developing area with many adolescent ages. By conducting

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the study in this area, the incidence of STIs in Jatinangor adolescent may be prevented.

## Methods

This descriptive study was conducted from May to September 2013. The population of this study was the students from senior high schools in Jatinangor. Through stratified random cluster sampling technique, from randomly selected senior high school in Jatinangor it was selected two schools: Sekolah Menengah Atas Persatuan Guru Republik Indonesia (SMA PGRI) Jatinangor and Sekolah Menengah Atas Negeri (SMAN) Jatinangor.

The respondents were 278 students selected from randomly selected class of both schools. Inclusion criteria in this study were senior high school students in Jatinangor, with total 3,674 students. This study took secondary data from Jatinangor Cohort team, Faculty of Medicine Universitas Padjadjaran. Questionnaire with close-ended questions was used for data collection. Questionnaire was developed from the previous study and the content validity which was done. After authorization was received from the selected senior high school, the study was informed and consent was obtained from the respondents.

The knowledge about STIs was measured by 15 positive questions and 5 negative questions. Three answer choices (true, false, and do not know) were provided for each question. Given point were one for correct answer and no point for 'do not know' and incorrect answers. The total score was obtained by summing the point from each question with maximum total score was 20. The total score of knowledge questions had a normal distribution, so this study used mean ( $=9.12$ ) as an indicator to categorize level knowledge, good knowledge (total score $>9.12$ ) and poor knowledge (total score $<9.12$ ). The knowledge questions were reliable (Cronbach's alpha=0.745).

Attitude towards STIs was measured using likert scale questions, including 12 positive questions and 2 negative questions. Four answer choices (strongly agree, agree, disagree, and strongly disagree) were provided for each question. For positive questions, given point was four for strongly agree, three for agree, two for disagree, and one for strongly disagree. For negative questions, given point was four for strongly disagree, three for disagree, two for agree, and one for strongly agree. Total score was obtained by summing the point from each question, and maximum total score was 56. Total score of attitude questions had a

normal distribution, so this study used mean ( $=42.94$ ) as an indicator to categorize level of attitude knowledge, positive attitude (total score $>42.94$ ) and negative attitude (total score $<42.94$ ). The attitude questions were reliable (Cronbach's alpha=0.705).

Microsoft Excel was used to analyze the data. Descriptive analysis, including percentage, was carried out to get the respondents' characteristic, knowledge, and attitude towards STIs. Ethical approval was obtained from Health Research Ethics Committee Faculty of Medicine Universitas Padjadjaran with ethical clearance number 329/UN6.C2.1.2/KEPK/2013.

## Results

The questionnaires were completed by 278 participants, out of these 58.6% were females and 41.4% were males. The age of respondents was ranged from 15 to 19 years old. Most of the respondents had ever had a boy/girlfriend (89.6%) and currently had a boy/girlfriend (52.5%). Majority of respondents (91.7%) lived with their parents.

Majority of respondents (66.5%) revealed that teacher was as their source information of STIs, followed by television/radio (45.3%) and friends (37.8%). Only a few students mentioned mother (16.2%) and father (6.5%) as their source information.

There were more respondents who had poor knowledge (56.5%) than respondents who had good knowledge about STIs (43.5%). Mean of knowledge score was 9.12 (SD=3.651).

Most of the respondents knew that adolescent (60.1%) and multiple sexual partner (88.1%) are risk factor of STIs. Only about one third of respondents (39%) knew that bacteria are not the only cause of STIs, while majority of respondents (78.1%) knew that AIDS is caused by HIV. Regarding to transmission of STIs questions, majority of respondents knew that STIs can be transmitted from mother to fetus (61.9%) and through sharing needle injection (79.9%). Almost three quarter of respondents (73.7%) answered correctly to question about AIDS as complication of STIs; however, most of respondents did not know whether infertility (74.1%) and problem on pregnancy (56.5%) are the complication of STIs. In response to the questions about the prevention of STIs, more than three quarter of respondents (77%) answered correctly to question about faithful to sexual partner.

