ADDIS ABABA UNIVERSITY

COLLEGE OF NATURAL AND COMPUTATIONAL SCIENCES

DEPARTMENT OF ZOOLOGICAL SCIENCES

Assessment of Knowledge, Attitude and Practice of Medhanealem Preparatory School Students about Gonorrhea Infection

BY

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JULY, 2020

ADDIS ABABA, ETHIOPIA

Acknowledgments

I thank the Almighty God who step by step guided my study. My sincere gratitude also goes to my advisor Dr. Fitsum Tigu who determinedly provided helpful and vital guidance throughout the conduction of this research. His expertise and guidance was basic, ultimate and fundamental towards the completion of this MSc thesis.

I am grateful to Medhanealem Secondary School Principals, teachers, and all management workers especially for their willingness & their material support.

I thank also my family members for their moral and material support during my entire stay at AAU and research area. I also express my gratitude to my friends and colleagues who encouraged me in all stages of my study.

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Acronyms and Abbreviations

ART	Anti-retroviral treatment
CDC	Center for disease control
DGI	Disseminated gonococcus infections
ECDC	European center for disease prevention and control
KAP	Knowledge attitude practice
NG	Neisseria gonorrhea
PID	Pelvic inflammation disease
MICs	Minimum inhibitory concentration
MSM	Men who have sex with men
NAAT	Nucleic acid amplification tests
PPV	Positive predictive value
SPSS	Statistical package for social science
STIs	Sexually transmitted infections
WHO	World health organization
AOR	Adjusted odd ratio
COR	Crude odd ratio
CI	Confident interval

Abstract

Neisseria gonorrhea is a bacterium responsible for one of the classic sexually transmitted infection (STI), gonorrhea. Antibiotic resistant *N. gonorrhea* is emerging at an alarming rate in many parts of the world, especially in developing countries. In Africa, the prevalence of the disease in STI suspected patients ranges from 2.7 to 8.2 % in various target groups. Up to 17.7 % gonorrhea prevalence was also detected among anti-retroviral treatment (ART) attendees. This study was done to assess the knowledge, attitude, risky behaviors and practices related to gonorrhea among preparatory students in Addis Ababa. A cross sectional descriptive study was conducted among a total of 410 participants (179 male; 231 female) aged between 16 and 22 years using self-administrated questionnaires during May 2019. The Statistical Packages for Social Sciences (SPSS) version 22 was used for statistical description and analysis and results were presented in numbers and percentages. Less than half of the respondents know about STDs, till there are misconception and their practice remained quit low. Most of the respondents did not know the sign, symptoms and treatments of STDs. whereas students knew the risk factors for STDs, they had a high degree of risk taking sexual behavior. Majority of the student's attitude towards gonorrhea was also found to be negative. All the demographic variables such as gender, age group, grade level, father's educational level, father's occupation, family income and family size were not associated with student's risky behaviors and preventive practices. Knowledge and attitude of student's towards gonorrhea infection had significant influence p-value on their risky behavior and preventive practices on sexually transmitted disease. A higher level acceptable sexual practices was observed among students with good knowledge level compared to students with poor knowledge level (62.9% vs. 43.1%; AOR = 2.12 95% CI = 1.42–3.18). Students with positive attitude had 1.66 times higher odds of having acceptable sexual behavior compared to students who has negative attitude (AOR = 1.66, 95% CI = 1.11–2.48). Knowledge on STDs is still lacking and risky behaviors have been practiced. Although there were low level of knowledge and attitude among them but their practice on sexuality is high. There is a need to revisit the existing STDs education curriculum so that appropriate intervention on STDs can be implemented.

Keywords / phrases: sexually-transmitted diseases; preparatory students; knowledge; attitude; sexual behavior

INTRODUCTION

1.1. Background of the Study

Neisseria gonorrhea (*NG*) is a gram negative coffee-bean shaped intracellular diplococus bacterium responsible for gonorrhea which is one of the classical Sexually Transmitted Infections (STIs) (Kayser *et al*., 2005). Gonorrhea can also be transmitted from mother to child during delivery and cause infection of the eye of the newborn (Gewirtzman *et al*., 2011). Genital tract gonorrhea gives rise to well recognize complications such as pelvic inflammatory disease with possible sequelae including infertility, ectopic pregnancy, fetal wastage, neonatal ophthalmia and disseminated gonococcal (GC) infections. People with gon`1orrhea infection have increased risk of HIV acquisition and transmission.

Gonorrhea is the second most commonly reported Sexually Transmitted Infection in the United States. Colonizes and infects the human genital tract but can also infect rectal and pharyngeal mucosal tissue in both men and women (Handsfield, 1984). Symptoms of genital infection include painful urination, genital pain, and abnormal discharge. Nonetheless, the infection is often asymptomatic (Den Heijer *et al.*, 2017). The asymptomatic rates as high as 56% in men (Hananta *et al.*, 2016) and 80% in women.

Asymptomatic infections cause extended colonization without treatment. Such untreated infections raise major concerns on the transmittance of gonorrhea and other STIS. In women, if left untreated, infection can lead to complications such as Pelvic Inflammatory Disease (PID) and Disseminated Gonococcal Infection (DGI) (Mayor *et al*., 2012).Consequences of PID include scarring of the reproductive organs, which may result in chronic pelvic pain, predisposition to ectopic pregnancy, and/or infertility. DGI can cause arthritis, tenosynovitis, dermatitis, and skin lesions (Silva And Wilson, 1979). The significance of gonorrhea is further highlighted by the findings that infection increases the risk of HIV infection and co-infections of other sexually transmitted pathogens (Jarvis and Chang, 2012).

Antibiotic resistant *Neisseria gonorrhea* is emerging at an alarming rate in many parts of the world, especially in developing countries. As a result, inexpensive treatment regimens of

gonorrhea in those countries have been rendered ineffective while efficacious ones are often unaffordable (Tibebu *et al*., 2013). After years of easy susceptibility of NG to penicillin and other antibiotics, there is a worrying trend of antimicrobial resistance to the commonly prescribed antibiotics such as quinolones and cephalosporin. Although, the center for disease control (CDC) recommends a combination therapy such as, ceftriaxone plus either azithromycin or doxycycline as first-line treatment for gonorrhea, it also noted that as a result of high drug resistant ability of gonococci cephalosporin resistance, especially ceftriaxone resistance, would greatly limit treatment options and cripple gonorrhea control efforts.

Meanwhile in Africa the prevalence in these age groups was estimated to be 8.2 million. Some of the studies in Africa showed that the prevalence of the disease in STI suspected patients ranges from 2.7 to 8.2 % in various target groups (Hailemariam *et al*., 2013). Up to 17.7 % gonorrhea prevalence was also detected among anti-retroviral treatment (ART) attendees (Mitiku *et al*., 2013). As indicated in sexually transmitted diseases treatment guideline, multiple sexual partners, sexually active age, unsafe sex practice, lower socio-economic status, urban residence and substance use are among the list of host related risk factors for acquiring the infection.

In spite of the high prevalence of STIs in Ethiopia, relatively little epidemiological research has been carried out, the people with STIs who have minor or no symptoms do not seek treatment at public health facilities, lack of information on STIs, health facilities offering treatment for STIs are far away from clients who present with STIs, Stigma associated with attending public STI clinics, and some patients do not attend formal STI clinics due to economic factors and they would rather go to traditional healers that provide services for free or with cheap costs, the prevalence of STI in Ethiopia is not well known (Afsarah *et al*., 2002)

The problem of STIs in Ethiopia is generally believed to be similar to that of other Developing countries there are no studies on students in this country indicating the Current KAP status of Gonorrhea infection in Ethiopia. In Ethiopia among men of age 15-19 and 20-24 nearly 5% and 2% had experienced STIs or associated symptoms has got treatment or medical advice but the rest did not get treatment because of lack of health insurance or ability to pay, lack of transportation, discomfort with facilities and services designed for adults and concern about confidentiality (Marrazzo, 1998, Mwambete & Zephaniah, 2006, Charrie & Berhane, 2011).

With the advent of STIs for which curative therapy is not available, primary prevention has assumed greater importance. Modifying selection of sexual partners, avoiding certain sexual practices theoretically and designing effective behavioral change intervention reduces the risk of infection. In Ethiopia, studies on Sexually Transmitted Infections (STIs) among high school students are very few students like seto semero high school students. Therefore, conducting research on knowledge, attitude and risky behavior towards Gonorrhea infection among High school students is an important input to design policy and strategy aimed at preventing and controlling the infections.

The finding of this study will help to understand the knowledge, attitude and practice of adolescents towards gonorrhea and to determine what methods are more appropriate to educate adolescents about gonorrhea. The result of this investigation will also help the concerned bodies or sectors to know the problem in the study area and carry out their intervention activities for reduction of this problem. The main aim of this study is to assess the knowledge, attitude and practice on gonorrhea infection among Medhanealem Preparatory School Students, Addis Ababa, Ethiopia.

1.2. Objectives of the Study

1.2.1. General Objective

The general objective of the study is to assess the knowledge, attitude and practice of students towards Gonorrhea infection at Medhanealem Preparatory School.

1.2.2. Specific Objectives

- ✓ To assess the knowledge level of preparatory school students towards Gonorrhoea infection
- ✓ To measure the attitude of preparatory school students towards Gonorrhoea infection
- ✓ To evaluate risky behaviours and preventive practices on sexually transmitted diseases among preparatory school students
- ✓ To identify the factors affecting risky behaviours and preventive practices on sexually transmitted diseases among preparatory school students

1.3. Statement of the problem

The KAP model asserts that knowledge is a precondition to acquire attitude about any concept, situation and circumstances. In the case of STDs (specifically gonnorohea infection), information should be provided for adolescents to make them have correct knowledge for behavior change, to stop their undesirable practices and lead them to the road to healthy life. In relation to this information needs, the Ethiopian culture does not encourage talking about the issue. Lack of sufficient information also hinder the knowledge acquisition of students about sexually transmitted diseases exposes them to false information from their friends and other sources.

Combating STDs among young adults is a daunting task for health professionals in most countries. Teachers, family members and the overall community are not seen involving in such efforts. Overcoming medical and social issues related to STDs will be more difficult if future healthcare providers are not well equipped with sound knowledge, good attitudes and practices. High school students are considered to be informed well and promote health education on STDs and to implement appropriate preventive measures in their current and future sexual life. They are thought to be more enlightened and well informed compared to the general population and are expected to possess good KAP towards STDs. Thus, it is interesting to explore their level of knowledge, attitudes and practices on STDs so that appropriate interventions can be rectified or planned accordingly in the future (Davis et al., 2006).

