NEAR EAST UNIVERSITY

INSTITUTE OF HEALTH SCIENCES

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THESIS APPROVAL CERTIFICATE

The thesis study of Nursing Department graduate student **IBARI IFESINACHI QUEENET** with student number titled "**THE KNOWLEDGE LEVEL RISKY BEHAVIORS ON SEXUAL TRANSMITTED DISEASES AMONG NEAR EAST UNIVERSITY STUDENTS"** has been approved with unanimity / majority of votes by the jury and has been accepted as a Master of Master of Nursing Thesis.

Thesis Defense Date:

Jury Members Signature

Assistant Prof.Serap TEKBAŞ (Supervisor) …...…….……

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ABSTRACT

Sexually transmitted diseases are among the most common causes of morbidity in the world.Sexually transmitted diseases is an unwanted pregnancy and it's problems resulting from sexual activity have increased among adolescents.Sexually transmitted infections can have serious long-term consequences for example; infertility, ectopic pregnancy, chronic disease, and premature death. Chlamydia, gonorrhea, and syphilis can cause severe and sometimes fatal infections (congenital or pneumonia) and low birth weight before birth and in the newborn. Infection with human papillomavirus increases the likelihood of later cervical cancer. This study was carried out to determine the level of knowledge and risk behaviors of university students about Sexually transmitted diseases. The sample group of the study was composed of foreign students at Near East University Faculty of Law. The study have two questionnaires. The first questionnaire have personal information and assessing students' knowledge about sexually transmitted disease.The second questionnaire was Safer Sex Behavior Questionnaire (SSBQ). This questionnaire was a 27 item questionnaire that measures sexual behaviors."Statistical Package for Social Sciences (SPSS) Version 20 was used. The descriptive statistics as well as the use of Mann-Whitney and and Kruska-Wallis for mutlivariate analysis were used. The findings of the study showed that significant relationship was found between the students' sex behavior scale mean and age ($p<0.001$). In addition, it was concluded that students did not have enough information about the symptoms of sexually transmitted diseases, ways of protection and transmission routes and recommendations were made on the need to etsbalish a counseling center on sexual health and sexually transmitted diseases whic will be very useful within the Near East University. At this center, students should be screened about sexually transmitted diseases.

Keywords: Sexually Transmitted Diseases, Knowledge, Risky Behaviors

TİTLE PAGE

ABBREVIATIONS

STD:Sexually Transmitted Diseases

HIV:Human Immunodeficiency Virus

HPV : Human Papillomavirus

AIDS:Acquired Immune Deficiency Syndrome

PID : Pelvic Inflammatory Disease

DGI: Disseminated Gonococcal Infection

HSV:Herpes Simplex Virus

TABLE PAGE

CHAPTER ONE

1.1. INTRODUCTION

Sexually transmitted diseases (STD) are among the most common causes of morbidity in the world. Before the first AIDS cases in 1981, STDs were considered a public health problem but a secondary concern for health services in developing countries (Beaglehole at al.,1994). Over the past decade, the incidence of sexually transmitted diseases among young adults agesfifteen to twenty-four years old has increased considerably. This subsection of the population is responsible for over half of the twenty million new sexually transmitted disease (STD) cases diagnosed each yearand a lot of health spending. In 2015, the Centers for Disease Control and Prevention found there was a 6% increase in diagnosed Chlamydia cases and 13% increase in diagnosed Gonorrhea cases since 2014 (CDCP, 2016). We haven't enough information about the incidence of STDs. Because inadequate of records about STDs, sometimes asymptomatic and some people don't go to the doctor. However, the available data indicate that syphilis and genital warts tend to increase (Awang et al., 2013). According to the World Health Organization (WHO) Europe report, untreated gonococcal and chlamydial infections in women cause pelvic inflammatory disease in 40% of cases. One in four of these results leads to infertility. Worldwide, untreated maternal infections are responsible for eye infections leading to blindness in nearly 4,000 newborns each year (WHO STD Report 2012). Sexually transmitted infections can have serious long-term consequences (infertility, ectopic pregnancy, chronic disease, and premature death, for example). Chlamydia, gonorrhea, and syphilis can cause severe and sometimes fatal infections (congenital or pneumonia) and low birth weight before birth and in the newborn. Infection with human papillomavirus increases the likelihood of later cervical cancer (the second leading cause of cancer death in women worldwide),

resulting in some 240,000 annual deaths (Tsevat et al., 2017). Adolescents and young adults are more at risk of STD than adults.The WHO estimated that 20% of persons living with HIV/AIDS are in their 20's. (Orisatoki, Oguntibeju, 2010). The reasons why young people are more at risk include having more unprotected sexual intercourse, having more than one sexual partner, as well as having problems getting information, services and supplies to avoid STDs. They may also have difficulty accessing STD prevention services and they do not know where to find them or they do not have access to services. (Nsuam et al.,2010).

Aim of the study

Aim of this study was to determine their level of knowledge and risk behaviors aboutSTDs among university students . The choice of Cyprus as the research location was borne out of the fact that Cyprus is a regional hub for higher education. Thus, the country has many higher educational institutions with quite large number of adoslcents students from diverse from ethnic and racial backgrounds. Thus, there is a greater tendency of sexual activeness among these students population cohort which could increase the risks and tendencies of risky sexual behavior.

Significance of the Research

The research will help the Near East University to understand the sexual dispositions of students in the school and how effective strategies and support systems can be developed and implemented in order to curtail any risky sexual behaviour tendencies that can affect healthy lifestyles of students in the University**.**

General Information

Sexually transmitted diseases are very important health problem for all peoaple. But affecting mostly young people(Zeeb et al.,2011). Globally, adolescents and young adults aged from 15 to 24 years accounted for 25% of the sexually active population. They also took up almost 50% of all newly acquired STDs worldwide (Kam, K. Mat all 2019).

STDs are an unwanted pregnancy and it's problems resulting from sexual activity have increased among adolescents. In many university students around the world reported sexually transmitted disease in one form or another; two-thirds contracted gonorrhea from casual contacts or prostitutes and one third from friends or continuing partners. Whereas there is increasing success in preventing and controlling gonorrhea and syphilis, other sexually transmitted diseases (such as herpes simplex virus, human papillomavirus, and HIV) for which no cure is available are gaining prominence. These sexually transmitted diseases have devastating effects on the capacity to reproduce, prenatal infection rates and incidence of genital cancers (Table 1.1.). Both ulcerative and non-ulcerative sexually transmitted diseases enhance the transmission of HIV (Zeeb at al.,2011, Drago at al.,2016).

