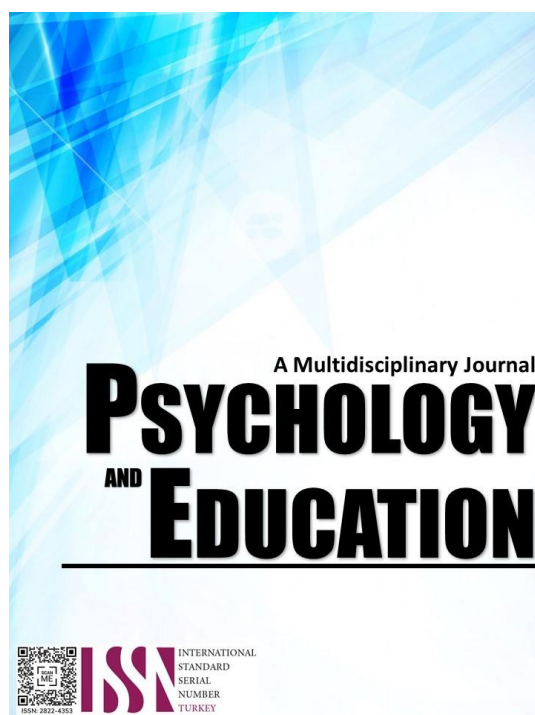


**LIVED EXPERIENCES OF INDIVIDUALS WITH
SEXUALLY TRANSMITTED INFECTIONS (STIS):
AN INPUT TO INFECTIOUS DISEASE
AWARENESS AND PREVENTION**



PSYCHOLOGY AND EDUCATION: A MULTIDISCIPLINARY JOURNAL

2023

Volume: 10

Pages: 1121-1131

Document ID: 2023PEMJ932

DOI: 10.5281/zenodo.8172251

Manuscript Accepted: 2023-19-7

Lived Experiences of Individuals with Sexually Transmitted Infections (STIs): An Input to Infectious Disease Awareness and Prevention

John Aivane V. Gutierrez*, Leinard Reign SE Antonio, Christian Maddox S. San Miguel,
Lei Andrei S. Traquinia, Jaimey Rainne L. Natividad, Jane Beverly T. Ramirez,
Clarisse Erica D. Turdanes, Ray Ann Q. San Juan, Romnick B. Dolores

For affiliations and correspondence, see the last page.

Abstract

Rise in the rate of STI cases in the Philippines has been tremendously seen throughout the past few years. In regards to this, it appears that there is a persisting stigma associated with STIs, which has significant effects on spreading awareness and acquiring knowledge about the issue at hand. In relation to this, the study aimed to assess the respondents' knowledge regarding Sexually Transmitted Infections (STIs) and their lived experiences. The researchers used a convenient sampling method and limited it to the people who acquired, recovered from, or were undergoing medical treatment in STIs, and who lived in the province of Rizal. A total of six (6) respondents were gathered by the means of a 'call for respondents' poster in social media, specifically, Facebook. Then the researchers use a mixed method using a structured modified questionnaire and semi-structured interview to assess the knowledge level of the respondents on STIs. After garnering data, results showed that unprotected sex is the most prominent mode of transmission that each respondent has done before acquiring STI. In general, respondents have a "Moderate" knowledge level on STIs with an MPS of 65.28% ($f=235$). Therefore, the results indicate that the individuals' knowledge regarding Sexually Transmitted Infections (STIs) is significant to their lived experiences by the assessment of the respondents' knowledge. Furthermore, information dissemination, education, and counseling can substantially improve people's ability to recognize the symptoms of STIs, increase their likelihood of seeking treatment, and encourage a sexual partner to do the same.

Keywords: *sexually transmitted infections, awareness, case rate, infections, symptoms, transmission, risk factors, prevention, and outcomes*

Introduction

The high prevalence and increasing incidence rate of sexually transmitted infections (STIs) worldwide cause public health concerns that supplicate effective health and educational intervention strategies since this concern has been associated with the level of awareness of the populace on its prevention. A sexually transmitted infection is caused by an organism (bacteria, virus, or parasite) that can be passed from one person to another during sex or intimate contact (British Columbia Centre for Disease Control, 2023). This infection can also be spread through sharing needles, blood transfusions, breastfeeding, or from an infected mother to an infant during pregnancy and childbirth (National Cancer Institute, n.d.).

The World Health Organization (WHO, 2022) reported that over 1 million STIs are acquired worldwide every day with the vast majority being asymptomatic. They added that there are estimated 374 million new cases of one of four STIs: chlamydia (129 million), gonorrhea (82 million), syphilis (7.1 million), and trichomoniasis (156 million). Comparably, there were reported 1,454 individuals confirmed with Human Immunodeficiency Virus (HIV) in the Philippines in January 2023, accounting for a total of

110,736 reported cases since January 1984. Among the 17 regions, National Capital Region (NCR) and Region IV-A (CALABARZON) have the highest number of newly reported cases with 397 (27%) and 233 (16%), respectively (Department of Health, 2023).

As a response to this enduring public health concern, in 2018, the Philippine government adopted the Republic Act No. 11166 which strengthens the Philippine Comprehensive Policy on HIV and Acquired Immune Deficiency Syndrome (AIDS) Prevention, Treatment, Care, and Support. Furthermore, this law has mandated that the Department of Education (DepEd), Commission on Higher Education (CHED), and Technical Education and Skills Development Authority (TESDA) must integrate basic and age-appropriate instruction on the causes, modes of transmission, and ways of preventing the spread of HIV and AIDS and other STIs in their respective curricula taught in public and private learning institutions, including alternative and indigenous learning systems. The learning modules shall include human rights-based principles and information on treatment, care, and support to promote stigma reduction.

