

Assessment of Knowledge, Attitude and Preventive Practices towards Sexually Transmitted Infections among Secondary School Students in Mlimba Division, Ifakara, Tanzania

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Abstract

Background

This study was done to assess knowledge, attitude and preventive practices towards sexually transmitted infections among secondary school students in Mlimba Division, Ifakara, Tanzania.

Method

A descriptive cross-sectional study was conducted in March 2021. A total of 365 secondary school students (193 male; 172 female) aged between 12 and 23 years were surveyed by using a pretested self-administered questionnaire.

Results

The study found the majority 95.9% had heard of STDs, 77.8% knew symptoms of STDs, 86.8% knew mode of transmission, 94.0% knew the importance of use of condom during sexual intercourse. Among the sexually-active students, 70.7% had practiced sexual intercourse and 42.2% used condom during sexual intercourse.

Conclusion

The risky behavior practiced by the sexually-active students in this study is alarming. There is a need to introduce STD education curriculum in secondary schools so that appropriate intervention on STDs can be implemented.

Introduction

Sexually transmitted infections (STIs) also referred to as sexually transmitted diseases(STDs)

and venereal disease (VD) are illnesses that have a significant probability of transmission between humans by means of human sexual behavior including vaginal intercourse, oral and anal sex [1, 2]. The common STIs which we come across in daily practice are gonorrhoea, chancroid, syphilis and chlamydial infections which can be cured and others such as HIV, genital herpes, HPV and Hepatitis B infection cannot be cured [3]. STIs is caused by more than 30 different pathogens including bacteria, virus, parasite, protozoa and fungal agents [4]. STIs present themselves mainly in seven syndromes; these are genital ulcer, urethral discharge, vaginal discharge, lower abdominal pain, inguinal bubo, neonatal conjunctivitis and scrotal swelling [5, 6]. Young individuals in the age group of 16–24 years are considered to be at more risk for STIs compared to older adults. The World Health Organization estimates that 20% of persons living with HIV/AIDS are in their 20s and one out of twenty adolescents contract an STI each year [3]. If the STIs are not treated adequately, it can lead to various complications such as infertility, urethral stricture, abortions, malignancies, perinatal, and neonatal morbidities [7,8]. Adolescents are disproportionately affected by STIs because of their engagement in unsafe sexual practices such as multiple sexual partnerships, casual sex and inconsistent condom use [9]. About 333 million people worldwide contract sexually transmitted infections (STIs) yearly [10].

It is estimated that more than 500 million people still are at high risk of infection; over 140 million persons are infected and about 6 million are in Africa, Middle East, central and south-east Asia and countries in Latin America [6]. About 60% of young people whose age between 14-19 are infected with STIs and females who are at age of 20 years are prone to this case [9]. In sub-Saharan Africa, comprehensive accurate knowledge about STIs remains low in most countries [11]. The situation in Tanzania is worse where about 2.2 million adults and children were estimated to have been infected with STIs including HIV/AIDS [10] Approximately 17% of children under 15 years of age in Tanzania had been infected with STIs, and about 50% of the STIs occur before

the age of 29 years of age [12, 10]. In Tanzania, it is considered a taboo for teachers and parents to talk with pupils/children about sexual matters, such as sexual relationships, and STIs in schools as well as at home because of cultural and religious barriers [13].

No previous research has been conducted in Mlimba division on assessment of knowledge, attitude and practices towards STIs among secondary schools students. Therefore, this study was a descriptive cross-sectional study to assess the knowledge, attitude and practice towards sexually transmitted infections among secondary school students in Mlimba Division, Ifakara, Tanzania.

Methodology

Study Area

The study was conducted in Mlimba division in Kilombero district, Tanzania which is one of the districts in Morogoro Region. It is 300 km from Morogoro Municipality, 121km from Ifakara town and has altitude of 304m above sea level. It lies within longitudes 35°49'0"E and latitudes 8°48'0"S. Mlimba has a population of 34,969 people of these 19,358 females and 18,752 males this is according to population census of 2012. The division has 8 wards and 22 villages with a total number of 7 secondary schools.

Study Design

This was a descriptive cross sectional study carried out from February to March 2021.