Therefore, studying regarding this sensitive problem among adolescents is an issue, which can support to overcome young people from sexual related problems. It would be thus be reasonable to access the knowledge, attitude and practices of adolescents regarding gonorrhea infection and other STDs and then to design programme based on findings filling the gaps and spending less time on what teens already know (Jain et al., 2016).

The main aim of this study was to assess the knowledge, attitude and practice on *Gonorrhoea* infection among Medhanealem Preparatory School, Addis Ababa, Ethiopia, 2019. This study was needed because the school's students are at reproductive age; some students become absent after lunch; they are also seen in the local bars; worldwide studies indicates that gonorrhea attacks people between the age of 15-29 and the text books of grade 11 and 12 focuses only on HIV(AIDS) and not on gonorrhea (personal observation).

2. LITERATURE REVIEW

2.1. Etiology and Transmission

Gonorrhea related clinical manifestations are caused by infection with the gram-negative bacterium. Infection predominantly involves the columnar epithelium of the urethra, endocervix, rectum, pharynx and conjunctivae. Although it usually remains localized to the initial sites of infection, it can ascend to the upper genital tract to cause pelvic inflammatory disease and epididymo-orchitis or disseminate as bacteraemia. Transmission is by direct inoculation of infected secretion from one mucosa to another, i.e., genital-genital, genital-anorectal, oro-genital or oro-anal contact or by mother-to-child transmission at birth. In 2008, the World Health Organization (WHO) estimated 106 million cases of gonorrhea among adults globally, a similar global incidence to genital Chlamydia infections.(https en.Wikipedia.org/Wiki/Gonorrea)

In Europe, Gonorrhoea is the second most common bacterial sexually transmitted infection (STI), i.e. after Chlamydial infections (ECDC, 2012). However, the incidence in several countries is underestimated because of suboptimal diagnostics, case reporting and surveillance. There is considerable geographic variation in the distribution of gonorrhea and infection is reported three times more frequently in men than women, reflecting the significantly higher proportion of symptoms in men and the burden of infection in men who have sex with men (MSM). The highest incidence of gonorrhea in young adults (15 to 29 years) and, in many countries, there is a disproportionate burden of disease in ethnic minority groups and MSM (Hook, 2008).

2.2. Clinical Features and Symptoms

Symptoms and physical signs of gonorrhea commonly reflect localized inflammation of infected mucosal surfaces in the genital tract (Sherrard, 1996). In men, the predominant presentation is of acute urethritis with symptoms of urethral discharge (>80%) and dysuria (>50%), usually starting within 2-8 days of exposure. Asymptomatic urethral infection is uncommon in men (less than 10% of urethral infections), in women, genital tract symptoms relate to endo-cervical and urethral infection and include increased or altered vaginal discharge (≤50%), lower abdominal pain (≤25%), dysuria (10-15%) and rarely inter-menstrual bleeding or menorrhagia. Endo-

cervical infection is commonly asymptomatic (≥50%), rectal and pharyngeal infections are usually asymptomatic *(*Peters *et al*., 2011).

2.3. Complications of Gonorrhea Infection

Pelvic inflammatory disease (PID) in women and epididymo-orchitis in men are the most notable complications from local spread of gonococcal infection. Gonococcal bacteraemia rarely occurs (less than 1% of infections) and is usually manifested by skin lesions, fever, arthralgia, acute arthritis and tenosynovitis disseminated gonococcal infection (Bleich 2012).

2.4. Diagnosis of Gonorrhea Infection

The diagnosis of uncomplicated gonorrhoea is established by identification of *N. gonorrhea* in genital, rectal, pharyngeal or ocular secretions. It can be detected by nucleic acid amplification tests (NAATS) or culture. The bacterium can also be visualized on microscopy of stained genital tract smear to facilitate rapid diagnosis in symptomatic patients. No test offers 100% sensitivity and specificity. Microscopy (×1000) using gram or methylene blue staining for identification of diplococci within polymorphonuclear leukocytes offers good sensitivity (≥95%) and specificity as a rapid diagnostic test in symptomatic men with urethral discharge (Taylor *et al*., 2011). Microscopy has poor sensitivity (≤55%) in asymptomatic men and in identifying endocervical (≤55%) or rectal infection (≤40%) and cannot be recommended as a test of exclusion in these situations (Sherrard, 1996). Microscopy is not recommended for identification of pharyngeal infection due to poor specificity as well as low sensitivity. Culture offers a specific and cheap diagnostic test that readily allows confirmatory identification. It is the only diagnostic test that enables antimicrobial susceptibility testing and capacity to perform culture remains essential to detect and monitor evolving antimicrobial resistance. Selective culture media containing antimicrobials are recommended (Jephcott, 1997).

Non-selective media can beneficially be used in addition to the selective media for urogenital and conjunctival samples if affordable. Culture is appropriate for endocervical, urethral, rectal, pharyngeal and conjunctival specimens but not for urine. The sensitivity of culture is high for genital samples providing that specimen collection, transport, storage and isolation procedures are optimized. An appropriate quality assurance is needed for the gonorrhea culture system since

commercial media and culture procedures vary in their selectivity and sensitivity. Culture (ideally supplemented with a NAAT for optimal diagnostic sensitivity) should be performed for antimicrobial sensitivity testing in patients with persisting infection or symptoms following treatment or if treatment failure is suspected (Unemo *et al*., 2011*).* NAATs are more sensitive than culture, offer testing on a wider range of specimen types and are less demanding in specimen quality, transportation and storage (Cook *et al*., 2005).

They show high sensitivity (>96%) in both symptomatic and asymptomatic infection, show equivalent sensitivity in urine and urethral swab specimens from men and equivalent sensitivity in clinician-taken or self-taken vulvo-vaginal and endo-cervical swabs from women (Schachter *et al*., 2005). NAATs significantly outperform transported samples for culture and are the sample of choice for testing individuals who are asymptomatic. In women, urine samples offer a lower sensitivity than swabs from the genital tract and are not the optimal sample for testing (Ison 2006). The performance characteristics of different commercially available or in house gonococcal NAATs differ substantially, particularly in regard to specificity.

When using NAATs to detect gonorrhea, the positive predictive value (PPV) of the testing protocol used should exceed 90%. The principal factors influencing the PPV are the prevalence of gonorrhea in the population tested and variation in the specificity of available NAATs, particularly at non-genital sites. If the used diagnostic NAAT does not display a PPV exceeding 90%, positive samples are recommended to be subjected to confirmatory testing, i.e. repeated with a NAAT targeting another sequence. NAATs are significantly more sensitive than culture for detecting pharyngeal and rectal infection 29-35 and are the test of choice for screening for rectal and pharyngeal gonococcal infection. However, commercially available NAATs are not licensed for testing specimens from these sites and they differ significantly in their specificity, 36, and 37 particularly at the pharynx due to the frequent presence of non-gonococcal *Neisseria* species. It is recommended that strict local evaluation is performed before introducing a NAAT to test rectal and pharyngeal samples. Women may have genital tract infection localized to the endo-cervix or urethra. In the current era of NAAT testing, asymptomatic women are commonly offered screening for gonorrhea and chlamydia infection by a single vulvo-vaginal or endocervical test (Lavelle *et al*., 2006).

This pragmatic approach is endorsed although there remains a lack of evidence to confirm its effectiveness in excluding gonorrhea. The additional contribution of routinely testing rectal and pharyngeal sites when screening women for gonorrhea is poorly defined in Europe, although sampling these sites should be considered when there is a history of direct exposure evidence on the minimum incubation period necessary before testing can be recommended is lacking, although clinical experience suggests that positive NAAT results may be observed within 1-2 days of infection *(*Peters *et al*., 2011*).*

2.5. Therapy of Gonorrhea Infection

Neisseria gonorrhea has shown a remarkable capacity to develop resistance to multiple classes of antibiotics including penicillin, tetracycline, macrolide and fluoroquinolone (ECDC, 2012). After a steady rise in minimum inhibitory concentrations (MICs) in recent years, resistance and even clinical failures to extended-spectrum cephalosporin (ceftriaxone and cefixime) have now been confirmed (Tapsall *et al*., 2009).

In this emergent situation including the fear that gonorrhea may become untreatable, who has published the global action plan to control the spread and impact of antimicrobial resistance in gonorrhea. As a consequence of the emergence of clinically important resistance to extended-spectrum cephalosporin and the absence of robust alternative antimicrobials that can be administered as a single dose, these guidelines have adopted combination antimicrobial therapy as a strategy to delay and combat the widespread development of multi-drug resistance rather than only recommending administration of an increased dose of the extended-spectrum cephalosporin. According to limited data, combination antimicrobial therapy with extended-spectrum cephalosporin and azithromycin seems to show synergy *in-vitro* and *in-vivo*, and also eradicates concomitant *Chlamydia trachomatis* Infection, which is relatively common in many settings. Published clinical trials on the treatment of gonorrhea do not address the rapidly evolving situation of resistance to extended-spectrum cephalosporin and provide very limited data on the treatment of multidrug resistant gonorrhea (Furuya *et al*., 2006).

Treatment regimens recommended in this guideline are based on early clinical efficacy trials, pharmacokinetic/pharmacodynamic considerations, *in vitro* antimicrobial susceptibility surveillance data, case reports of antimicrobial resistance, and anticipated trends in antimicrobial

resistance. Nevertheless, there remains significant geographical variation in resistance and local alternative treatments based on comprehensive, quality assured local surveillance data of resistance may be reasonable (Tapsall *et al*., 2009).

2.6. Empirical Studies about KAP towards Gonorrhea Infection and STDs

A cross-sectional study was conducted on 186 STI suspected patients seen in Gambella hospital from March to July 2015. The study was aimed at determining the magnitude, its determinants and antimicrobial resistance profile of *N. gonorrhoeae* in a place where there is risk related cultural practices and relatively high HIV prevalence. The study found that 11.3 % of the STI suspected patients were confirmed to have *N. gonorrhoea* (Ali et al., 2016).

The other study was conducted to assess the knowledge, attitude and practice on sexual transmitted infection among Haile Mariam Mamo preparatory school students, Debre Birhan, Ethiopia, 2013. A total of 347 students were involved in the study by using stratified random sampling. Among the total participants regarding information heard sexually transmitted infection transmission and prevention method, fourteen (17.5%) were from rural and 246 (82.5%) were from urban. Even if most of the respondents have knowledge about STIs, till there are misconception and their practice remained quit low. Behavioral change communication and demonstration be done regularly as part of the routine service and through the outreach school Visit) program about optional prevention and control of sexual transmission infection practice to all students who came to health institute and outreach services especially preparatory school.