"Table 1.1. Examples of Common Sexually Transmitted Diseases and Their Clinical Manifestations

Infection	Clinical symptoms	Long-term sequelae
Gonorrhoea	Among men urethritis/discharge, among women mostly asymptomatic, but some may experience pain or burning sensation when urinating	In women pelvic inflammatory disease/infertility/ectopic pregnancy
Syphilis	Genital ulceration	latent infection also
HIV	Asymptomatic over long periods of time; early signs can include fatigue, fever, night sweats	If untreated full-blown AIDS
HPV	Generally asymptomatic and clears on its own	Genital warts, penile cancer, cervical cancer
Chlamydia	Asymptomatic infection common among both men and women; women may experience abdominal pain or burning sensation when urinating	In women pelvic inflammatory disease/infertility/ectopic pregnancy; in men epididymitis
Hepatitis B	Partly asymptomatic or unspecific symptoms such as fever, abdominal pain	Acute liver failure, liver cancer
Genital herpes	Recurrent genital blister-like sores	Pregnancy complications, neonatal herpes
Trichomoniasis	Often asymptomatic, occasionally genital discharge	Pregnancy complications

Source: Workowski & Bermann, 2006

Gonorrhea: Gonorrhea is a bacterial infection caused by Neisseria gonorrhoeae.The routes of transmission are oral, anal and vaginal sex(Tao & Irwin, 2006). Gonorrhea is usually not symptomatic and rarely result in significant morbidity, because they may act as a reservoir

promoting sustained infection, be less susceptible to treatment, and contribute to the evolution of antimicrobial resistance (Bamberger, D. M.at all 2019). Symptoms may occur from two days to twenty onedays of sexual activity with an infected person. They can also be asymptomatic. If gonorrhea is not treated, gonorrhea can cause a lot of problem such as epididymitis, infertility, pelvic inflammatory disease, and (PID) ectopic pregnancies(Tao & Irwin, 2006). Gonorrhea has some complications includingdermatitis, multiple skin lesions and various forms of arthritis(Workowski, 2015; Belkacem et al., 2013). Although the treatment of gonorrhea is with antibiotics, drug-resistant strains are increasing in the world. In addition to regular testing of STDs, it is also important to ensure that a new partner is tested before entering sexual activity(Tao & Irwin, 2006).

Syphilis: Syphilis is a sexually transmitted infection caused by Treponema pallidum. Syphilis is a systemic infectious disease, which has a tendency to become chronic and can last years with symptomatic and asymptomatic periods. If syphilis isn't treated include ulcers, skin rash, mucocutaneous lesions, and lymphadenopathy as well as cranial nerve dysfunction, auditory or ophthalmic abnormalities, and cardiac or gingival lesions(Workowski et al,2010). Syphilis in both men and women is more common in populations with high sexual activity, risky sexual intercourse, sex workers, homosexual men and socioeconomic low societies. Sexual intercourse, transplacental from mother to infant and transmission during delivery, the use of articles contaminated with microbes and blood transfusions are the major transmission routes of the disease (Singh AE, Romanowski B.1999).There are four stages of syphilis including primary stage, secondary phase, latent stage and late stage.Symptoms of syphilis appear during the primary and secondary stages.During the primary stage, patients have sores appears. Wounds usually occur in the external genitals. But sometimes it can also occur in internal organs. In addition, the wounds may appear on the mouth or lips.The wounds last three to six weeks and can

heal without treatment. If the treatment is not administered, the disease will progress to the secondary stage, even if the wounds heal.The symptoms of the secondary universe include rash and swollen lymph glands, fever, weight loss, weakness, pain, and hair loss. At this stage, the symptoms end without treatment. However, the disease continues the secret phase. There may not be symptoms of the disease in the secret phase, but the disease is continuing. If syphilis is not treated, severe complications may occur in the late stage. This muscle movement can result in stroke, blindness, dementia, drowsiness and sometimes death.Because the clinical findings of syphilis are mixed and the in vitro culture of the agent cannot be performed, indirect (serological) methods are used in the diagnosis.Using condoms is an important method of protection. However, sexual intercourse should be avoided if condoms are used or if there is a wound (Wuet all 2016) (Kent &Romanelli, 2008).

Human Immunodeficiency Virus (HIV): The pathology of human immunodeficiency virus (HIV) develops due to virus-related immunodeficiency, direct damage to organs, and indirect effects of chronic inflammation on organs. HIV continues to be a major global public health issue, having claimed more than 35 million lives so far. In 2016, onemillion people died from HIV-related causes globally (CDCP, 2016). Mostof all HIV / AIDScases (94%) occur in developing countries and 89% in sub-Saharan Africa, South and South-East Asia. HIV infection is characterized by a wide clinical picture ranging from asymptomatic carriage to lethal diseases. The development of acquired immunedeficiency syndrome (AIDS) related diseases as a result of untreated HIV infection or viremia is the result of death. AIDS is primarily viral, bacterial, parasitic, opportunistic infections including pulmonary tuberculosis; non-hodgkin lymphoma can be seen with cancer such as (Girard MP 2011).

With more than thirty years of the HIV epidemic, there is still no cure or an effective vaccine, however, there have been major advances in treating HIV. Global trends in HIV infection

demonstrate an overall increase in HIV prevalence and substantial declines in AIDS-related death slargelyattri but able to the survival benefits of antiretroviral treatment (Lundgren J.D. et all2015).

Hiv infection is transmitted sexually, by blood and blood products, from mother to baby, injector and other instruments (Gao, N et all. 2017).Individual education and global policies are important in AIDS prevention.The global AIDS prevention strategy consists primarily of three interrelated tactics:

(1) encouraging people to reduce their number of sexual partners,

(2) promoting the widespread use of condoms and

(3) treating concurrent STDs in populations at risk of HIV

Women who have little power to negotiate disproportionately poor and sexual encounter terms are more likely to benefit from these life-saving strategies (Rotheram-Borus et al.,1995) .

