



**NEAR EAST UNIVERSITY
INSTITUTE OF GRADUATE STUDIES
DEPARTMENT OF MEDICAL AND CLINICAL MICROBIOLOGY**

**A SURVEY OF CURRENT KNOWLEDGE ON SEXUALLY TRANSMITTED
DISEASES AND SEXUAL BEHAVIOR IN STUDENTS OF NORTHERN
CYPRUS**

MSc. THESIS IN MEDICAL AND CLINICAL MICROBIOLOGY

KOLLIE T. KESSELLY

NICOSIA

JANUARY, 2024

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MASTER THESIS

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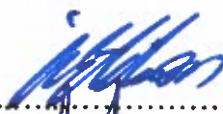
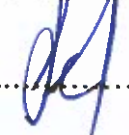


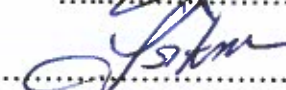
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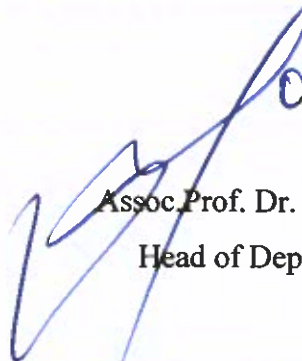
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Approval

We certify that we have read the thesis submitted by **K OLLIE T. KESSELY** entitled “**A SURVEY OF CURRENT KNOWLEDGE ON SEXUALLY TRANSMITTED DISEASES AND SEXUAL BEHAVIOR IN STUDENTS OF NORTHERN CYPRUS**” and that in our combined opinion it is fully adequate, in scope and quality, as a thesis for the degree of Master of Science in Medical & Clinical Microbiology.

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Declaration

I hereby declare that all information, documents, analysis, and results in this thesis have been collected and presented according to the academic rules and ethical guidelines of the Institute of Graduate Studies, Near East University. I also declare that as required by these rules and conduct, I have fully cited and referenced information and data that are not original to this study.

KOLLIE T. KESSELLY

...../...../2024

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KOLLIE T. KESSELY

Abstract

A survey of current knowledge on Sexually Transmitted Diseases and sexual behavior in students of Northern Cyprus

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Aim: The purpose of this study is to ascertain the present level of Knowledge of medical and Nursing Students have about STDs (STDs) and sexual behavior, given the fact that they have a significant part to play in diagnosing and curtailing the spread of STDs.

Method: The study employed a cross-sectional research design. The study included all Medical and nursing Students Studying at the Near East University during the 2023/2024 Fall Semester. The data was collected using the STD-KQ and the Sexual Risk Behaviors Scale (SRBS).

Results: The study found that 74.4 % of both medical and nurses had good knowledge about STDs and 74.8% had a lower risk of engaging in risky sexual behavior. The study found no statistically significant correlation between the student knowledge of STDs and their Sexual behavior.

Conclusion: The study concludes that both medical and nursing students have good knowledge about STDs and a lower risk of engaging in risky sexual behavior. This study also concludes that the level of education influences both Knowledge of STDs and Sexual Risk Behaviors. Since knowledge alone does not influence sexual risk behavior, studies be conducted to see whether psychological, social, and cultural factors in addition to knowledge contribute to risky behaviors

Key Words: Knowledge, Sexually, Transmitted, Diseases, Sexual, Behavior, Student

ÖZET

Kuzey Kıbrıs'taki öğrencilerde cinsel yolla bulaşan hastalıklar ve cinsel davranışlara ilişkin güncel bilgiler üzerine bir araştırma

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Ocak 2024, Sayfa

Amaç: Bu çalışmanın amacı, cinsel yolla bulaşan hastalıklar (CYBH) ve cinsel davranış hakkında tıp ve hemşirelik öğrencilerinin sahip oldukları mevcut bilgi düzeyini belirlemektir; Cinsel yolla bulaşan hastalıklar.

Yöntem: Araştırmada kesitsel bir araştırma tasarımı kullanılmıştır. Araştırmaya 2023/2024 Güz Döneminde Yakın Doğu Üniversitesinde öğrenim gören tüm Tıp ve Hemşirelik Öğrencileri katılmıştır. Veriler STD-KQ ve Cinsel Risk Davranışları Ölçeği (SRBS) kullanılarak toplandı.

Bulgular: Çalışmada hem tıp hem de hemşirelerin %74,4'ünün cinsel yolla bulaşan hastalıklar konusunda iyi bilgiye sahip olduğu ve %74,8'inin riskli cinsel davranışlarda bulunma riskinin daha düşük olduğu bulundu. Çalışma, öğrencilerin cinsel yolla bulaşan hastalıklar hakkındaki bilgileri ile Cinsel davranışları arasında istatistiksel olarak anlamlı bir ilişki bulamadı.

Sonuç: Çalışma, hem tıp hem de hemşirelik öğrencilerinin cinsel yolla bulaşan hastalıklar hakkında iyi bilgiye sahip olduğu ve riskli cinsel davranışlarda bulunma riskinin daha düşük olduğu sonucuna varmıştır. Bu çalışma aynı zamanda eğitim düzeyinin hem Cinsel Yolla Bulaşan Hastalıklar Bilgisini hem de Cinsel Risk Davranışlarını etkilediği sonucuna varmaktadır. Bilgi tek başına cinsel risk davranışını etkilemediğinden, riskli davranışlara bilginin yanı sıra psikolojik, sosyal ve kültürel faktörlerin de katkıda bulunup bulunmadığına yönelik çalışmalar yapılmalıdır.

Anahtar Kelimeler: Bilgi, Cinsel Yolla, Bulaşan, Hastalıklar, Cinsel, Davranış, Öğrenci

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List of Abbreviations

Alzheimer's disease	AD
Acquired immunodeficiency syndrome	AIDs
Antimicrobial resistance	AMR
Authorized organizational representative	AOR
Apolipoprotein E4	APOE4
Centers for disease control and prevention	CD
Chronic hepatitis B	CHB
confidence interval	CI
Central nervous system	CNS
Disability-adjusted life years	DALYs
Deoxyribonucleic acid	DNA
Genital herpes	GH
Health assistants	HAs
Hepatitis B	HB
Hepatitis B virus	HBV
Hepatocellular carcinoma	HCC
Human immunodeficiency virus	HIV
Human papillomavirus	HPV
High risk- human papillomavirus	HR-HPV
High risk sexual behavior	HRSB
Health safety and environment	HSE
Herpes stromal keratitis	HSK
Herpes simplex virus	HSV
Lymphogranuloma venereum	LGV

Low risk- human papillomavirus	LR-HPV
Men sex men	MSM
Nucleic acid amplification tests	NAATs
Near east university	NEU
Pelvic inflammatory disease	PID
Sexual risk behaviors scale	SRBs
Sexually Transmitted Diseases	STD
Sexually transmitted disease knowledge questionnaire	STD-KQ
Sexually transmitted infection	STI
Tuberculosis	TB
Turkish republic of Northern Cyprus	TRNC
World health organization	WHO

CHAPTER I

Introduction

The problem statement of this study, the purpose of this investigation, the research question that will be asked, the significance of this study, and the constraints of this study will all be described in this chapter.

Background

Sexually Transmitted Diseases, often known as STDs or STIs, are illnesses that can be transferred from one person to another through intercourse (Workowski et al., 2021; Drago et al., 2016). The illness is spread when two infected people have oral, anal, or genital contact and one of them becomes infected with the other's bacteria, virus, or other germs in their blood, sperm, vaginal secretions, or other body fluids. Needle sharing, blood transfusions, breastfeeding, and vertical transmission of infection during pregnancy and childbirth are all potential routes of transmission of infectious diseases. Sexually transmitted infections (STIs) may cause itching, redness, discomfort, burning, unusual discharge or bleeding from the penis or vagina, lower abdomen pain, fever, and painful, enlarged lymph nodes, particularly in the groin (National Health Institute, 2023; CDC, 2023).

Every day, more than a million people worldwide get an STD. According to data from the WHO, 374 million people contracted one of the four STIs in 2020 (WHO, 2023). The prevailing sexually transmitted infections (STIs) globally are trichomoniasis (with 100 million reported cases (WHO, 2023), gonorrhea (with 82 million reported cases (WHO, 2023) syphilis (with 7.1 million reported cases (WHO, 2023) and chlamydia (with 129 million reported cases (WHO, 2023). In 2016, 300 million women were living with Human papillomavirus (HPV) and 490 million people with genital herpes (WHO, 2023). HPV is the primary cause of STDs in males. Sexually transmitted illnesses also include HSV, and HIV. (WHO, 2019). Most STIs have no or very minor symptoms, therefore they are commonly missed by both patients and doctors (Tsevat et al., 2020). Prolonged exposure to STIs can have detrimental effects on a woman's reproductive health, such as the development of cancer, stillbirth, premature delivery, heightened vulnerability to HIV infection, and infertility. (Bansal, 2016; Buder, 2019; Paavonen, 2001). In low- and middle-income countries, where STIs are prevalent and mostly managed by symptomatic treatment, the process of diagnosing these infections is challenging, the time required for making new discoveries is prolonged, and contact tracing is not feasible.

Although syndromic diagnosis is quite sensitive and specific for ulcerative infections, it is frequently unable to detect other STIs, which may lead to delays in treatment (Masson, 2019).

Bacterial and parasitic STDs are treatable with antibiotics. Medications may alleviate symptoms and reduce transmission risk for many STDs, but they cannot treat those caused by viruses. The danger of contracting or transmitting STDs is drastically reduced with the proper use of latex condoms, although it is still there. Avoiding anal, vaginal, and oral sex is the surest method to keep oneself from contracting infections (Morris, 2023).

In both developing and developed nations, sexual experimentation throughout adolescence is a major contributor in the spread of STDs. Inadequate education increases the likelihood that adolescents may engage in high-risk activities that make them vulnerable to contracting STDs. To safeguard young people's reproductive health from danger, it is essential to understand STDs. The lack of education about STDs is the biggest obstacle to effective prevention efforts among young adults. Delays in diagnosis and treatment due to ignorance about STIs might exacerbate the disease. Knowledge about STIs may have a significant impact on people with STIs' propensity to seek medical attention. Several studies around the world have reported that a large percentage of respondents have a good understanding of STIs. The percentages differ across institutions: 74.7% in India, 92.4% in Nigeria, 89.9% in Tanzania, 98% in Jimma, Ethiopia, 88.5% in Dhaka, Bangladesh, 86.6% in Malaysia, 74% among medical students, 61.6% among non-medical students, and 83.1% in Pakistan. (Nigussie & Yosef 2020).

"Sexual behavior" refers to a wide range of activities. To convey their sexuality, people engage in a broad range of behaviors that are collectively referred to as sexual activity (in humans). These behavioral displays, which have both biological and cultural repercussions, are linked to sexual arousal, which is accompanied by a variety of physiological changes in the excited person, ranging from the obvious to the subtler. The word "sexual behavior" refers to a broad range of actions, some of which are carried out alone (for example, masturbation and autoerotic stimulation), while others are carried out with other people on a more consistent basis (for example, intercourse, oral sex, non-penetrating sex, and so on). Activities intended to arouse desire in possible partners can also be included in sexual conduct (courtship displays or rituals), as well as behaviors that are intended to enrich sexual encounters (foreplay, Bondage, Discipline, Sadism, Masochism, and other similar activities). The term "sexual behavior" can also refer to actions that are taken with the intention of increasing sexual encounters (Alleydog, 2023).

Studies on the association between sexual activity and sexual practices, relationships, reproductive health, STIs, and contraception have been conducted. It is acceptable and natural to engage in sexual behavior and to express one's sexuality. However, the specific setting in which these actions occur can often give the impression of being unnatural or potentially dangerous. While studies have been undertaken on several potentially harmful pursuits, there is still some disagreement over what constitutes "high-risk sexual behavior" (HRSB). Hazardous sexual activity, commonly referred to as "high-risk sexual behavior," includes engaging in sexual activity that increases a person's risk of acquiring STIs, such as HIV. There is a connection between "risky sexual behavior" and the phrase "high-risk sexual behavior." Most of the research in this subject has focused on the risks associated with engaging in unprotected sexual intercourse or having several sexual partners. (Strunin & Hingson, 1992; Lowry et al., 1994).

Those between the ages of 15 and 30 are considered young adults, and it is during this time that they undergo the many bodily and psychological transformations typical of late adolescence and early adulthood at which time they matriculate at various universities (Arriagada & Bertoni, 2014).

As a result of the new social and subjective relationships they must learn to navigate, college students are particularly susceptible to the kinds of health risks associated with their lifestyle choices—including, but not limited to, risky sexual conduct and substance misuse are prevalent among young people at this time of life. (Mendes & Lopes, 2014; Moreira & Santos, 2011; Ramis et al., 2012; Sousa et al., 2013).

Students' increased freedom to explore their sexuality at university has been attributed to their increased exposure to a variety of influences and the removal of parental constraints on their behavior, including the use of alcohol and other drugs. Because they haven't had much exposure to the issue in school, haven't gained specialized knowledge, and haven't participated in any care promotion circumstances or preventative activities relating to safer sex behaviors, newly admitted students are the most at risk (Moreira & Santos, 2011; Borges et al., 2015; Dessunti & Reis, 2012).

The realization that sexual behaviors will remain for the whole of existence gives rise to the acknowledgment of the significance of safe behaviors and formal knowledge of sexuality. These cover things like how to avoid getting pregnant too young and STDs. This insight may

contribute to the development of more targeted therapies that might be employed in educational settings. (Hugo et al., 2011; Rebello & Gomes, 2012; Nardelli et al., 2013).

It is necessary to acknowledge the sexual behavior of students in order to give subsidies that will lower students' susceptibility to and exposure to risk associated with risky sexual practices in the context of the academic setting.

Statement of the Problem

Despite making up just 25% of the population that engages in sexual activity, young people are the demographic most vulnerable to (STIs). Over 50% of newly acquired STIs worldwide are acquired by people between the ages of 15 and 24, according to recent studies. (Dehne & Riedner, 2001; Chinsebu, 2009; Yarber & Parrillo, 1992).