3. MATERIALS AND METHODS

3.1. Description of the study area

The study was conducted at Medhanealem preparatory school located in Worda 9, Gullele Sub-City, Addis Ababa, Ethiopia. The school was inaugurated in 1924. According to the statistics obtained from the school record office, a total of 1707 students were enrolled during 2019/20 academic year. From the total students of 1707, 714 were grade 11 students and 993 students were grade 12 students. Out of these students 874 female 833 were males. The school had 40 sections in total, 18 sections were allocated for grade 11 students on average class size of 40 students per class, and 22 sections were allocated for grade 12 students on average class size of 45 students per class.

3.2Study Design

A cross sectional descriptive study was conducted on a total of 410 participants using self-administrated questionnaire during May 2019. The Statistical Packages for Social Sciences (SPSS) version 22 was used for statistical description and analysis and results were presented in numbers and percentages. A decretive quantitative cross sectional study design was employed.

3.3 Study Population

All grade 11 and 12 students of Medhanealem preparatory school used as source population and sample students of Medhanelum preparatory school who were selected by the study. Sampling frame was list of students from the school record office as study population.

3.4Sample Size Determination and Sampling Procedure

The sample size was determined using the formula for a single population proportion for cross sectional study following assumption by using the 50% of students has knowledge attitude and practice about gonorrhea infection to obtain maximum sample size at 95% certainty. The sample size was determined by the formula:

$$n = \frac{Z^2 \times P(1-p)}{e^2}$$ Cochran's formula (Cochran 1963)

$$n = \frac{(1.96)^2 \times 0.5(1-0.5)}{(0.05)^2} = 384$$

Where (n=Sample Size, Z=95% of confidence i.e. 1.96, P=0.5 (population proportion to be included in the sample i.e. 50%), Q=1-p D= Margin of error or degree of accuracy required (i.e. 0.05). The final sample size was determined to be 384. The non-response rate 10% of the sample size was added and the final total sample size of the study was 422.

3.5 Sampling Techniques

First, after obtaining the students list from the school, students were grouped in to two strata (grade 11&12) based on grade level difference. And then, sample size from each grade were proportionally taken. From Grade 11 (177 respondent) were selected and grade 12 (245 respondent) were selected randomly. Finally, systematic sampling methods was used to select the sample students in the class by 4^{th} intervals according to lottery method

K=N/Nf: 1707/422=4. So every forth individual were selected until the sample size was completed.

3.6. Instruments and Measurement

Data from the respondents was collected using self-administered questionnaires. The structure of questionnaires for each items are adapted from similar studies done. The instrument contains four parts: socio-demographic characteristics of the respondents, knowledge of students towards gonorrhea infection, attitudes and practice of the students towards gonorrhea infection. The questionnaire was initially developed in English and translated in to Amharic by a person who has good ability of both language and then back to English to ensure consistence. The questioner was pretested in similar setting inside the study area/place (Medhanealem Preparatory School) with similar group as the target group. Negatively stated questions were reversed into positive in order to score the responses uniformly.

I. Demographic data

The demographic data was collected based on demographic questions, which focuses on background information such as age, sex, grade level, father's occupation, father's education level and family income.

II. Knowledge

Data related to risky behaviors and preventive practices on sexually transmitted diseases was collected by using twenty close-ended questions. The students' knowledge on STDs was assessed by using a 20-item questions (knowledge on STD and specifically gonorrhea), preventive practices, symptoms and treatment of STDs (gonorrhea). These questions have two measurement scales; ten questions with five scale knowledge inventory scales and alternatives. Participants were instructed to give a "yes" or "no" answer. Those students with knowledge scores above the mean were categorized as having good knowledge, while those with knowledge scores below the mean were categorized as having poor knowledge.

III. Attitude

Attitude related to STDs was assessed using a (attitudes towards STD screening, self-perceived risk, perception on the necessity of condom use and treatment seeking attitudes). The responses were classified based on a two level scale where 1= Yes, 0= No. All results were discussed by descriptive data analysis.

IV. Practice

The preventive practice questions contained 10 items (sexual abstinence, condom use, having sex with only one partner, and STD testing). Respondents were asked to give a response of "yes" or "no". Each "yes" response was scored "1", while a "no" response was scored "0". The mean preventive score was obtained, and those students that had scores above the mean were categorized as having "acceptable preventive practice", while those with scores lower than the mean were categorized as having "unacceptable preventive practice". For the item "Have you ever had sexual intercourse?" it was interpreted as have at least one sexual intercourse. In

addition, students who answered “no” to this question were instructed to proceed further by answering the remaining items on preventive practices.

3.7Data Collection Procedure

Self-administrating structured questionnaire which contain socio-demographic characteristics, knowledge, attitude and practice towards gonorrhea infection was prepared to collect primary data. The questionnaire was pretested in preparatory students of the same grade in Medhanealem secondary school having the same socio-demographic character before the actual data collection.

3.8Data Processing and Analysis

The collected data were manually checked for completion for respondents are to be included in analysis and analysis was done by software. Frequencies, proportions and summary of descriptive statistics were employed to describe the study population in relation to relevant variables. Chi-square test and odds ratio were at done 95% CI using a p-value of ($p< 0.05$) significance using SPSS (version 22 statistical software).

3.9Data Quality Control

Questionnaires were rechecked by the principal investigator and colleagues to maintain the quality of data.

3.10 Ethical Consideration

Ethical clearance and approval formal letter was obtained from Addis Ababa University, College of Natural and Computational Sciences institutional review board and, to all relevant offices and concerned bodies to obtain their cooperation. All study participants were informed about the purpose of the study and any additional information were given as they need, verbally and in written form. Efforts were done to overcome ethical concerns of the participants due to the sensitivity of the issue under study by careful designing and structuring the questionnaire; clear explanation about the purpose and usefulness of the study and by excluding names and other identifying numbers. The result of the study will be disseminated to Medhanealem preparatory school administrator, other relevant organizations working around gonorrhea infection.

4. RESULT AND DISCUSSION

4.1. Result

4.1.1. Demographic characteristics of respondents

A total of 410 respondents returned the questioner in this study making the response rate of 97.2 %. Among these respondents 179 (43.7%) were males and 231 (56.3%) were females. The age distribution of the respondents showed that most of the respondents (82.9%) were between 16-18 years old. From the respondents 236 (57.6%) were grade twelve students and the rest 174 (42.4%) were from grade eleven. Half of the respondent's fathers (49.3%) had a private occupation followed by government employees (21.2%), merchants (20.5%) and drivers (9%) (Table 1).

Regarding father's educational status, 42% of them reported that their parents had attended primary school followed by father's attended secondary school (23.9%) and college (18.5). The rest 15.6% of fathers were illiterates. Above one third (35.6%) of the respondents said that their family monthly income is between 1000 and 3000 birr. Respondents who has a family monthly income of 3001-5000 is 24.1% and above 7000 birr is 20.5%. Majority 280 (68.3%) of the respondents had 3-5 family size and 113 (27.6%) of them had a family size of between six and eight (Table 1).

Table 1: Frequency distribution on socio-demographic characteristics of respondents (n= 410)

Variable	Category	Frequency	Percent
Sex	Male	179	43.7
	Female	231	56.3
Age	16-18	340	82.9
	19-21	66	16.1
	22 and above	4	1.0
Grade	11	174	42.4
	12	236	57.6
Father's occupation	Government	87	21.2
	Private	202	49.3
	Merchant	84	20.5
	Driver	37	9.0
Father's education	Illiterate	64	15.6
	Primary	172	42.0
	Secondary	98	23.9
	College	76	18.5
Family income	1000-3000	146	35.6
	3001-5000	99	24.1
	5001-7000	26	6.3
	>7000	84	20.5
	I don't know	55	13.4
Family size	3-5	280	68.3
	6-8	113	27.6
	9-10	12	2.9
	>10	5	1.2

4.1.2. Knowledge level of students about gonorrhoea infection

Overall, the level of knowledge of participants on sexual intercourse and sexually transmitted diseases were classified into two groups; 'good knowledge' (44.16%), and 'poor knowledge' (58.54%) (Fig. 1). Regarding sexually transmitted diseases, only less than half of respondents (41.46%) reported that they have knowledge about gonorrhea disease. Similarly about forty present (40.24%) of the students knew about the signs and symptoms of gonorrhea disease (Fig.

1). Students were asked whether all burning sensation could be the symptoms of gonorrhea disease. As indicated in Table 2, majority (61%) said that it is not true while the rest 39% responded yes. Student's knowledge about treatment of gonorrhea disease is also counted as minority of the total respondents (40.5%) (Fig. 1). This implies that clearly the students have misconceived the general features of this disease.

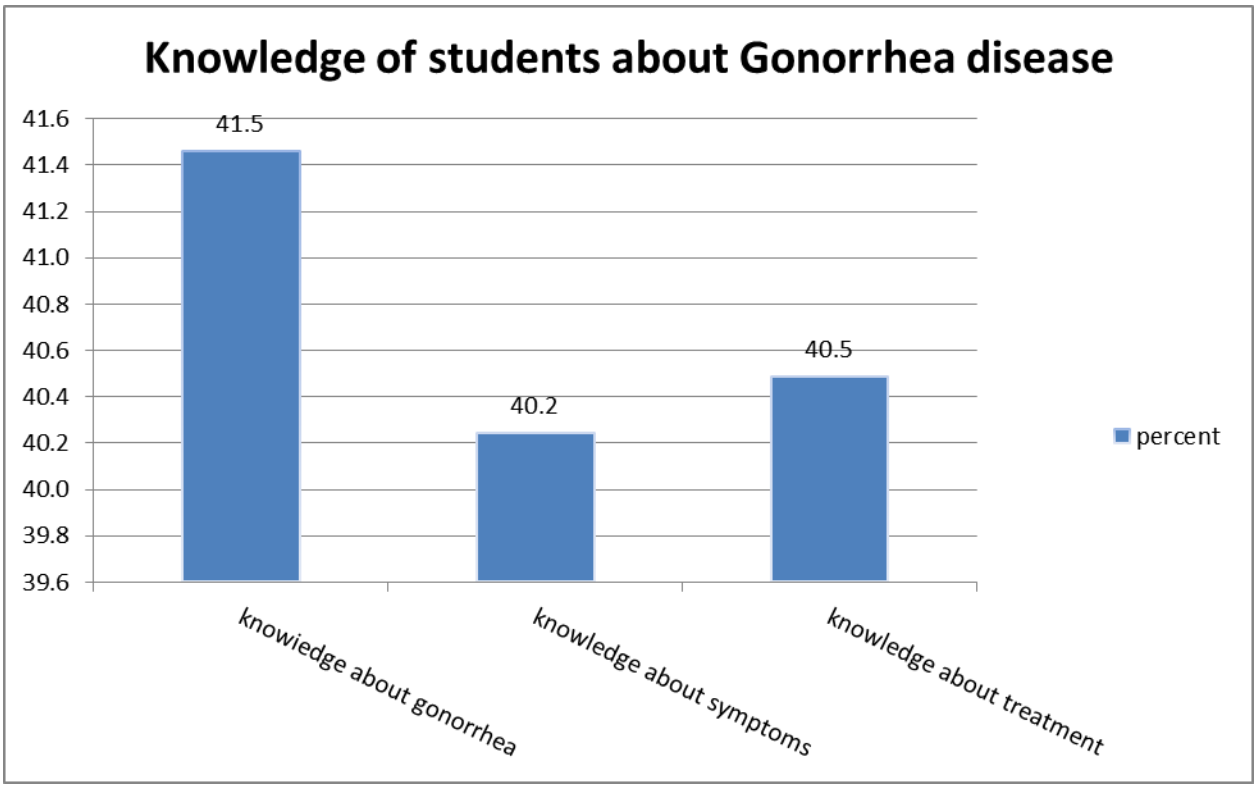

Figure 1: Percentage distribution of knowledge about signs, symptoms and treatment of gonorrhea disease among preparatory students (n= 410)