HIV-related stigmatization is considered to be a permanent and destructive problem because it constitutes a significant obstacle to access to disease prevention, care, and treatment services and causes familial, social and economic damage (Mbonu, 2009).

Human Papillomavirus (HPV):Cervical cancer is predominantly a virally mediated disease. Considered as one of the common sexually transmitted diseases, as many as 50% of sexually active individuals are infected with HPV in their lifetime. HPV infections are most prevalent in young adults, as sexual risk behaviors are greatest in this age group (Perez et al, 2016). HPV infections are asymptomatic and most infections occur within three to twenty months. Non-symptomatic genital warts can then lead to various types of cancer(Colón-López, Ortiz, & Palefsky, 2010, Giuliano et al., 2011). Approximately 91% of human papillomavirus cervical and anal cancers, 69% of vulvar cancers, 75% and 63% of vaginal cancers cause penile cancers(Merck

and Co., 2014). In addition, approximately 70-90% of oropharyngeal cancers are thought to be associated with HPV. People who use alcohol and tobacco are at greater risk for oropharyngeal cancers (Young et al., 2015). HPV strains 6 and 11 are responsible for over 90% of genital warts (Gerend and Barley, 2009).

Chlamydia: Chlamydia are microorganisms that are gram negative, coke-like, immobile and necessarily living in the cell.It is a bacterial infection caused by the bacterium Chlamydia trachomatis. Nowadays, C. trachomatis is one of the leading agents of sexually transmitted diseases.According to the data of Centers for Disease Control and Prevention , approximately 90 million new chlamydial infections occur worldwide in the US and 4 million according to World Health Organization data.In areas such as Africa, Middle-East Asia, South America, the disease is endemic. C. trachomatis can pass from an infected mother to a baby during childbirth. Epidemiological studies show that the incidence of symptomatic and asymptomatic chlamydial infections in pregnant women is between 2 and 24%.C. trachomatis causes acute and chronic cervicitis, endometritis, acute urethral syndrome, oophoritis, acute salpingomy, bartolinitis, proctitis and inflammatory disease of the pelvis in women.Urethritis, proctitis and conjunctivitis caused by C. trachomatis are clinical conditions that can be seen in both sexes. However, infections are usually asymptomatic and therefore, many cases cannot be diagnosed (Peipert, 2003, Satterwhite, Joesoef, Datta, & Weinstock, 2008).In order to be effective in treatment of chlamydial infections and to protect against recurrent infections, sexual partners of infected individuals should be followed and treated if necessary. To prevent chlamydial infections, individuals should be informed about sexually transmitted diseases, and chlamydial infections should be informed that they can survive without long term clinical symptoms (Stamm, W.E et al., 2005).

Genital Herpes: Herpes simplex virus type 1 (HSV-1) and type 2 (HSV-2) are large double-stranded DNA viruses of the Herpesviridae family**.**Herpes Simplex Virus 1 and 2 (HSV-1 and HSV-2) are important human pathogens. It is estimated that approximately 90% of the world's population are infected with one or both viruses. HSV-1 is the primary cause of cold sores and HSV-2 of genital herpes(Arvin et al.,2007). Both HSV-1 and HSV-2 cause genital herpes and affect individual and public health.Genital herpes has a very high global prevalence and disease burden. Recent seroprevalence studies for the years 2005-2010 indicate that 1 out of 2 adults in the United States ages 14-49 years old is latently infected with HSV-1 (Bradley et al. (2013).HSV-2 is a virus transmitted through the theme of the genital tract.HSV-2 usually causes non-symptomatic genital wounds.An increasing number of HSV-1 rather than HSV-2 infections are being observed in clinical cases (Roberts et al.,2003). The most common complication of HSV is recurrent outbreaks of either oral or genital lesions, which can be distressing and embarrassing for sufferers. Studies show that it is usually transmitted by genital fluids, even if it is not a symptom of the disease (Johnston, and Corey 2016). Immunocompetent people with genital HSV infection can have frequent, painful, and recurrent genital lesions associated with much psychosocial distress(Looker et al.,2015, Schiffer and Corey, 2013). A clinical diagnosis of genital herpes should be confirmed with laboratory tests. A definitive diagnosis of HSV guides the most appropriate choice of treatment and identification of the type of HSV provides important information for prognosis. Patients presenting with genital lesions should also be tested for other causes of genital ulcers (Freeman EE 2006).People with symptomatic disease should be counselled to abstain from sexual activities. If lesions are present and to use condoms consistently at all other times (Wald A, 2005).

Trichomoniasis: The woman is placed in the vagina, and the male in the urethra. Trichomoniasis is transmitted from person to person through sexual contact. In some of the parasites, the parasite

can live asymptomatic in the vagina for a long time. As a result of the suppression of the growth of bacteria like Lactobacillus acidophylus in the vagina and the vagina pH of some of the bacteria, vaginalis shifts to the alkaline T. vaginalis vagina in the vagina begins to reproduce and disease. In addition, immunosuppression, HIV, cervical cancer, prostate cancer, contraceptive use, polygamy are the factors for this disease (Schwebke and Burgess, 2004). It is, therefore, an important public health problem. While it is not globally a reportable disease, T. vaginalis is likely the most common nonviral STD in the World(Kissinger,2015). The incubation period is 4-20 days, on average 7 days. The patient is contagious during the symptoms and at the time of discharge and up to 1 week after treatment.Vaginal discharge, odor, itching are symptoms of infection. In addition, dysuria and lower abdominal pain may occur. The color of the discharge may change.Patients should be informed about the sexually transmitted infection and their ways of transmission. Patients immediately should be treated and avoid sexual intercourse during treatment(Schwebke and Burgess, 2004).

Sexual Transmitted Diseases Risks Among Adolescents

Sex and sexuallife problemsareamongtheissuesthataffectyoungpeople'shealth. Adolescents have a higher risk of sexually transmitteddiseases. Because young people's experience of sexuality at an earlyage, inability to use contraceptives, marriage at an early age and pregnancy, abortion and unsafe conditions are low,STIs arethebasicreproductiveandsexualhealthproblems (Akalpler, O., &Eroglu, K. (2016). Almost half of all STD casesoccureveryyear in young people betweentheages of 15-24 (CDCP, 2016) .Especially university students are more at risk because they are living away from the family and they are sexually active butthey do not have enough knowledge about protection from sexually transmitted diseases (Awang, H. et all, 2014).