In 2018, DepEd issued "Policy Guidelines on the Implementation of the Comprehensive Sexuality

Education (CSE)” in its commitment to provide and protect the rights of Filipino learners to good education and improved health and to help Filipino learners complete basic education without the burden of health concerns. DepEd recognizes the roles and responsibilities of the school system to give learners their right to good health by leading the implementation of the CSE. The United Nations Educational, Scientific and Cultural Organization (UNESCO, 2023) has emphasized the significant impact of CSE as it improves attitudes related to sexual and reproductive health and behaviors, and it does not increase sexual activity, sexual risk-taking behavior, or STI/HIV infection rates. Importantly, CSE has the most impact when school-based programs are complemented with the involvement of parents and teachers, training institutes, and youth-friendly services.

However, based on the fifth iteration of Young Adult Fertility and Sexuality Study (YAFS5) conducted by the University of the Philippines Population Institute (2022) only one-third of Filipino youth aged 15-24 years are aware of STIs and emergency contraceptive (EC) pills. Furthermore, more than half (52%) of Filipino youths believe that sharing food with an infected person can cause HIV infection. These statistics are concerning, at the same time, these will serve as a piece of useful information in determining knowledge gaps regarding STIs. In relation to this, there seems to be a persisting stigma associated with STIs which has a significant impact on spreading awareness and acquiring knowledge regarding the subject. STIs are associated with stereotypes due to the nature of infection and its transmission. According to Brook (2023), stigma against STIs happened when people are judged or condemned for having the said infections.

Information dissemination, education, and counseling can substantially improve people's ability to recognize the symptoms of STIs, increase their likelihood of seeking treatment, and encourage a sexual partner to do the same. Unfortunately, lack of public awareness, lack of training for health professionals, and long-standing, widespread stigma surrounding STIs continue to be barriers to greater and more effective use of health and educational interventions resulting in a stereotype-filled society.

The researchers have come to question these societal and health issues which ultimately affect educational interventions that intend to address STIs. The researchers aim to assess the knowledge level and knowledge gaps in individuals who acquired,

recovered from, or are undergoing medical treatment for STIs. Further, this study is conducted to develop information, education, and communication (IEC) materials regarding the identified knowledge gaps of the respondents that may help address issues on awareness and prevention of STIs.

Research Questions

This study aims to know the lived experiences of individuals with sexually transmitted infections (STIs) in the Province of Rizal. It seeks to respond to the pivotal questions that follow:

1. What is the profile of the respondents in terms of age, sex, educational attainment, and employment status?
2. What is the respondents' knowledge level on Sexually Transmitted Infections (STIs) with respect to infections, symptoms, transmission, risk factors, prevention, and outcomes?
3. What are the knowledge gaps of the respondents as identified in the incorrect response rate on knowledge questions regarding Sexually Transmitted Infections (STIs) with respect to:
 - 3.1 infections
 - 3.2 symptoms
 - 3.3 transmission
 - 3.4 risk factors
 - 3.5 prevention, and
 - 3.6 outcomes?
4. What are the lived experiences of individuals with sexually transmitted infections (STIs)?
5. What intervention may be developed to address the identified knowledge gaps of the respondents?

Literature Review

Mijatović (2020) states that comprehensive sexuality education provides numerous benefits, in terms of spreading awareness regarding the reproduction and health risks associated with sexuality. Additionally, United Nations Population Fund (2021) provided facts about the contributions of comprehensive sexual education such as; decreasing the number of sex and number of sexual partners (that potentially leads to the contraction of sexually transmitted infections) and the reduced risky behaviors and increased use of contraceptives like condoms and pills.

According to WHO (2022), unprotected sexual contact is the main method of transmission for STIs. Certain STIs can also spread through contaminated blood or blood products, during pregnancy, delivery, nursing,

and other conditions. STIs have a profound impact on health. These can have catastrophic repercussions if left untreated, such as neurological and cardiovascular disorders, infertility, ectopic pregnancy, stillbirths, and an increased chance of HIV infection. Furthermore, an STI can exist in a person even in the absence of symptoms. When present, STIs frequently cause lower stomach discomfort, abnormal vaginal discharge, urethral discharge, genital lumps and ulcers, and abnormal vaginal discharge. Fortunately, some STIs are presently treatable with success. Chlamydia, gonorrhea, and syphilis are three bacterial STIs, whereas trichomoniasis is one parasitic STI. All four STIs may typically be treated with current, efficient single-dose or multiple-dose antibiotic regimens. Antivirals or anti-cancer therapies (in the case of HTLV-1), which can modify the course of the illnesses but cannot cure these three diseases, are the most effective treatments for viral STIs (HIV, HSV, and HTLV-1) now on the market (WHO, 2022).

According to Subotic et al. (2022), one of the protective factors for students is having good knowledge of STIs, so they can become aware of the ways in which STIs are transmitted, the precautions they should take, and any complications that may arise. This knowledge will eventually help them to take care of themselves and reduce their risk of infection for all STIs. Relative to the connection between education and the prevention of STIs, UNESCO (2017) stated that comprehensive sexuality education (CSE) is a curriculum-based approach to teaching and learning about the social, emotional, cognitive, and physical facets of sexuality that aim to give kids and teenagers the knowledge, abilities, attitudes, and values they need to realize their health, well-being, and dignity, build respectful relationships with others, think about how their decisions affect both their own and others' well-being, and comprehend and ensure the protection of their rights throughout their lives. They added that for young people to be able to prevent unintended pregnancy, HIV infection, and other sexually transmitted diseases, foster the values of tolerance, respect for others, and non-violence in relationships, and enable a secure transition into adulthood, CSE is crucial. And the benefits of CSE have been shown to include increased knowledge and self-worth, altered attitudes and social and gender norms, and increased self-efficacy. While not accelerating sexual activity, it has a good effect on safe sexual behaviors.