In addition, this is the time when young people begin to investigate their own identities, which is followed by the pursuit of autonomy and the beginning of sexual activity (Weinstein et al., 2008). On the basis of several studies on college students' sexual activity, researchers have come to the conclusion that students are a high-risk demographic that is more likely to get and transmit STDs. (Benson, 2000). Students who regularly swap partners, don't always use condoms, and have sex while under the influence of mental health drugs are examples of unsafe sexual behavior (Scott-Sheldon et al., 2010; Chanakira et al., 2014).

It has been shown in the research that there are a variety of elements that have a role in the development of hazardous sexual practices among college students. Risky sexual behavior has been found to be significantly correlated with childhood maltreatment, poor mental health, alcohol and drug abuse, relationship violence, and sexual assault (Yi et al., 2018). In general, students at boarding schools have a greater propensity to explore sexually and are more likely to engage in sexually hazardous activities. Their newly found sense of independence at these facilities, which is followed by their sense of freedom from their parents, teachers, and the community, may help to explain this. Students in colleges and universities are considered to be among the most vulnerable members of society because of their propensity to participate in sexually hazardous activities and their lack of awareness of their own vulnerabilities. Despite this, since their rates of sickness and death are lower than those of older and younger age groups, kids have historically not been prioritized when it comes to health care (Kassie et al., 2019). This matter is highly significant because college students are especially susceptible to acquiring (STDs), which can have severe and lasting repercussions, including potential

infertility if not addressed promptly (Doster, 2018). The ignorance of college students about (STDs) is a serious issue.

One of the most important markers of the health condition of an area or nation is the type and quantity of infectious illnesses that have been documented in that region or country. Infectious illnesses continue to provide a significant obstacle in terms of infection control on a worldwide scale, despite the progress that has been made in terms of both preventative and diagnostic technologies (Unemo et al., 2017; WHO, 2017).

There is a wide range of data indicating that social, economic, and behavioral variables have a significant influence on the epidemiology of illnesses in different parts of the globe (Peeling et al., 2017; Frew et al., 2016). When compared to high-income areas, low- and middle-income countries have much higher rates of syphilis, HIV, and Hepatitis B infections (Degenhardt et al., 2017).

According to research, certain infectious illnesses should be given priority based on the yearly number of Disability Adjusted Life Years (DALYs) that they cause per 100,000 people in the European Union and the European Economic Area. According to the findings, the incidence of influenza was the highest, tuberculosis was the second highest, and HIV was the third highest, followed by hepatitis B and syphilis (Cassini et al., 2018).

Hepatitis B is a virus that can cause both acute and chronic illnesses, making it a serious global health hazard to the general public. The number of persons who are chronic carriers of this illness is estimated to reach 325 million all over the globe. Hepatitis B can be passed from mother to child during childbirth or via contact with contaminated blood. It is possible for the virus to transfer from one infected individual to another via their blood or other body fluids. Furthermore, it poses a substantial risk of injury on the job to those who work in the medical field. Due of its ability to establish a long-lasting infection in the liver, it might potentially contribute to the progression of more serious ailments, including liver cirrhosis and liver cancer. Hepatitis B, on the other hand, is preventable using vaccinations that are both safe and effective, and they have a success rate of 95% in warding off Hepatitis B infections (WHO, 2020b).

There are primary, secondary, latent, and tertiary phases of syphilis, much like any other STD (Kojima & Klausner, 2018) Due to its global prevalence, it is now considered a notifiable illness (Forrestel et al., 2020), conditions affecting the central nervous system and the cardiovascular system may appear in cases of advanced syphilis (Totten et al., 2015).

Syphilis poses a significant risk to public health and has the capacity to result in widespread consequences. Concerns about syphilis center on the fact that it, like other STDs, is linked to HIV and has serious health consequences (Lang et al., 2018). Individuals with syphilis are at a greater risk to contracting HIV (Totten et al., 2015).

The global pandemic presents a substantial health risk to individuals worldwide due to the increased vulnerability of persons living with HIV/AIDS to a wide range of other infectious illnesses. The three groups most at risk of HIV infection are those who use drugs often, work in industries where sexual exploitation occurs, and are physically or mentally restrained. An increased risk of HIV infection is associated with medical operations that are not performed in sterile conditions, sexual interactions that pose a risk, and the use of needles that are contaminated with HIV (WHO, 2020c).

Certain viral diseases might be detrimental to a society's social and economic well-being some of which are STDs (Jin et al., 2019). It is possible for a number of different elements, such as the ecological balance, the demographic and cultural structure, and the natural resources, to have an effect on the health state of communities. Changes in ecosystems and climate, increases in population and migration, drug misuse, changes in the microbiome, and the absence of public health initiatives may all contribute to a rise in infectious illnesses, which in turn can lead to poor health. The health effects of infectious illnesses constitute one of the most significant markers of poverty, and as the incidence and severity of poverty are both increased by the presence of infectious diseases, one of the main factors in the spread of many infectious illnesses is poverty (Adhikari et al., 2016).

Many public health issues arise as a result of a society's population expanding unchecked. The high costs of housing in densely populated areas, the high costs or inadequacy of healthcare services, and the lack of appropriate labor may all add to the strains on healthcare systems. In order to provide for basic necessities like shelter and food, many people engage in unsafe and sometimes fatal sexual practices. These include but are not limited to HIV/AIDS, syphilis, Hepatitis B, and tuberculosis (Grief & Miller, 2019). Diseases like HIV and TB spread quickly in overcrowded environments because of factors including poor nutrition, excessive drinking and drug usage, an increase in physical and sexual assault, and discrimination. As a result, the health of society suffers as a result (Kral et al., 2001; Grief & Miller, 2019).

In Northern Cyprus's governmental hospitals and health facilities, the rates of gonorrhea, hepatitis B and C, tuberculosis, syphilis, and HIV/AIDS are startlingly high. The most common

notifiable illnesses in the nation are HIV/AIDS, syphilis, tuberculosis, and hepatitis B, all of which must be recorded by healthcare providers. There has been some success in preventing and treating these infectious illnesses, but they still pose major threats to public health worldwide and are responsible for the lives of millions and they also cause huge economic impact on a country and families.

Purpose and objectives of the Study

Researches have shown that STDs are prevalent among low-income countries, and the majority of students in Northern Cyprus are from low-income countries, that STDs are associated with densely populated places and the prices of things including accommodation are rapidly increasing in Northern Cyprus, many students may be cluster together in a particular apartment. The goal of this study is to determine Nursing and Medical students living in TNRC's current knowledge and habits about STDs, since in reality, their knowledge and behaviors determine their attitude and actions towards sex, which can impact the well-being of the population in which they belong and to see which factors influences their knowledge of STDs.

The purpose of this study is to ascertain the present level of Knowledge of medical and Nursing Student have about STDs (STDs) and sexual behavior, given the fact that they have a significant part to play in diagnosing and curtailing the spread of STDs.

Research Questions / Hypotheses

The following research issue is addressed by this study:

1. To what extent do Medical & Nursing students in Northern Cyprus currently know about sexual behavior and sexually transmitted infections?
2. Is there a connection between Medical & Nursing students in Northern Cyprus sociodemographic traits and their degree of current knowledge and sexual conduct with regard to STDs?
3. Is there a relationship between the current knowledge and sexual behaviors of STDs among Medical & Nursing students in Northern Cyprus?

Significance of the Study

To reduce the incidence of STIs and other harmful short- and long-term impacts on physical, mental, and sexual health, it is crucial to first identify college students who are susceptible to experiencing inadequate sexual well-being. The results of this study will provide the

government and other organizations with valuable insights on sexually transmitted illnesses and the sexual conduct of students in Northern Cyprus. This will enable them to formulate effective public health policies for STDs. This research will be a starting point for other researchers who are interested in conducting similar research concerning STDs. The study results will be helpful as they provide more evidence of the need for preventative measures and awareness of STDs. Potential beneficiaries of this study include public health workers, the government, students in Cyprus, citizens as a whole in Cyprus and other countries, as well as organizations.

Limitations

This study is restricted to Medical & Nursing students attending the Near East University in the Turkish Republic of Northern Cyprus. It's limited to students who can read the only student of the Medical & Nursing Faculties. It's limited to questionnaires and students might not have been honest in their answers as they might just have chosen because the questions are close-ended.

Definitions of Key Terms

Knowledge - The term "knowledge" is used to describe any kind of familiar information or perception. It's feasible that expertise and knowledge are interchangeable terms. Knowledge is not something you just pick up one day. Only through actual use can one acquire it (CareerRide, 2023).

STDs - Sexually transmitted infections (STIs) are the root of all STDs. Sexual interaction is the primary vector for their dissemination. Bacteria, viruses, and parasites all have a role in triggering STIs. Numerous bodily fluids, such as sperm, blood, and vagina fluid, have the potential to serve as vectors for the spread of STDs. It's important to remember that there are other potential vectors for STD transmission than sexual contact. Infectious diseases like syphilis and gonorrhea may be passed on to children during delivery. Needle sharing and blood transfusions can contribute to the transmission of STIs. Although symptoms are common, STIs don't always manifest themselves. STDs may be acquired from a seemingly healthy partner who is really unknowingly infected (MedlinePlus, 2023).

Sexual Behavior - is the outward expression of the innate human inclination to satisfy sexual impulses. The manner in which sexual action is performed might potentially result in unforeseen consequences. Nevertheless, the determination of whether a sexual action is

deemed hazardous may vary significantly according to cultural, gender-related, age-specific, and threshold considerations (Chawla & Sarkar, 2019).

CHAPTER II

Literature Review

Introduction

Sexually transmitted infections (STIs) are the primary cause of all STDs (STDs). Sexual interaction is the primary vector for their dissemination. Bacteria, viruses, and parasites all have a role in triggering STIs. STDs may be transferred by vaginal secretions, blood, or sperm. The transmission of certain STIs may occur via non-sexual means as well. Infectious diseases like syphilis and gonorrhea may be passed on to children during delivery. Transmission of STIs also occurs via transfusions and the sharing of needles. Symptoms of STIs are not always present. STDs may be acquired from a seemingly healthy partner who is really unknowingly infected (Mayo Clinic, 2023).

The impact of sexually transmitted infections (STIs) on worldwide sexual and reproductive health is considerable. Every day, almost one million individuals acquire new instances of STDs (STIs). In 2020, the World Health Organization projected that there will be around 374 million newly diagnosed cases of sexually transmitted infections (STIs). The published data includes 129 million cases of chlamydia, 82 million cases of gonorrhea, 7.1 million cases of syphilis, and 156 cases of trichomoniasis. The primary causative factor for the development of cervical cancer and anal cancer in males who engage in sexual activity with other males is HPV infection. It is predicted to impact over 300 million women. Approximately 490 million people were affected with genital herpes in 2016. There are approximately 296 million individuals worldwide who have chronic hepatitis B. (WHO, 2023).

Approximately 340 million individuals are infected with STDs each year, as estimated by the World Health Organization (WHO). (Siracusano et al., 2014). Sexually transmitted infections have a significant influence on sexual and reproductive health, as well as the overall welfare of both the mother and the newborn. Furthermore, they possess the capacity to induce long-lasting health complications. 40% of syphilis patients who do not get treatment are at risk of developing tertiary syphilis, which, in extreme circumstances, may even harm the cardiovascular and brain systems. Congenital syphilis may cause serious local and systemic difficulties, and in certain cases, it can even lead to the death of a newborn. Chlamydial and gonococcal infections can result in infertility or bad pregnancy outcomes (Phillips, 2019; Unemo et al., 2019). A number of different forms of the human papillomavirus have been

linked to cervical, anogenital, or oropharyngeal cancer (De Martel et al., 2017). Sexually transmitted infections are linked to HIV infection. After 10 years following the diagnosis of syphilis, it was claimed that the rate of HIV infection might reach up to twenty percent (Hook, 2017). STDs may impose a psychological, social, and financial impact on affected individuals. The United States had an annual expenditure of over \$3 billion in 2018 alone for the direct medical expenses associated with diagnosing and treating 19.7 million persons with a sexually transmitted disease (STD). (Gottlieb et al., 2014). Having a fundamental understanding of the public health burden at a macro level was a crucial basis for the creation and execution of health policies.

Genital Herpes (HSV)

Genital herpes (GH) is caused by two types of herpes simplex viruses (HSV), namely HSV-1 and HSV-2. These viruses are linked to one another but are not the same (García-Cisneros et al., 2019).

Herpes simplex virus type 1 (HSV-1) and type 2 (HSV-2) are highly prevalent infections in humans, with global prevalence rates of around 67% and 13%, respectively. (James et al., 2020). In 2016, it was projected that around 3.7 billion persons throughout the globe had a positive serology for HSV-1, and almost 500 million had a positive serology for HSV-2 (James et al., 2020). Both HSV-1 and HSV-2 can be transferred by close physical contact between individuals, leading to a long-lasting infection. HSV-1 infection often happens during childhood and is spread through the mucous membranes of the mouth and lips. Infection with HSV-2 typically takes place later in life and is transmitted sexually. In most cases, infection with one type of HSV leads to the development of immunity that protects against subsequent infections with the same serotype (Knipe et al, 2013) but this is not the case with the other kind. Based on 2016 predictions, it was predicted that there were approximately 491.5 million individuals globally, aged 15 to 49, who were infected with HSV-2. The seroprevalence rate for this infection was 13.2%. Additionally, approximately 3.75 billion individuals aged 0 to 49 were affected by HSV-1, with a seroprevalence rate of 66.6%. (Looker et al., 2017). The African area has the greatest seroprevalence worldwide.