Many factors affect the risk of developing STD during adolescence. These including social, biological, psychological and behavioral factors. Comparedwith men andwomenabout

STD risk, women are more have a high-risk than men (MurpheyandNagy, 2002). They may have poorer access to information andgreaterdifficultyin accessingservicesthanadultshave. High proportions of minority youth and economically disadvantaged adolescents have difficulty accessing good quality medicalcare(Panchaud et all.,2000).

Control and Prevention of Sexual Transmitted Diseases

Universty students are likely to be at risk for contract sexually transmitted diseases (STDs) because of their patterns of sexual behavior including sex with multiple partners and inconsistent use of condoms (Levis at all 2000). Sexual counseling is very important in the prevention of STDs. A detailed history should be obtained from individuals or individuals in the risk group in order to ensure correct sexual counseling. Counselors should also be approached according to their sexual orientation, age and development level. Especially when communicating with the young people should be judged. Counseling should include all individuals with and without a history of STD(Guidelines, 2015).Condom use is very important in preventing sexually transmitted diseases.Although other contraceptive options are more effective for pregnancy prevention, condoms are the only available method for sexually active adolescents that offers protection against both unintended pregnancy and STDs.Choosing a safer sex act is another way to reduce risk. Investigators have recommended different strategies for addressing these factors.Some have recommended reducing the number of sexual partners,avoiding high-risk sexual acts such as anal sex, and educating the public on the advantages of the use of condoms and voluntary HIV testing and counseling(Varghese 2002).

CHAPTER THREE

MATERİAL AND METHOD

Design

Design of thestudy wasa cross-sectional study.

Setting

This study was conducted at the Near East University, among the students of Faculty of Law. The Near East University is located in Nicosia, Cyprus.

Sample Selection

The study was planned to include foreign students studying at the Near East University. The study wasconducted at the Faculty of Law. The Faculty of Law has two educational programs. These are law programs in Turkish and English. Only foreign students were included in our study. This faculty was chosen because of the number of foreign students higher. All students who accept the study will be included in the study. The students were randomly selected during the survey and they were composed of diverse nationalties and age groups. Those who agreed to participate were asked to give their consent and to complete a series of questionnaires. The Faculty of Medicine, Faculty of Nursing and the Faculty of Health Sciences students were not included in the study.**P**ower analysing method was use to determine the sample size (The main purpose underlying power analysis is to help theresearcher todetermine the smallest sample size that is suitable to detect the effect of a given test at thedesired level of significance). A population 0f 200 students was considered at given a 95% confidence level, wherethemargin of error is 5%.

$n = \frac{N*X}{X+N-1}(z_{\alpha/2} * p(1-p))/MOE^2$ n= sample size,

p= proportion of sample

MOE= margin of error

N= Population size

$z_{\alpha/2}$= The critical value of the normal distribution at a α/2(for a confidenceintervallevel of 95%, α is 0.05 and te criticalvalue is 1.96)

Thus, N=200, p= 0.5, MOE= 0.05, and $z_{\alpha/2}$ = 1.96

$$X = \frac{1.96^2 * 0.5(1-0.5)}{0.05^2} X = 384.16$$

$$n = \frac{200 * 384.16}{384.16 + 200 - 1}$$

$$n = \frac{76{,}832}{583} = 130$$

Study Tools

This study tools were two questionnaires. The first questionnaire has 17 questions. This questionnaire have 5 items on personal information question and the students' knowledge on STDs was assessed by using 12 item questionnaire (knowledge on the different types of STDs, their causes, transmission routes, preventive practices, symptoms, and complications of STDs). These questions were created by the researchers using the literature information.

The second questionnaire has Safer Sex Behavior Questionnaire (SSBQ). The SSBQ is a 27 items questionnaire that measures sexual behaviors, condom usage, high-risk sexual behaviors, and sexual communication and negotiation with responses on a 4 point Likert scale (1=Never, 4 =Always)(DiIorio et al.,1992). The SSBQ included 27 statements concerning sex practices, to

which participants select a Likert rating that represents the frequency that they partake in those practices. Example items are, “If I know an encounter may lead to sexual intercourse, I have a mental plan to practice safer sex” and “I drink alcoholic beverages prior to or during sexual intercourse.” Seven items are specific to condom use (e.g. “I insist on condom use when I have sexual intercourse”), and six items are specific to partner communication about topics relevant to safe sex (e.g. “I ask potential sexual partners about their sexual histories”). Study reveals this scale to be internally consistent with Cronbach’s alpha of .82 for the whole scale, .77 for the condom use subscale and .75 for the partner communication subscale (11).

Pilot Testing

Before employing the study tools in the real setting, it was a pilot studywith seven students from each class and totally 28 students were selected (it was chosen 10% of the total number of students) in Near East University law department. The questionnaireconducted in the pilot study that were excluded from the study. It had no problems, so results of this pilot study was included the study.

Ethical Considerations

Necessary permissions were obtained from the Near East University Ethics Committee and the Near East University Dean of the Faculty of Law to implement the study.

Data Collection:

The questionnaires were being administered by researcher to students with face to face, self-completion method. Completion of the questionnaire was taken almost 20 minutes. Confidentiality was maintained by number coding instead of names in the questionnaire. Students participated voluntarily, no incentive was provided. It was received written permission from the

students. Questionnaires was applied to 130 law students at the faculty of law in Near East University, Cyprus who accepted to participate in our study.

Data Analysis

A factor analysis was conducted and five (5) distinct factors were obtained.The first factor consisted of nine (9) items which typify measure of Assertiveness. The second factor2 consists of eight items (8) which typify items that characterized Anal/Homosexual practices. The third factor consists of five items (5) which consists of items related to Condom use. The fourth factor consists of three items(3) which consists of items related to bodily fluids secretions while the fifth factor consists of three items(3) related to risky sexual practices thus was named Risky behavior. All the measures of loadings consider were above an Eigen value of 0.3 As a result of the analysis, it was found that total and sub-dimension total scores were not Normally distributed ($p < 0.05$). Hence the Statistical Package for Social Sciences (SPSS) for Windows version 20.0 package, was used to compute the arithmetic mean, standard deviation, median and minimum-maximum value of the data, while Mann-Witney Test was used for pair comparison and Kruska-Wallis (X^2_{KW}) test for more than two groups comparison.