Majority of the respondents (61.7%) believe that gonorrhoea infection is curable and the rest (38.3%) said that it is not possible to cure it. About half of the students (52.2%) said that condom is important to avoid Gonorrhea disease during sexual intercourse while the other nearly half (47.8%) of them believed inversely. Adolescence is the critical stage in human life that brings the opportunity to new things including sexual intercourse. Therefore, orientation is important in order to help them adjust to the new changes and develop prevention mechanisms from such STDs. By doing this it is possible to boost student's readiness to talk about sexual and health

issues. In the study area, it is found to be poor. As shown in the Table 2, only 46.1% of the respondents reported that they feel comfortable enough to ask about Gonorrhea disease. More than half of them (53.9%) feel not comfortable to ask about it.

Respondents who agree with the statement "Gonorrhea mainly affects younger people" were 319 (77.8%). Regarding sources of advice, 56.1% of the participants said that any advice about Gonorrhea is good for students whereas 43.9% responded 'no'. This implies that majority students are not selective towards their source of information (advice). This may make them prone to misleading knowledge about gonorrhea. Additionally, only 39.5% of the respondents reported that they are sufficiently informed to avoid the risk of Gonorrhea disease whereas 60.5% said that they are not sufficiently informed in a way that avoid the risk of gonorrhoea. Inversely, majority of the respondents (59%) reported that sexual education received at school has been considered while the rest 41% opposed it. On the other hand, majority (59%) did not believe that school participants have their own role to avoid the risk of gonorrhea disease and the rest 41% believe on the role of school participants to avoid the risk (Table 2).

Table 2: Knowledge of students about gonorrhoea infection (n= 410)

Statements	Response	Frequency	Percent
1. Condom is important to avoid gonorrhoea disease during sexual intercourse	Yes	214	52.2
	No	196	47.8
2. It is possible to cure gonorrhoea	Yes	253	61.7
	No	157	38.3
3. Gonorrhoea mainly affects younger people, do you agree?	Yes	319	77.8
	No	91	22.2
4. I feel comfortable enough to ask about gonorrhoea disease	Yes	189	46.1
	No	221	53.9
5. All burning sensation could be the symptoms of gonorrhoea disease?	Yes	60	39.0
	No	250	61.0
6. Any advice about gonorrhoea is good for students	Yes	230	56.1
	No	180	43.9
7. I am sufficiently informed to avoid the risk of gonorrhoea disease	Yes	162	39.5
	No	248	60.5
8. Sexual education received at school has been considered	Yes	242	59.0
	No	168	41.0
9. School participants have their own role to avoid the risk of gonorrhoea disease	Yes	168	41.0
	No	242	59.0

When comes to the knowledge on sexual intercourse and STDs (Table 3), the participants also were asked about their communication with their parents about STDs. About 253 (61.7%) reported that they have never talked with their parents about STDs. One forth 105 (25.6%) talk rarely and 27 (6.6%) sometimes. In this regard, student's communication with their friends is better than their communication with their parents. Only 36.3% said that they have never talked about STDs with their parents. Respondents who have had talked rarely, sometimes and often talked with your friends about gonorrhea covered 24.9%, 24.6% and 14.1% of the total participants respectively.

Three forth of the respondents (74.6%) have used alcoholic drinks while 25.4% have never drink. The share of respondents who rarely, sometimes, often and always used alcohol drinks is 32.2%, 30.5%, 10% and 2% respectively. Regarding friend's influence, 34.9% of the respondents said that friends have never influence on sexual intercourse, 26.8% rarely, 21.7% said sometimes and 14.4% often. This implies that friend's (peer-group) have influence on sexual behavior even if the magnitude varies. Twenty one percent of the respondents believe that sex education and Gonorrhea prevention could not improve the quality of life. Respondents who believe that sex education and Gonorrhea prevention could rarely improve the quality of life are 37.3% and sometimes (28.8%).

Majority of the respondents (72.2%) said that only biology teachers have a responsibility to give education about gonorrhea disease whereas 27.8% said that biology teachers are not the only responsible. About one forth (23.9%) reported that they will never advise students to avoid any sexual intercourse before marriage. On the other hand, 23.9% said they rarely advice, 22.2% sometimes, 16.8% often and 13.2% always.

Table 3: Information of respondents' experience on sexual intercourse and STDs (n= 410)

Statements		Frequency	Percent
1. I talk with my parents about STDs	Never	253	61.7
	Rarely	105	25.6
	Sometimes	27	6.6
	Often	17	4.1
	Always	8	2.0
2. Have you ever talked with your friends about gonorrhoea?	Never	149	36.3
	Rarely	102	24.9
	Sometimes	101	24.6
	Often	58	14.1
3. Have you ever used alcoholic drinks	Never	104	25.4
	Rarely	132	32.2
	Sometimes	125	30.5
	Often	41	10.0
	Always	8	2.0
4. Could friends have influence on sexual intercourse?	Never	143	34.9
	Rarely	110	26.8
	Sometimes	89	21.7
	Often	59	14.4
	Always	9	2.2
5. Sex education and gonorrhoea prevention could improve the quality of life?	Never	88	21.5
	Rarely	153	37.3
	Sometimes	118	28.8
	Often	48	11.7
	Always	3	.7
6. Only biology teachers have a responsibility to give education about gonorrhoea disease	Yes	296	72.2
	No	114	27.8
7. I will advise students to avoid any sexual intercourse before marriage	Never	98	23.9
	Rarely	98	23.9
	Sometimes	91	22.2
	Often	69	16.8
	Always	54	13.2

4.1.3. Attitude of students towards gonorrhoea Infection

Students were asked whether they can be willing to take care of a family member who is gonorrhea infected people if become sick. About half of the respondents (49.5%) replied that can take care of their gonorrhea infected family member. The rest 50.5 of them cannot do that.

Nearly half of the respondents (49%) they have a discomfort if a student is gonorrhea infected, would he/she be permitted to continue studying in the school while 51% replied that they will not have a discomfort. More than half (56.8%) said that they can still continue to be a friend with gonorrhea infected classmates and the rest 43.2 said that they cannot continue their friendship.

Majority (60.5%) said that they have not any discomfort if the school principal is talking about the impacts of Gonorrhea infection in public and the rest 39.5% said that they will have a discomfort with this action. If person in shopping area is Gonorrhea infected, 53.4% said that they would be willing to buy items from him/her. On the other hand 46.6% would not be willing to buy the products.

Majority (67.6%) of them believe that Gonorrhea infection is not God's punishment while the rest 32.4% agreed with the saying. Meanwhile, 53.4% of the students felt that safe sex is not difficult to practice whereas 46.6% said that safe sex is difficult to practice. About 64% of the students believe that Gonorrhea is a problem in my community and the rest 35.9 believe that gonorrhea is not a problem in their community. Less than half (41.2%) claimed Gonorrhea does not concern them and 58.8% said that gonorrhea concern them (Table 4).

Table 4: Attitude of students towards Gonorrhoea infection (n= 410)

		Frequency	Percent
1. Can you be willing to take care of a family member who is gonorrhoea infected people if become sick?	Yes	203	49.5
	No	207	50.5
2. Do you have any discomfort if a student is gonorrhoea infected, would he/she be permitted to continue studying in the school?	Yes	201	49.0
	No	209	51.0
3. Do you believe that gonorrhoea infection is God punishment?	Yes	133	32.4
	No	277	67.6
4. Can you still continue to be a friend with gonorrhoea infected classmates?	Yes	233	56.8
	No	177	43.2
5. Do you have any discomfort if the school principal is talking about the impacts of gonorrhoea infection in public?	Yes	162	39.5
	No	248	60.5
6. Are you willing to discuss about gonorrhoea infection with your classmate friends?	Yes	245	59.8
	No	165	40.2
7. If person in shopping area is gonorrhoea infected, would you be willing to buy items from him/her?	Yes	219	53.4
	No	191	46.6
8. Is safe sex is difficult to practice?	Yes	191	46.6
	No	219	53.4
9. Do you believe that gonorrhoea is not a problem in my community?	Yes	147	35.9
	No	263	64.1
10. Gonorrhoea does not concern you?	Yes	169	41.2
	No	241	58.8

4.1.4. Preventive Practices and Risky Behaviours towards STDs

Among respondents who participated in the study 184 (44.9%) had sexual intercourse. With regard to sexual activity, 55.1% of students never had any sexual intercourse in the time of study. From those individuals who perform sex, 74 (40.2%) of them had sex under the influence of alcohol. Among those who perform sex, 86 (46.7%) didn't use condom, but the 98 (53.3%) of them use condom. The other aspect of protecting oneself and sexual partner is faithfulness. Among the students who had sexual intercourse, half of (95 /51.6%) said that they are faithful for their sex partners and the rest 89 (48.4%) said that they are not faithful. Those students were also asked about whether they have more than one sexual partners, from those 67 (36.4%) of them reported that they have more than one sexual partner.

Regarding the prudence of respondents among the total participants, 138 (33.7%) of them said that they keep condoms in their pocket. Among students who has sexual experience, less than half (45.7%) said that they can stop when a condom is teared during sex. Majority of the respondents 255 (62.2%) reported that they have no friends that can make a sexual intercourse without condom and the rest 155 (37.8%) have a friend that can do unsafe sex. These students were asked whether they have taken Gonorrhea test after sexual intercourse. Among them 71 (38.6%) have tested for gonorrhea after sexual intercourse. From those 71 students who have checked, 10 (5.4%) had history of gonorrhea.