Infections produced by HSV-1 and HSV-2 can lead to symptoms that range from mild to severe, or perhaps show no signs at all. HSV creates an illness that is often mild and goes away on its own in immunocompetent persons. On the other hand, HSV infection is also linked to a

higher probability of sickness and death in some individuals, for reasons that are not fully understood. (Zhang, 2020)

The herpes simplex virus (HSV) is the causative agent for several illnesses such as cold sores, vaginal herpes, herpes stromal keratitis (HSK), dermatitis herpetic, meningitis, widespread sickness in infants, and herpes simplex encephalitis. Eczema herpeticum can potentially be caused by the herpes simplex virus. Multiple papers provide more data supporting the correlation between HSV infection and neurodegenerative diseases. The final result of an HSV infection is defined by the relationship it forms with the host, specifically in relation to the immune system. There is a correlation between inherited flaws in the CNS's intrinsic and innate defensive systems and an increased likelihood of developing HSE (Zhang, 2020). People who have low levels of T-cell immunity are at a greater risk of developing recurring cases of meningitis, pneumonitis, and hepatitis (Hull et al., 1984).

Untreated newborn infections exhibit greater aggressiveness compared to adult infections, mostly due to the young age of the immune system. This aggressiveness leads to systemic viral dispersion, which is associated with high death and morbidity rates (Brown et al., 1987; Brown et al., 2007; Whitley et al., 1991). Moreover, there is substantial evidence suggesting that persons carrying the apolipoprotein E 4 (APOE4) allele are more prone to acquiring the herpes simplex virus type 1 (HSV-1) and therefore developing Alzheimer's disease (AD). The data unequivocally establish the essential role of both the innate and adaptive immune responses in regulating HSV infection and mitigating the severity of pathogenesis. In addition, they demonstrate that host genetic variations are responsible for some of the most severe kinds of illness. Nevertheless, HSV possesses virulence characteristics that are remarkably well-suited to both alter and evade the immune system. (Schulz & Mossman, 2015; Christensen & Paludan, 2017). In addition, a reaction of the immune system that is exaggerated or out of control might contribute to the etiology of an illness, as shown in HSK (Rajasagi & Rouse, 2019; Lobo et al., 2019).

Human Immune Virus (HIV)

Human immunodeficiency virus (HIV) is a viral infection that primarily targets the body's immune system. AIDS refers to the most catastrophic phase of the disease. (WHO, 2023).

HIV specifically targets the body's leukocytes, resulting in a compromised immune system. This increases the likelihood of an individual developing illnesses such as tuberculosis, infections, and some types of cancer. HIV may be transmitted between persons by various

bodily fluids, such as blood, breast milk, semen, and vaginal secretions. It is non-transmissible by physical contact, such as kissing, hugging, or sharing meals. Additionally, it may be passed on from a woman to her child. Antiretroviral treatment, sometimes known as ART, may both treat and prevent HIV infection. If HIV is not treated, AIDS may develop, however, this usually takes a very long time. As per the World Health Organization (WHO), advanced HIV disease (AHD) in adults and adolescents is characterized by a CD4 cell count below 200 cells/mm³ or being in WHO stage 3 or 4. Regardless of their age, children under 5 years old with HIV are classified as having severe HIV illness. (WHO, 2023).

Since its discovery, HIV has been responsible for 40,4 million [32,9–51,3 million] deaths worldwide and is still actively transmitted in every country on the planet, with certain nations reporting rising trends in new infections despite a general downward trend. By the conclusion of 2022, it is estimated that the worldwide tally of HIV infections would reach 39.0 million [33.1-45.7 million]. Approximately 25.6 million people will reside in the WHO African Region, constituting almost two-thirds of the whole figure. In 2022, the number of deaths caused by HIV-related reasons was 630,000, with a range of 480,000 to 880,000. Furthermore, 1.3 million people, within a range of 1.0 to 1.7 million, were infected with HIV. (WHO, 2023).

Risk Factors of HIV

The below instances illustrate activities and conditions that elevate an individual's susceptibility to acquiring HIV: Engaging in the act of using infected needles, syringes, and other equipment for injecting drugs, as well as exchanging drug solutions during the process; Exposure to unhygienic injections, blood transfusions, tissue transplants, and unsterile cutting during medical operations; Engaging in hazardous alcohol consumption and drug use during sexual encounters; having a sexually transmitted infection (STI) that is not the common cold, such as bacterial vaginosis, herpes, chlamydia, gonorrhea, or syphilis (WHO, 2023).

Chlamydia

Chlamydia trachomatis is the bacterium that causes this prevalent sexually transmitted illness. This can produce proctitis, urethritis, and cervicitis. In females, these infections may result in the following symptoms: This syndrome manifests as ectopic pregnancy, tubal factor infertility, pelvic inflammatory disease (PID), and chronic pelvic pain. (CDC, 2023).

The bacteria Chlamydia trachomatis is the cause of a unique type of sexually transmitted disease (STD) known as lymphogranuloma venereum (LGV). Proctitis outbreaks have recently

been reported in people who identify as homosexual, bisexual, or who have sex with men (MSM). (O'Farrell et al., 2008; White, 2009).

The Centers for Disease Control and Prevention (CDC) estimates that there were four million cases of chlamydial infections in 2018. (Kreisel et al., 2021). Furthermore, the US CDC reports that chlamydia is the most common sexually transmitted illness to be detected there (2021). It might be challenging to identify the source of many instances of chlamydia. Most people who have been diagnosed with the illness don't show any symptoms, thus they do not get tested. Chlamydia is more prevalent in adolescents and young adults. Of all newly diagnosed cases of chlamydia, two-thirds are in youths between the ages of 15 and 24. (Kreouths et al., 2021). Approximately one in every twenty sexually active young women aged 14 to 24 are infected with chlamydia (Torrone et al., 2014).

Still, inequalities in opportunities persist among various ethnic and racial minority groups. In 2021, the rate of chlamydia infection among African Americans and other Blacks was six times higher than that of Whites (Marcus et al., 2010). Another illness that is frequently contracted by men who have intercourse with other men is chlamydia. Within MSM, the range of rectal chlamydial infection prevalence is 3.0% to 10.5%. (Marcus et al., 2010; Pinsky et al., 2012). There has been a range of 0.5% to 2.3% in the percentage of MSM that tested positive for pharyngeal chlamydial infection. (Pinsky et al., 2012; Park et al., 2012).

Oral, anal, or vaginal intercourse with an infected person can transfer chlamydia. It is not necessary for there to be any sperm present in order to contract or transmit the virus. Chlamydia may be passed from mother to kid during delivery if the mother is infected while pregnant. Some newborns may develop pneumonia or ophthalmia neonatorum (conjunctivitis) as a result of this condition (Frommell et al., 1979; Hammerschlag et al., 1982; Heggie et al., 1981; Schachter et al., 1986). In babies who were infected at birth, an infection in the rectal or vaginal area might last for one year or even longer (Bell et al., 1992). After the neonatal period, however, young children who have a vaginal, urethral, or rectal infection should have the possibility of sexual assault considered. Chlamydia patients who have been well treated for the disease are susceptible to reinfection if they engage in sexual activity with a partner who is infected. (Batteiger et al., 2010).

Risk factors for Chlamydia

Individuals who partake in sexual intercourse without using a condom are at risk of contracting chlamydia if their partner already has the virus. This applies to both vaginal, oral, and anal intercourse. It is a highly frequent sexually transmitted disease, particularly among those of younger age ((Kreisel et al., 2021). Because of their behaviors, their biology, and their culture, sexually active young people have a significantly increased chance of contracting chlamydia. Some people don't always use condoms (Eaton et al., 2012. During the period when chlamydia is very infectious, certain individuals may transition from one monogamous partnership to another. Consequently, the probability of transmission may increase. (Kraut-Becher & Aral, 2003). Cervical ectopy is a condition that may affect teenage girls and young women. This condition occurs when cells normally found on the endocervix migrate to the ectocervix (Singer, 1975). It's possible that having a cervical ectopy makes you more susceptible to getting chlamydia. Obstacles may exist that hinder young individuals from accessing STD prevention programs, hence potentially contributing to the elevated prevalence of chlamydia among young people. Some of these obstacles include a lack of accessible transportation, financial burdens, and a stigmatizing perception (Kraut-Becher & Aral, 2003; Singer, 1975; Cunningham et al., 2009; Elliott & Larson, 2004; Tilson et al., 2004). MSM are at risk of contracting chlamydia because to the possibility of transmission through oral or anal intercourse. The prevalence of rectal infections among MSM ranges from three percent to ten and a half percent. (Marcus et al., 2010; Pinsky et al., 2012). The prevalence of pharyngeal infection among men who have sex with men (MSM) varies from 0.5% to 2.3%. (Pinsky et al., 2012; Park et al., 2012).

Symptoms

Chlamydia is an infection commonly known as a "silent" illness. This is because the majority of infected individuals do not exhibit any symptoms and have normal results on physical examination. In different settings and using different research methods, scientists have shown that different proportions of chlamydia patients develop symptoms. According to the findings of two modeling studies, around 10% of males and a varying percentage of 5% to 30% of females with a confirmed infection display symptoms. (Farley et al., 2003; Korenromp et al., 2002). The duration of chlamydia's dormancy in the body is yet unknown. Because the organism has a somewhat sluggish replication cycle, symptoms may not begin to manifest in persons who get symptoms until many weeks after they have been exposed to the organism. In

females, the cervix is the main location of infection for the bacteria. This might lead to endocervical discharge that is mucopurulent and easily cause bleeding from the endocervical canal, which are symptoms and indicators of cervicitis. It is also possible for the urethra to get infected. This might result in signs and symptoms of urethritis, such as frequent urination, blood in the urine, and dysuria. Pelvic inflammatory disease (PID) can occur when an infection spreads from the cervix to more developed reproductive organs, such as the uterus and fallopian tubes. PID may be asymptomatic. (also known as "subclinical PID") (Wiesenfeld et al., 2005) or acute, with typical symptoms that include discomfort in the abdomen and/or the pelvis. During the examination, you may experience symptoms such as cervical motion discomfort and tenderness in the uterus or adnexa. Urethritis, which is marked by a slimy or watery discharge from the urethra and painful urination, typically affects guys who have these symptoms. Some men have testicular discomfort, soreness, and swelling on just one side of their body when they have epididymitis (with or without clinical urethritis) (Berger et al., 1978).

Both males and females are prone to acquiring chlamydia during anal intercourse. This may take place either directly, as in the case of receptive anal intercourse, or indirectly, as the result of the virus spreading from a woman's cervix and vagina (Barry et al., 2010; Jones et al., 1985). Even while these infections often don't create any symptoms, they have the potential to induce proctitis symptoms, such as rectal discomfort, discharge, and/or bleeding (Jones et al., 1985; Quinn et al., 1981; Thompson et al., 1989). Men and women can get conjunctivitis if they come into touch with infectious vaginal fluids (Kalayoglu, 2002). Even while having oral intercourse may transfer chlamydia to the throat, most people don't experience any signs of the infection. Pharyngitis development does not appear to be influenced by this factor. (Jones et al., 1985).

Gonorrhoea

Neisseria gonorrhoeae, often known as the gonococcus, is the pathogenic bacterium that is responsible for the sexually transmitted infection (STI) known as gonorrhea. Approximately 87 million incident instances were globally documented in 2016 among persons between the ages of 15 and 49. 20 cases per 1000 women and 26 cases per 1000 males comprised the incidence rate. (Rowley et al., 2019).

Patients who have gonorrhea frequently experience recurrent infections, which may affect the conjunctiva, rectum, urogenital tract, oropharynx, or recurrent oropharynx. Urogenital

infections often present asymptotically, especially in females. However, regardless of whether symptoms are present or not, gonorrhoea is associated with a considerable amount of illness. Infertility, chronic pelvic pain, pelvic inflammatory disease, and ectopic pregnancy are all conditions that can lead to severe consequences and outcomes for women. (Unemo et al., 2019). Pregnancy-associated infections have been linked to a number of adverse birth outcomes, including neonatal conjunctivitis and low birth weight, both of which have the potential to result in blindness. (Unemo et al., 2019; WHO, 2023). Epididymitis is a condition that may be brought on by gonorrhoea in males (Unemo et al., 2019). Rectal and pharyngeal gonorrhoea infections, which frequently remain asymptomatic, are common among guys who engage in sexual activity with other men (MSM). Nevertheless, these diseases can also be common in women and, specifically, in heterosexual males. (Chan et al., 2016) MSM are the primary demographic affected by the bulk of gonorrhoea cases. Furthermore, the presence of gonorrhoea serves as a contributing factor in the transmission of the human immunodeficiency virus (HIV). (Beck et al., 1996).

Globally, gonorrhoea is severely underreported and underdiagnosed (WHO, 2023). Over 50% of STDs (STIs) go unnoticed or unreported, even in wealthy nations with sophisticated STI monitoring systems. (Van Lier et al., 2016; Satterwhite et al., 2013). Limited availability of advanced diagnostic techniques like nucleic acid amplification tests (NAATs) is linked to higher rates of both under diagnosis and underreporting in low-resource and syndromic-management environments. Certain demographic groups, including teenagers, young adults, specific racial and ethnic communities, low-income areas, medically underserved populations, sex workers, and others, may be less likely to disclose their health issues due to their tendency to delay seeking medical care until symptoms arise. (Leichliter et al., 2020).

The World Health Organization (WHO) aims to achieve a 90% reduction in global gonorrhoea prevalence by the year 2030. (WHO, 2016). National STI trend monitoring is advised to track how well this objective is being met.) Regular prevalence assessments of bacterial sexually transmitted infections (STIs) should be conducted every two to three years among diverse groups of both men and women. This should include pregnant women, women seeking family planning services, military recruits, and males having occupational health checks. (WHO, 2023) It is crucial to constantly monitor populations at high risk, such as men who engage in sexual activity with other men (MSM) and individuals involved in sex work. (WHO, 2023; WHO, 2016).

The World Health Organization (WHO) use epidemic models to offer prevalence estimates of curable non-viral sexually transmitted infections (STIs) on a global and regional scale. Nevertheless, it is crucial to recognize the scarcity of accurate prevalence data points while generating these estimations. (Rowley et al., 2019; WHO, 2023). Crucially, the existing estimates of the prevalence of gonorrhoea do not take into account infections in the rectum and throat, and do not particularly consider important demographic groups such as men who have sex with men (MSM) and sex workers. These groups are anticipated to play a substantial role in the overall burden of infection worldwide. (Rowley et al., 2019).

