

# **Study of Knowledge, Perception and Attitude towards STIs or HIV, Safer Sex and Sex Education: A Cross-Sectional Survey of Adolescent Freshmen in a Philippine Community College**

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In spite of global efforts to address one of the world's most serious public challenges, a rising trend in new HIV infections worldwide proves that further research about this elusive epidemic is needed more than ever. Sexually transmitted infections (STIs), particularly human immunodeficiency virus (HIV), has been shown to predominantly affect sexually active young adults aged 19 to 34. This study evaluated freshman college students' knowledge, perceptions and attitudes toward STIs or HIV, safer sex practices, and sex education. A cross-sectional online survey was carried out in 2018 at the City College of Angeles with 307 student participants from a total frosh population of 1,094. More than half of the respondents had inaccurate knowledge on how HIV infection is transmitted with 29%, believing it can be passed on through a mosquito bite. About 35% of respondents think AIDS could be cured, approximately 30% agree that condoms are effective in protecting against STIs and HIV infections, 53% believe condoms should not be available to youths, and 34% doubt that women can remain chaste prior to marriage. Although highly controversial especially in a country dominated by religious conservative views, there is an obvious need for better and efficient sex education regarding STIs/HIV and safer sex practices.

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Keywords: *Sexually transmitted infections, HIV, Sexual practices, Sex education*

## **Introduction**

The Philippines is one of the countries with rapidly growing number of HIV human immunodeficiency virus (HIV)-infected individuals. Along with Bangladesh, Indonesia, and Sri Lanka, the rate of new HIV infections in the Philippines has increased by more than 25% between 2001 and 2011 (Joint United Nations Programme on HIV/AIDS [UNAIDS], 2012). In July 2014, the Philippines had 585 new HIV-antibody seropositive individuals confirmed by the STD/AIDS Cooperative Central Laboratory (SACCL) and reported to the HIV and AIDS Registry. This was 30% higher compared to the same period in 2013 (n=449), and the highest number of cases ever reported in a month. From January to July 2014, there were 3,399 newly reported cases of HIV-infected individuals. From 1984 to 2014, there were 19,915 HIV-antibody seropositive cases reported, of which 18,100 (91%) were asymptomatic and 1,815 (9%) were AIDS cases at the time of reporting. The annual number of deaths of HIV-infected individuals in the Philippines from 1984 to 2010 ranges from 2 to 36 cases with a median of 14 deaths per year. Beginning 2011, there has been an increase in the number of recorded deaths. There were 68 in 2011, and 176 in 2012. From January to July 2014, there were a total of 90 deaths among HIV-infected individuals (Philippine Department of Health, 2014).

HIV mainly affects sexually-active young people. Causes of the increased rates of STIs/HIV in young people are complex. However, the main reasons include biological factors, risky sexual behavior patterns (early initiation of sex, premarital sex, bisexual orientation and multiple sexual partners), transmission dynamics, and treatment-seeking behavior. There is growing evidence of increased premarital sexual activities among young people. While generalization is difficult, studies indicate that between 20% and 30% of young men and up to 10% of young women have premarital sexual experiences. The present dearth of STI education in the Philippines is a major concern, particularly in schools (McManus & Dhar, 2008).

As of 2016, Philippines had already topped its neighboring countries as the one with the fastest growing HIV epidemic in Asia and the Pacific, accounting for more than 85% of new HIV infections in the region. A UNAIDS Report on the global HIV epidemic states that the number of new infections in the Philippines has more than doubled in just six (6) years from an estimated 4,300 in 2010 to an estimated 10,500 in 2016 (DOH, 2014).

Philippines may relatively have a low HIV-prevalence, but the rate of increase in infections is one of the highest. This makes information about behavior, attitudes, and knowledge through regular surveys more critical than ever in order to better understand the dynamics of HIV and Sexually Transmitted Infections (STIs) in general. This information is also important in assessing changes over time as a result of prevention efforts. Thus, the aim of the present study is to evaluate freshman college students' knowledge, perceptions and attitudes toward STIs/HIV and safer sex practice and sex education.

## **Methodology**

A cross-sectional study was carried out in the City College of Angeles to investigate the perception, knowledge and attitude of adolescent college freshmen toward sexually transmitted infections (STIs), HIV/AIDS, safer sex practice and sex education. An online survey was completed by 307 consenting students from the said school. The adopted questionnaire converted to web format was provided for by original authors McManus and Dhar (2008) who designed the instrument for a similar research.

## **Results and Discussion**

The ages of the responding freshman students ranged from 17 to 19 years. Most of the students (n = 195; 63.5%) identified themselves as Roman Catholics. Among others 20.5% (n = 63) of the students were members of Born-Again Christian, and 8.5% (n = 26) Iglesia Ni Cristo. More than half (n = 179; 58.3%) graduated from public senior high schools. The main findings of the study are as follows:

### **A. Knowledge on STIs/HIV/AIDS**

More than a half of the respondents had incorrect knowledge about how a person gets HIV infection. Only 40% believe that condoms help protect people from getting HIV while only one-third are aware that there is no cure for AIDS.