Study Population

The study targeted both male and female secondary school students in Mlimba division.

Sample Size

The sample size was 365 students comprising of 193 male and 172 female students.

Sampling Techniques

In this study sampling technique was employed in selected wards within Mlimba division. Three wards out of eight wards were selected: Mlimba town, Kalengakelu, and Kamwene. From the three wards 5 secondary schools

out of 7 were selected to participate in the study. The selected secondary schools were Kalengakelu, Treefarms, Kaozya, Kamwene and Mlimba. In each school students in Form I to IV were involved in the study. In each Form only eighteen (18) students were obtained. In each class papers written Yes and No were placed in a box each student picked one paper. There were only eighteen papers written Yes those who picked these papers were involved in the study. In each school a total of 73 students were picked and involved in the study making a total of 365 students from all schools.

Data Collection Tools

A structured, pre-tested and self-administered questionnaire was used for data collection on Knowledge, Attitude and Practice about STIs.

Data Collection Procedure

The sampled students were informed the purpose of the study and importance of participation and verbal consent was ensured. Based on their willingness to participate in the study, a pre tested, structured, self-administered questionnaire was distributed to collect the data.

Data Analysis

The results were analyzed by Statistical Package for Social Sciences (SPSS version 20) computer software.

Ethical Issues

The proposal of the study was first submitted to St. Francis University College of Health and Allied Sciences Ethical Committee for ethical approval. After approval official letter was written to the District Executive Director (DED) of Kilombero to get permission. The DED communicated with the District Medical Officer (DMO) of Kilombero, permission was granted to go to the local authority leaders of Mlimba Ward. The local authority leaders of Mlimba Ward communicated with the authorities of Secondary Schools selected, permission was granted to conduct the study in the respective Secondary Schools. The respondents were informed

about the objective and purpose of the study and verbal consent was obtained from each respondent and assured that all data was confidential.

Results

Socio demographic characteristics of the respondents A total of 365 students took part in the study. Of these, 193(52.9%) were male and 172(47.1%) were female. The age of the respondents ranged from 12 to 23 years, 114(31.2%) aged between 12 to 15 years, 241(66%) aged between 16 to 19 years and 10(2.7%) aged between 20 to 23 years (Table 1).

Knowledge on STDs

A total of 350 (95.9%) students had heard about STDs, 79 (21.6%) male and 60(16.4%) female students mentioned AIDS, gonorrhoea and syphilis are sexually transmitted infections, The majority of sexual intercourse as main mode of transmission of STDs. The main source was from teachers and mass media. Main symptom mentioned was discharge from genital organs, penis was 138(37.8%) male and vagina was 128(35.1%) female students (Table 2).

Attitude on STDs

The majority of students responded that condom protect people from STDs, 190(52.1%) male and 165 (45.2%) female students, 180(49.3%) male and 163 (44.7%) female responded it was necessary to use condom during sexual intercourse. Both 186(51.0%) male and 186(51.0%) female students responded it was necessary to do screening while 193(52.9%) male and 153(41.9%) female students. All participants agreed to seek treatment after noticing symptoms were 193 (52.9%) male and 172(47.1%) females (Table 3).

Practices towards STDs

Participants who had sex before were 43(11.8%) males and 91(24.9%) females, those who used condom first time to have sex were 62(17.0%) male and 47 (12.9%) females, who used condom last time to have sex were 37(10.1%) male and 97(26.6%) females, participants who do sex with a single partner were 61

Table 1. Socio demographic characteristics of secondary school students in Mlimba town

Characteristics	Frequency %
Sex	
Male	193(52.9%)
Female	172(47.1%)
Age	
12-15	114(31.2%)
16-19	241(66.0%)
20-23	10(2.7%)