There were more respondents who had positive attitude (53.2%) than respondents

**Table 1 Characteristic of Respondents**

Characteristic	Percentage (%)
Gender:	
Male	41.4
Female	58.6
Religion:	
Muslim	99.6
Christian	0.4
Respondents has ever had a boy/girlfriend:	
Yes	89.6
No	10.4
Respondents currently has a boy/girlfriend:	
Yes	52.5
No	47.5
Whom respondents live with:	
Parents	91.7
Relative	7.2
Alone	1.1
Information sources of STIs	
Mother	16.2
Father	6.5
Sibling	7.2
Teacher	66.5
Friends	37.8
Television/radio	45.3
Newspaper/magazine	21.2
Others	9.0

Note: STIs=sexually transmitted infections

who had a negative attitude (46.8%) towards STIs. Mean of total score was 42.94 (SD=4.616).

Majority of the respondent had an appropriate response to each attitude questions, except for 'people with STIs must have had sexual intercourse' question. More than three quarter of respondents (79.1%) had an inappropriate response to the question.

## Discussion

This study revealed that more than a half of respondents had poor knowledge. The result was consistent with previous study conducted by Kurkowski.<sup>6</sup> The result in the present study could arise probably because of education, environment, and social culture factors.<sup>9</sup>

Although information about STIs is given during junior high school through textbook and teacher, the information given is not detailed enough.<sup>10</sup> Furthermore, in Indonesian culture, sexuality is considered taboo, so a discussion about sexuality is not supported.<sup>11</sup>

The present study found that large percentage of correct answer was shown in the question about HIV/AIDS, which is consistent with two previous studies conducted by Anwar<sup>1</sup> and Fagan<sup>12</sup> The result from this study showed that respondents have a better knowledge about HIV/AIDS compared to common STIs. This may be explained by the fact that education is concentrated on AIDS.<sup>1</sup> STIs other than HIV/AIDS are neglected and do not become a priority in public health.<sup>1</sup>

**Table 2 Knowledge about STIs**

Question	Answer		
	True (%)	False (%)	Do not know (%)
Risk factor of STIs			
Prevalence in man is as high as in woman	56.3	10.8*	32.9
Adolescents	60.1*	8.3	31.7
Multiple sexual partners	88.1*	1.8	10.1
Have suffered STI previously	14.1	28.2*	57.8
Etiology of STIs			
Only bacteria	24.2	39.0*	36.8
AIDS is caused by HIV	78.1*	0.4	21.6
Type of STIs			
Gonorrhoea	38.8*	9.0	52.2
Syphilis	34.2*	6.1	59.7
Symptom of STIs			
Many patient does not have symptom	31.4*	21.7	47.0
Yellowish discharge from urethral on male	45.0*	6.8	48.2
Vaginal discharge on female	17.6*	33.8	48.6
Transmission of STIs			
Only through sexual intercourse	69.1	18.7*	12.2
From mother to fetus	61.9*	3.2	34.9
Sharing needle injection	79.9*	3.2	16.9
Complication of STIs			
AIDS	73.7*	0.4	25.9
Infertility	21.6*	4.3	74.1
Problem on pregnancy	41.0*	2.5	56.5
Prevention of STIs			
Condom	42.4*	7.6	50.0
Risk of STIs in circumcised man is as high as in uncircumcised man	7.9	24.8*	67.3
Faithful to sexual partner	77.0*	6.5	16.5

Note: STIs=sexually transmitted infections; AIDS=acquired immunodeficiency syndrome; HIV=human immunodeficiency virus, \*correct answer

Based on the study in Jakarta, 62% of senior high school students was given information about HIV/AIDS while only 17% was given information about STIs.<sup>13</sup>

Some areas in STIs need special attention. Majority of the respondents did not know or answered incorrectly to the question about etiology of common STIs, risk factors, type, symptom, complications, and prevention of STIs. These areas, except for type of STIs, are not taught in junior high school,<sup>10</sup> Small

percentage of respondents was knowledgeable about it. More than half of the respondents did not know whether gonorrhoea and syphilis are type of STIs, yet these topic actually have been introduced to the junior high school students.<sup>10</sup> Unfortunately, knowledge is not maintained by repetitive given information so respondents just forget about the information which was only given once.<sup>13</sup>

Knowledge about STIs is an essential prerequisite for safe sexual practice, which