The World Health Organization (WHO) has raised concern about the possible appearance of untreatable gonorrhoea in the near future. (Unemo et al, 2019) because to the spread of *N. gonorrhoeae*'s antimicrobial resistance (AMR) to all treatment medications. Prevalence statistics at the national level are a crucial barometer of success in combating gonorrhoea and STIs in individual states and throughout the world (WHO, 2023).

Human Papillomavirus (HPV)

HPV is a small DNA virus that belongs to the Papillomaviridae family. This virus may be classified into two separate categories: high-risk HPVs (HR-HPVs) and low-risk HPVs (LR-HPVs). Anogenital and cutaneous warts are caused by the former, whilst the latter is responsible for malignancies in the oropharynx, tonsil, throat, as well as anogenital cancers such cervical, vulva, vaginal, and penile cancers. (De Martel et al., 2012 a; Forman et al., 2012; Buchanan et al., 2016; Asiaf et al., 2014; De Martel et al., 2017b).

Sub-Saharan Africa has the greatest prevalence of cervical HPV among women, with a rate of 24 percent. This is followed by Southeast Asia at 14 percent, Latin America and the Caribbean at 16 percent, and eastern Europe at 14 percent. (Bruni et al., 2010). There is a large amount of variation in prevalence among male's dependent on sexual trends.

Based on available evidence, the virus is more prevalent among the following demographic groups: women living with HIV, men who engage in sexual activity with other men, immunocompromised individuals, those who are co-infected with other sexually transmitted infections (STIs), those who are on immunosuppressive medications, and children who have experienced sexual abuse, It is projected that an estimated 625,600 females and 69,400 males will receive cancer diagnoses annually due to HPV-associated infections. In 2020, the global incidence of cervical cancer was anticipated to be 604,127 new cases, with 341 831 fatalities. (Sung et al., 2021). Among women, cervical cancer is the fourth most significant cause of death

connected to cancer. malignancies of the cervix are responsible for 93% of all HPV-related malignancies in females (de Martel et al., 2020).

Countries with low and moderate socioeconomic levels exhibit the highest rates of occurrence and death from cervical cancer. This highlights significant differences since the death rate from cervical cancer is three times greater in low- and middle-income nations than it is in high-income nations.

Hepatitis B

The extremely infectious Hepatitis B virus presents a substantial worldwide health threat. The hepatovirus known as hepatitis B virus (HBV) is a member of the Hepadnaviridae family and is the cause of a potentially fatal liver infection. Blood, semen, and vaginal secretions are frequently implicated in its transmission. More than 95% of persons who get infected with HBV may recover from the virus without treatment. Both acute clinical illness and asymptomatic HBV infection may be detected with screening. HBV infection may cause a wide range of symptoms, both acute and chronic (Tripathi & Mousa, 2019).

Chronic hepatitis B (CHB) infection can lead to cirrhosis, liver failure, and hepatocellular carcinoma (HCC), however these consequences can be avoided with antiviral medication or HBV immunization. In 2016, the World Health Organization (WHO) set goals to reduce the occurrence of viral hepatitis by 90% and lower the number of deaths caused by it by 65% by the year 2030. (Ott et al., 2017). The World Health Organization (WHO) estimated in 2019 that there will be 1.5 million new instances of chronic hepatitis B (CHB) and 820,000 fatalities attributed to the hepatitis B virus (HBV). These numbers pose a significant risk to the important measures aimed at eliminating viral hepatitis. (Martinez et al., 2021).

In the WHO Western Pacific Region, there is a total of 116 million persons who are chronically sick. Similarly, the WHO African Region has a population of 81 million individuals who are chronically infected. The burden of infection is greatest in these two regions. The WHO Region of the Eastern Mediterranean has a total of sixty million infected persons, the WHO Region of Southeast Asia has eighteen million infected people, the WHO Region of Europe has fourteen million infected people, and the WHO Region of the Americas has five million infected people. (WHO, 2023)

Related Literature

Knowledge of STDs

Folasayo et al (2017) A study was conducted to assess the level of awareness of STDs (STDs) among university students in Malaysia. The study utilized a cross-sectional study design. The survey was administered using an internet-based questionnaire, which was filled out by a combined total of 700 university students from both health-related and non-health-related disciplines. Out of the total number of students, 255 were male and 445 were female. The age range of these students spanned from 17 to 30. 86.6% of the participants, with 50.4% being conscious of the potential, were familiar with STDs (STDs). HIV is the predominant sexually transmitted disease (STD) that students are aware of, with 83.6% of them having knowledge about it. In contrast, chlamydia and trichomoniasis are seldom recognized, with just 26% and 21.0% of students being familiar with them, respectively. A significant link was observed between gender, age group, educational level, and faculty type, and the degree of knowledge (with p-values less than 0.05). The vast majority of them (88.8%) were aware that STD testing was essential, but only 63.8% of them were aware that condom usage was protective. The vast majority of respondents had the firm belief that therapy needs to be sought out as soon as possible if either they (85.5% of respondents) or their spouses (87.4%) exhibited symptoms. 66.7 percent of sexually active students have engaged in sexual activity with many partners, while 18 percent have engaged in sexual activity with individuals involved in the sex industry. In addition, 17.4 percent of sexually active students have engaged in sexual activity after using alcohol, while 9.4 percent have done so after using drugs. The research revealed that the age range of 24 to 30 years old (with an odds ratio (AOR) of 0.57 and a 95% confidence interval (CI) of 0.377-0.859) and the type of faculty (with an AOR of 5.69 and a 95% CI of 4.019-8.057) were the primary determinants of the knowledge level, as determined by logistic regression analysis. There is still a dearth of comprehension of the elements that lead to STDs (STDs) that are not connected to HIV. It is concerning to note that the sexually active students in our research engaged in hazardous behavior. (Folasayo et al., 2017).

Sekirime et al (2001) Performed a study on the knowledge, attitudes, and behaviors about sexually transmitted illnesses among university students in Kampala. This research was a descriptive cross-sectional survey conducted in January 1994. The participants were non-medical students enrolled at Makerere University and residing in one of the nine halls of residence. Among these halls, three were designated for women and six for men. The study

employed a self-administered questionnaire including a sequence of encoded inquiries. The questions examined socio-demographic variables, understanding of the features and outcomes of common STDs, various patterns of sexual activity, and strategies for handling STDs. The sample of the study was 400 students. Students were more likely to be familiar with more prevalent STDs including gonorrhea, syphilis, and HIV/AIDS than with the less common ones. *Trichomonas vaginalis* was more familiar to women than men ($X^2 = 17.1$; $p = 0.014$). Students had a good understanding of the common signs of STDs; females were more attuned to the possibility that abnormal vaginal discharge or monthly disruptions would be indicative of an STD, while males were more likely to suspect an STD when they had painful micturition. Of the individuals polled, 50% of males and 37.5% of females were knowledgeable with the fact that gonorrhea can cause painful urination. Among the surveyed population, 63% of males and 71.5% of females demonstrated knowledge of the potential occurrence of pus discharge from the vaginal canal as a result of the illness. Seventy-seven percent of the students, with an equal distribution of boys and girls, recognized the correlation between syphilis and genital ulcers. In contrast, 61.2% of the students (59.8% male and 62.5% female) correctly linked syphilis with an itchy skin rash. The students clearly lack comprehension of the clinical symptoms of this disease. The majority of students have a comprehensive understanding of the clinical manifestations of HIV/AIDS. the relationship between Knowledge on the causes of predisposing factors of STDs such as Multiple sexual partners, unsafe sexual encounters, rape, ignorance, extramarital sex, and intoxication were not significant (Sekirime et al (2001).

Eksi & Kömürçü (2014). The study utilized a descriptive and prospective research design to assess the degree of knowledge on STDs (STDs) at Marmara University's Goztepe Campus in Turkey. The study was conducted from 2005-2006 with 888 as the sample using the random sampling technique. HIV/AIDS was identified as the predominant sexually transmitted disease (STD), with a prevalence rate of 94%. This was followed by hepatitis, which had a prevalence rate of 82.9%, gonorrhea at 65.1%, and syphilis at 61%. The most widespread sexually transmitted infections, with low rates of identification for their common names, were genital warts (HPV) (29.4%), herpes genitalis (6%), chlamydia, and trichomonas vaginalis (3.7%). Thirty-three percent, twenty-seven percent, and twenty-four percent of female students believe that genital-to-genital transmission of STDs does not occur. Similar percentages of male students (29.5%, 27.4%, and 20.7%) believe that STDs (STDs) cannot be spread via vaginal contact, anal sex, or maternal transmission. Female students had a prevalence rate of 50.5% for "warts, wounds, or ulcers in the genital area," but male students had a prevalence rate of 50.9%

for "vaginal or urethral discharge." There was a significant disparity in understanding of vaginal/urethral discharge and transmission from mother to newborn between male and female students, as evidenced by a p-value of less than 0.05. 74.6% of males and 69.3% of females acknowledged the necessity of using condoms for protection. However, 223 males (47.6%) and 165 ladies (39.3%) expressed their belief that individuals should utilize condoms presently or in the coming times. (Eksi & Kömürçü, 2014).

A cross-sectional research study was undertaken at Mizan-Aman Polytechnic College in Southwest Ethiopia, including a sample size of 453 students. The study employed a random sampling method to assess the students' understanding of STDs (STDs) and the factors linked to them. Out of the total number of responders (453), 216 (or 47.7%) cited sexual contact as a mechanism of transmission for STIs. One hundred fifty (33.1%) of the respondent's condoms were used to prevent STIs, and ten (2.2%) of the respondents had misunderstandings (concerning contraceptive pills) regarding the protection of STIs. A total of 177 (39.1%) out of the 453 had an adequate understanding of sexually transmitted illnesses. The 103 male respondents (58.2%) who had a strong awareness of sexually transmitted illnesses were students, while the 74 female respondents (41.8%) were also students (Nigussie & Yosef, 2020).

A study was conducted among high school and university students to evaluate their understanding of STDs and risky behaviors. by Visalli et al., (2019). The study was carried out by distributing an anonymous survey to a combined total of 1228 students who were currently enrolled in high schools and institutions located in Sicily, Italy. The roster of sexually transmitted illnesses include HIV, syphilis, hepatitis A, hepatitis C, HPV infection, and meningitis. HIV/AIDS was the most widely acknowledged among sexually transmitted infections (STIs), whereas HPV had the lowest level of awareness. Specifically, 98.9% of students (with a 95% confidence interval of 95.5-102.2) correctly recognized HIV/AIDS as a sexually transmitted infection (STI), whereas 68.3% (with a 95% confidence interval of 49.5-87.2) accurately identified syphilis. Approximately 35% of the students accurately identified HPV infection as a sexually transmitted illness, with a confidence interval of 9.1% to 60.9%. The mean knowledge score was 10.3 ± 3.4 (95% CI: 10.1-10.5) on a scale ranging from 0 to 18. University students overall, and science students, in particular, show a rising trend. Age was positively connected with the knowledge score (P 0.001. Italian pupils likewise outperformed their international counterparts on this test (P = 0.0048). In addition, individuals

with a more scientific background tend to know more about STIs than their peers in college ($P < 0.001$) (Visalli et al., 2019).

Amu & Adegun (2015) A research was conducted to assess the level of awareness and knowledge regarding sexually transmitted illnesses among adolescents in Ado, a city located in South Western Nigeria. The research method used a cross-sectional descriptive approach. Using a multistage sampling technique, 550 youths were selected from secondary schools in the Ado Local Government Area of Ekiti State. There were public and private schools in this group.

Four hundred ninety-nine of the respondents, or 92.4 percent, were familiar with the topic of sexually transmitted illnesses. Out of the respondents, 80% were aware of just one type of sexually transmitted infection (STI). The two STIs that were most commonly cited were gonorrhea (20%) and HIV/AIDS (68%). The majority of respondents, over seventy-five percent, demonstrated awareness of the modes of transmission for sexually transmitted illnesses. However, a small portion of them also harbored misconceptions. The most prevalent symptom, reported 77.4% of the time, was weight loss. This was followed by painful urination, reported 68.9% of the time, and genital ulcer, reported 54.1% of the time. Collectively, a little 6.9% of the individuals surveyed possessed a commendable comprehension of sexually transmitted illnesses (STIs), whilst the remainder participants exhibited either moderate or inadequate knowledge. According to the poll, secondary school pupils in the Ado Local Government Area have a merely moderate level of understanding of STDs. The research proposed the inclusion of studies on sexually transmitted illnesses (STIs) in school curricula, as well as the intensification of media activities to enhance public awareness and education about STIs.

Mwambete and Mtaturu, (2006) A study was conducted in Dares Salaam, Tanzania, using a cross-sectional methodology and a semi-structured questionnaire to evaluate the extent of understanding among secondary school students on STDs (STDs), as well as their attitudes towards sexual behavior and STDs. The researchers sought to ascertain the sentiments of the pupils toward these subjects. Employing a direct random sampling technique, with a sample size of 635 pupils. The findings suggest that a substantial percentage of students (98%) admitted to having information about STDs (STDs); nevertheless, their understanding of the symptoms linked to STDs was limited. In a similar vein, 147 students, or 23 percent of the total, were unaware that sexual contact is not the only way that STDs may be spread. The

proportion of students that successfully identified all the STDs (STDs) was same for students at the ordinary (10.5%) and advanced (10.6%) levels, with a statistically significant difference ($p < 0.001$). A total of 32 participants, which accounts for 8% of the sample, had no indication of being capable to identifying any tracer STDs (STDs). Although around 96% of respondents claimed their capacity to protect themselves from acquiring STDs, 38% of them acknowledged being susceptible to contracting STDs. The overwhelming majority of participants (99%) reported having many sources of knowledge about STDs (STDs), with television and radio being the most commonly cited sources. Nevertheless, it is noteworthy that none of the participants indicated their parents as a source of information ($p < 0.001$ for this observation). When asked about their susceptibility to STDs (STDs), 503 students, or 79% of the total, agreed that female students were more susceptible to developing STDs compared to male students.