Table 5: Preventive Practices and Risky Behaviours towards STDs (n= 410)

NOTICE that this data analysis has been made according to the instruction provided to respondents on the appendix (IV).

Statements	**N**		**Frequency**	**Percent**
1. Have you ever had sexual intercourse?	410	Yes	184	44.9
		No	226	55.1
2. Do you have sex under the influence of alcohol?	184	Yes	74	40.2
		No	110	59.8
3. Do you use condom during sex?	184	Yes	98	53.3
		No	86	46.7
4. Do you have more than one sexual partner?	184	Yes	67	36.4
		No	117	63.6
5. Do you keep condoms in your pocket?	410	Yes	138	33.7
		No	272	66.3
6. Do you stop when a condom is tore during sex?	184	Yes	84	45.7
		No	100	54.3
7. Do you have a friend that can make a sexual intercourse without condom?	410	Yes	155	37.8
		No	255	62.2
8. Are you faithful to your sexual partner?	184	Yes	95	51.6
		No	89	48.4
9. Have you ever taken gonorrhoea test after sexual intercourse?	184	Yes	71	38.6
		No	113	61.4
10. Do you have gonorrhoea history regarding to sexual intercourse?	184	Yes	10	5.4
		No	174	94.6

4.1.5. Factors affecting the practice of Gonorrhoea Infection

A chi-square and logistic regression tests were used to evaluate the possible association of knowledge, attitude and other demographic factors with practice. Chi-square test of contingencies was carried out to evaluate the level of knowledge, attitude and other demographic factors associate with the participant's risky behaviors and preventive practices on sexually transmitted diseases among Medhanealem preparatory school students. As shown in the Table 6, none of the demographic factors has significant association with risky behavior and preventive practice of respondent's sexually transmitted diseases.

The chi-square test for sex (χ^2 (1, N= 410) = 0.008, p=0.505), age group χ^2 (2, N= 410) = 2.14, p= 0.342), grade level (χ^2 (1, N= 410) = 0.042, p=0.458), father's occupation χ^2 (2, N= 410) = 2.58, p= 0.461), father's education level χ^2 (3, N= 410) = 5.59, p=0.133), family monthly income χ^2 (4, N= 410) = 2.42, p= 0.659) and family size χ^2 (3, N= 410) = 2.06, p=0.560) were statically insignificant. Thus, these demographic variables of the participants do not influence their risky behavior and preventive practice. In addition, the binary logistic regression result also revealed that there were no significant associations observed between the preventive practices and socio-demographic profiles (p-values > 0.05).

Table 6: Relation between Socio-demographic Factors affecting the sexual practice of preparatory students (n= 410)

Variables		Practice		Total	X^2	P value	AOR (95% CI)
		Acceptable	Unacceptable				
Sex	Male	93 (52%)	86 (48%)	179 (100%)	0.008	0.505	1
	Female	119 (51.5%)	112 (48.5%)	231 (100%)			0.947 (.630, 1.425)
Age	16-18	173 (50.9%)	167 (49.1%)	340 (100%)	2.14	0.342	1
	19-21	38 (57.6%)	28 (42.4%)	66 (100%)			0.675 (.382, 1.195)
	≥ 22	1 (25%)	3 (75%)	4 (100%)			3.13 (.301, 32.67)
Grade	11	91 (52.3%)	83 (47.7%)	174(100%)	.042	0.458	1
	12	121 (51.3%)	115 (48.7%)	236 (100%)			1.12 (.748, 1.69)
Father's occupation	Government	42 (48.3%)	45 (51.7%)	87 (100%)	2.58	0.461	1
	Private	101 (50%)	101(50%)	202 (100%)			0.783 (.422, 1.454)
	Merchant	46 (54.8%)	38 (45.2%)	84 (100%)			0.651 (.279, 1.51)
	Driver	23 (62.2%)	14 (37.8%)	37 (100%)			0.549 (.223, 1.351)
Father's education	Illiterate	29 (45.3%)	35 (54.7%)	64 (100%)	5.59	0.133	1
	Primary	88 (51.2%)	84 (48.8%)	172 (100%)			0.889 (.483, 1.635)
	Secondary	60 (61.2%)	38 (38.8%)	98 (100%)			0.505 (.251, 1.01)
	College	35 (46.1%)	41 (53.9%)	76 (100%)			0.785 (.346, 1.78)
Family income	1000-3000	76 (52.1%)	70 (47.9%)	146 (100)	2.42	0.659	1
	3001-5000	54 (54.5%)	45 (45.5%)	99 (100%)			0.963 (.549, 1.69)
	5001-7000	11 (42.3%)	15(57.7%)	26 (100%)			1.64 (.642, 4.18)
	> 7000	46 (54.8%)	38 (45.2%)	84 (100%)			0.931 (.447, 1.93)
	I don't know	25 (45.5%)	30 (54.5%)	55 (100%)			1.43 (.730, 2.82)
Family size	3-5	146 (52.1%)	134 (47.9%)	280 (100%)	2.06	0.560	1
	6-8	59 (52.2%)	54 (47.8%)	113 (100%)			1.02 (.600, 1.75)
	9-10	6 (50%)	6 (50%)	12 (100%)			1.45 (.430, 4.90)
	>10	1 (20%)	4 (80%)	5 (100%)			8.05 (.768, 84.4)

Knowledge and attitude of student's towards gonorrhea infection had significant influence on their risky behaviour and preventive practices on sexually transmitted disease. The chi-square test for attitude of students towards STDs and their risky behaviour and preventive practices was

statistically significant, χ^2 (1, N= 410) = 15.84, p=0.001 (Table 7). Similarly, there was significant association between knowledge of students about sexually transmitted infections and risky behaviour and preventive practices χ^2 (1, N= 410) = 8.5, p=0.002. Thus, the level of knowledge of the participants influences their risky behaviour and preventive practice of students towards sexually transmitted diseases (Table 7).

Table 7 shows the associations between the student's knowledge level and attitude with their risky behaviour and preventive practices on STDs. A higher level acceptable sexual practices was observed among students with good knowledge level compared to students with poor knowledge level (62.9% vs. 43.1%; AOR = 2.12 95% CI = 1.42–3.18). By logistic regression, students with positive attitude had 1.66 times higher odds of having acceptable sexual behavior compared to students who has negative attitude (AOR = 1.66, 95% CI = 1.11–2.47).

Table 7: The association of knowledge and attitude with sexual behaviour of preparatory students

Variable			Practice		Total	X^2	P value	AOR (95% CI)
			Acceptable	Unacceptable				
Knowledge	Good	N	112	66	178	15.84	0.001	1
		%	62.9%	37.1%	100.0%			
	Poor	N	100	132	232			2.12 (1.42, 3.18)**
		%	43.1%	56.9%	100.0%			
Attitude	Positive	N	114	78	192	8.5	0.002	1
		%	59.4%	40.6%	100.0%			
	Negative	N	98	120	218			1.66 (1.11, 2.47)**
		%	45.0%	55.0%	100.0%			

** Significant at α= 0.05

4.2. Discussion

This study has tried to assess knowledge, attitude and practice of sexual transmitted infections (specifically gonorrhea infection) among Medhanealem preparatory school students in Addis Ababa Ethiopia.

4.2.1 Knowledge level of students about Gonorrhoea Infection

The level of knowledge of participants on sexual intercourse and sexually transmitted diseases is labeled as good (44.1%) and 'poor knowledge' (55.9%). This implies that majority of the students has poor knowledge about sexual issues and STDs.

The students' knowledge about sexually transmitted diseases is found to be low. Only less than half of respondents (41.46%) have knowledge about gonorrhea disease. This result was lower than the study conducted in Seto Semero, Debre Birhan, and Wolaita Sodo University in which 88.5%, 82.5%, and 96.4% of the respondents heard about STIs respectively. This might be because of the educational difference between the students since the study conducted in university students. Additionally, the other source of this inconsistency may be because of the specific nature of the Gonorrhea infections due to the previous studies were focused on both types of STIs.

Similarly about forty present (40.2%) of the students knew about the signs and symptoms of gonorrhea disease. It is lower than the finding in Debre Birhan where 74.7% of respondents' aware sign & symptoms of STIs but the rest 25.3% didn't know any sign & symptom of STI (Addis *et al*., 2013). Student's knowledge about treatment of gonorrhea disease is also counted as minorities of the total respondents (40.5%) were aware about the disease. This implies that clearly the students have misconceived the general features of this disease. Adolescence is the critical stage in human life that brings the opportunity to new things including sexual intercourse. Therefore, orientation is important in order to help them adjust to the new changes and develop prevention mechanisms from such STDs. By doing this it is possible to boost student's readiness to talk about sexual and health issues. In the study area, it is found to be poor.

Regarding sources of advice, 56.1% of the participants said that any advice about Gonorrhea is good for students whereas 43.9% responded 'no'. This implies that majority students are not

selective towards their source of information (advice). This may make them prone to misleading knowledge about gonorrhoea.

According to the findings of the study, majority of the students are lacking knowledge, these students would have more risky behaviors and exposure to pornographic materials despite having good sexual education at schools (Ma *et al*., 2006). Sex education in Ethiopian schools is still new and has not been standardized in terms of the mode of teaching delivery and the involvement of teachers in the subject. In order to improve student's knowledge towards STDs, indigenous institutions should play their part. Among the strong institutions in Ethiopia, religious institutions are more the strongest. It is very taboo to talk about sexual affairs in Ethiopian culture, especially in front of children. The study found that the number of students who can talk about gonorrhoea with their parents and friends is few. This may hinder the knowledge acquisition of students about sexually transmitted diseases. So, it is acceptable to say that the suppressive culture of the country affects the student's knowledge about STDs and it has a negative contribution for their risky sexual behavior.

Poor knowledge and risky practices related to STIs are a universal phenomenon among adolescents. In Ethiopian society, it is seen that STIs are widely associated with social stigma, embarrassment and denial. Sexuality, and associated health risks are still a major taboo. While their rights and needs may be acknowledged in theory, in practice they are still confronted with many barriers when it comes to obtaining practical support.

4.2.2 Attitude of students towards Gonorrhoea Infection

Regarding the attitudes of students about having multiple sexual partners was very casual. Those students were also asked about whether they have more than one sexual partners, from those 67 (36.4%) of them reported that they have more than one sexual partner. According to study conducted by (Shenghui Hi et al., 2012) among the school going adolescents in China, about 7% of adolescents had sexual intercourse. Amongst 39.6% reported two or more sexual partners; 42.4% reported ever had unprotected sexual intercourse. Compared to the above mentioned study, the prevalence of non-responsible sexual practices is higher in the current study. On the other hand, the result is slightly lower than students in Malaysia (Folasayo et al., 2017), German

cities (Samkange-Zeeb, 2013) and Malaysia (Zulkifli & Wong, 2002). Multiple sexual contacts are a well-known behavioral risk factor for acquiring STDs (Santelli et al., 1998).