Based on the data gathered by the Department of Health (DOH) in the Philippines in January 2022, the average number of cases per day is 28 and of course,

this can be more because of the unreported cases of this disease. And in CALABARZON, the region where this study will be conducted, the case rate is at 18%. Fortunately, the Philippine government decided to pass DepEd Order No. 31, series of 2018 which was the Policy Guidelines on the Implementation of Comprehensive Sexuality Education. This has ensured the establishment of common understanding of CSE key concepts and messages by aligning its framework with the K to 12 Basic Education Curriculum and integrating core topics and subtopics in various learning areas. Through this, youth shall be informed with sexuality education that can help them prevent from future harm including contraction of sexually transmitted infections.

In relation to this, the DOH launched a program "The National HIV, AIDS and STI Prevention and Control Program (NASPCP)" which has the objective of minimizing the spread of HIV and STIs among the general public and the most vulnerable groups, and lessening their effects on people individually, in families, and in communities. However, according to Nichols (2020), in the Philippines 80% of people identify as Roman Catholics and as a result the Catholic Church has a significant impact on the nation's sex education system. And for now, the Church is opposed to both the introduction of sex education in schools and the dispensing of contraception. In order to educate children about reproductive health, the Church prefers to rely on their parents. Even so, many families, however, lack the means to do so or choose not to talk about it openly with their kids. It is saddening that many families do not want to talk about it with their children despite the fact that it's essential for parents to have efficient communication with their kids (Singla, 2020). The family environment benefits from clear and effective communication, and kids will be more disciplined and work more to participate.

Methodology

Sampling

In this study, convenience sampling was used. Due to the sensitivity of the subject and the health institutions do not have the right to reveal the identity of patients with STIs, a call for respondents' method was employed by the researchers. Researchers disseminated flyers with researchers' contact information on social media platforms and through other means. To be included in the final sample, respondents gave consent and participated voluntarily

in the conduct of this research.

Data Collection

A mixed method using a structured modified questionnaire and semi-structured interview was adopted by the researchers. Through the questionnaire, respondents' knowledge on STIs and the methods of preventing its transmission was gathered and analyzed. After written responses, respondents were interviewed online about their lived experiences as an individual who have acquired, recovered from, or are undergoing medication for STIs. The questionnaires were distributed using a web-based Google form across social media websites. An explanation of the targeted sample was provided at the top of the questionnaire and on the related website posts. Private social media forums were also used for questionnaire distribution. The researchers automatically closed the form after responses were collected using a Google workplace application, "form limiter."

Ethical Considerations

In carrying out this study, the researchers ensured that proper ethics in research were followed. Before proceeding to the questions and interview with the respondents, they were given a letter of consent that contained the procedures of the study. And the same letter, if they agreed, were signed as a proof of agreement. That letter, containing their names and signatures were secured to protect and respect respondents' privacy. Respondents were briefed for further assurance of security and privacy. They were not forced to answer questions and were allowed to discontinue the interview if they felt the need to do so. Answers on the interview were recapped by the researchers to the respondents to avoid exaggeration and falsification of answers. For further protection of the participants, pseudonymization was applied. No identifiable features and characteristics such as height, physical figure, hair and eye color, skin tone, facial description of them were put in the manuscript.

Data Analysis

After retrieval and gathering of data, the researchers tallied, computed, tabulated, analyzed, and interpreted the data. For research question one, frequency, percentage, and ranking were used in order to assess the profile of the respondents in terms of age, sex, educational attainment, and employment status. For the second research question, respondents' knowledge level on STIs with respect to infections, symptoms, transmission, risk factors, prevention, and outcomes

were determined by calculating the frequency, mean, mean percentage score (MPS), standard deviation, and rank of the responses. The computed MPS were interpreted as "Inadequate" for <50%, "Moderate" for 51%-75%, and "Adequate" for 76%-100%. For the third research question, the responses were analyzed through item analysis. The frequency, percentage, and rank of incorrect responses were counted to determine the respondent's knowledge gap on knowledge questions regarding STIs with respect to infections, symptoms, transmission, risk factors, prevention, and outcomes. For the fourth research question, the data of the lived experiences of the respondents underwent qualitative discussion. Responses were compared to the responses from the first research questions. Lastly, information, education, and communication materials were made based on the identified knowledge gaps of the respondents.

Results

In this study, six (6) people of legal age who have acquired, recovered from, or are undergoing medication for Sexually Transmitted Infections (STIs) in the Province of Rizal had participated. Questionnaire with semi-structured interview was used to assess the knowledge level of the respondents on STIs. A total of six (6) respondents answered the questionnaire and all six (6) consented for an interview. As for the respondents' demographic profile in terms of age, sex, educational attainment, and employment status: Respondent 1 is a Female college student, 21 years old, and is currently unemployed. Respondent 2 is a Male aged 38 years, he reached high school education and is currently self-employed as a hairdresser. Respondent 3 is a 23 year old Male, who is currently unemployed and has reached high school as his highest educational attainment. Respondent 4 is a 26 year old Male freelancer who had reached college as his highest educational attainment. Respondent 5 is a 37 year old Female, her highest educational attainment was College and her employment status is self-employed. Respondent 6 is a 22 year old Male, who is currently unemployed and has reached college as his highest educational attainment.

Most of the respondents are in ages 18-24 since it has a frequency of 3 (50%), followed by ages 35-49 with 2 respondents (33.33%), and the least are respondents in ages 25-34 with only 1 (16.67%). This implies that the population of the study is primarily made up of younger people between the ages of 18 and 24, according to the data provided. The older age groups, specifically those between 25-49, were gathered less in

the study. Four (66.675%) of the respondents are male while there are only 2 (33.33%) female respondents. In terms of educational attainment, 4 of 6 (66.67%) respondents have background on collegiate level of education and there are 2 (33.33%) high school-level respondents. Further, there are 3 (50%) respondents who are self-employed, 2 (33.33%) unemployed, and only 1 (16.67%) employed.