The research findings indicate a correlation between students' educational levels and a lack of awareness regarding STDs. The absence of information comprises the capacity to identify certain STDs (STDs), express symptoms associated with STDs, and comprehend their method of transmission. Female students exhibit a higher propensity for contracting STDs (STDs) in comparison to their male counterparts. Utilizing mass media as an educational tool to inform students about STDs (STDs) remains the most efficacious approach.

In 2015, Mou et al conducted a cross-sectional investigation. Among the 402 female students, originating from seven different institutions in Dhaka, Bangladesh. The objective of the study was to evaluate the levels of knowledge and attitudes about STDs (STDs), HIV/AIDS, and reproductive health among young female university students (aged 19-27) in Dhaka, Bangladesh. Face-to-face interviews utilizing a standardized questionnaire were used to gather data on sociodemographic details, knowledge, and attitudes on HIV/AIDS, STDs (STDs), and reproductive health. The data were evaluated using descriptive analysis, and frequency and percentage breakdowns of the results were given. The great majority of research participants were young individuals who had never been married. The majority of the participants (66%) knew about STDs and (79%) claimed that they had prior knowledge of HIV/AIDS. On the other hand, there was a lack of awareness about the causes of the illnesses and how to avoid contracting them. Ninety percent of respondents believe that HIV/AIDS poses a danger to the public health in Bangladesh. The frequency of dangerous sexual conduct (18%), the high percentage of illiteracy (76%), the rise in mortality (20%), and the distaste for Western culture (31%) are the key reasons affecting this attitude. Of those who participated in the study, 65% said that practicing safe sexual behavior would help prevent AIDS, 55% said that moral

education and religious values should be upheld, and 59% said that knowledge about AIDS will help stop its spread. Although the majority of young female students in Bangladesh were aware of HIV/AIDS, they lacked significant understanding about how the disease spreads and how to prevent it. Efforts to prevent sexually transmitted illnesses and HIV/AIDS should focus on devising techniques to educate adolescent girls about reproductive health. Barandouzi & Cong (2019) carried out research on American college students' knowledge of STDs. Descriptive research was conducted using a cross-sectional design in this study. 345 undergraduate students from a major public institution in the US participated in the study. The pupils were selected using a procedure known as convenience sampling. Undergraduate students' mean and standard deviation scores for the total number of correct answers on the STD-KQ were 15.66 and 5.84, respectively. (out of 27). Variation in student understanding of sexually transmitted disease (STD) etiology was observed. The majority of students (n=301, 87.20%) acknowledged that not all STDs are caused by the same virus. Also, 83.20% of the people who took part in the survey agreed that having sexual relations in the vaginal canal is not the only method to get genital warts. Out of the total number of students (n=223), 64% were knowledgeable of the potential link between Human Papillomavirus (HPV) and cancer. Furthermore, it was discovered that HPV cannot cause genital herpes, HIV, or HPV itself; correspondingly, n=214 (62%), n=203 (58.8%), and n=187 (54.20%) were the percentages of awareness. Students from both sexes agree that the health risks associated with STDs are significant; this opinion was shared by 56.50% (n=195). In addition, less than one-third of the students (n=103, 29.90%) believed that those with STDs were at a greater risk of HIV infection, and fewer than half (n=163, 47.20%) were aware that recurring urinary tract infections cannot be attributed to chlamydia. Most students (n=279, 80.90%) were aware that the severity of STD symptoms could not be predicted by a positive HIV test. In addition, almost two-thirds of the student body (n=231, 67%) thought that HIV infection does not cause genital sores. In addition, n=241 (or 69.90%) knew that a physical exam alone is not enough to detect STDs. Sixty percent of the students said a woman with gonorrhea couldn't tell she had an STD simply by how she felt about her body, and almost as many men (n = 206, 59.7%) thought they couldn't tell they had Hepatitis B (HB) just by how they felt. surprisingly, only one-third of the students (n=120, 34.8%) responded correctly when it came to the fact that chlamydia is not the main source of an unpleasant vaginal odor. Fifty-six percent of students (n=193) said they were familiar with the treatment options for STDs like chlamydia. However, just 44.9 percent of students (n=155) knew that gonorrhea may be treated. Students had a high level of awareness that genital herpes might be transmitted from mother to kid after delivery (n=231, 67%). Furthermore, a total of

191 students, accounting for 55.40% of the participants, correctly comprehended that the presence of an open sore is not a prerequisite for spreading genital herpes to a sexual partner. However, just about a third of the students (n=120, 34.8 percent) were aware that anal intercourse makes one more susceptible to HB infection. Sixty-five percent of the student body (n=225) was aware that having gonorrhoea may prevent future infections.

N=206, or 59.70%, of the people who took part in the research, knew about the HB vaccine. Interestingly, just nearly half of the individuals (n=189, 54.80%, n=170, 49.30%) were aware that chlamydia and gonorrhoea are not preventable with immunization. In addition, n=189 (54.8%) of students knew that avoiding genital warts by post-sex hygiene is an unrealistic expectation. Condoms made from natural materials, such as lambskin, are not efficient in preventing the spread of HIV. This was confirmed by a research where 47.20% of the participants (n=163) were aware of this fact.

Factors Associated with Sexually Transmitted Disease Knowledge

A study conducted by Nigussie & Yosef (2020) revealed that individuals who reported having only one or no sexual partners had a 1.53 times higher likelihood (Adjusted Odds Ratio) of possessing knowledge about sexually transmitted infections (STIs). Furthermore, an additional year of academic pursuits was correlated with a 3.65-fold increased probability of possessing knowledge pertaining to sexually transmitted infections. Furthermore, individuals who relied on mass media (such as TV or radio) as their source of information about STIs had a 2.76 times higher likelihood of possessing knowledge about STIs. All of these associations were statistically significant, with p-values less than 0.05. Only 177 (39.1%) of the sample of 453 showed above-average awareness of STIs.

It was determined that education, residence, prior exposure to sexual and reproductive health education, participation in STI awareness programs, and place of employment were significant predictors of STI knowledge ($F(4,445) = 11.405, p < 0.001, R^2 = 0.093$). The study had a response rate of 88%. On a scale from 0 to 38, the average knowledge score was 24.1. Most people were familiar with HIV, but few knew about lesser-known STIs including gonorrhoea, trichomoniasis, and chlamydia. It was not well understood that STIs may be transmitted during oral intercourse. A greater percentage of respondents (between 78% and 95%) correctly identified control and preventative measures for STIs than correctly identified the signs and symptoms of STIs (between 8.5% and 67.8%). Ninety percent or more of those polled didn't know that a person may have a STI and show no symptoms (Mansor et al., 2020).

A binary regression model was developed to analyze the factors that determined the respondents' overall knowledge on STIs. The variance explained by the model's components ranged from 10.4% to 17.5% of the observed discrepancy in the variables that impacted the respondents' levels of STI awareness. The range of this variation was explained by the model. The omnibus tests of the model coefficient found that it was statistically helpful ($p = 0.001$ for the value of 44.461). Those from the faculties of arts, education, and biological sciences had a considerably lower probability of possessing adequate knowledge about STDs (STIs) compared to those from the management sciences department. The odds ratios for these skills were 0.832 (with a 95% confidence interval of 0.29–2.38), 0.393 (with a 95% confidence interval of 0.15–1.03), and 0.568 (with a 95% confidence interval of 0.20–1.61), respectively. However, the p -value was greater than 0.05, indicating that the differences may not be statistically significant. Compared to respondents aged 25 and older, those aged 19 and those aged 20–24 were 0.442 and 0.854 times less likely to have a solid understanding of STIs. The 95% confidence intervals for these estimates were 0.12–1.57 and 0.29–2.56, respectively. The p -value was more than 0.05. Persons who live with both of their biological parents are significantly more likely to have substantial knowledge of sexually transmitted infections (STIs) compared to persons who live with their spouse ($p = 0.042$, 95% CI: 1.05–12.08). The likelihood of this discrepancy occurring was three times higher among respondents who resided with both of their parents. Compared to those cohabiting with spouses, respondents who lived with a single parent or lived alone were also more inclined to possess a comprehensive comprehension of sexually transmitted illnesses (STIs). However, these differences were not statistically significant ($p > 0.05$). Participants whose fathers only completed primary school were less educated than those whose fathers completed at least a secondary education, or no education at all had a significantly lower probability of possessing extensive knowledge about sexually transmitted infections. This conclusion is supported by a statistically significant confidence interval of 0.14 to 0.98 (95% confidence level) and a p -value of 0.046. (Nzopotam et al., 2022)

Sexual Behavior

Laddunuri (2013) Conducted a descriptive cross-sectional research employing a multistage random sample approach to gather data from 550 secondary school students (aged 13–19 years) in Tanzania, in order to assess sexual behavior patterns and trends. Students' mean age was 17.2 with a standard deviation of 1.8. More than a third (40.2%) of those who participated in the study had had at least one sexual encounter by that time. When compared to sexual

intercourse, the average age of people who hug, kiss, and fondle each other's breasts is far lower. Students had used contraceptives at a high rate (78.5%), but just around half (48.6% had used them "always"). The primary reasons cited for delaying sexual beginning were "purely for enjoyment" (37.5%) and "influence from peers" (27.6%). The probability of sexual activity among male students was 1.46 times higher than that among female students. Students' probabilities of engaging in sexual activity decrease as parental education levels rise, suggesting that parental education is the strongest predictor of adolescents' sexual debut. Researchers found that there was a high rate of sexual activity and some respondents engaged in unsafe sexual behavior. Therefore, it is important to encourage intervention programs based on the characteristics that have been shown to enhance the chance of an untimely sexual debut and unsafe sexual behavior.

Mavhandu-Mudzusi et al. (2016) Conducted a study to assess the frequency of high-risk sexual behaviors among typical undergraduate students at Jigjiga University in Ethiopia. Their research was aimed at finding out whether or not these behaviors were common. The researcher conducted their investigation using a quantitative, univariate, cross-sectional methodology. A straightforward method for selecting students at random resulted in the selection of two hundred thirty-six (236) pupils. A standardized and organized questionnaire was used throughout the data collection process. According to the findings of the survey, 70.53 percent of respondents had previous sexual experience. Over half, specifically 54.8%, of the participants who had previous sexual experience said that they had been involved in sexual activity during the three months prior to completing the questionnaire. It's estimated that up to 30.14 percent of respondents with sexual experience have had sexual encounters with someone other than their present spouse in the last year. The percentage of respondents who had previously engaged in sexual activity who wore a condom during their most recent sexual encounter was just 59.6%. The study findings suggest that college students engage in sexual behaviors that may increase their susceptibility to obtaining HIV. Considering the aforementioned findings, the researchers suggest implementing contextually appropriate interventions at the Jigjiga institution to reduce the prevalence of risky sexual behaviors among its students. The aim is to collect data on the prevalence of particular sexual behaviors among high school students in Cape Town and do a survival analysis to ascertain the ages at which students first participate in sexual encounters. Flisher et al. (2003) Collected data from 2740 students in grades 8 and 11, who were selected using a multistage cluster selection procedure. The students represented 39 different educational institutions. Overall, 29.9% of people had

engaged in sexual activity, with a greater prevalence among men and students in grade 11 than any other age group. At the age of 14, 23.4% of males and 5.5% of girls had engaged in sexual activity before. Among men, the prevalence was higher. At the age of 19, these numbers were correspondingly 71.8% and 58.2% respectively. 78.4% of respondents had known their most recent partner for more than seven days, the median number of partners in the previous year was one, and the median time elapsed since the last sexual encounter was four weeks. Condoms and injectable steroids were the most prevalent forms of contraception, each being used by 67.7% and 43.2% of respondents, respectively, during their most recent sexual encounters. 65.4% of respondents reported having used some kind of contraception. There has been a steady rise in the percentage of students engaging in sexual engagement since 1990. The elementary school level is where intervention programs should get their start. There has been a substantial increase in the population of students who are vulnerable to contracting sexually transmitted illnesses and experiencing unintended pregnancies.

applying a cross-sectional questionnaire research of university freshmen to gather data, Brian et al. (2016) carried out a study to determine the risk behavior patterns of 276 students enrolled at a university in the southeast Nigerian state of Anambra. The study aimed to evaluate the sexual orientation of these pupils in order to ascertain the pattern of risky behavior among them. The majority of respondents, 190 out of 276 or 68.8%, participate in sexual behavior, according to the survey's findings. Only 34 of the sexually active respondents were married, which means that 156 (82.1%) of the sexually active respondents are single. Among the respondents, a significant proportion of 34 individuals (17.9%) reported having had between two and five sexual partners in the last year, while 26 individuals (13.7%) reported having had at least six sexual partners over the same period. Specifically, 140 responders, or 73.7% of the sample, reported having sex for pleasure, while just 14 respondents, or 7.4%, engaged in sexual behavior for financial benefit. The majority of the students who participated in this research had premarital sexual encounters, and they did so typically and often with several partners. This is a sexual activity that comes with considerable danger. Students at higher educational institutions are encouraged to participate in safer-sex sexuality education to mitigate the negative effects of this disturbing trend.

Golbasi and Kelleci (2011) A cross-sectional questionnaire research was undertaken with Turkish university students to investigate their sexual experiences and engagement in hazardous sexual activities. The study took place at a state institution located in the central area of Turkey. The academic year 2006–2007. 949 individuals were chosen to take part in the study

by a process known as convenience sampling. To determine the students' hazardous sexual behaviors, personal characteristics, and sexual experiences, to gather information, the researchers created a questionnaire. The chi-square test was used in the data's statistical analysis. There were 42.9% females and 57.1% males in the sample. The proportion of students with prior sexual experience varied between 33.8% and 100%. At some point, 17.1% of pupils with prior sexual experience engaged in sexual activity. 17.47 years was the mean age of the first sexual contact, with a standard deviation of 1.79. 64.2 percent of sexually active students' encounters occurred while under the influence of alcohol, 51.9 percent involved more than one sexual companion, and 51.9 percent reported engaging in sexual activity unprotected. Finally, remarks Based on the results obtained from this research, it is viable to conclude that a considerable percentage of university-enrolled students have participated in sexual activity. Additionally, students who participate in sexual activity bear the risk of developing major health problems, such as the spread of STDs and the incidence of unintended pregnancy.