Study Questions

1-What knowledge do university students in Near East University Faculty of Law have about STDs?

2-Is there a difference between female and male University students about knowledge and attitudes towards STDs?

3-What are the risk behaviors of university students about STDs?

4-What are the factors affecting university students' risk behaviors related to STDs?

3. FINDINGS

Findingsof thisstudyweregiven under the headings below.

3.1 Demographic characteristics of the university students

3.2Students' Knowledge About Sexually Transmitted Diseases

3.3Students' Knowledge About Transmitted Way Sexually Transmitted Diseases

3.4 Students' Information Resources About Sexually Transmitted Diseases

3.5 :Distribution of Scale and Sub-scale Score Averages of Students

3.6: The Comparison of Students' Average Points by Gender

3.7: The Comparison of Students' Average Points by Age

Table 3.1. Demographic Characteristics of the University Students (N= 130)

Demographic characteristics	n	%
Age		
20 yrs below	47	36.2
Above 20 years	79	60.8
No Response	4	3.0
Gender		
Male	81	62.3
Female	47	36.2
No Response	2	1.5%
Class Level		
1	32	24.6
2	26	20.0
3	21	16.2
4	26	20.0
No Response	25	19.3
Marital status		
Single	120	92.3
Married	6	4.6
No Response	4	3.1
Do you have any history of sexually transmitted diseases?		
Yes	5	3.1
No	125	96.9

The participants consisted of 130 students in Near East University Faculty of Law. The demographic characteristics (age, gender, marital status and class) were presented in Table 1.The students were aged between 17-26 years and the mean age was 20.29 (SD= 1.548). Regarding gender, 81 (62.3%) of the studentswere male and 47 (36.2%) were female.Approximately 97% of the students stated that they had not history of sexually transmitted diseases.

Table 3.2. Students' Knowledge About Sexually Transmitted Diseases (N= 130)

Which diseases are sexually transmitted diseases	**n**	**%**
Gonorrhea	84	16.9
Diabetes	4	0.8
Chlamydia	30	6.0
Tuberculosis	8	1.6
Genital herpes	46	9.2
HIV/AIDS	193	38.8
HPV	40	8.0
Syphilis	81	16.3
Trichomoniasis	6	1.2
Hypertension	6	1.2

Table 3.1 showed students' knowledge about sexually transmitted diseases.38.8% of the students marked AIDS, 6% Chlamydia and 8% marked HPV.In addition, 3.6% of the students indicated, to non-sexually transmitted diseases . About 0.80% selected diabetes, 1.6% seleceted tuberculosis and 1.2% selected hypertension .

Table 3.3Students' Knowledge About Transmitted Way Sexually Transmitted Diseases

Transmission ways of sexually transmitted diseases	**n**	**%**
Anal sex	102	17.1
Shaking of hands with an infected person	7	1.2
Oral sex	90	15.1
Vaginal intercourse	84	14.0
Kiss	53	8.9
From mother to baby	61	10.2
Via blood	102	17.1
Living together	10	**1.7**
Sharing injection needles	79	13.2
Sharing food/drinks	5	**0.8**
Sharing clothes	5	**0.8**

Students, were asked to mark transmission ways of sexually transmitted diseases.About 1.2% students said shaking of hands with an infected person 8.9% indicated transmission via kissing , 0.8 % students indicated sharing food/drinks and %0.8 indicated that transmission can be done through cloth sharing. (Table 3).Only 17.1% of the students stated that blood sexually transmitted diseases can be transmitted through blood.

When we asked the students about the symptoms of sexually transmitted diseases, 16.5% of the students said vaginal / penis / urethral discharge. In addition, 4.3% of the students in the hands of numbness, 2.3% of the cough said.

When we evaluate the knowledge of the students about risk behaviors, 15.4% stated that they did not use condoms and 19% stated that more than one partner was a risky behavior.

About 26.7% of the respondents indicated that the usage of condoms can help prevent STDs transmission; 24.4% indicated that the sex education can help prevent STDs transmission; 6.2% indicated that the bathing after sexual intercourse can help prevent STDs transmission; 8.2 % indicated that the usage of contraceptives can help prevent STDs transmission.

We found a significant relationship between the age of the students and the students who said that sexually transmitted diseases could be treated ($p<0.001$).We found a significant relationship between the age of the students and the students who said that sexually transmitted diseases could be treated.

60% of the students included in our study answered "no" to the question of whether sexually transmitted diseases can be asymptomatic. The rate of those who say that sexually transmitted diseases cannot be treated is 14.6%.

Table 3.4 Students' Information Resources About Sexually Transmitted Diseases

Information Resources	**N**	**%**
Book	66	9.5
Radio&TV	70	10.0
Internet	89	12.8
Friends	68	9.7
Schhool Education	76	10.9
Health Personnel	95	13.6
Father	67	9.6
Mother	55	7.9
Sister	38	5.4
Brother	32	4.6
Partner	42	6.0

In a bid to examine the sources of information about the sexually transmitted diseases (Table 3); It was seen that 13.6% of the students get information from health personnel, 12.8% of them receive information from the internet and 10.9% of them from school education.6% of the students stated that they received information from their partner.

When asked about if students would desire training and counseling on sexually transmitted diseases, 60% of the students responded " yes" while others responded no desire for such.

Table 3.5: The Comparison of Students' Average Points by Gender

Gender	Scale Total M±SD	Assertiveness M±SD	Anal/ homosexual Sexual Practices M±SD	Condom Use M±SD	Fluids M±SD	Risky behaviours M±SD
Male (n=81)	2.138±0.512	2.752±0.824	1.766±0.621	1.972±0.654	2.083±0.752	2.115±0.753
Female (n=47)	2.252±0.448	2.849±0.645	1.895±0.694	2.085±0.550	2.222±0.818	2.206±0.823
U P	1394.500 0.490	1549.000 0.387	14970.500 0.466	1689.000 0.494	1655.000 0.467	1733.00 0.690

When compared the gender of the students with the Safe Sex Behavior Questionnaire scale (Table 5), it was deduced that there was no significant relationship ($p>0.05$).But women had higher risk behaviors. It was also found that all total scale score mean (Female;2.252±0.448; male;2.138±0.512) and sub-scale scores mean of women were higher than men.