Table 2. Knowledge on STDs among Secondary School students in Mlimba division

Characteristic	Sex	
	Male	Female
Have you ever heard of STIs?		
Yes	187(51.2%)	163(44.7%)
No	6(1.6%)	9(2.5%)
Which of the following is an STD?		
AIDS	18(4.9%)	12(3.3%)
Gonorrhoea	3(0.8%)	2(0.6%)
Syphilis	1(0.3%)	1(0.3%)
AIDS and gonorrhoea	11(3.0%)	30(8.2%)
AIDS and syphilis	5(1.4%)	9(2.5%)
Gonorrhoea and syphilis	38(10.4%)	20(5.5%)
AIDS, syphilis and gonorrhoea	79(21.6%)	60(16.4%)
others(genital warts, chancroid and herpes)	0(0%)	2(0.6%)
Does not know	38(10.4%)	36(9.9%)
How is STDs transmitted?		
Sexual intercourse	165(45.2%)	145(39.7%)
Blood transfusion	9(2.5%)	17(4.7%)
Sharing food/drinks	19(5.2%)	10(2.7%)
Where did you get information on STDs		
Mass media	59(16.2%)	47(12.9%)
Health workers	47(12.9%)	27(7.4%)
Family, Friend, Colleagues and neighbors	16(4.4%)	27(7.4%)
Religious leader	1(0.3%)	3(0.8%)
Teachers	70(19.2%)	68(18.6%)
What are the symptoms of STDs		
Discharge from vagina	25(6.8%)	128(35.1%)
Discharge from penis	138(37.8%)	9(2.5%)
Ulcers in the genital organ	12(3.3%)	18(4.9%)
Pain while passing urine	18(4.9%)	17(4.7%)

Table 3. Attitudes on sexually transmitted diseases among secondary school students in Mlimba divi-

Characteristics	Sex	
	Male	Female
Do you think condom protect people from STDs?		
Yes	190(52.1%)	165(45.2%)
No	3(0.8%)	7(1.9%)
Do you think screening for STDs is important?		
Yes	186(51.0%)	153(41.9%)
No	7(1.9%)	19(5.2%)
If you notice symptoms of STD will you seek treatment?		
Yes	193(52.9%)	172(47.1%)
No	0(0%)	0(0%)

Table 4. Practices towards STDs among secondary school students in Mlimba ward

Characteristics	Sex	
	Male	Female
Have you had sex before?		
Yes	43(11.8%)	91(24.9%)
No	150(41.1%)	81(22.2%)
Was a condom used the first time you had sex?		
Yes	62(17.0%)	47(12.9%)
No	131(35.9%)	125(34.2%)
Was a condom used the last time you had sex?		
Yes	37(10.1%)	97(26.6%)
No	156(42.7%)	75(20.5%)
Do you have sex with only one partner?		
Yes	61(16.7%)	73(20.0%)
No	157(43.0%)	99(27.1%)

(16.7%) male and 73(20.0%) females (Table 4).

Discussion

This study was conducted among secondary school students in Mlimba Division, Tanzania. The purpose of using secondary school students in Mlimba Division was to assess whether these students have good knowledge, attitudes and preventive practices towards STDs. The age category from 16-19 years in this study is in agreement with the characteristics of current student population in secondary schools in Ethiopia [23]. Several studies have revealed that sexually transmitted infections are the cause of multiple complications as a result of lack of knowledge about STIs [14]. Health seeking behavior depends on knowledge about STIs [15]. The proportion of students heard about sexually transmitted infections was 95.9%. This finding was higher than 27% in Udupi Taluk, India [16], 45.4% in Gondar, Ethiopia [17], 70.1% in northern Cape Province, South Africa [18], 79% in Dhaka, Bangladesh [19], 86.6% in Malaysia [20], 89.9% in Brazil [21], 92.4% in Nigeria [12], and less than 98% in Dar es Salaam, Tanzania [22]. The variation observed compared to other studies could be due to the differences in methodology, sample size, and operational definition used. The socio-cultural, socio-economic, and behavioral characteristics of the study participants may play a great role in the variation observed.

The three STDs; AIDS, syphilis and gonorrhoea were the most known by the participating students 21.6% males and 16.4% females. However, genital warts, chancroid and herpes were poorly known by the participating students 0% males and 0.6% females. The findings in our study could be these are uncommon types of STDs which are neglected by policy makers.