The gender gap in the sample size is evident as there are more male respondents compared to females. The fact that the results might not fairly represent both genders could be an indication of bias or study limitations. Future research should aim to have a more gender-balanced sample size in order to avoid potential gender bias. The vast majority of respondents are college graduates. This suggests that the study's results might not be representative of people with a lower level of education. Thus, to have a more in-depth understanding of the research topic, future research must ensure a diverse representation in terms of educational background. Since 50% of respondents identify themselves as self-employed, it's possible that the study favors people with entrepreneurial mindsets or the capacity to create their own employment opportunities. This implies that the employment status of the respondents is not evenly distributed, with only 1 out of 6 participants being employed. Future research should aim to ensure a more balanced distribution of participants in terms of employment status.

Table 1. *Respondents' Knowledge Level on Sexually Transmitted Infections (STIs) with Respect to Infections, Symptoms, Transmission, Risk Factors, Prevention, and Outcomes*

Category	f	Mean	MPS	SD	R	VI
Infections	36	6.00	60.00%	3.8987	5	Moderate
Symptoms	62	10.33	68.89%	4.9666	4	Moderate
Transmission	43	7.17	71.67%	1.4720	2.5	Moderate
Risk Factors	23	3.83	76.67%	1.4720	1	Adequate
Prevention	43	7.17	71.67%	1.8348	2.5	Moderate
Outcomes	28	4.67	46.67%	2.5820	6	Inadequate
Total	235	39.17	65.28%	14.5797	-	Moderate

Table 1 shows the knowledge level of the respondents on STIs with respect to infections, symptoms, transmission, risk factors, prevention, and outcome. The table reveals that relative to the mean percentage score (MPS) the respondents have "Adequate" knowledge on factors that put people at risk for STIs (76.67%). At the same time, there are

"Moderate" knowledge level on the modes of transmission (71.67%), prevention (71.67%), signs and symptoms (68.89%), and common types of STIs (60%). On the other hand, respondents have "Inadequate" knowledge on the complications and outcomes associated with STIs (46.67%).

In general, respondents have a "Moderate" knowledge level on STIs with an MPS of 65.28% (f=235). Despite the apparent "Adequate" knowledge of the respondents on the risk factors for STIs, an interview reveals that they do not have prior knowledge on STIs before contraction. The researcher surmised that the respondents only get interested on STIs when they get infected. This is alarming since it means that a person first needs to get infected before getting interested and informed of the subject in question. According to the fifth iteration of the Young Adult Fertility and Sexuality Study (YAFS5) conducted by the University of the Philippines Population Institute (UPPI), awareness of STIs was at 35% among males and 34% among females in 2021. Thus, only one in three Filipino youth have knowledge about STIs. Such awareness does not account for comprehensive knowledge on STIs. Using the same scale in the interpretation of data in this study, one-third (33.33%) is interpreted as "Inadequate." This implies that there is a general lack of knowledge and instruction about STIs in the populace. Despite the fact that the respondents appear to have a moderate understanding of STIs, the fact that they only express an interest in the subject after contracting one raises serious concerns and emphasizes the need for more proactive education and awareness campaigns about STIs and their risk factors. People may engage in risky behaviors without understanding the possible repercussions, which may contribute to the spread of STIs. Therefore, even among those who have not acquired a STI, it is critical to promote STI education and raise awareness.

The table exhibits respondent's knowledge gap as identified in the incorrect response rate on knowledge questions regarding STIs with respect to infections.

Based on the results, Human Immunodeficiency Virus (HIV) and Syphilis are the two most commonly known infections among the 10 types of STIs included in the study with a correct response rate of 83.33% (f=5). On the other hand, the least known STIs are genital warts and molluscum with an incorrect response rate of 66.67% (f=4).

Table 2. Respondent's Knowledge Gap as Identified in the Incorrect Response Rate on Knowledge Questions Regarding Sexually Transmitted Infections (STIs) with Respect to Infections

Infections	Incorrect Response		
	f	%	R
Human Immunodeficiency Virus (HIV)	1	16.67	9.5
Syphilis	1	16.67	9.5
Gonorrhea	2	33.33	6.5
Genital warts	4	66.67	1.5
Genital herpes	3	50.00	3.5
Chlamydia	2	33.33	6.5
Trichomoniasis	2	33.33	6.5
Molluscum	4	66.67	1.5
Scabies and pediculosis	3	50.00	3.5
Hepatitis B & C	2	33.33	6.5
	24	40.00	

HIV and syphilis being the most known STIs by the respondents, the same findings in a study of Al-Ghuri (2023). However, in their study, only HIV was most known. This may be derived from a study of Samkange-Zeeb, et al. (2013) that in some countries, STD prevention mainly focuses on HIV/AIDS.

Moreover, genital warts and molluscum are the least recognised STIs. This may be supported by the research of Amu & Adegun (2015) that knowledge of STIs apart from HIV/AIDS are low in the developing world. Which also signifies that IEC (information, education, and communication) programs done focused or concentrated on AIDS with little to no emphasis given to other STIs as revealed in the study of Anwar et al. (2010).

This may have the implication that more public education and awareness are required regarding STIs, particularly with regard to genital warts and molluscum. For people to learn about and safeguard themselves against these less well-known STIs, it may be beneficial to provide more information and resources. The availability of testing and treatment for all STIs, particularly the more well-known HIV and Syphilis, should be improved as well.