**Table 1. Knowledge on HIV/AIDS**

Statement	Yes		No		Not Sure	
	n	%	n	%	n	%
1. If someone with HIV coughs or sneezes near other people, could they get the virus?	84	27%	161	52%	62	20%
2. Could a person get HIV (the AIDS virus) from mosquitoes?	88	29%	152	50%	67	22%
3. Could a person get HIV by hugging someone who has it?	20	7%	243	79%	44	14%
4. If a woman with HIV is pregnant, could her baby become infected with HIV?	225	73%	23	7%	59	19%
5. Could a woman get HIV through having sex with a man?	253	82%	28	9%	26	8%
6. Does the pill (birth control) protect a woman from HIV infection?	32	10%	192	63%	83	27%
7. Could a man get HIV through having sex with a woman?	246	80%	35	11%	26	8%
8. If condoms are used during sex, does this help to protect people from getting HIV?	122	40%	106	35%	79	26%
9. Could a man get HIV through having sex with a man?	242	79%	13	4%	52	17%
10. Does having multiple sexual partners increase the risk of getting HIV infection?	271	88%	5	2%	31	10%
11. Could a person get HIV by sharing a needle or syringe with someone when injecting drugs?	236	77%	13	4%	58	19%
12. Could someone who looks very healthy pass on HIV infection?	166	54%	80	26%	61	20%
13. Is there any test people can take to find out whether they have HIV/AIDS?	246	80%	13	4%	48	16%

14. Is it possible to cure AIDS?	107	35%	98	32%	102	33%
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The majority of respondents (69%) had no knowledge about genital herpes infections, 75% did not know syphilis, and 73% were unaware of gonorrhoea. Conversely, majority were aware of the signs and symptoms of STIs in men and women as evident in the table below.

**Table 2a. Knowledge on STIs in General**

Have you heard of any of these infections?	n	%
Cold sore	115	37.5
Chlamydia	33	10.7
Gonorrhoea	82	26.7
Syphilis	75	24.4
Genital herpes	95	30.9
Ectoparasitic infections	29	9.4
Leukorrhoea	39	12.7
Which of the following are the signs and symptoms of a sexually transmitted disease in a man?		
Discharge from penis	238	77.5
Pain in back	120	39.1
Ulcers/sores in genital area	216	70.4
Headache	134	43.6
Pain during urination	256	83.4
Which of the following are the signs and symptoms of a sexually transmitted disease in a woman?		
Vaginal discharge	241	78.5
Pain during urination	243	79.2
Pain in chest	139	45.3
Pain in throat	123	40.1
Ulcers/sores in genital area	235	76.5

In response to the question 'people who always use condoms are safe from all STIs', 55% (n = 168) of respondents said this was not true, while 26% (n = 80) were unsure. Furthermore, 38% of the girls (n = 117) said that apart from HIV/AIDS, all other STIs could be cured. Only 23% (n = 71) of the respondents had the correct information about this topic. 23% of the respondents (n = 70) did not know that some STIs can lead to female sterility, while 43% (n = 133) were unsure. Similarly, 23% of the respondents (n = 71) did not know that some STIs can lead to male sterility, while 41% (n = 127) were unsure.

**Table 2b. Knowledge on STIs in General**

	Yes		No		Not Sure	
	n	%	n	%	n	%
1. A woman and a man can have a sexually transmissible infection (STIs) without any obvious symptoms.	27	9%	211	69%	69	22%
2. Apart from HIV/AIDS, all STIs can be cured.	71	23%	117	38%	119	39%
3. People who always use condoms are safe from all STIs.	168	55%	59	19%	80	26%
4. Some STIs can lead to sterility (women will not be pregnant in their lifetime) among women.	70	23%	104	34%	133	43%
5. Some STIs can lead to sterility (men will not be able to impregnate in their lifetime) among men.	71	23%	109	36%	127	41%

### **B. Sexuality, Gender and Norms**

Around 34% (n = 105) of the respondents believed that it is not possible for girls to remain a virgin prior to marriage. When asked questions regarding HIV prevention, roughly 10% (n = 32) considered that the contraceptive pill could protect a woman from HIV infection, while approximately 30% have a knowledge that using condoms is an effective method of preventing HIV/AIDS and other STIs.

**Table 3. Sexuality, Gender and Norms**

Statements	Agree		Disagree		Don't know / not sure	
	n	%	n	%	n	%
1. It is not possible to talk to my parents about sex and sexually transmissible infections (STIs).	111	36%	100	33%	96	31%
2. I believe it is alright for unmarried boys and girls to go out together.	112	36%	134	44%	61	20%
3. Nowadays, it is not possible for girls to remain a virgin (who have not had sex anytime) until marriage.	105	34%	129	42%	73	24%
4. Most girls who have sex before marriage regret it afterwards.	149	49%	35	11%	123	40%
5. I believe there is nothing wrong with unmarried boys and girls having a sexual relationship if they love each other.	68	22%	169	55%	70	23%
6. I believe that girls should remain virgins until they marry.	239	78%	17	6%	51	17%
7. I believe that boys should remain virgins until they marry.	210	68%	26	8%	71	23%
8. It's all right for boys and girls to have sex with each other provided that they use methods to stop pregnancy.	67	22%	161	52%	79	26%
9. Using condoms is an effective method of preventing pregnancy.	129	42%	74	24%	104	34%
10. Using condoms is an effective way of protecting against HIV/AIDS.	90	29%	101	33%	116	38%
11. Using condoms is an effective way of protecting against STIs.	92	30%	91	30%	124	40%
12. Condoms should not be available to the youth because it encourages them to have sex.	163	53%	64	21%	80	26%
13. Girls should not take the contraceptive pill; it is only for married women.	123	40%	68	22%	116	38%