Table3.6: The Comparison of Students' Average Points by Age

Age	Scale Total M±SD	Assertiveness M±SD	Anal/ homosexual Sexual Practices M±SD	Condom Use M±SD	Fluids M±SD	Risky behaviours M±SD
20 yrs and below (n=47)	1.922±0.453	2.467±0.859	1.914±0.593	1.670±0.529	1.908±0.6419	1.892±0.668
Above 20 yrs(n=79)	2.329±0.431	2.981±0.610	1.914±0.669	2.225±0.573	2.254±0.779	2.272±0.789
U P	760.000 0.000	1037.000 0.001	1154.500 0.017	752.500 0.000	1375.000 0.039	1244.000 0.007

By comparing the the age of students with the Safe Sex Behavior Questionnaire Scale (Table 6), it was found that a a significant relationship exist between the age of the students and the scale (p=0.001).Total scale scores mean (2.329±0.431) and all subscale scores mean of the students over the age of 20 were higher.

CHAPTER FOUR

4 .DISCUSSION

In this study aim, it was aimed to determine the level of knowledge and risk behaviors of university students about STDs.The sample group of this cross-sectional study is the Department of Law at Near East University.Overall, the findings of the study examine the behavior and knowledge of the students about sexually transmitted diseases.

38.8% of the students included in our study stated that they knew about HIV / AIDS. The ratio of those who said they knew HPV was 8.8%. for example ın a study The teenagers interviewed had inferior knowledge of AIDS compared to HPV infection. Women had better information on HPV infection, is 72.6% (Drago, F.at all 2016).

A significant relationship was found between the students' sex behavior scale mean and age ($p<0.001$). The mean age of sexual behavior scale increases as age increases.In a study, it was observed that age played a role in STD knowledge score and the risk of sexual behavior increased as age increased. (Andersson-Ellstrom & Milsom ,2002) In another study with adolescents, the risk of sexually transmitted diseases increased as age increased. (Johnson et al., 2006)

In our study, 85.4% of the students said that sexually transmitted diseases can be treated.It is very important for students to find sexually transmitted diseases as treatable. Thinking that treatment of sexually transmitted diseases can help them to go to the doctor.A similar study in Rio de Janeiro (Trajman et al., 2003) Young people had thought (78%) AIDS was curable, which shows a great deal of knowledge about the STDs. In addition we found a significant relationship between the age of the students and the students who said that sexually transmitted diseases could be treated ($p<0.001$). We found a significant relationship between the age of the students and the students who said that sexually transmitted diseases could be treated.The increase in the risk of

STD despite the increase in age, the increase in the thought that treatment can be treated is positive for students' sexual health.

High-risk sexual behaviors like multiple sexual partners and non-use of condoms are usually associated with increased risk of STDs (Zuma, K.,2005).In our study, 15.4% of the students stated that not using condoms as risky behavior. In addition, 27.7% of the students stated that condom protects against sexually transmitted diseases.Harper et al. Examined risky behaviors in sexually transmitted diseases between 2003 and 2015. They found, condom use declined significantly among both female and male students from 2003 to 2015 (Harper et al.2018)

When we evaluate students' knowledge about preventive methods in sexually transmitted diseases, we found that 6.2% of the students said that bathing after sex had prevented from sexually transmitted diseases and 8.2% said that contraseptives were a protective method. This result shows that the students who participated in our study did not have enough knowledge about preventive methods in sexually transmitted diseases.

Many studies have found low knowledge about sexually transmitted diseases similar to our study. Sexual education of adolescents is very important in protection from STD. Universities can also play an important role in this education. (Samkange-Zeeb,at all 2011, Orisatoki, R. O., and Oguntibeju, O. O. 2010).

CHAPTER 5

5.Result and Recommendations

According to the findings of thisstudy, it was conducted to evaluate the knowledge levels and behaviors of the students about sexually transmitted diseases, the results are given below.

5.1.Result

5.1.1. A significant relationship was found between the students' sex behavior scale mean and age ($p<0.001$).The mean age of sexual behavior scale increases as age increases.

5.1.2. A significant relationship wasn't found between the students' sex behavior scale mean andgender marital status ($p>0.05$).

5.1.3.A significant relationship wasn't found between the students' sex behavior scale mean andmarital status ($p>0.05$).

5.1.4. It was found that there is a significant relationship between the age of the students and the students who said that sexually transmitted diseases could be treated ($p<0.001$).We found a significant relationship between the age of the students and the students who said that sexually transmitted diseases could be treated.

5.1.5. There was no significant relationship between the gender, marital status of the students and the students who said that sexually transmitted diseases could be treated ($p>0.05$).

Recommendations

In this study, it can be deduced that the Department of Law students at Near East University have risky behavior and don't have enough information about sexually transmitted diseases, thus the students need education about sexually transmitted disease. Hence, the following actions are encouraged to be taking in order to avert this unpleasant situation:

- There sould be an establishment of a counseling center on sexual health and sexually transmitted diseases which will be very useful within the Near East University.At this center, students should be screened about sexually transmitted diseases.
- Also, such establsihed centre this center should give regular trainings to students about STDs.These trainings programs should border on issues such as sexually transmitted diseases, ways of transmission, and means of protection.
- Students should be encouraged to talk about sexuality and ask questions.For this purpose, all departments in the Near East University should be provided with sexual health courses and all students should benefit from this course.
- The university student affair office should help establish health awareness clubs and societies thhrough which students can be trained to become advocates for safe beahviour among the university students
- There should be signage posters and posts around strategic locations on the campus, dormitories and school buses to remind students about the risks of sexual diseases

Research on all the faculties related to this subject will give us more detailed information.

References

Akalpler, O., & Eroglu, K. (2016). University Students' Sexual Behavior and Knowledge Levels on Common Sexually Transmitted Infections in the Turkish Republic of Northern Cyprus. Journal of Hacettepe University Faculty of Nursing, 2, 12-16.