Table 3. Respondent's Knowledge Gap as Identified in the Incorrect Response Rate on Knowledge Questions Regarding Sexually Transmitted Infections (STIs) with Respect to Symptoms

Symptoms	Incorrect Response		
	f	%	R
Groin swelling	2	33.33	7.5
Genital ulcers	3	50.00	3.5
Genital itching	3	50.00	3.5
Groin pain and Genital rash	2	33.33	7.5
Painful urination	1	16.67	11.5
Menstrual problems	1	16.67	11.5
Vaginal discharge	1	16.67	11.5
Urethral discharge	1	16.67	11.5
Body rash	3	50.00	3.5
Fever	0	0.00	15
Frequent diarrhea	3	50.00	3.5
Frequent cough	3	50.00	3.5
Frequent sore throat	1	16.67	11.5
Weight loss	3	50.00	3.5
No Symptoms	1	16.67	11.5
	28	31.11	

Table 4. Respondent's Knowledge Gap as Identified in the Incorrect Response Rate on Knowledge Questions Regarding Sexually Transmitted Infections (STIs) with Respect to Transmission

Transmission	Incorrect Response		
	f	%	R
Sexual Intercourse [YES]	0	0.00	9
Non-sexual skin contact [YES]	4	66.67	1.5
Indirect contact through objects [YES]	3	50.00	3
Sharing food and drinks [NO]	1	16.67	6.5
Swimming pools [NO]	0	0.00	9
Blood transfusion and injections [YES]	1	16.67	6.5
Hairdressing [YES]	4	66.67	1.5
Pregnancy and childbirth [YES]	2	33.33	4.5
Breastfeeding [YES]	2	33.33	4.5
Mosquito bite [NO]	0	0.00	9
	17	28.33	

The table shows respondent's knowledge gap as identified in the incorrect response rate on knowledge questions regarding STIs with respect to transmission. The respondent's awareness on the transmission of STIs through sexual intercourse is high with 100% (f=6) correct response rate. In addition, all of the respondents (f=6) are aware that swimming pools and mosquito bites cannot spread STIs. However, the items with 50% incorrect response rate regarded as "common misconceptions" where respondents believe that STIs cannot be shared through non-sexual skin contact and hairdressing stand

at 66.67% ($f=4$). The Young Adult Fertility and Sexuality Study (UPPI, 2022) reported that more than half (52%) of Filipino youths believed that a person can get HIV by sharing food with someone who is infected. About a quarter (24%) likewise believed a person can get HIV from mosquito bites. It has been suggested that young people do not possess sufficient knowledge regarding STD infections and that their education and knowledge level are the main contributing factors affecting the incidence of infection (Voyiatzaki et al., 2021).

Based on the table provided, it can be inferred that while respondents are well-informed about the modes of transmission for most common STIs, there is a prevalent misconception that non-sexual skin contact and hairdressing cannot spread STIs. This emphasizes how crucial it is to keep educating people and raising their awareness in order to debunk these widespread misconceptions and encourage the dissemination of truthful information.

Table 5. *Respondent's Knowledge Gap as Identified in the Incorrect Response Rate on Knowledge Questions Regarding Sexually Transmitted Infections (STIs) with Respect to Risk Factors*

Risk Factors	Incorrect Response		
	<i>f</i>	%	<i>R</i>
Multiple partners	1	16.67	3.5
Unprotected sex	0	0.00	5
Substance use	3	50.00	1
Prostitution	2	33.33	2
Having another untreated STI	1	16.67	3.5
	7	23.33	

Table 5 exhibits respondent's knowledge gap as identified in the incorrect response rate on knowledge questions regarding STIs with respect to risk factors.

All 6 respondents (100%) are aware that unprotected sex increases chances of contracting STIs followed by having multiple partners and having another untreated STIs with a correct response rate of 83.33% ($f=5$). On the other hand, only 3 respondents (50%) are aware that having sex under the influence of drugs or alcohol can result in greater sexual risk-taking, hence, are more likely to be exposed to STIs.

Despite the 0.00% incorrect response rate on unprotected sex as risk factor for STI, an interview with the respondents bares that they all engaged in

unprotected sex prior to their infection.

The reluctance might be attributed to the notion: many adolescents do not perceive themselves to be at risk of contracting an STD (Samkange-Zeeb et al., 2011).

This suggests that despite knowing that unprotected sex raises the risk of STIs, the respondents continued to engage in this behavior. This emphasizes how crucial it is to practice safe sex as well as having knowledge of risk factors in order to stop the spread of STIs. It also implies that other interventions might be required because changing behavior might not be possible with just awareness and education alone.

Table 6. *Respondent's Knowledge Gap as Identified in the Incorrect Response Rate on Knowledge Questions Regarding Sexually Transmitted Infections (STIs) with Respect to Prevention*

Prevention	Incorrect Response		
	<i>f</i>	%	<i>R</i>
Abstinence before marriage [YES]	3	50.00	2
Condoms [YES]	0	0.00	9.5
Single partner [YES]	1	16.67	7.5
Routine check-ups [YES]	1	16.67	7.5
Vaccination for genital warts [YES]	2	33.33	5
Showering before and after sex [NO]	3	50.00	2
Hormonal contraceptive [NO]	2	33.33	5
Circumcision [YES]	3	50.00	2
There is a vaccine against HIV [NO]	2	33.33	5
STIs are preventable [YES]	0	0.00	9.5
	17	28.33	

The table presents respondent's knowledge gap as identified in the incorrect response rate on knowledge questions regarding STIs with respect to prevention

The data shows that all 6 respondents (100%) are cognizant that STIs are preventable and among the 10 items that pertains to prevention of STIs, the use of condoms is the most discernible with 100% correct response rate ($f=6$). Five out of six (83.33%) respondents are aware that having a single partner or mutual monogamy and routine check-ups are some of the measures to avoid STIs. On the contrary, only 50% of the respondents ($f=3$) are aware that abstinence and circumcision help prevent STIs. Furthermore, 50% of the respondents ($f=3$) incorrectly answered that "showering before and after sex" prevents STIs.