**Table 3 Attitude towards STIs**

Statements	Response			
	Strongly agree (%)	Agree (%)	Disagree (%)	Strongly disagree (%)
I think, adolescents require more attention because they have high risk to get STIs	64.4	32.4	2.5	0.7
I think, multiple sexual partners must be avoided	60.4	35.6	1.4	2.5
I think, AIDS is caused by HIV	37.8	54.7	6.1	1.4
I think, gonorrhoeae is STIs	15.5	57.4	24.2	2.9
I think, syphilis is STIs	15.2	53.6	25.4	5.8
I think, I will not get STIs as long as I have sexual intercourse with person with no symptom *	10.4	31.7	41.7	16.2
I think, I need to worry to get STIs if there is yellowish discharge from urethra (on man) or vaginal discharge (on woman)	28.8	47.1	21.2	2.9
I think, people with STIs must have had sexual intercourse*	22.3	56.8	18.7	2.2
I think, sharing needle injection must be avoided	54.9	40.4	3.6	1.1
I think, STIs must be avoided because people with STIs have higher risk to get AIDS	46.2	48.4	4.7	1.7
I think, STIs is harmful because it can cause infertility	26.7	50.6	20.2	2.5
I think, STIs can be dangerous in pregnancy	27.2	60.1	9.4	3.3
I think, condom usage is important to prevent STIs	20.9	52.5	23.4	2.5
I think, faithful to sexual partner is essential to prevent STIs	49.5	41.5	7.6	1.4

Note: STIs=sexually transmitted infections; AIDS=acquired immunodeficiency syndrome; HIV=human immunodeficiency virus, \*negative statement. For positive statements, appropriate responses are 'strongly agree' or 'agree'. For negative statements, appropriate responses are 'strongly disagree' or 'disagree'

can lead to the decrease in the high prevalence of STIs and suppress the increase of STIs incidence.<sup>1,14</sup> Adolescents should be educated about the symptom of STIs, so they know when they should seek medication.<sup>15</sup> Education about safe sexual practice as the prevention of STIs is also important to delay the onset of sexual practice among adolescents.<sup>16</sup>

Attitude is important to decide whether a person will perform risky sexual practice or not. The finding of this study reported that more than half of respondents had positive attitude towards STIs, coinciding with previous study conducted in Ethiopia.<sup>16</sup> Influence from teacher, educational institution, religion, and culture in Indonesia may affect the present study result.<sup>9</sup> Junior high school teacher gives some information about STIs, and Indonesian culture is considered that sexual intercourse can only be done after marriage.<sup>10,11</sup> These may make Indonesian people had an appropriate

response towards STIs. Majority of the respondents had an appropriate response to each attitude question, except for 'people with STIs must have had sexual intercourse' question. Majority of the respondents thought people with STIs must have had sexual intercourse. Almost all of the respondents thought that adolescents require more attention. Adolescents are risk factor of STIs because of their development in sexual maturity and increasing sexual drives. For that matter, adolescents require more attention, especially from their parents.<sup>4,17,18</sup>

This present study revealed that teacher was the main information source of STIs in adolescents. This is due to the fact that STIs are the object of study in biology subject on junior high school in Indonesia. Junior high school students are introduced to the various type STIs from textbook, but not the risk factor, the transmission, and the prevention of STIs in

detail.<sup>10</sup>

Teacher and parents are expected to be the information sources of STIs for adolescents, but only a few of respondents mentioned parents as their information source. This is due to STIs is considered taboo in Indonesia, which leads to a barrier between parents and children on discussing matters related to sexuality.<sup>11,18,19</sup> Certain condition causes many students seek information from mass media and friends, as seen in this study, which was corroborated with previous study conducted in India<sup>15</sup>. Influence from media and friends are mostly negative.<sup>20</sup>

Limitation in this study was presence of some non-valid questions in questionnaire. The solution for future research is to ensure validation score is sufficient before questionnaire is given to respondents. Further study to investigate effective education method in promoting knowledge and attitude toward STIs is recommended.

More detailed information about STIs is needed by adolescents as a way to encourage a safe sexual behavior, especially information about part of STIs they are lacking in, which are the etiology of common STIs, the risk factors, the type, the symptom, the complication, and the prevention of STIs. This can be succeeded by educating the adolescents.<sup>7,8</sup> Teacher and parents are expected to be the information sources of STIs.<sup>18</sup> Media also can be used to educate through its advertisement or health program. Education should not only be given to adolescents, but also to their teachers as the main source information of STIs.

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