Andersson-Ellström, A., & Milsom, I. (2002). Knowledge about prevention of sexually transmitted diseases: A longitudinal study of young women from 16-23 years of age. Sexually Transmitted Infections, 78, 339-341. doi:10.1136/sti.78.5.339

Anonymous. Centers for Disease Control and Prevention. Bioterrorism overview. https:// emergency.cdc.gov/bioterrorism/index.asp, (Erişim tarihi: 10.01.2019).

Arvin A, Campadelli-Fiume G, Mocarski (2007). Human Herpesviruses: Biology, Therapy, and Immunoprophylaxis. Cambridge University Press. Cambridge, UK.

Awang, H., Wong, L. P., Jani, R., & Low, W. Y. (2014). Knowledge of sexually transmitted diseases and sexual behaviours among Malaysian male youths. Journal of biosocial science, 46(2), 214-224.

Bamberger, D. M., Graham, G., Dennis, L., & Gerkovich, M. M. (2019). Extragenital Gonorrhea and Chlamydia Among Men and Women According to Type of Sexual Exposure. Sexually transmitted diseases.

Bradley, H., Markowitz, L. E., Gibson, T., & McQuillan, G. M. (2013). Seroprevalence of herpes simplex virus types 1 and 2—United States, 1999–2010. The Journal of infectious diseases, 209(3), 325-333.

Belkacem, A., Caumes, E., Ouanich, J., Jarlier, V., Dellion, S., Cazenave, B., & Patey, O. (2013). Changing patterns of disseminated gonococcal infection in France: cross-sectional data 2009–2011. Sex Transm Infect, 89(8), 613-615.

Bozon M, Kontula O. (1998). In: Sexual behavior and HIV/AIDS in Europe. M Hubert, N Bajos, and T Sandfort, editor. London: UCL Press;. Sexual initiation and gender in Europe; pp. 37–67.

Burstein, G. R., Zenilman, J. M., Gaydos, C. A., Diener-West, M., Howell, M. R., Brathwaite, W., & Quinn, T. C. (2001). Predictors of repeat Chlamydia trachomatis infections diagnosed by DNA amplification testing among inner city females. Sexually Transmitted Infections, 77(1), 26-32.

Centers for Disease Control and Prevention. (2016). Sexual Risk Behaviors: HIV, STD,& Teen Pregnancy Prevention. Retrieved fromhttps://www.cdc.gov/healthyyouth/ sexualbehaviors/

Colón-López, V., Ortiz, A. P., & Palefsky, J. (2010). Burden of human papillomavirus infection and related comorbidities in men: implications for research, disease prevention and health promotion among Hispanic men. Puerto Rico health sciences journal, 29(3), 232

Constantine, N. A., & Jerman, P. (2007). Acceptance of human papillomavirus vaccination among Californian parents of daughters: a representative statewide analysis. Journal of Adolescent Health, 40(2), 108-115.

Drago, F., Ciccarese, G., Zangrillo, F., Gasparini, G., Cogorno, L., Riva, S., ... & Parodi, A. (2016). A survey of current knowledge on sexually transmitted diseases and sexual behaviour in Italian adolescents. International journal of environmental research and public health, 13(4), 422.

Food and Drug Administration. (2014). Product approval-prescribing information [Package insert]. Gardasil [human papillomavirus quadrivalent (types 6, 11, 16, and 18) vaccine, recombinant], Merck & Co, Inc. Silver Spring, MD: US Department of Health and Human Services. Food and Drug Administration.

Freeman EE, Weiss HA, Glynn JR, Cross PL, Whitworth JA, Hayes RJ (2006). Herpes simplex virus 2 infection increases HIV acquisition in men and women: systematic review and meta-analysis of longitudinal studies. AIDS; 20: 73–83.

Gao, N., Fu, K., He, W., Li, R., & Lou, W. (2017). Cognition and attitude of bachelor dental students towards HIV/AIDS. Biomedical Research, 28(6), 2578-2582.

Gerend, M. A., & Barley, J. (2009). Human papillomavirus vaccine acceptability among young adult men. Sexually transmitted diseases, 36(1), 58-62.

Giuliano, A. R., Palefsky, J. M., Goldstone, S., Moreira Jr, E. D., Penny, M. E., Aranda, C., ... & Chang, Y. H. (2011). Efficacy of quadrivalent HPV vaccine against HPV Infection and disease in males. New England Journal of Medicine, 364(5), 401-411.

Girard MP, Osmanov S, Assossou OM, Kieny MP(2011). Human immuno deficiency virus (HIV) immuno pathogenesis and vaccine development: A review. Vaccine; 29: 6191-218.

Harper, C. R., Steiner, R. J., Lowry, R., Hufstetler, S., & Dittus, P. J. (2018). Variability in Condom Use Trends by Sexual Risk Behaviors: Findings from the 2003–2015 National Youth Risk Behavior Surveys. Sexually transmitted diseases, 45(6), 400-405.

Johnston, C., & Corey, L. (2016). Current concepts for genital herpes simplex virus infection: diagnostics and pathogenesis of genital tract shedding. Clinical microbiology reviews, 29(1), 149-161.

Johnson-Silver, E., & Bauman, L.J. (2006). The association of sexual experience with attitudes, beliefs, and risk behaviors of inner-city adolescents. Journal of Research on Adolescence, 16(1), 29-45. doi: 10.1111/j.1532-7795.2006.00118.x

Kam, K. M., Wong, L. K., & Fu, K. C. W. (2019). Creation of Sexually Transmitted Diseases Education Program for Young Adults in rural Cambodia. Frontiers in Public Health, 7, 50.

Kermode, M. (2019). HIV-related knowledge, attitude & risk perception amongst nurses, doctors & other healthcare workers in rural India.

Kıssınger, Patricia.(2015), Epidemiology and treatment of trichomoniasis. Current infectious disease reports, 17.6: 31.

Kumar, V., Abbas, A. K., Fausto, N., & Aster, J. C. (2014). Robbins and Cotran pathologic basis of disease, professional edition e-book. Elsevier health sciences.

Lewis, L. M., Melton, R. S., Succop, P. A., & Rosenthal, S. L. (2000). Factors influencing condom use and STD acquisition among African American college women. Journal of American College Health, 49(1), 19-23.