Between December 2013 and February 2014, Mulu et al. (2014) carried out cross-sectional research on the students of Bahir Dar University to determine sexual behavior and its associated factors. multistage sampling using self-administered questionnaires was used. Descriptive statistics like frequency and mean were used to describe the research participants in respect to the pertinent factors. A multivariate analysis was performed on the variables whose bivariate analysis had a p-value of less than 0.2 in order to identify the predictive factors. The findings showed that 297 (36.4%) of the 817 students who took part in the research had previously engaged in sexual activity. It was 18.6 years old on average when people had their first sexual experience. A total of 184 sexually active students (62 percent) engaged in unprotected sexual activity; 126 (42.7 percent) had multiple sex partners; 22 (7.4 percent) had sex with commercial sex workers; and 12 (4 percent) engaged in sexual activity for monetary gain. The percentage of people who went to nightclubs was 130 (15.8%), while the percentage of people who watched pornographic movies was 534 (65.4%). The odds ratio for male respondents viewing pornographic movies was 4.8, with a confidence interval ranging from 3.49 to 6.54, while the odds ratio for male respondents going to nightclubs was 3.9, with a confidence interval ranging from 2.3 to 6.7. A substantial association was found between having ever had sex and having several sexual partners among those who watched pornographic movies, went to nightclubs, chewed khat, and consumed alcohol on a regular basis. Both the habit of chewing khat (odds ratio = 8.5, confidence interval = 1.31 - 55.5) and the practice of going to night clubs (odds ratio = 4.6, confidence interval = 1.8 - 11.77) were statistically associated with the intention of

engaging in sexual activity for financial benefit and with the intention of having intercourse with commercial sex workers, respectively. The results of the research indicated that a sizeable proportion of the student population engaged in a variety of sexually dangerous behaviors. Researchers discovered that the use of substances, attending nightclubs, and consuming graphic adult content were all substantial indicators of participating in diverse sexual activities. As a result, preventative intervention programs must be bolstered, properly executed, and monitored not only in primary and secondary schools but also in higher education institutions.

Relationship between STDs Knowledge & Sexual Behavior

Andersson-Ellström et al. (1996) conducted a research to investigate how much adolescent females know about STDs and how that relates to their sexual behavior. During the course of the study, 88 female participants went to every single appointment. Girls from a variety of socioeconomic backgrounds who were 16 years old showed no statistically significant differences in their sexual experience, age of first sexual encounter, or number of partners at age 18. It has been demonstrated that teenage females who were sexually active were more likely to understand as adults the importance of using condoms and other measures of preventing STDs ($p < 0.01$ for both). Girls who said they had several lifelong partners were the most aware, yet they still didn't take precautions. Even though 34% of the females who had ever had a sexual partner were discovered to be infected with an STD, almost all of the participants in this research denied ever having been infected. Girls knew about STDs and how to prevent getting them, but this information didn't seem to change their behavior (Andersson-Ellström et al., 1996).

People living in the two Chinese areas were studied by Nortu et al. (2013) ranging in age from 15 to 49. All houses were visited by Health Assistants (HAs) who handed out questionnaires to gauge residents' familiarity with STIs and their propensity to engage in risky behaviors. Knowledge of sickness and its consequences was the lowest among respondents, while that of preventive was the greatest. Increased levels of education were correlated with higher levels of STI literacy ($P < 0.05$). Almost one-third of the class did poorly. Nearly a third of the sample engaged in potentially harmful sexual conduct, with 31.2% engaging in sexual activity with people other than their usual partner and 10.9% engaging in sexual activity outside of their marriage. Only 49.1% of those who did not have frequent relationships used condoms routinely. The most prevalent cause for not wearing a condom was unavailability during sexual contact. Despite participants' increased awareness of the risks associated with sexual activity,

the research found no significant decline in such behavior ($p > 0.05$). Participants' familiarity with STIs and their consequences ranged widely. Roughly one-third of people, particularly men, engaged in at least one form of dangerous sexual conduct. Usage of condoms was low. Knowledge did not correlate with a decrease in hazardous sexual behavior, suggesting that more education does not always lead to safer sexual practices.

Students often engage in sexual activity with unprotected, casual partners. Some 32% of high schoolers report having had sexual encounters with an uncommitted partner; 27% of those reports having protected themselves using a condom. The situation is marginally better for college kids. Of the students who reported having sex with an occasional partner, 52% indicated they had done so while using a condom. Students who indicated involvement in high-risk sexual conduct had lower knowledge levels compared to students who did not disclose engaging in such behavior. In particular, students' knowledge scores ranged from 8.7 (95% CI: 7.9-9.5) for unprotected sexual behavior with casual partners to 10.8 (95% CI: 10.5-11.0) for those who did not participate in such activities. The statistical significance is less than 0.001 (Visalli et al., 2019).

CHAPTER III

Methodology

This chapter discusses the study's demographic, design, data collecting, and analysis strategy.

Research Design

The study employed a cross-sectional research design. A cross-sectional study that is analytical in nature does not use experimental methods in its quantitative research. The aim of these studies is to "collect data from a group of persons at a certain point in time." (Schmidt & Brown, 2019, p. 206).

Participants/Population and Sample

The population of this research includes all Medical & Nursing Students Studying at the Near East University during the 2023/2024 Fall Semester. According to both faculties Dean, 400 students are in the Nursing faculty while 1600 students are in the medical faculty. With a 95% confidence level and a 5% margin of error, the sample size for a population of 2000 was found to be 322 in the Krejcie & Morgan 1970 sample size table. The researcher sample 384 for adequate sample size. The study used the Convenience sampling technique to collect the responses from the study population.

Criteria for selection of sample group

The below are the inclusion criteria for the collection of the study sample:

1. Must be Presently residing in TRNC
2. Must be student at the Near East University
3. Be in the faculty of medicine & Nursing
4. You can be of any gender
5. Participants can be of any level of Education
6. Demonstrate a willingness to actively engage in the study
7. Proficiency in English is required to comprehend the questions.

Data Collection Tools/Materials

This study's survey tool is the STD-KQ, a concise yet thorough evaluation of STD knowledge made by Jaworski and Carey (2007). The survey consists of 27 questions that inquire about participants' understanding of sexually transmitted illnesses (STDs) apart from HIV/AIDS. Given that the authors believed that although awareness of HIV/AIDS has grown, awareness

of other STDs is still poor, mostly because of the educational focus on HIV/AIDS rather than other illnesses, they decided to shift their attention to STDs other than HIV/AIDS. The transmission of STDs is quite similar across all of them, but there are important distinctions that need more study to avoid the spread of illness and its associated increases in incidence (Jaworski & Carey, 2007).

To create the STD-KQ, researchers looked at previous studies that had used STD knowledge questionnaires as well as the most recent data available on STDs. Item content was added or modified about risk reduction and to contribute to the foundation of construct validity after a focus group comprised of 40 participants and six STD experts (nurse practitioners and medical doctors) reviewed the CDC-gathered STD information (Jaworski & Carey, 2007). The first 85-item questionnaire was piloted with a small group of 50 college students. After analyzing the data from the tiny pilot group, a 76-item questionnaire was given to 391 college students, which is a bigger sample size. Internal consistency, item analysis, and component analysis were the foci of the larger pilot sample, while question difficulty and item variation were the primary foci of the smaller pilot sample. The ages of the participants in the small pilot sample were 18–49, whereas those in the big sample were 18–74. Equal representation of Hispanics, Whites, African-Americans, Asians/Pacific Islanders, Multiracial, and other peoples characterizes both samples, the majority of which were women (almost 80%). Internal consistency of $\alpha = .86$ was found in the final 27-item questionnaire (Appendix A). After administering the questionnaire to both groups again and providing the test group with a 30-minute educational STD movie, the final research group of 80 participants—most of whom were female and had mean ages ranging from 18 to 74—showed test-retest reliability of $r = .88$ over a brief period of time. (Jaworski & Carey, 2007). The things are presented as concise assertions in the present tense, using straightforward language. The developer believes that there is an easier way to identify or decide on an answer for the many "false" claims and that there is only one right response for each item. Due to the higher diversity in results caused by getting an STD, there is a "don't know" option available, and there are more goods with a female connection. (Jaworski & Carey, 2007). Initially, the questionnaire included demographic questions on gender, age, and ethnicity to guarantee that this information is collected for each participant for further research. An STD-KQ score of 27 is deemed optimal. Every question had a point value: 1 for right answers, 0 for wrong answers, and 0 for "don't know" responses, which were considered incorrect. More knowledge of STDs is indicated by a higher score.

The Sexual Risk Behaviors Scale was created with the intention of providing a quick, accurate, and dependable tool for assessing sexual risk behaviors among college students. (SRBS) (Fino et al., 2021). An analysis of current studies on sexual risk behaviors as key factors in negative sexual health outcomes among college students informed the development of the SRBS. Having several sexual partners, engaging in unprotected sexual activity, and using drugs either before or during sexual activity are some of the main risk behaviors that this scale looks at. The scale consists of five options: "Never" (represented by 0), "Rarely" (represented by 1), "Sometimes" (represented by 2), "Often" (represented by 3), and "Very often" (represented by 4). The newly designed questions were evaluated by a panel of three experts in human sexuality and psychology to ascertain the scale's content validity. The experts focused on how well the items assessed important sexual risk behaviors. Panelists ultimately determined that six of the thirteen products met all three requirements. The items eliminated were intended to gather information about students' recollections, experiences, and perceptions regarding the variables that influence sexual risk behaviors, rather than just quantifying the frequency of such activities. As a result, they did not meet the requirement of coherent elaboration needed to establish cognitive validity (Fino et al., 2021). A Cronbach's alpha of 0.76 indicates that the SRBS is internally consistent and reliable. A higher total score indicates a greater risk of participating in sexually risky activities; the scale runs from 0 to 24.

Ethical Consideration

Because the scales used in this investigation are open-access, there is no need to get permission from the authors; The transmission and availability of the Creative Commons Attribution license are governed by its rules and limitations. (<http://creativecommons.org/licenses/by/3.0/>). To avoid ethical misconduct, the authors of those scales were referred to throughout the work went mentioning the data collection instruments. The NEU Scientific Research Ethics Committee authorized this project. (NEU/2023/115-1730).

Data Collections

The collection of the data employed two methods. Questionnaires were distributed to the study participants through face to face and were collected after it was filled. Google Survey service or Google Form was also used to collect the responses from the study. The link to the form was distributed to some study participants through WhatsApp, messenger, and email addresses. Their responses were automatically recorded and the researcher downloaded them for analysis.

Data Evaluation

The data collected was evaluated using SPSS 26. The demographic portion of the questionnaire was analyzed using descriptive statistics to determine the frequency and percentages. The data was checked for parametric assumptions and it was found that the data was not normally distributed using the Kolmogorov–Smirnov test and the Shapiro–Wilk test. The continuous variables and the categorical variable were analyzed using either a Kruskal Wallis test and Mann Whitney U Test was used.

CHAPTER IV

Findings and Discussion

Data Analysis and Results

This study seeks to carry on “a survey of current knowledge on STDs and sexual behavior in students of Northern Cyprus”. These students are from the Near East University Faculty of Medicine and Faculty of Health Sciences (Nursing). The actual number of students from both faculties was 2,000. Those basic demographic parameters were Gender, age, educational status, region, religion, employment status, and faculty.

Table 1.

Demographic Characteristics of study participants (n=384)

Variable	Categories	Frequency	Percentage
Gender	Female	225	58.6
	Male	156	40.6
	Prefer not to Say	3	.8
Education	Undergraduate	363	94.5
	Master	21	5.5
Marital Status	Single	363	94.5
	Married	21	5.5
Region	Africa	229	59.6
	Middle East	138	35.9
	America	10	2.6
	Europe	7	1.8
Religion	Islam	184	47.9
	Christianity	168	43.8
	Other	21	5.5
	Prefer not to say	11	2.9
Employment	Unemployed	330	85.9
	Part-Time	54	14.1
Faculty	Medical	229	59.6
	Nursing	155	40.4

Table 1 shows the Student’s socio-demographic characteristics. Students in the study were between 16 to 36 years old and the mean age was 22.4 years (SD± 3.248). The majority of the Students were Female (225, 58.6%), Male 156 (40.6%) and prefer not to say (3, 0.8%). Based on education, 363 (94.5%) were Undergraduate while 21(5.5%) were Master’s students. With regard to marital status, single were 363 (94.5%) and married were 21 (5.5%). Based on region, the majority of the student were from Africa, 229 (59.6%), Middle East 138 (35.9%), America 10 (2.6%) and 7 (1.8%). Pertaining Religion, the majority of the student were from the Islamic

religion 184 (47.9%), Christianity 168 (43.8%), Other religion 21 (5.5%) and those who prefer not to state their religion were 11 (2.9%). Regarding employment, 330 (85.9 %) were unemployed while 54 (14.1%) were part – time. Majority of the students were from the medical faculty 229 (59.6%) while 155 (40.4%) were from the nursing faculty.

Reliability Test

Table 2

Cronbach Alpha

Variables	No. of Items	Cronbach's Alpha
Sexually Transmitted Disease Knowledge Questionnaire (STD-KQ).	27	0.811
Sexual Risk Behaviors Scale (SRBS)	5	0.752

Table 2 shows the reliability of the study scales. The Cronbach alpha for the Sexually Transmitted Disease Knowledge Questionnaire (STD-KQ) is 0.811 and that of the Sexual Risk Behaviors Scale (SRBS) is 0.752. These values indicate the reliability of the study scales.