Some 35% of young people also did not believe that a person can reduce the risk of getting HIV infection by using a condom during sex, contrary to multiple evidence that consistent condom use is very effective against HIV transmission. YAFS5 data show a low level of condom use during high-risk sexual activities, such as transactional and casual sex, among male youth (University of the Philippines Population Institute, 2022). Although accurate knowledge alone is insufficient to produce changes in attitude and behavior, it is a necessary component towards a person's developing the motivation to change his or her behavior (Anwar, 2010). According to Johnson et al. (1999) correct knowledge about methods of preventing STIs is an essential starting point in the behavior change process for individuals who have misconceptions about behaviors that prevent STI infection. Such misconceptions may lead to the use of ineffective STI protective strategies in place of effective, but less acceptable strategies, for example douching instead of condom use.

Based on the data presented, it appears that there may be a lack of knowledge or education among the respondents regarding effective methods for preventing STIs. While the proper use of condoms is widely accepted, there may be some misconceptions about other preventative measures like abstinence and circumcision. Given the myth that showering before and after sex can prevent STIs, more education about the facts of STI prevention may be required. These findings suggest that targeted education and awareness campaigns may improve this group's comprehension of STI prevention methods.

Table 7. Respondent's Knowledge Gap as Identified in the Incorrect Response Rate on Knowledge Questions Regarding Sexually Transmitted Infections (STIs) with Respect to Outcomes

Outcomes	Incorrect Response		
	f	%	R
Infertility	3	50.00	6
Abortion	4	66.67	3
Premature birth	3	50.00	6
Birth defects	3	50.00	6
Kidney problems	4	66.67	3
Cancer	2	33.33	8.5
Death	2	33.33	8.5
Individuals with HIV can reach resolution [NO]	4	66.67	3
All STIs other than HIV can reach resolution [NO]	6	100.00	1
Is there a cure for HIV/AIDS [NO]	1	16.67	10
	32	53.33	

The table exhibits respondent's knowledge gap as identified in the incorrect response rate on knowledge questions regarding STIs with respect to outcomes.

The most correctly answered item among the outcomes of STIs is "there is no cure for HIV/AIDS" with 83.33% (f=5) followed by cancer and death with 66.67% (f=4). All of the respondents (f=6) are not aware that it is not only HIV that cannot reach resolution. Some other STIs that cannot be cured are genital herpes, human papillomavirus, hepatitis, and cytomegalovirus. Interestingly, 4 of 6 respondents (66.67%) incorrectly answered that "individuals with HIV can reach resolution." Other responses at 66.67% incorrect rate are abortion and kidney problems. Only half of the respondents (f=3) are aware that STIs might cause infertility, premature birth, and birth defects.

The high incorrect response rate on HIV awareness of the respondents is reflective of the drop on the youth awareness of HIV/AIDS. As reported by UPPI (2022): Among those who have heard of HIV and/or AIDS, the YAFS5 also examined the percentage of those with comprehensive knowledge of HIV, based on five standardized statements consisting of a mix of correct information and misconceptions about the virus. In all, only 19% or one in five youth has comprehensive knowledge of HIV. STDs cause severe consequences in the health of the affected population and are responsible for the development of various secondary diseases and complications, such as cervical cancer, infertility, pregnancy-associated complications including fetal mortality, increased risk for acquiring human immunodeficiency virus (HIV), and reduced quality of life due to psychological and social factors (Voyiatzaki et al., 2021).

Without proper treatment, STDs can lead to an inability to get pregnant, pregnancy complications, long-term pain and an increased risk of getting HIV (Hokanson, 2018). Sexually transmitted infections can cause lifelong complications if left untreated (Cleveland Clinic, 2023). It hints that there is a lack of awareness and knowledge among the respondents regarding the outcomes of sexually transmitted infections (STIs). Despite 83.33% of respondents correctly identifying the fact that there is no cure for HIV/AIDS, more people need to be made aware of the fact that some STIs are incurable. The data also suggests that there are many misconceptions about how HIV is treated and the possible consequences of STIs, such as infertility, premature birth, and birth defects. In order to increase people's knowledge of

STIs and their potential effects, the study emphasizes the value of education and awareness campaigns.

Lived Experiences of the Respondents

All of the respondents are of legal age. Most of them have no prior knowledge on STIs before contraction. One respondent had multiple sex partners. Few of the respondents engage in same-sex relationships and casual sex or tryst. All of the respondents didn't use protection when they engaged in a sexual act which causes them to contract an STI. One respondent is a rape victim. Most of the respondents experienced anxiety as mental consequences of knowing that they contracted an STI. Respondents have opted to keep their situation private and whenever they disclose it, they don't feel discriminated at all. They look for support from social media groups where they could relate with those who share the same dilemma and feel warranted. Health care workers provided assistance to the respondents who were diagnosed and have declared their health situation to the concerned health government unit.

Discussion

The researchers made an infographic as a means to disseminate awareness to the people. Infographic was used for it is eye-catching, straight to the point, and has informative content. The material would help readers to certainly grasp the information therein. The contents of the infographic included current data of the Republic of the Philippines' Department of Health regarding Sexually Transmitted Infections (STIs) and the knowledge gap of the respondents as revealed in the study, specifically, outcomes or complications that is identified in the questionnaire as the least known among all the variables. Furthermore, the difference between STI and Sexually Transmitted Diseases (STDs), different types of STIs, incurable STIs, and preventive measures are discussed in the material.