Students are not comfortable with matters of sexual issues to be discussed with the parents. This is because of social taboo our society possesses regarding sexual issues. The present study revealed that nearly half of the respondents (49%) they will have a discomfort if a student is gonorrhea infected, would he/she be permitted to continue studying in the school while 51% replied that they will not have a discomfort. Majority (60.5%) said that they have not any discomfort if the school principal is talking about the impacts of Gonorrhea infection in public and the rest 39.5% said that they will have a discomfort with this action.

4.2.3 Preventive practices and risky behaviors towards STDs

Despite the students possessing moderate levels of knowledge in the present study, it is shocking to know that their preventive practices were poorly implemented. Among respondents who participate in the study, 184 (44.9%) have ever had sexual intercourse. This result is higher than even university student's sexual experience in Malaysia that found only 20% of the study participants had sexual intercourse (Folasayo, et al., 2017). Among those who perform sex, 86 (46.7%) didn't use condom, but the 98 (53.3%) of them use condom. This result is similar with the study conducted among university students in Malaysia (Folasayo, et al., 2017), German cities (Samkange-Zeeb, 2013) and Malaysia (Zulkifli & Wong, 2002). The figure is less as compared to usage of condoms in sexually active adolescents of Lao province which was 70%. This is because adolescents engage in sexual activity at relatively young age in developed countries.

It is well known that the risky behaviors of students are influenced by various factors, such as their peers. Majority of the respondents 255 (62.2%) reported that they have no friends that can make a sexual intercourse without condom and the rest 155 (37.8%) have a friend that can unsafe sex. Peers have an impact on risky behaviors, such as drinking alcohol, using drugs and watching pornographic movies (Guia et al., 2004). It is of concern that these students might be able to influence other students to do these unacceptable behaviors. Thus, there is a need to initiate the risky sexual behavior prevention program among students in the future.

These students were asked whether they have taken Gonorrhea test after sexual intercourse. Among them 71 (38.6%) have tested for gonorrhea after sexual intercourse. From those 71 students who have checked, 10 (5.4%) had history of gonorrhea. It is different with the prevalence of total STDs in the study conducted in Debre Birhan (10.9%) and it is different from Study conducted at Hawassa, Ethiopia from sample students 59.63% of student had history of sexually transmitted infections. This difference may be because of study population and study settings.

4.2.4 Factors affecting the practice of Gonorrhoea Infection

A chi-square and logistic regression tests were used to evaluate the possible association of knowledge, attitude and other demographic factors with practice. Chi-square test of contingencies was carried out to evaluate does the level of knowledge, attitude and other demographic factors associate with the participant's risky behaviors and preventive practices on sexually transmitted diseases among Medhanealem preparatory school students. As shown in the table below, none of the demographic factors has significant association with risky behavior and preventive practice of respondent's sexually transmitted diseases.

The chi-square test for sex, age group, grade level, father's occupation, father's education level, family monthly income and family size were statically insignificant. Thus, these demographic variables of the participants do not influence their risky behaviour and preventive practice.

In addition, the binary logistic regression result also revealed that there were no significant associations observed between the preventive practices and socio-demographic profiles (p-values > 0.05). This result is found inconsistent with the study conducted in Debre Birhan where fathers education of 9 and above classes had positive association with respondents knowledge of sign and symptoms of STIs (COR =2.58). Mothers education 9 and above classes had positive association with students' knowledge of sign and symptoms of STIs (COR=2.9). Families occupation being a government employee had positive association with knowledge of sign and symptoms (COR=10).

Socio-demographic variables have no influence on risky behaviors and preventive practices of students towards sexually transmitted diseases. This implies that being male or female, being in any age category, having educated or uneducated father, having a father who has any kind of occupation, having any size of family members, and family monthly income is nothing for the

student's sexual behavior and vulnerability for sexually transmitted disease. This may be because of having similar culture and environmental condition about the issue. Knowledge and attitude of student's towards gonorrhoea infection had significant influence on their risky behavior and preventive practices on sexually transmitted disease. The chi-square test for attitude of students towards STDs and their risky behavior and preventive practices was statistically significant, χ^2 (1, N= 410) = 15.84, p=0.001

Similarly, there was significant association between knowledge of students about sexually transmitted infections and risky behavior and preventive practices χ^2 (1, N= 410) = 8.5, p=0.002. Thus, the level of knowledge of the participants influences their risky behavior and preventive practice of students towards sexually transmitted diseases. This implies the proportion of risk adolescents are exposed to due to their inadequate knowledge and casual attitude. A higher level acceptable sexual practices was observed among students with good knowledge level compared to students with poor knowledge level (62.9% vs. 43.1%; AOR = 2.12 95% CI = 1.42–3.18). By logistic regression, students with positive attitude had 1.66 times higher odds of having acceptable sexual behavior compared to students who has negative attitude (AOR = 1.66, 95% CI = 1.11–2.48).

5. CONCLUSION AND RECOMMENDATIONS

5.1. Conclusion

The finding of the study revealed that less than half of the respondents know about STDs, till there are misconception and their practice remained quit low. Most of the respondents did not know the sign, symptoms and treatments of STDs. The adolescents are in need to be provided with correct knowledge for behaviour change, to stop their undesirable practices and lead them to the road to healthy life.

It is very taboo to talk about sexual affairs in Ethiopian culture, especially in front of children. The study found that the number of students who can talk about gonorrhea with their parents and friends is few. This may hinder the knowledge acquisition of students about sexually transmitted diseases. So, it is acceptable to say that the suppressive culture of the country affects the student's knowledge about STDs and it has a negative contribution for their risky sexual behavior.

Whereas students knew the risk factors for STDs, they had a high degree of risk taking sexual behavior evidenced by the very low percentage using condoms and a large proportion having multiple partners.

5.2. Recommendations

Based on the findings obtained from the study, the following recommendations are forwarded.

Priority should be given for reproductive health of youths, anti STIs clubs in school should be strengthened and programs concerning with STIs should focus on practice, since most of the respondents aware about STIs.

Modifying the current teaching on STDs in the curriculum is urgently needed to ensure that students is well equipped with sound knowledge, good attitudes and preventive practices, can actively participate in solving any sexual issues during his/her learning activities and, finally, can influence or empower other people to do the same. Without such efforts, it seems very difficult to produce healthy adolescents.

The adolescents are in need to be provided with correct knowledge for behaviour change, to stop their undesirable practices and lead them to the road to healthy life. There was a relationship between knowledge and practices especially with respect to the sexual practices of youth which needs to be increasing the student's awareness about the nature of sexual practices and its consequences in their life. This in turn may improve the acceptable sexual behaviour and protective practices.

The high level of unsafe sexual practices, they may be vulnerable to other sexually transmitted diseases including HIV/AIDS. There is urgent need to introduce sexual education at preparatory schools in order to increase students' awareness about the problem and prevention of STDs including gonorrhoea.

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Appendices

Appendix A: questionnaire: English Version

Introduction

Hello my name is Gebresilassie Molla. I work with research team **the Knowledge, Attitude and Practice of gonorrhea infection at Medehnealm preparatory School Student in Gullele sub-city Addis Ababa, Ethiopia. The Objective of the Study:** The general objective is to characterize KAP and to assess related on gonorrhea infection of preparatory school students in Gullele sub-city Addis Ababa, Ethiopia.

2. Participation Procedure and Guideline:

a. The information you provide will be kept completely anonymous. That is, your name will not be indicated on any of the forms.
b. It will take about40 minutes to complete the survey. Nevertheless if you do not want to participate in the study it is your right and has no influence on the care being provided in this health institution or other areas
c. Since the questions are prepared in Amharic, the discussion will be in Amharic and the questioner will ask you in the language that you are familiar with.

3. Participation Benefits and Risk:

a. Risk:-Your participation in this study does not involve risks to you than those you experience in your daily life. You might feel some mild discomfort in responding question and the time you spent, but it is not different from your appointment time.

b. Benefits: - you may experience some benefits from participating in the project. These benefits might be positive feelings from helping with important research project and your response will assist in improving health care delivery to HIV positive women in health institution in Addis Ababa.

c. Incentives/Payment for Participation: No payment will be given in participating in this stud.

4; Confidentiality: The information gathered from you will be **confidential** and will not be exposed to anybody. The information will be stored in secured place locked by using coded identification without indicating your name.

5, Right to Refuse or withdraw: your participation is **Voluntary**, and there is no penalty for you not wanting to participate. This means that you are free to stop fully or choose not to answer any particular question or all questions**.**

6. Right as a participant: You have a right to have any questions about this research project answered. Please direct call to any question to Mr. Gebresilassie Molla, cell phone +251911979669

Ethical clearance will be obtained from Addis Ababa University Institutional Review Board Ethics Committee.

7, Informed Consent Form: with do understanding of the aforementioned information, are you willing to participate in the study?

1. If Yes_____ (continue) 2. No_____ (Terminate)

Signature of the participant _____Date: _____

a) Consent Form

In signing this document, I am giving my consent to participate in the study "**the Knowledge, Attitude and Practice of students toward gonorrhea infection at Medhanealem preparatory school in Gullele sub-city Addis Ababa, Ethiopia.''**

I have been informed that the purpose of this particular research project is to assess the Knowledge, Attitude and Practice of gonorrhea infection at Medhanealem preparatory school in Gullele sub -city Addis Ababa, Ethiopia. I understand that I am selected to participate in this study randomly from **community members in Addis Ababa**.

I have been informed that participation in the study is entirely voluntary, I can refuse from participating fully or partially and to terminate at any time. I have been told that my answers to questions will not be given to anyone else and no reports of this study will ever identify me in any way. I have also been informed that my participation or non-participation or my refusal to answer questions will have no effect on me or on the service that I can get. I am told that the question will take 20-30 minutes to complete the survey.

I have been informed that no monetary incentives will be given for my participation in this study. I understand that participation in this study does not involve risk. The study will help in developing appropriate knowledge, attitude and practice on gonorrhea infection and associated risks.

I understand that the results of this research will be given to me if I ask and Mr. Gebresilassie, cell phone 0911979669, the contact persons if I have questions about the study or about my rights as a study respondent.