Table 3

Descriptive Statistics of student's Knowledge of Sexually Transmitted Disease and Sexual Risk Behaviors (n=384)

	\bar{x}	SD	Min	Max
Sexually Transmitted Disease Knowledge	9.9427	5.04775	0.00	27.00
Sexual Risk Behaviors	1.4714	2.87043	0.00	20.00

Table 3 shows the descriptive statistics of student's Knowledge of Sexually Transmitted Disease and Sexual Risk Behaviors. Sexually transmitted disease knowledge mean score is 9.9427 (± 5.05 SD). The total knowledge questionnaire is 27. The sexual Risk behaviors mean score is 1.4714 (± 2.87 SD).

Table 4**Comparison of Knowledge of Sexually Transmitted Disease and Sexual Risk Behaviors based on Gender**

Variable	Gender	Kruskal Wallis Test					
		n	Median	Mean rank	X ²	Df	p
Knowledge of Sexually Transmitted Disease	Male	156	10.5000	201.55	2.432	2	0.296
	Female	225	10.0000	187.00			
	Prefer not to Say	3	6.0000	134.17			
Sexual Risk Behaviors	Male	156	0.0000	210.69	10.437	2	0.005**
	Female	225	0.0000	179.60			
	Prefer not to Say	3	0.0000	213.67			

P≤0.05* p≤0.01**

Table 4 displays the Comparison of Knowledge of STDs and Sexual Risk Behaviors based on Gender. There is no significant difference between student knowledge of STDs based on gender ($p > 0.05$). However, Significant difference exist between Sexual Risk Behaviors of students based on Gender ($p < 0.001$). Dunnett's T3 post hoc test shows difference between males and females ($p < 0.05$).

Table 5**Comparison of Knowledge of STDs and Sexual Risk Behaviors based on educational Levels**

Variable	Educational Status	Kruskal Wallis Test					
		n	Median	Mean rank	X ²	Df	p
Knowledge of Sexually Transmitted Disease	Medical	229	10.000	190.28	11.471	2	0.05*
	Nursing	134	10.000	183.99			
	Master	21	13.000	271.10			
Sexual Risk Behaviors	Medical	229	0.0000	190.74	11.493	2	0.05*
	Nursing	134	0.0000	185.16			
	Master	21	1.0000	258.55			

P≤0.05* p≤0.01**

Table 5 shows a Comparison of Knowledge of STDs and Sexual Risk Behaviors based on educational Status. There is a Statistically significant difference between Knowledge of STDs ($p < 0.05$) and Sexual Risk Behaviors ($p < 0.05$) based on educational levels. Master's students have higher median scores (13.00, 1.00) on both Knowledge of STDs and sexual risk behaviors.

Table 6

Comparison of Knowledge of Sexually Transmitted Disease and Sexual Risk Behaviors based on Region

Variable	Region	n	Median	Mean rank	Kruskal Wallis Test		
					X ²	Df	p
Knowledge of Sexually Transmitted Disease	Middle East	138	10.000	187.94	1.765	3	0.623
	Europe	7	11.000	157.93			
	America	10	10.000	169.85			
	Africa	229	10.000	197.29			
Sexual Risk Behaviors	Middle East	138	0.0000	187.68	1.775	3	0.620
	Europe	7	0.0000	181.36			
	America	10	1.0000	224.95			
	Africa	229	0.0000	194.33			

$P \leq 0.05$ * $p \leq 0.01$ **

Table 6 shows the Comparison of Knowledge of STDs and Sexual Risk Behaviors based on region. There is no significant difference between student knowledge of STDs and student sexual risk behaviors based on region ($p > 0.05$).

Table 7

Comparison of Knowledge of STDs and Sexual Risk Behaviors based on Marital Status

Variable	Marital Status	n	Median	Mean rank	Mann-Whitney U Test	
					z	p
Knowledge of STDs	Single	363	10.0000	191.14	-0.998	0.319
	Married	21	12.0000	215.93		
Sexual Risk Behaviors	Single	363	0.0000	187.71	-4.193	0.001**
	Married	21	2.0000	275.29		

$P \leq 0.05$ * $p \leq 0.01$ **

Table 7 Shows the comparison of student Knowledge of STDs and Sexual Risk Behaviors based on marital status. There is no significant difference between student knowledge of STDs based on marital status ($p > 0.05$). Significant difference exists between the Sexual Risk Behaviors of students based on marital status ($p < 0.001$). Those who are married have a higher median score (2.00).

Table 8

Comparison of Knowledge of Sexually Transmitted Disease and Sexual Risk Behaviors Based on Religion

Variable	Religion	n	Median	Mean rank	Kruskal Wallis Test		
					X ²	Df	p
Knowledge of STDs	Christianity	168	10.500	201.55	2.987	3	0.394
	Islam	184	10.000	182.64			
	Other	21	10.000	195.57			
	Prefer not to say	11	10.000	213.27			
Sexual Risk Behaviors	Christianity	168	0.0000	204.82	49.495	3	0.001**
	Islam	184	0.0000	165.79			
	Others	21	4.0000	263.69			
	Prefer not to say	11	4.0000	315.14			

P≤0.05* p≤0.01**

Table 8 displays the Comparison of Knowledge of STDs and Sexual Risk Behaviors based on religion. There is no significant difference between student knowledge of STDs based on religion ($p > 0.05$). However, Significant difference exist between Sexual Risk Behaviors of students based on religion ($p < 0.001$). Dunnett's T3 post hoc test shows difference between Islam and all others ($p < 0.05$). Both others and Prefer not to say have high median score (4.00).

Table 9**Comparison of Knowledge of STDs and Sexual Risk Behaviors Based on Employment**

Variable	Employment	Mann-Whitney U Test				
		n	Median	Mean rank	z	p
Knowledge of STDs	Unemployed	330	10.0000	187.70	-2.098	0.036*
	Part-Time	54	12.0000	221.81		
Sexual Risk Behaviors	Unemployed	330	0.0000	190.11	-1.245	0.231
	Part-Time	54	0.0000	207.11		

$P \leq 0.05^*$ $p \leq 0.01^{**}$

Table 9 Shows the comparison of student Knowledge of STDs and Sexual Risk Behaviors based on employment. There is a significant difference between student knowledge of STDs based on employment ($p < 0.05$). However, there is no significant difference exists between the Sexual Risk Behaviors of students based on employment ($p > 0.05$). Those who have Part – Time employment have higher median score (12.00).

Table 10**Comparison of Knowledge of STDs and Sexual Risk Behaviors Based on Faculty**

Variable	Faculty	Mann-Whitney U Test				
		n	Median	Mean rank	z	p
Knowledge of STDs	Medical	229	11.0000	206.62	-3.039	0.001**
	Nursing	155	10.0000	171.64		
Sexual Risk Behaviors	Medical	229	0.0000	203.41	-2.792	0.001**
	Nursing	155	0.0000	176.38		

$P \leq 0.05^*$ $p \leq 0.01^{**}$

Table 10 Shows the comparison of student Knowledge of STDs and Sexual Risk Behaviors based on faculty. There is a significant difference between student knowledge of STDs and Sexual risk behavior based on faculty ($p < 0.001$). Students from the medical faculty have higher mean rank scores (206.62, 203.41).

Table 11**Comparison of Knowledge of Sexually Transmitted Disease and Sexual Risk Behaviors based on Age**

Variable	Region	n	Median	Mean rank	Kruskal Wallis Test		
					X ²	Df	p
Knowledge of Sexually Transmitted Disease	16 - 20	113	9.000	154.57	27.875	3	0.001**
	21 - 25	215	11.000	198.11			
	26 - 30	48	13.000	250.44			
	31 & Above	8	12.500	229.81			
Sexual Risk Behaviors	16 - 20	113	0.0000	154.13	38.111	3	0.001**
	21 - 25	215	0.0000	200.23			
	26 - 30	48	1.0000	231.96			
	31 & Above	8	2.5000	290.06			

P≤0.05* p≤0.01**

Table 11 shows the Comparison of Knowledge of STDs and Sexual Risk Behaviors based on age range. There is a significant difference between student knowledge of STDs and Sexual risk behavior based on age range ($p < 0.001$). Dunnett T3 test shows differences between groups: for Knowledge and sexual behavior 16 -20:21-25:26 – 30.

Table 12**Relationship between knowledge of sexually transmitted disease & Sexual risk behavior**

	Knowledge of STDs	Sexual risk behavior
KNOWLEDGE_TOTAL	r	0.094
	p-value	0.066

Table 12 shows the relationship between knowledge of STDs & Sexual risk behavior. There is no statistically significant relationship between knowledge of STDs & Sexual risk behavior ($p > 0.005$).

CHAPTER V

Discussion

In this chapter, based on the findings that this study has gathered, a discussion will be made in comparison or contrast to similar studies that have been conducted.

Discussion

The purpose of this study was to find out the current knowledge and behaviors of Nursing and medical students at the Near East University TNRC about STDs and sexual behavior.

The study found that 74.4 % of both medical and nurses had good knowledge about STDs and 74.8% had a lower risk of engaging in risky sexual behavior. These results are reasonable because sexual health education, which covers strategies for preventing, identifying, and treating sexually transmitted illnesses, is a part of the curriculum for nursing and medical students at Near East University. These courses provide a solid foundation for enhancing comprehension of sexual health by encompassing topics such as public health, microbiology, anatomy, and physiology. Students at the Near East University engage in clinical rotations at the school hospital. During their rotations, they see patients with a diverse array of health conditions, including sexually transmitted illnesses. By observing the real-world outcomes of different sexual behaviors, these students can apply their theoretical knowledge in practical situations. Public health is a fundamental component of the medical and nursing programs at the Near East University. This endeavor encompasses disease prevention, health promotion, and strategies to mitigate the spread of infectious diseases, particularly sexually transmitted infections. To stay abreast of the latest advancements, suggestions, and optimal approaches in the field of sexual health, medical and nursing students are encouraged to continue to pursue ongoing education. This is because the healthcare sector is constantly evolving and requires individuals to be up-to-date in their knowledge and skills.

These results have also been supported by other studies encompassing sexual knowledge and sexual behavior. In a study that was carried out by Scarano-Pereira et al., (2023) at two different Spanish universities, the sample consisted of 657 students who were enrolled in health-related universities. 77.9% of the participants exhibited a good level of knowledge, as evidenced by their right responses to fifty percent of the questions.

A cross-sectional descriptive study was conducted in Central South China, involving certified oncology nurses from 55 hospitals in 6 provinces. Stratified random sampling was used to select the participants. The study found that the median score for Knowledge Attitude and

Practice of Sexual Health Care was 139, indicating a moderate level of knowledge, attitude, and practice in this area. The dimension exhibiting the highest median score was the attitude towards Sexual Health Care, while the dimension with the lowest median score was the practice of Sexual Health Care (Xie et al., 2023).

Medical and nursing students possess a considerable amount of sexual knowledge (74.8%) and exhibit a favorable attitude towards premarital sex (87.5%) and homosexuality (94.5%) (Zhao et al., 2023).

The average knowledge score was 41.82%, indicating a good degree of knowledge on STDs (Begum et al., 2023).

In 2018/2019, 219 Health Students from the University Jacques Lisfranc, Saint-Etienne, France) participated in a study conducted by Raia-Barjat et al., (2020). 156 second-year medical and 63 second-year nursing took part in the cross-sectional study using a questionnaire. The study result shows that While 83% of Health students had a solid understanding of how HIV is transmitted, just 50% were familiar with the various HIV prophylaxis options available before and after exposure. Only 33 (15.3%) Health students were aware that HPV infection can cause genital warts, while 10 (4.6%) HS were aware that it might cause anal cancer. Thirty-six Health students (19.7%) admitted to engaging in sexual activity without protection within the past year.

Most nurses were aware of sexually transmitted infection symptoms, transmission methods, and preventative methods. Condom use was deemed unnecessary for stable sexual relationships. students' knowledge was adequate concerning STDs (Gonsalves de Freitas et al., 2022).

The study investigated gender differences in Knowledge of STDs and Sexual Risk Behaviors. The study found out there was no significant difference between student knowledge of STDs but significant differences exist between the Sexual Risk Behaviors of students based on Gender. Students who never identify their gender score higher. The fact the study identified no gender difference implied that both genders have equal knowledge of STDs. It is worth noting that both genders are taking the same courses and might be putting in the same time to study. it is wise to also accept the study results on no gender difference in knowledge as instructors expect equal performance from students regardless of their gender since all students are involved in taking care of human life which is very important. It's logical again to accept gender differences in sexual risk behaviors between students as everyone has their life to live

and no one has control over the other student's life. Even instructors do not have. Besides, the majority of the students in both faculties are international students who are living alone and do what pleases them. A study carried out by McKelvey et al., (1999) found that females have negative sexual attitudes. This result is different as only two gender categories were included in that study while this study included 3 gender categories.

In Xie et al., (2023) study on Nurses, sex was a significant factor associated with the knowledge aspect of Sexual Health Care of nurses ($F = 49.173$, $P < .001$, adjusted $R^2 = 0.103$) and sex was not associated with the attitude of nurses. The level of knowledge was significantly higher in female participants in both groups the nursing and medical students concerning knowledge of STDs (Scarano-Pereira et al., 2023).

The study investigated significant differences between Knowledge of STDs and Sexual Risk Behaviors based on educational status. Master's students have higher scores on both Knowledge of STDs and sexual risk behaviors. This is supported by others. comparing the knowledge of nursing students to medical students, When it comes to STDs (STDs), how they are transmitted, and how they can be protected against, the senior students have a level of knowledge that is highly satisfactory and considerably less inaccurate perceptions than the first-year students. On the other hand, they exhibit risky sexual behaviors in a significant proportion of cases, including those of college freshmen (Panagiotou et al., 2016).

There was no significant difference in the attitude and knowledge of STDs between graduate nursing students and sophomore medical students. Sophomore medical students and graduate nursing students were much less aware of STDs compared to graduate nonmedical students. However, graduate nonmedical students were significantly more tolerant towards STDs (Kuczynski, 1980).