Lima, V. D., Lourenço, L., Yip, B., Hogg, R. S., Phillips, P., & Montaner, J. S. (2015). AIDS incidence and AIDS-related mortality in British Columbia, Canada, between 1981 and 2013: a retrospective study. The lancet HIV, 2(3), e92-e97.

Looker, K. J., Magaret, A. S., Turner, K. M., Vickerman, P., Gottlieb, S. L., & Newman, L. M. (2015). Global estimates of prevalent and incident herpes simplex virus type 2 infections in 2012. PloS one, 10(1), e114989.

Lundgren J.D.,Babiker A.G., Gordin F., Emery S., Grund B., Sharma S., Avihingsanon A., Cooper D.A., Fätkenheuer G., Llibre J.M., Molina J.M., Munderi P., Schechter M., Wood R.,

Klingman K.L., Collins S., Lane H.C., Phillips A.N., Neaton J.D. (2015),Study GroupInitiation of antiretroviral therapy in early asymptomatic HIV infection. N. Engl. J. Med.;373(9):795–807

Mbonu NC, Van den Borne B, De Vries NK. (2009) Stigma of peoplewith HIV/AIDS in Sub-SaharanAfrica: a literaturereview. J Trop Med.; 145891.

Murphey, P. A., & Nagy, S. (2002). Group membership and STI knowledge among adolescents: a ten-year window. *American Journal of Health Studies*, *17*(4).

Nsuami, J. M., Sanders, L. S., & Taylor, S. N. (2010). Knowledge of sexually transmitted infections among high school students. American Journal of Health Education, 41(4), 206-217.

Orisatoki, R. O., & Oguntibeju, O. O. (2010). Knowledge and attitudes of students at a Caribbean offshore medical school towards sexually transmitted infections and use of condoms. West Indian Medical Journal, 59(2), 171-176.

Panchaud, C., Singh, S., Feivelson, D., & Darroch, J. E. (2000). Sexually transmitted diseases among adolescents in developed countries. *Family Planning Perspectives*, 24-45.

Peipert, J. F. (2003). Genital chlamydial infections. New England Journal of Medicine, 349(25), 2424-2430.

Perez, G. K., Cruess, D. G., & Strauss, N. M. (2016). A brief information–motivation–behavioral skills intervention to promote human papillomavirus vaccination among college-aged women. Psychology research and behavior management, 9, 285.

Roberts, C. M., Pfister, J. R., & Spear, S. J. (2003). Increasing proportion of herpes simplex virus type 1 as a cause of genital herpes infection in college students. Sexually transmitted diseases, 30(10), 797-800.

Rotheram-Borus, M. J., Mahler, K. A., & Rosario, M. (1995). AIDS prevention with adolescents. AIDS Education and Prevention.

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, 11(1), 727.

Satterwhite, C. L., Joesoef, M. R., Datta, S. D., & Weinstock, H. (2008). Estimates of Chlamydia trachomatis infections among men: United States. Sexually transmitted diseases, 35(11), S3-S7.

Schiffer JT , Corey L . (2013). Rapid host immune response and viral dynamics in herpes simplex virus-2 infection. Nat Med 19:280–288. doi:10.1038/nm.3103

Schwebke, J. R., & Burgess, D. (2004). Trichomoniasis. Clinical microbiology reviews, 17(4), 794-803.

Singh AE, Romanowski B. Syphilis: Review wih emphasis on clinical, epidemiologic and some biologic feaures. Clin Microbiol Rev, 1999; 12:187

Stamm, W.E., Jones, R.B., Batteiger, B.E. (2005). Introduction to Chlamydial Diseases and Chlamydia trachomatis; In Mandell, Douglas and Benett's Principles and Practice of Infectious Diseases (2236-2268). Mandell G.L., Benett J.E., Dolin R(Ed.). 6th. Ed., Philadelphia, Churcill Livingstone.

Tao, G., & Irwin, K. L. (2006). Gonorrhea prevention and clinical care in the private sector: lessons learned and priorities for quality improvement. Sexually transmitted diseases, 33(11), 652-662.

Trajman, A., Belo, M. T., Teixeira, E. G., Dantas, V., Salomão, F. M., & Cunha, A. J. L. A. (2003). Knowledge about STD/AIDS and sexual behavior among high school students in Rio de Janeiro, Brazil. Cadernos de Saúde Pública, 19, 127-133.

Tsevat, D. G., Wiesenfeld, H. C., Parks, C., & Peipert, J. F. (2017). Sexually transmitted diseases and infertility. American journal of obstetrics and gynecology, 216(1), 1-9.

Varghese, B., Maher, J. E., Peterman, T. A., Branson, B. M., & Steketee, R. W. (2002). Reducing the risk of sexual HIV transmission: quantifying the per-act risk for HIV on the basis of choice of partner, sex act, and condom use. Sexually transmitted diseases, 29(1), 38-43.

Wald A, Langenberg AG, Krantz E, et al.(2005) The relationship between condom use and herpes simplex virus acquisition. Ann Intern Med; 143: 707–13.

World Health Organization. (2014). Report on global sexually transmitted infection surveillance 2013.

Workowski, K. A. (2015). Centers for Disease Control and Prevention sexually transmitted diseases treatment guidelines. Clinical Infectious Diseases, 61(suppl_8), S759-S762.

Workowski, K. A., & Berman, S. M. (2010). Sexually transmitted diseases treatment guidelines, 2010.

Wu, X., Hong, F., Lan, L., Zhang, C., Feng, T., & Yang, Y. (2016). Poor awareness of syphilis prevention and treatment knowledge among six different populations in south China. BMC public health, 16(1), 287.

Young, D., Xiao, C. C., Murphy, B., Moore, M., Fakhry, C., & Day, T. A. (2015). Increase in head and neck cancer in younger patients due to human papillomavirus (HPV). Oral oncology, 51(8), 727-730.

Zuma, K., Lurie, M. N., Williams, B. G., Mkaya-Mwamburi, D., Garnett, G. P., & Sturm, A. W. (2005). Risk factors of sexually transmitted infections among migrant and non-migrant sexual partnerships from rural South Africa. Epidemiology & Infection, 133(3), 421-428.