Respondent's signature_____ Date _____

Thank You

ADDIS ABABA UNIVERSITY COLLEGE OF COMPUTATIONAL SCIENCE AND DEPARTMENT OF ZOOLOGICAL SCIENCE

The aim of this questionnaire is to gather information which helps me to do a research on assessing the knowledge, attitude and practice on gonorrhea infection for the fulfillment of my master science in general biology. So you are kindly requested to answer the following questions putting 'X' in the space provided accordingly.

Part I: Socio demographic characteristics

This thesis will be conducted at Medhanealem Preparatory School by using quantitative data collection technique.

Name of the school_____

1. Sex : A. male …….. B. female……..

2. Age A. 16---18---------- B. 19---21----------C. 22 and above ----------

3. Grade: A. 11---------- B. 12----------

4. Father's occupation:

A. government employed------ B. private employed----- C. merchant D. driver------

5. Father's educational status:

A. Illiterate ☐ B. Primary ☐ C. Secondary ☐ D. College/University ☐

6. Family income per month _____ ET birr

7. Family size_____

III The following questions are put to know the Students' attitude towards Gonorrhea infected people

For the question (3.1 – 3.10) provide your answer by putting tick (✓) under the alternative box.

No		**Yes**	**No**
3.1	Can you be willing to take care of a family member who is gonorrhea infected people if become sick?		
3.2	Do you have any discomfort if a student is gonorrhea infected, would he/she be permitted to continue studying in the school?		
3.3	Do you believe that Gonorrhea infection is God punishment?		
3.4	Can you still continue to be a friend with Gonorrhea infected class mates?		
3.5	Do you have any discomfort if the school principal is talking about the impacts of Gonorrhea infection in public?		
3.6	Are you willing to discuss about Gonorrhea infection with your class mate friends?		
3.7	If person in shopping area is Gonorrhea infected, would you be willing to buy items from him/her?		
3.8	Is safe sex is difficult to practice?		
3.9	Do you believe that Gonorrhea is not a problem in my community?		
3.10	Gonorrhea does not concern you?		

IV. The following questions are putted to know the Students' practice towards Gonorrhea infected people

For the question (4.1 –4.10) provide your answer by putting tick (✓) under the alternative box.

Notice- If your answer for question number 1 is ' Yes ', answer questions 2,3,4,6,8,9 and 10 since you are well experienced with sexual intercourse and additionally questions 5 and 7 alone. But, if it is 'NO ', answer the rest questions number 5 and 7 only. Thank you.

No		**Yes**	**No**
4.1	Have you ever had sexual intercourse?		
4.2	Do you have sex under the influence of alcohol?		
4.3	Do you use condom during sex?		
4.4	Do you have more than one sexual partner?		
4.5	Do you Keep condoms in your pocket?		
4.6	Do you stop when a condom is tore during sex?		
4.7	Do you have a friend that can make a sexual intercourse without condom?		
4.8	Are you faithful to your sexual partner?		
4.9	Have ever taken Gonorrhea test after sexual intercourse?		
4.10	Do you have Gonorrhea history regarding to sexual intercourse?		

Appendix B: questionnaire: Amharic version of the above English questionnaires

a) **የመረጃና የስምምነት ቅፅ**

የመረጃ ቅፅ

ጤና ይስጥልኝ ስሜ ገብረስላሴሞላ ይባላል፡፡በጨብጥ በሽታ እውቀት፣ አመለካከት እና ተግባር በተመለከተ በአዲስ አበባ ከተማ በጉለሌ ክፍለ ከተማ ውስጥ የሚገኙ መሰናዶ ትምህርት ቤቶች ለመዳሰስ በተዘጋጀው ጥናት ቡድን አባል ነኝ፡፡የዚህ ጥናት ዋና ዓላማ ታላላፊ የሆኑ በሽታዎችእውቀት፣ አመለካከት እና ተግባር በተመለከተ ተያያዥ ሁኔታዎችን ለመዳሰስ፡፡

1. **የተሳትፎ መመርያ እና ሂደት**

ይህንን ጥናት ለማከወን እርስዎ በፍቃደኝነት እንዲሳተፉ የተጋበዙ ሲሆን ፍቃደኛ ከሆኑ መልሱልን፡፡

ሀ. የሚሰጡት መረጃ ሚስጥራዊነቱ የተጠበቀ ነው ስም ሆነ ሌላ መረጃ በፍፁም ለማንም አይነገርም፡፡

ለ.በዚህ መጠይቅ ለመሳተፍ ቢበዛ 50ደቂቃ ይፈጃለ፡፡ሆኖም ላለመሳተፍ ከፈለጉ ጥናቱን ከጀመሩም በኋላ ሆነ በፊት ማቋረጥ መብትዎ ነው፡፡

2. **ከተሳትፎ የሚገኝ ጥቅም**

ሀ.ጥቅም፡-በዚህ ጥናት መሳተፍ ተላላፊ ከሆኑ በሽታዎች ዉስጥ በጨብጥ በሽታ እውቀት፣ አመለካከት እና ተግባር በተመለከተ በጤና ለይ የሚያስከትለውን እክል ለማወቅና የህብረተሰቡን ግንዛቤ ለማሻሻል ጠቁሜታው የጎላ ነው፡፡

ለ. አደጋ/አለመመቸት ፡በዚህ ጥናት መሳተፍዎ ግዜዎትን ከመሰዋትዎ ውጪ ምንም የሚያመጣው ጉዳት የለም፡፡

ሐ. የተሳትፎ ክፍያ ፡- በዚህ ጥናት በመሳተፍዎ ምንም ዓይነት ክፍያ አይኖርም፡፡

3. **ሚስጥራዊነት**

ከእርስዎ የተገኘው መረጃ ለማንም ባለመግለፅ ሚስጥራዊነቱ ይጠበቃል፡፡ በመረጃው ስምዎ ሳይጠቀስ መለያ ቁጥር በመጠቀም በሚስጥር የሚቆለፍ ቦታ ይቀመጣል ፡፡ እርስዎ የሰጡት መረጃ ለዚህ ጥናት ብቻ የምንጠቀምብት መሆኑን እንገልፃለን፡፡

4. በጥናቱ ያለመሳተፍ ወይም የማቋረጥ መብት

በዚህ ጥናት ያለመሳተፍ መብትዎ የተጠበቀ ከመሆኑም ባሻገር ከጀመሩም በኋላ ሆነ በፊት መቀጠል ከፈለጉ በሙሉ ወይም በከፊል ማቋረጥ ይችላለ፡፡ ይህንንም በማድረግዎ በጤና አገልግሎትም ሆነ በሌላ አገልግሎት ላይ ምንም አይነት ተፅእኖ አይደርስብዎትም፡፡

5. የተሳታፊው መረጃ የማግኘት መብት

ሰለዚህ ምርምር ሊጠይቁ የሚፈልጉትን መረጃ ሁሉ የማግኘት መብት አለዎት፡፡ማንኛውንም መጠየቅ የሚፈልጉትን ጥያቄ ለአቶ ገብረሲላሴሞላ በ0911979669 ደውለው መጠየቅ ይችላለ፡፡ይህ ጥናት በአዲስ አበባ ዩኒቨርሲቲ የስነ-ምግበር ቦርድ ታይቶ ፀድቋል፡፡

የጥናት ተሳትፎ ፍቃድ መጠየቂያ ቅፅ፡፡

ከላይ የተገለፁትን መረጃዎች በመገንዘብ በጥናቱ ለመሳተፍ ቃደኛ ነዎት?

1. **አዎ** _____ **ወደ መጠይቁ ይለፉ**
2. **መሳተፍ አልፈልግም** _____**መጠይቁን ያቁሙ**
3. **የተሳታፊ ፊርማ** _____ **ቀን** _____

አመሰግናለው፡፡

b) **<u>የስምምነት ቅፅ</u>**

<u>ለጥናቱ ተሳታፊዎች መረጃ</u>

እንደምን አደራችሁ/እንደምንዋላቹሁ/ ይህን መጠይቅ ለመሙላት ግዜ ስለሰጡኝ አመሰግናለሁ፡፡ዛሬ እዚህ የተገኘነው የአዲስ አበባን ዩኒቨርሲቲን የተፈጥሮ ሳይንስ ባዮሎጂ ዲፓርትመንትን በመወከል ነው፡፡የዚህ ጥናት ዓላማ ተላላፊ ከሆኑ በሽታዎች መካከል በጎነሪያ ያላችሁን እውቀት፣ አመለካከት እና ተግባር በተመለከተ ሁኔታዎችን ለመዳሰስ ነው፡፡፡፡በተጨማሪም በጤና ለይ የሚያመጣውን ዕክል ለማወቅና አስፈላጊውን ቁጥጥር ለመዘርጋት የሚያስችልበትን አቅጣጫ ለማሳየት ነው፡፡

ይህ መጠይቅ ለመሙላት በአማካይ 50 ደቂቃ ይፈጃል፡፡ማንኛውም እርሶ የሚሰጡት መረጃ ሚስጥራዊነቱ የተጠበቀ ነው፡፡መጠይቅ የእርሶ ስም አይጻፍም፣ ለጥናቱ ስኬት እርሶ የሚሰጡት ትክክለኛ መረጃ በጣም አስፈላጊነው፡፡
የሚቀጥሉትን መረጃ ለመሙላት ተስማምተዋል?