The present study indicates that teachers and mass media were the sources of information on STDs to secondary school students in Mlimba Division. Students who reported teachers were source of information; 19.2% males and 18.6% females while mass media; 16.2% males and 12.9% females. The results in this study are low compared to studies conducted in Ethiopia where

teachers and mass media contributed 48.1% and 39.7% respectively [24]. The findings indicate that more effort is needed by teachers and mass media in Mlimba Division to educate secondary school students on sexually transmitted diseases.

The findings of this study showed that the prevalence of sexual initiation among secondary school students is 11.8% males and 24.9% females. This finding is lower for males and higher for females comparing to the study conducted in Ethiopia which was 21.5% [25].

The majority of participating students had knowledge that condom protects people from STDs; 52.1% were males and 45.2% were females. This result is higher than a study done in Ethiopia where 39.7% had knowledge that condom protects people from STDs [26].

Sexually active students, 3.6% males and 2.5% females used condom during last sexual intercourse. The result in the present study is lower than the study conducted in Ethiopia which showed 54.7% used condom during last sexual intercourse [26]. In the present study, participants who responded to have sex with only one partner were 16.7% males and 20.0% females. The result in the present study is inconsistent with the study done in Ethiopia which showed 54.4% had fewer than two sexual partners [27].

Conclusion

The study revealed that almost all students had heard about STDs. Knowledge regarding modes of transmission, prevention methods was low but the attitude on condom use during sexual intercourse as a preventive measure for STDs was high. Among those who practiced sexual intercourse, some of them did not use condom. The study showed that, signs and symptoms associated with STDs in both males and females were not well known by the students. The mass media and teachers are still major effective means of educating students, on STDs.

Recommendations

It is recommended that parents and teachers should collaborate in educating the students on the re-

productive health affairs particularly STDs, in more open and comprehensive way. Government policy on STDs education should be reviewed so as to come up with more concrete ways of fighting STDs including HIV/AIDS.

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Conflict of Interest

The author has no conflict of interest.

Reference

- Centers for Disease Control and Prevention (CDC). Update to CDC's Sexually transmitted diseases treatment guidelines, 2010: oral cephalosporins no longer a recommended treatment for gonococcal infections. *MMWR Morb Mortal Wkly Rep.* 2012; 61(31): 590-594.
- Samkange-Zeeb FN, Spallek L, Zeeb H. Awareness and knowledge of sexually transmitted diseases among school going adolescents in Europe; a systematic review of public literature. *BMC Public health.* 2011;11: 727.
- Olasode O. "Sexual behaviour in adolescents and young people attending a sexually transmitted disease clinic, Ile Ife, Nigeria." *Indian Journal of Sexually Transmitted Diseases*, vol. 28, no. 2, 2007, p. 83.
- Workowski K, Berman S. *Sexually transmitted diseases treatment guidelines.* 2006;55:1-94.
- Ogbe J.O. Knowledge, source of information and practice of condom use in the prevention of sexually transmitted infections (STIs) among rural Delta State. *Studies on Ethno-Medicine.* 2011; 5(2): 107-114.
- McNabb S.J., Jajosky R.A, Hall-Baker P.A., Adams D.A., Sharp P. Summary of Notifiable diseases in United States; 2005.
- World Health Organization. Global strategy for the Prevention and Control of Sexually Transmitted Infections: 2006-2015: Breaking the chain of Transmission. Geneva: World Health Organization; 2006-2015.
- De Waure C, Mannocci A, Cadeddu C, Gualano MR, Chiaradia G, Vincitorio D. Knowledge, attitudes and behavior about sexually transmitted infections: A survey among Italian University female students. *Epidemiol. Biostat Public Health.* 2015; 12: 1-10.
- Kidd S.E., Workowski K. *Infectious diseases related travel. Sexually transmitted diseases.* Chapter 3. Centers for diseases control and prevention CDC 24/7: saving lives, protecting people; 2010.
- National AIDS Control Program (2000) Dar es Salaam. Tanzania: Ministry of Health; 2002. Report No. 16.
- Shiferaw Y, Alemu A, Girma A, Getahun A, Kassa A, Gashaw A. Assessment of knowledge, attitude and risk behaviors towards HIV / AIDS and other sexual transmitted infection among preparatory students of Gondar town, north west Ethiopia. *BMC Res Notes.* 2011. 21;4:505.
- Amu E.O. and Adegun P.T. Awareness and Knowledge of Sexually Transmitted Infections among Secondary School Adolescents in Ado Ekiti, South Western Nigeria. *J. Sex. Transm. Dis.* 2015; 1-7.
- National AIDS Control Programme (NACP). HIV/AIDS/STD Surveillance Ministry of Health (MOH) United Republic of Tanzania, Dar es Salaam 1994. Report No.8.
- Sau HN, Anh KD, Giang TV, Cuong TN, Thu HTL, Truong TN *et al.* Lack of Knowledge about Sexually Transmitted Diseases (STDs): Implications for STDs Prevention and Care among Dermatology Patients in an Urban City in Vietnam. *Int J Environ Res Public Heal.* 2019;16(6):1080.