This study found that there is no significant difference between student knowledge of STDs and student sexual risk behaviors based on region. This result illustrates that nurses and medical students from all regions are studios and paying close attention and making the best use of their time in a foreign land knowing that their respective countries look up to them for their valuable services to the healthcare setting. It also indicates that they are aware of the repercussions associated with risky sexual behavior. It may imply that there is a growing homogeneity in global society's views on sexual health. Factors like worldwide media coverage, multinational partnerships, and easier access to information online might play a role in this. No study was

found investigating medical and nursing student knowledge of STDs and sexual behavior based on region.

This study also investigated knowledge and attitudes based on marital status. It found no significant difference between student knowledge of STDs based on marital status. Navidi et al (2022) An analysis of the knowledge, attitude, and behavior of healthcare workers regarding sexually transmitted illnesses in Markazi Province, Iran. As a result, 226 individuals were examined, including 40 doctors, 99 nurses, and 87 midwives from the Central University of Medical Sciences' health institutions. The study found no significant difference in knowledge based on marital status which also supports our research finding.

This study found a significant difference in attitude based on marital status. This study result is contrary to Navidi et al (2022) in which marital status was not associated with attitude. The study design was a stratified sampling technique and this study uses convenience sampling which could explain the differences.

Another demographic variable sought doing our study was the employment status of nursing and medical students based on knowledge and attitude. However, there is no significant difference exists between the Sexual Risk Behaviors of students based on employment. Both nursing and medical students are aware of the thread post to their health because of engaging in such behavior as such they are careful to avoid such behavior. They might be aware of the impact their profession should have on their attitude which could explain the reason for no difference in sexual risk behavior.

A significant difference was found in the knowledge of Nursing and medical students. Those who have Part-time employment has a higher median score. Nursing and medical students who engage in part-time employment may experience increased opportunities for direct patient care and clinical exposure. If working students acquire supplementary practical experience through their jobs, it could potentially enhance their level of sexual health knowledge in comparison to their fellow students. Employed students can utilize their theoretical knowledge in practical scenarios, hence strengthening their comprehension of sexual health subjects.

There is a significant difference between student knowledge of STDs and Sexual risk behavior based on faculty. Students from the medical faculty have higher mean rank scores. The clinical training that medical students receive is typically more extensive than the training that nursing students receive, particularly in specialized areas. One reason for this distinction is that nursing and medical professionals have quite different duties and responsibilities in the healthcare

industry. There is a wider variety of medical disorders that medical students are exposed to, including STDs (STDs), which is in line with their future position as physicians. As a result of the nature of their education, medical students receive a more comprehensive understanding of STDs (STDs) and the behaviors that are linked with them than nursing students do. As a result of the breadth and depth of medical education, this disparity reflects the difference. Higher knowledge ratings are the result of a more direct relationship between medical disciplines and STDs (STDs).

There is no significant relationship between knowledge of STDs & Sexual risk behavior among Nursing and Medical students.

Based on the findings, it appears that having a greater understanding of STDs (STDs) does not necessarily result in changes in sexual risk behavior. There are many facets to sexual risk behavior, and it is influenced by a variety of factors, including social, psychological, and cultural aspects. The absence of a significant link may suggest that knowledge alone is not a powerful predictor of behavior concerning sexual health. Knowledge is not the only factor that might influence sexual risk behavior; it is not the only factor. According to the findings of the study, there is a significant amount of individual variance in the relationship between sexual risk behavior and knowledge of STDs (STDs). As may be seen, students come from a wide variety of backgrounds and geographical locations all over the world. While some people may be able to put their knowledge to use in the process of making well-informed decisions, others may not be able to translate their information into changes in behavior. The sexual conduct of individuals can be greatly influenced by cultural and societal standards. Based on the findings of this study, it appears that societal and cultural influences have a more significant role in determining sexual risk behavior than individual knowledge levels do.

CHAPTER VI

Conclusion and Recommendation

This chapter provides conclusions derived from the research findings per the research's objective and offers appropriate suggestions.

Conclusion

The purpose of this study was to find out the current knowledge and behaviors of Nursing and Medical Students studying at the Near East University in the TNRC about STDs since in fact, their knowledge and behaviors might influence their attitude and actions toward sex, which can impact the well-being of the population in which they belong and to see which factors influence their knowledge of STDs.

The study concludes that both medical and nursing students have good knowledge about STDs and a lower risk of engaging in risky sexual behavior. These results are reasonable because sexual health education, which covers strategies for preventing, identifying, and treating sexually transmitted illnesses, is a part of the curriculum for nursing and medical students at Near East University. Gender does not influence the knowledge of nursing and medical student but rather influences their sexual behavior.

This study also concludes that the level of education influences both Knowledge of STDs and Sexual Risk Behaviors. Master's students have more knowledge of both Knowledge of STDs and sexual risk behaviors. The knowledge of STDs and student sexual risk behaviors of students from all regions at both faculties is the same. From the study investigation, knowledge of STDs is not influenced by marital status is another point of conclusion from this study but Sexual Risk Behaviors is influenced by marital status.

Religion is not an influencing factor for knowledge of STDs but it influences sexual risk behavior. Students from nursing and medical faculties who have part-time employment have more knowledge of STDs but they are similar concerning the sexual risk behavior of their unemployed counterparts.

One major point of conclusion is that medical students have more knowledge about STDs and sexual risk behavior as compared to nursing students. Age differences exist in both knowledge of STDs and sexual risk behavior.

Finally, this study concludes on the note that the fact that you know about STDs does not influence sexual risk behavior as no correlation was found in this study.

Recommendations

Based on the findings of this study, the researcher offers the following recommendation:

1. A follow-up study be conducted at both faculty with a different study design and measuring instruments to assess both the knowledge and sexual risk behavior of students
2. Since knowledge alone does not influence sexual risk behavior, studies be conducted to see whether psychological, social, and cultural factors in addition to knowledge contribute to risky behaviors.
3. That a reassessment of the delivery of sexual health education at both faculties is considered.
4. Since a gap exists between nursing and medical students, more interdisciplinary collaboration between medical and nursing faculties should be put in place. Facilitating the exchange of knowledge between the two groups of students could yield advantages, promoting a more thorough comprehension of sexual health
5. Differences in teaching methodologies between medical and nursing faculties may have contributed to variations in levels of knowledge. The efficacy of instructional tactics in disseminating knowledge about STDs (STDs) should be considered.
6. More clinical practice be given to nursing students in addition to their theoretical knowledge.
7. An initial assessment of the knowledge and sexual risk behaviors of both medical and nursing students be done before entrance into the various programs to know the specific knowledge of both programs and the impact that the program has had on them.

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Appendices

Appendix A

Questionnaire

INFORMED CONSENT

Dear Participant,

My name is Kollie T. Kesselly; I am a master of science student currently studying at Near East University in Northern Cyprus who developed an interest in conducting research on the topic “A survey of current knowledge on STDs and sexual behavior in students of Northern Cyprus” This questionnaire is an important part of a study that investigates the knowledge on STDs and sexual behavior in students of Northern Cyprus.

It will take about 10 minutes to fill in the questionnaires. Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. Your name is not required to be mentioned while filling in the questionnaire. Your participation is voluntary. Your decision whether or not to participate will not affect your relationship with the school you are attending; you are also free to withdraw your consent and discontinue participation at any time without penalty. I will be immensely happy for your participation in this study. Completing this survey signifies your consent to participate, that you understand the study, and agree to participate.

Respectfully yours;

Kollie T. Kesselly
Masters Student in Medical & Clinical Microbiology

Assoc. Prof. Eşref Çelik
NEU Medical & Clinical Microbiology Department

QUESTIONNAIRE

1. Gender (Sex)

Male Female Prefer not to say

2. What is your age? (please specify) _____

3. What is your current educational status?

Undergraduate student Master student Ph.D. student

Other (please specify) _____

4. What is your nationality? Please state.....

5. What is your marital status?

1. Single 2. Married 3. Divorced/Separated

4. Other (please specify).....

6. If applicable, please specify your religion.

Christianity Judaism Islam Buddhism Hinduism No religion

Other (please specify) _____

Prefer not to say **Employment status**1. Full time 2. Part-time 3. Contract 4. Unemployed

4. Other (please specify)

Faculty (Please write) _____

The Sexually Transmitted Disease Knowledge Questionnaire (STD-KQ). For each statement below, please circle true (T), false (F), or I don't know (DK). If you don't know, please do not guess; instead, please circle DK

Statement	True (T)	False (F)	I Don't Know (DK)
Genital Herpes is caused by the same virus as HIV.			
Frequent urinary infections can cause Chlamydia.			
There is a cure for Gonorrhea.			
It is easier to get HIV if a person has another Sexually Transmitted Disease.			
Human Papillomavirus (HPV) is caused by the same virus that causes HIV.			
Having anal sex increases a person's risk of getting Hepatitis B.			
Soon after infection with HIV, a person develops open sores on his or her genitals (penis or vagina).			
There is a cure for Chlamydia.			
A woman who has Genital Herpes can pass the infection to her baby during childbirth.			
A woman can look at her body and tell if she has Gonorrhea.			
The same virus causes all of the STDs.			
Human Papillomavirus (HPV) can cause Genital Warts.			
Using a natural skin (lambskin) condom can protect a person from getting HIV.			
Human Papillomavirus (HPV) can lead to cancer in women.			
A man must have vaginal sex to get Genital Warts.			
STDs can lead to health problems that are usually more serious for men than women.			
A woman can tell that she has Chlamydia if she has a bad-smelling odor from her vagina.			
If a person tests positive for HIV the test can tell how sick the person will become.			
There is a vaccine available to prevent a person from getting Gonorrhea.			
A woman can tell by the way her body feels if she has a Sexually Transmitted Disease.			
A person who has Genital Herpes must have open sores to give the infection to his or her sexual partner.			
There is a vaccine that prevents a person from getting Chlamydia.			
A man can tell by the way his body feels if he has Hepatitis B.			
If a person had Gonorrhea in the past he or she is immune (protected) from getting it again.			
Human Papillomavirus (HPV) can cause HIV.			
A man can protect himself from getting Genital Warts by washing his genitals after sex.			
There is a vaccine that can protect a person from getting Hepatitis B.			

Part III: The following questions are about the nature and frequency of your sexual behaviors since you came to Northern Cyprus. Please read the questions carefully and tick only one box for each question. Remember that your answers are completely anonymous and will not be traceable to you in any way.

1. How often have you had anal sex without a condom?

Never Rarely Sometimes Often Very Often

2. How often have you performed oral sex without protection (condom or dental dam)?

Never Rarely Sometimes Often Very Often

3. How often have you had sex while under the influence of alcohol (i.e. drunk)?

Never Rarely Sometimes Often Very Often

4. How often have you had sex while under the influence of drugs or substances?


Never Rarely Sometimes Often Very Often

5. How often have you had sex without a condom with someone you have just met?

Never Rarely Sometimes Often Very Often

Appendix B

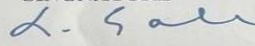







Ethical Approval


 NEAR EAST UNIVERSITY
 SCIENTIFIC RESEARCH ETHICS COMMITTEE

RESEARCH PROJECT EVALUATION REPORT

Meeting date :21.06.2023
Meeting Number :2023/115
Project number :1730

The project entitled "A Survey Of Current Knowledge On Sexually Transmitted Diseases And Sexual Behaviour In Students Of Northern Cyprus" (Project no: NEU/2023/115-1730), which will be conducted by Assoc. Prof. Dr. Eşref Çelik and Prof. Dr. Fazilet Aksu has been reviewed and approved by the Near East University Scientific Research Ethical Committee.

NAME-SURNAME	ROLE	SIGNATURE
1. Prof. Dr. Şanda Çaltı	HEAD OF ETHICS REVIEW COMMITTEE	
2. Assoc. Prof. Dr. Gulifeiya Abuduxike	RAPPORTEUR	
3. Prof. Dr. Tamer Yılmaz	MEMBER	
4. Prof. Dr. Şahan Saygı	MEMBER	
5. Prof. Dr. İlker Etikan	MEMBER	
6. Prof. Dr. Nilüfer Galip Çelik	MEMBER	KATILMADI
7. Assoc. Prof. Dr. Mehtap Tınazlı	MEMBER	
8. Assoc. Prof. Dr. Dilek Sarpkaya Güder	MEMBER	
9. Assoc. Prof. Dr. Burçin Şanlıdağ	MEMBER	

<https://etikkurul.neu.edu.tr/>

Appendix C

Medical Faculty Approval

YAKIN DOĞU ÜNİVERSİTESİ
TIP FAKÜLTESİ



NEAR EAST UNIVERSITY
FACULTY OF MEDICINE

TFD068/2024

13.02.2024

İlgili Makama,

Fakültemiz öğretim üyesi Yard. Doç. Dr. Eşref Çelik'in danışmanı olduğu KollieTarnue Kesselli (20213701)Tıbbi Mikrobiyoloji ve Klinik Mikrobiyoloji Anabilim Dalı'nda Master eğitimi almaktadır. Öğrencinin master tezi olarak Tıp Fakültesi Dönem 3 öğrencileri arasında " A SURVEY OF CURRENT KNOWLEDGE ON SEXUALLY TRANSMITTED DISEASES AND SEXUAL BEHAVIOUR IN STUDENTS OF NORTHERN CYPRUS" konusunda bir anket yapması uygundur.




Prof. Dr. Gamze Mocan

Dekan

Appendix D

Nursing Faculty Approval

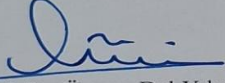
YAKIN DOĐU ÜNİVERSİTESİ  NEAR EAST UNIVERSITY

8.11.2023

Sayın Yrd. Doç. Dr. Eşref Çelik;

Danışmanı olduğunuz öğrenciniz 20213701 Kolhe Tarnue Kesselli'nin master tezi olarak YDÜ Hemşirelik Fakültesi 4. Sınıf İngilizce Programdaki öğrencilerimize "A Survey Of Current Knowledge On Sexually Transmitted Diseases And Sexual Behaviour In Students Of Northern Cyprus" konusunda anket uygulaması Dekanlığımız tarafından uygun bulunmuştur.

Saygılarımla



Prof. Dr. Ümran Dal Yılmaz
Hemşirelik Fakültesi Dekanı

Appendix E

Turnitin Similarity Report