1. **ከተስማሙ ወደ ሚቀጥለው ገፅ ይግለጡ**
2. **ካልተስማሙ መጠይቁን ለሚቀጥለው ተሳታፊ ያስተላልፉ**

የመረጃ ሰብሳቢ ስም_____ ፊርማ_____
የአስተባባሪ ስም _____ ፊርማ_____
ቀን _____

በአዲስ አበባ ዩኒቨርሲቲ በስነ-ህይወትት/ት ክፍል የድህረ-ምረቃ ፕሮግራም

የዚህ መጠይቅ ዓላማ ስለ ጨብጥ በሽታ የተማሪዎችን ዕውቀት፤ አመለካከትና ልምምድ መረጃ ለመሰብሰብ እና በስነ-ህይወት ት/ት የድህረ ምረቃት/ት ለማጠናቀቅ ነው፡፡ ስለዚህ በቀና ትብብራቹ የሚከተሉትን ጥያቄዎች በክፍት ቦታው ላይ የ 'X' ምልክት በማድረግ እንድትመልሱልኝ ስል በትህትና እጠይቃለሁ፡፡

ክፍል-1፡ የግል ሁኔታን የሚመለከቱ መጠይቆች

ይህ የመመረቂያ ጽሁፍ የተሰራው በመድኃኒአለም መሰናዶ ት/ት/ ቤት ውስጥ ነው

የት/ቤቱ ስም፡ ----------

1. ፆታ፡ሀ. ወንድ---------- ለ. ሴት----------
2. ዕድሜ፡ሀ. 16---18--------ለ. 19---21--------ሐ. 22 እና ከዚያ በላይ--------
3. ክፍል፡ሀ. 11----- ለ.12-------
4. የአባት የስራ ሁኔታ፡

   ሀ. የመንግስት ሰራተኛ---------- ለ. የግል ------- ሐ. ነጋዴ-------- መ. ሹፌር-----
5. የአባት የት/ት ሁኔታ፡

   ሀ. ያልተማረ ☐ ለ. የመጀመሪያ ደረጃ ☐

   ሐ.ሁለተኛ ደረጃ ☐ መ. ኮሌጅ/ዩኒቨርሲቲ ☐
6. የቤተሰብ የወር ገቢ ----------የኢትዮጵያ ብር ነው፡፡
7. የቤተሰብ ብዛት----------

ክፍል ሁለት

ተማሪዎች ስለጨብጥ በሽታ ያላቸው እውቀት

ክፍል ሁለት፡ ተማሪዎች ስለጨብጥ በሽታ ያላቸው እውቀት

ስለ ጥያቄ (2.1 — 2.20) መልስዎትን በተሰጠው አማራጭ ስር (✓) በማድረግ መልስዎን ይስጡ፡፡

ተ.ቁ.	ጥያቄዎች	አዎ	አይደለም
2.1.	ስለጨብጥ በሽታ እውቀት አለኝ፡፡		
2.2.	በወሲባዊ ግንኙነቱ ወቅት ከጨብጥ በሽታ ራስን ለመከላከል ኮንዶም በእጅጉ አስፈላጊ ነው፡፡		
2.3.	ስለጨብጥ በሽታ ምልክቶች አውቃለሁ፡፡		
2.4.	ስለጨብጥ በሽታ ህክምና አውቃለሁ፡፡		
2.5.	የጨብጥ በሽታን ለማዳን ይቻላል፡፡		
2.6.	ስለጨብጥ በሽታ ለመጠየቅ ችግር የለብኝም		
2.7.	ሁሉም የሚያቃጥል ስሜት የጨብጥ በሽታ ምልክቶች ሊሆኑ ይችላሉ፡፡		
2.8.	ስለጨብጥ በሽታ ማንኛቸውም ምክር ለተማሪዎች መስጠት ጥሩ ነው፡፡		
2.9.	በጨብጥ በሽታ እንዳልያዝ በቂ የሆነ ምክር ተሰጥቶኛል፡፡		
2.10.	የወሲባዊ ት/ት እና ጨብጥን መከላከል ጥሩ ሕይወት ለመምራት ያስችላል፡፡		
2.11.	የት/ቤት ተሳታፊዎች በጨብጥ በሽታ ላለመያዝ የራሳቸው ሚና አላቸው፡፡		

		የመልስምድብ				
		በጭራሽ	በጣም አልፎ አልፎ	አንዳንድ ጊዜ	ብዙ ጊዜ	ሁልጊዜ
2.12.	በወሲብ አማካይነት ስለሚተላለፉ በሽታዎች ከወላጆቼ ጋር ተነጋግሬአለሁ፡፡					
2.13.	የጨብጥ በሽታ የሚያጠቃው በአመዛኙ ወጣቶችን ብቻ ነው፡፡ ይስማማሉን?					
2.14.	ወሲባዊ ግንኙነት አድርገው ያውቃሉን?					
2.15.	ተማሪዎች ከጋብቻ በፊት ወሲባዊ ግንኙነት እንዳያደርጉ እመክራለሁ፡፡					
2.16.	በት/ቤት ስለወሲብ የተሰጠ ት/ት ታሳቢ ተደርጓል፡፡					
2.17.	የአልኮል መጠጦችን ጠጥተው ያውቃሉ					
2.18.	ስለወሲባዊ ግንኙነትጓደኞች በእርስዎ ላይ ግፊት አድርገው ያውቃሉን?					
2.19.	ስለጨብጥ በሽታ ከጓደኞችዎ ጋር ተነጋግረው ያውቃሉን?					
2.20.	ስለጨብጥ በሽታ የባዮሎጂ መምህራን ብቻ ት/ት ለመስጠት ኃላፊነት አለባቸው፡፡					

Part II: Students' knowledge on Gonorrhea disease

For the question (2.1 – 2.11) provide your answer by putting tick (✓) under the alternative box.

	Questions	Response Category	
		Yes	**No**
2.1	I have a knowledge about Gonorrhea disease		
2.2	Condom is important to avoid Gonorrhea disease during sexual intercourse		
2.3	I know the signs and symptoms of gonorrhea disease		
2.4	I know about the treatment of Gonorrhea Disease		
2.5	It is possible to cure Gonorrhea		
2.6	I feel comfortable enough to ask about Gonorrhea Disease		
2.7	All burning sensation could be the symptoms of gonorrhea disease?		
2.8	Any advice about Gonorrhea is good for students		
2.9	I am sufficiently informed to avoid the risk of Gonorrhea disease		
2.10	Sex Education and Gonorrhea prevention could improve the quality of life		
2.11	School participants have their own role to avoid the risk of gonorrhea disease		

For the question (2.12 –, 2.20)

Provide your answer by putting tick (✓) under the alternatives given as Always, Often ,Sometimes, Rarely, Never.

Key: - 5 Always 4 Often 3 Sometimes 2 Rarely 1 Never

No.	Questions	Response Category				
		5	**4**	**3**	**2**	**1**
2.12	I have talked with my parents about STDs					
2.13	Have you ever had full sexual intercourse					
2.14	Sexual education received at school has been considered					
2.15	Have you ever used alcoholic drinks					
2.16	Could friends have influence on sexual intercourse					
2.17	Have you ever talked with your friends about gonorrhea					
2.18	Only biology teachers have a responsibility to give education about gonorrhea disease					
2.19	Gonorrhea Mainly affects younger people, do you agree?					
2.20	I will advise students to avoid any sexual intercourse before marriage					

ክፍል ሦስት፡

የሚከተሉት ጥያቄዎች ተማሪዎች በጨብጥ የተጠቁ ሰዎች ዙሪያ ያላቸውን አመለካከት ለማወቅ የተቀመጡ ናቸው።።

ከ (3.1 - 3.10) ላሉት ጥያቄዎች መልስህን/ሽን በአማራጮች ስር ባሉት ሳጥኖች ውስጥ (✓) በማድረግ ስጥ/ጪ።።

ቁጥር		አዎን	አይደለም
3.1	ከቤተሰብ አባላት ውስጥ በጨብጥ የተጠቃ ሰው ለመንከባከብ ፈቃደኛ ነህ?		
3.2	አንድ ተማሪ በጨብጥ የተጠቃ ከሆነ መጥፎ ስሜት ይኖርሃል በትምህርት ቤቱ ትምርህታን/ቱን እንድትቀጥል/እንዲቀጥል ይፈቀድላታል?		
3.3	በጨብጥ መጠቃት የእግዚአብሔር ቁጣ ነው ብለህ/ሽ ታምናለህ/ታምኛለሽ?		
3.4	በጨብጥ ከተጠቃ/ች የክፍል ጓደኛ ጋር አሁንም ጓደኛ ሆነህ/ሽ መቀጠል ትችላለህ/ትችያለሽ?		
3.5	የትምህርት ቤቱ ርእሰ መምህር በህዝብ መካከል ስለጨብጥ ተፅእኖ ቢናገር መጥፎ ስሜት ይሰማሃል/ይሰማሻል?		
3.6	ከክፍል ጓደኛህ ጋር ስለጨብጥ በሽታ ለመወያየት ፈቃደናነህ/ሽ?		
3.7	በሱቅ አካባቢ ያለ ሰው የጨብጥ ተጠቂ ቢሆን ከእሱ/ሷ እቃዎችን ለመግዛት ፈቃደናትሆናለህ/ትሆናለሽ?		
3.8	ጥንቃቄ ያለበት ወሲብ ለመለማመድ ከባድ ነው?		
3.9	ጨብጥ በአካባቢዬ ማህበረሰብ ውስጥ ችግር አይደለም ብለህ/ብለሽ ታምናለህ/ታምኛለሽ?		
3.10	ጨብጥ አያሳስብህም/አያሳስብሽም?		

ክፍል አራት፡

የሚከተሉት ጥያቄዎች ተማሪዎች በጨብጥ የተጠቁ ሰዎች ዙሪያ ያላቸውን ልምምድ ለማወቅ የተቀመጡ ናቸው፡፡

ከ (4.1 - 4.10) ላሉት ጥያቄዎች መልስህን/ሽን በአማራጮች ስር ባሉት ሳጥኖች ውስጥ (✓) በማድረግ ስጥ/ጪ፡፡

ማሳሰቢያ- ከዚህ በታች ለጥያቄ 1 መልስዎት *አዎ* ከሆነ ጥያቄዎች 2 3 4 6 8 9 እና 10ን መልሱ፡፡ ይህ የሚሆነዉ በጥያቄ 1 መልስዎ መሰረት የግብረ ስጋ ግንኙነት ልምምዱ ስላለዎት ነዉ፡፡ይህን እንደጨረሱ ለብቻ ጥያቄ 5 እና 7 ይስሩ፡፡ ነገር ግን ለጥያቄ 1 መልስዎ *አይ* ከሆነ ጥያቄዎች 5 ና 7ን ብቻ ይስሩ ፡፡ አመሰግንዎታለሁ፡፡

ቁጥር		አዎን	አይደለም
4.1	በመጠጥ ተጽእኖ ስር ሆነህ/ሽ ወሲብ ታደርጊያለሽ/ታደርጋለህ?		
4.2	በመጠጥ ተጽእኖ ስር ሆነህ/ሽ ወሲብ ታደርጊያለሽ/ታደርጋለህ?		
4.3	በወሲብ ወቅት ኮንዶም ትጠቀማለህ/ሽ?		
4.4	ከአንድ በላይ የሆኑ የወሲብ አጋሮች አለህ/ሽ?		
4.5	ኮንዶምን በኪስህ ውስጥ ትይዛለህ/ሽ?		
4.6	በወሲብ ወቅት ኮንዶም ቢቀደድ ታቋርጣለህ/ሽ?		
4.7	ያለኮንዶም ወሲብ የሚያደርግ ጓደኛ አለህ/ሽ?		
4.8	ለወሲብ አጋርህ/ሽ ታማኝ ነህ/ሽ?		
4.9	ከወሲብ በኋላ የጨብጥ ምርመራ አድርገህል/ሻል?		
4.10	ወሲብን በተመለከተ የጨብጥ ታሪክ አለህ/ሽ?		