15. Tsadik M, Lul Lam ZH. Delayed health care seeking is high among patients presenting with sexually transmitted infections in HIV hotspot areas, Gambella town, Ethiopia. *HIV AIDS (Auckl)*. 2019 Aug 30;11:201-209.
16. Rana M, Kamath R, Ashok L, Shetty B, Guddattu V, Chandrasekaran V. Knowledge and attitude regarding STIs including HIV and RTIs among college adolescent girls in urban Udupi Taluk. *Glob J Med PUBLIC Heal*. 2015;4(1).
17. Shiferaw Y, Alemu A, Girma A, Getahun A, Kassa A, Gashaw A *et al*. Assessment of knowledge, attitude and risk behaviors towards HIV / AIDS and other sexual transmitted infection among preparatory students of Gondar town, north west Ethiopia. *BMC Res Notes*. 2011 Nov 21;4:505.
18. Nyasulu P, Fredericks M, Basera TJ, Broomhead S. Knowledge and risk perception of sexually transmitted infections and relevant health care services among high school students in the Platfontein San community, Northern Cape Province, South Africa. *Adolesc Health Med Ther*. 2018; 9:189-197.
19. Mou SZ, Bhuiya FA, Mohammed S, Islam S. Knowledge and perceptions of sexually transmitted diseases, HIV / AIDS, and reproductive health among female students in Dhaka, Bangladesh. *Int J Adv Med Heal Res*. 2015;2(1): 9-15.
20. Folasayo AT, Oluwasegun AJ, Samsudin S, Saudi SS, Osman M, Hamat RA. Assessing the Knowledge Level, Attitudes, Risky Behaviors and Preventive Practices on Sexually Transmitted Diseases among University Students as Future Healthcare Providers in the Central Zone of Malaysia? A Cross-Sectional Study. *Int J Environ Res Public Heal*. 2017;14(2):159.
21. Genz N, Maria S, Meincke K, Laura M, Carret V, Cândida A *et al*. Sexually Transmitted Diseases: Knowledge and Sexual Behavior of Adolescents. *Texto Context Enferm*. 26(2):1-12.
22. Mwambete KD, Mtaturu Z. Knowledge of sexually transmitted diseases among secondary school students in Knowledge of sexually transmitted diseases among secondary school students in Dar es Salaam, Tanzania. *Afr Health Sci*. 2014;6(3):165-169.
23. Ethiopian Federal Ministry of Education. 2013. Education Statistics: Annual Abstract.
24. Kajela G. and Saboka B. Assessment of Knowledge, Attitude and Preventive Practices towards Sexually Transmitted Infections among Preparatory School Students in Shone Town. *Health Medical Informatics*. 2015; 6 (1): 1-6.
25. .Cherie A, Berhane Y. Peer pressure is the prime driver of risky sexual behaviors among school adolescents in Addis Ababa, Ethiopia. *World J AIDS*. 2012;2(03):159. doi: 10.4236/wja.2012.23021.
26. Asmamaw D, Addis A, Destaw W. Determination of knowledge, attitude and practices on prevention of sexually transmitted infections among seto Semero high school students, Ethiopia. *MOJ Public Health* 2017; 5 (5): 142-153.
27. Tadesse Nigussie *et al*. Knowledge of sexually transmitted infections and its associated factors among polytechnic college students in Southwest Ethiopia. *Pan African Medical Journal*. 2020; 37:68.