**cont. Table 3. Sexuality, Gender and Norms**

Question	No				Yes							
	n		%		n		%					
Have you ever had sex?	258		84%		49		16%					
Question	A few do		About half do		All of them do		I don't think they have sex		Most of them do		None use condoms	
	n	%	n	%	n	%	n	%	n	%	n	%
Do you think people about same age as you mostly use condoms if they have sex?	105	34%	39	13%	9	3%	98	32%	46	15%	10	3%
Question	Both		Boys		Girls		I don't know					
	n	%	n	%	n	%	n	%				
For those young people who use condoms when having sex, who do you think mostly suggests using a condom?	83		27%	131	43%	38	12%	55	18%			
Questions	A little confident		Confident		I would never be in this situation		Not at all confident		Not very confident		Very confident	
	n	%	n	%	n	%	n	%	n	%	n	%
1. Imagine you are going out with a boy/girl. He/she wants to have sex but you do not want to. How confident are you that you could say no?	10	3%	39	13%	107	35%	5	2%	9	3%	137	45%
2. Imagine that in the future you and a boy/girl have decided to have sex. How confident are you that you could talk to him/her about using a condom?	25	8%	58	19%	125	41%	11	4%	11	4%	77	25%

**C. Sources of information on HIV/AIDS, other STIs and safer sex**

The main sources of information available to respondents about HIV/AIDS, other STIs and safer sex were the Internet (79%), media (76%), and school teacher (74%). Close to half of the respondents (41% and 46%) considered that it is not possible to talk with their parents about sex and STIs.

**Table 4. Sources of information on HIV/AIDS, other STIs and safer sex**

Which of the following sources have you ever used for advice about HIV/AIDS, other STIs and safer sex?	n	%
Doctor	217	71%
School teacher	226	74%
Mother	181	59%
Father	167	54%
Other relatives	164	53%
Friends	207	67%
Internet	241	79%
Media	232	76%
Pamphlets	190	62%
Books/magazines	194	63%
Films/videos	212	69%

**D. Attitude for sex education in school and perceptions of health services for STIs**

The table 5 below presents that majority of the respondents (90%) think there should be classes on HIV/AIDS, other STIs and safe sex.

**Table 5. Attitude for sex education in school and perceptions of health services for STIs**

Attitude for sex education in school and perceptions of health services for STIs	n	%
1. Ever attended school classes/seminars on HIV/AIDS, other STIs and safe sex	258	84%
2. Think that there should be classes on these topics in school	275	90%
3. Ever visited a health facility or doctor of any kind to receive advice on HIV/AIDS, other STIs or safe sex	49	16%
4. Received treatment for HIV/AIDS in the last twelve months	17	6%
5. Received treatment for STIs in the last twelve months (other than HIV/AIDS)	20	7%
6. Seen any posters on HIV/AIDS / STIs	113	37%
7. Would feel comfortable asking a doctor or a nurse about HIV/AIDs	184	60%
8. Would feel comfortable enough asking a doctor or a nurse about safer sex practices	139	45%
9. Would feel comfortable enough to ask questions about sexually transmitted diseases	186	61%



### Conclusions and Recommendations

Despite the existence of multiple sources of information on HIV/AIDs and other STIs, college freshmen in the research locale still lack proper knowledge on several aspects of these topics. They welcome more education on these matters, hence the need for better integration of these topics in the curricula. Moreover, with the anticipated implementation of age-appropriate sex education included in the comprehensive RH Law of the Philippines as advocated by Department of Health (DOH), it would be worth looking into if such intervention would finally succeed in filling in a seemingly persistent knowledge gap in STIs/HIV and safer sex practices among the Filipino youths.

Also, worth noting are issues intertwined with the aforementioned knowledge gap, particularly its implication to teenage pregnancy and even the country's population crisis. In an article on the Philippine Information Agency (PIA), Paunan (2019) cited the Commission on Population's (POPCOM) report during the World Population Day Forum held in Quezon City in July 2019, about the "some 196,000 Filipinos between the ages of 15 and 19 years old are getting pregnant each year" which also consequently, contribute vastly to the country's population increase according to Pernia, the socioeconomic planning secretary .

This study unintentionally puts a spotlight on the failure of our leaders in charge of safeguarding the youth against the dangers of unsafe sex practices and substandard sex education in general. If people from the government lack the political will for an efficient and swift change, perhaps it relies on the people in the academe to make the necessary steps going forward.

### References

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