Conclusion

The study concludes that having knowledge about infectious disease awareness and prevention plays a vital role in preventing it. Most have little to no knowledge prior to their contraction, as revealed in the interview; therefore, they perform the act without applying preventative measures. Furthermore, it is also revealed that as they learn more about their condition, they become more knowledgeable, resulting in a

moderate level of knowledge. Furthermore, the identified knowledge gap of the participants is about the complications and outcomes associated with STIs. This category was in an inadequate level of knowledge as revealed by the answer of the respondents. Moreover, 4 out of 6 participants reached college level as their highest educational attainment. Most of them got high scores in the questionnaire but there is one exception. One respondent that only reached high school as highest educational attainment got the highest scores among them all. Moreover, their knowledge level that was measured in the questionnaire was after their contraction which may indicate that they could have known more about STIs. Hence, having high score.

(1)The professionals' dispensation of knowledge about and against STIs should be strengthened as the case rate of contracting one is rising. Reaching out especially to those who are considered impoverished are highly encouraged for them to obtain even simple knowledge regarding infectious disease awareness and prevention. (2)The researchers suggest that a symposium about infectious disease awareness and prevention be done. It will help to disseminate information to the people, especially the youth regarding how to prevent acquiring STIs. Furthermore, having it presented, different information such as preventive measures, how it is acquired, different complications or outcomes that someone has when contracted an STI, will be made known to them which can significantly make them aware of the said infections and prevent them from acquiring these infections. (3)Continuation of study in line with the topic is encouraged by the researchers. The researchers encourage the professionals to carry on with this as they are the ones that are much capable of doing this study. They can obtain more participants because they're already experts. Subject participants could have trusted them more about their experiences and responses. Hence, drawing more respondents. Also, being an expert, they will have a more efficient way to handle the respondents especially in terms of interviewing. With this, much stronger data and results can be obtained.

References

- Aggarwal, S., Singh, A. K., Balaji, S., & Ambalkar, D. (2021). Sexually Transmitted Infections (STIs) and Its Changing Scenario: A Scoping Review. *Combinatorial Chemistry & High Throughput Screening*, 25(10), 1630–1638. <https://www.eurekaselect.com/article/114596>
- Al-Gburi G, Al-Shakarchi A, Al-Dabagh JD and Lami F. (2023). Assessing Knowledge, Attitudes, and Practices Toward Sexually

- Transmitted Infections among Baghdad Undergraduate Students for Research-Guided Sexual Health Education. *Front. Public Health* 11:1017300.doi:10.3389/fpubh.2023.1017300.<https://www.frontiersin.org/articles/10.3389/fpubh.2023.1017300/full>
- Amu E.O., & Adegun P.T. (2015). Awareness and Knowledge of Sexually Transmitted Infections among Secondary School Adolescents in Ado Ekiti, South Western Nigeria. *J Sex Transm Dis*. 2015; 2015: 260126. doi: 10.1155/2015/260126. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4546807/>
- Anwar, M., Sulaiman, S.A.S., Ahmadi, K., & Khan, T. (2010). Awareness of School Students on Sexually Transmitted Infections (STIs) and Their Sexual Behavior: A Cross-Sectional Study Conducted in Pulau Pinang, Malaysia. *BMC Public Health* 10, 47 (2010). <https://doi.org/10.1186/1471-2458-10-47>
- British Columbia Centre for Disease Control. (2023). Sexually Transmitted Infections (STIs). British Columbia Provincial Health Services Authority. [http://www.bccdc.ca/health-info/diseases-conditions/sexually-transmitted-infections-\(stis\)](http://www.bccdc.ca/health-info/diseases-conditions/sexually-transmitted-infections-(stis))
- Centers for Disease Control and Prevention. (2023). Sexually Transmitted Diseases. U.S. Department of Health & Human Services. <https://www.cdc.gov/std/general/default.htm#:~:text=STDs%20pass%20from%20one%20person,infection%20and%20not%20know%20it.>
- Cleveland Clinic. (2023). Sexually Transmitted Infections.<https://my.clevelandclinic.org/health/diseases/9138-sexually-transmitted-diseases--infections-stds--stis>
- Council of Europe. (2020, July 21). Comprehensive Sexuality Education Protects Children and Helps Build a Safer, Inclusive Society. Commissioner for Human Rights. <https://www.coe.int/en/web/commissioner/-/comprehensive-sexuality-education-protects-children-and-helps-build-a-safer-inclusive-society#:~:text=The%20benefits%20of%20sexuality%20education>
- Department of Education. (2018). Policy Guidelines on the Implementation of the Comprehensive Sexuality Education. Republic of the Philippines. https://www.deped.gov.ph/wp-content/uploads/2018/07/DO_s2018_031-1.pdf
- Department of Health. (2011). HIV, AIDS and STI Prevention and Control Program. Republic of the Philippines. <https://doh.gov.ph/national-hiv/sti-prevention-program>
- Department of Health. (2023). HIV/AIDS & ART Registry of the Philippines. Epidemiology Bureau.https://doh.gov.ph/sites/default/files/statistics/HARP-Report_January-AIDSeg2023_withAdvisory.pdf
- Gallao, M., Daniel, P., Faylogna, D. S., Galivo, A., Guerrero, N. J., & Taqeban, M. A. (2020). Sex Education: Level of Knowledge and Its Effects on the Sexual Behavior and Opinions Among the Government Senior High School Students of Vigan City SY 2018-2019 ISSN: 2435-5240. The Southeast Asian Conference on Education 2020: Official Conference Proceedings.<https://doi.org/10.22492/issn.2435-5240.2020.19.>
- Brook. (2023). STIs and Stigma. Brook Young People.<https://www.brook.org.uk/your-life/stis-and-stigma/>
- Hokanson, M. (2018). Know the Health Impacts of Sexually Transmitted Diseases During STD Awareness Month. North Central Health District. Georgia Department of Public Health. <https://northcentralhealthdistrict.org/know-health-impacts-sexually-transmitted-diseases-std-awareness-month/>
- Johnson L.S., Rozmus C., & Edmisson, K. (1999). Adolescent Sexuality and Sexually Transmitted Diseases: Attitudes, Beliefs, Knowledge, and Values. *Journal of Pediatric Nursing*. Volume 14, Issue 3, P177-185. [https://www.pediatricnursing.org/article/S0882-5963\(99\)80006-2/pdf](https://www.pediatricnursing.org/article/S0882-5963(99)80006-2/pdf)
- National Cancer Institute. (n.d.). Sexually Transmitted Infection.Department of Health and Human Services. United States of America. <https://www.cancer.gov/publications/dictionaries/cancer-terms/def/sexually-transmitted-infection>
- Nichols, Z. (2020). Sex Education in the Philippines. The Borgen Project. <https://borgenproject.org/sex-education-in-the-philippines/>
- Official Gazette. (2012). Republic Act No. 10354. Republic of the Philippines. <https://www.officialgazette.gov.ph/2012/12/21/republic-act-no-10354/>
- Official Gazette. (2018). Republic Act 11166: Philippine HIV and AIDS Policy Act. Republic of the Philippines. <https://www.officialgazette.gov.ph/downloads/2018/12dec/20181220-RA-11166-RRD.pdf>
- Samkange-Zeeb, F., Mikolajczyk R.T., & Zeeb H. (2013). Awareness and Knowledge of Sexually Transmitted Diseases among Secondary School Students in Two German Cities. *J Community Health*. 2013 Apr;38(2):293-300. doi: 10.1007/s10900-012-9614-4. <https://pubmed.ncbi.nlm.nih.gov/23001541/>
- Samkange-Zeeb, F.N., Spallek L., & Zeeb H. (2011). Awareness and Knowledge of Sexually Transmitted Diseases (STDs) Among School-Going Adolescents in Europe: A Systematic Review of Published Literature. *BMC Public Health*. 2011 Sep 25;11:727. doi: 10.1186/1471-2458-11-727.<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3189891/>
- Singla, C. (2020). Positive Communication Style Between Parents and Children. Psychologists.<https://www.psychologists.com/article/positive-communication-style-between-parents-and-children>
- Subotic, S., Vukomanovic, V., Djukic, S., Radevic, S., Radovanovic, S., Radulovic, D., Borcic, K., Andjelkovic, J., Tosic Pajic, J. & Simic Vukomanovic, I. (2022). Differences Regarding Knowledge of Sexually Transmitted Infections, Sexual Habits, and Behavior Between University Students of Medical and Nonmedical Professions in Serbia. *Front. Public Health* 9:692461. doi: 10.3389/fpubh.2021.692461. <https://www.frontiersin.org/articles/10.3389/fpubh.2021.692461/full>
- United Nations Population Fund (2021). Why Is Comprehensive Sexuality Education Important? UNFPA Asia, & Pacific Regional Office.<https://www.aidsdatahub.org/resource/why-comprehensive-sexuality-education-important>
- United Nations Educational, Scientific and Cultural Organization. (2017). What is Comprehensive Sexuality Education? Health and Education Research Centre. <https://csetoolkit.unesco.org/toolkit/getting-started/what-comprehensive-sexuality-education>
- United Nations Educational, Scientific and Cultural Organization. (2023). Comprehensive Sexuality Education: For Healthy, Informed and Empowered Learners.

<https://www.unesco.org/en/articles/why-comprehensive-sexuality-education-important>

University of the Philippines Population Institute. (2022). Youth Awareness of HIV/AIDS Drops to All-Time Low. <http://www.uppi.upd.edu.ph/news/2022/youth-awareness-of-HIV-AIDS-drops-to-all-time-low#:~:text=Based%20on%20the%202021%20Young,when%20awareness%20stood%20at%2095%25>.

University of the Philippines Population Institute (2022). Zoom in, zoom out: Filipino youth in focus [PowerPoint slides]. Population Institute, College of Social Sciences and Philosophy, University of the Philippines. https://www.uppi.upd.edu.ph/sites/default/files/pdf/YAFS5_National%20Dissemination_Slides_FINAL.pdf

Voyiatzaki, C., Venetikou, M. S., Papageorgiou, E., Anthouli-Anagnostopoulou, F., Simitzis, P., Chaniotis, D. I., & Adamopoulou, M. (2021). Awareness, Knowledge and Risky Behaviors of Sexually Transmitted Diseases among Young People in Greece. *International Journal of Environmental Research and Public Health* 18, no. 19: 10022. <https://doi.org/10.3390/ijerph181910022>

World Health Organization. (2022). Sexually transmitted infections (STIs). https://www.who.int/health-topics/sexually-transmitted-infections#tab_1

Affiliations and Corresponding Information

John Aivane V. Gutierrez

Morong National High School
Department of Education - Philippines

Leinard Reign SE. Antonio

Morong National High School
Department of Education - Philippines

Christian Maddox S. San Miguel

Morong National High School
Department of Education - Philippines

Lei Andrei S. Traquinia

Morong National High School
Department of Education - Philippines

Jaimey Rainne L. Natividad

Morong National High School
Department of Education - Philippines

Jane Beverly T. Ramirez

Morong National High School
Department of Education - Philippines

Clarisse Erica D. Turdanes

Morong National High School
Department of Education - Philippines

Ray Ann Q. San Juan

Morong National High School
Department of Education - Philippines

Romnick B. Dolores

Morong National High School
Department of Education - Philippines