

Knowledge About and Attitude towards Sexually Transmitted Diseases, Amongst First Year Medical Students of Continental Medical College Lahore

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ABSTRACT

Aim: To determine the knowledge level, attitude and educational needs of first-year medical students about sexually Transmitted Diseases at the Continental Medical College Lahore.

Study design: Cross sectional analytic study

Methodology: The study population has been consisted of first-year MBBS students at the departments of medical sciences as Anatomy, Physiology and Biochemistry. The sample size was calculated using a formula for cross sectional studies which was 97 But the total number of first-year students at CMC was 121 between the session of 2016 to 2017 (50 males and 70 female students). Among all these who were willing and available to participate in research constitute the sample of the study(100), during the month of 2nd half of April and May (Data collection period)

Results: Forty two(42%) male and 58% females had heard about Sexually transmitted diseases , 58% of respondents knew the names of diseases as HIV/ AIDS and the two most commonly mentioned were gonorrhoea and syphilis. The most important symptoms mentioned were pus discharge from urethra (29%) of respondents. The two most important sources of information were in school and colleges (46%) & internet (44%). The 88% knew that transmission via vaginal intercourse is most common. Most of the students (86%) had positive attitude towards STDs as well as good knowledge about prevention of STDs.

Conclusion: The study reported satisfactory levels of awareness and knowledge of sexually transmitted diseases; with positive attitude towards STDs infected people.

Keywords: Sexually transmitted disease, knowledge and attitude, 1st year medical students

INTRODUCTION

Sexually transmitted infections are regarded as a group of communicable diseases that are transferred predominantly by sexual contact. They are increasingly occurring at a high level, thereby forming one of the commonest groups of notifiable infectious diseases in most countries¹.

Sexually transmitted infections (STIs) demonstrate varying epidemiologic presentation from country to country and from one region to another within a country, based on ethnographic, demographic, socio-economic and health factors².

According to a recent report, the Caribbean has a HIV/AIDS prevalence rate of 1.1% which is considered to be the second highest in the world after sub-Saharan Africa, and the most affected in the Americas³. The commonest route of transmission of HIV/STI in the region is unprotected sexual intercourse. Despite a certain level of knowledge and awareness of the virus in the Caribbean, the incidence of new cases of HIV/AIDS is on the increase, making it one of the leading causes of

death among persons aged 25 to 44 years. In 2010, it was estimated that about 17 000 newly infected cases were identified in the region, which translates to about 230 000 people living with HIV in the Caribbean³.

The epidemiologic profile of STIs, before the advent of HIV/AIDS, was observed primarily to be sbacterial infections which included syphilis, gonorrhoea and viral infections caused by the herpes simplex and human papilloma viruses, however HIV/AIDS has contributed its own effect to the disturbing situation of STIs^{4,5}. Research findings have indicated that persons living with a STI have a three to five fold increase in risk of being infected with HIV than those who do not have sexually transmitted infections^{6,7}. Recent statistical data on STIs showed that there is an increasing number of STIs and deaths due to HIV/AIDS, particularly in the developing countries⁸.

It has been observed that effective preventive measures that can reduce the rate of spread of STIs among young adults, particularly college & university students can only be achieved through assessment of the students' knowledge of STIs including HIV

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infection, predisposing factors to infection by STIs and their attitudes towards STIs⁷.

The most common infections are gonorrhoea, chlamydial infection, syphilis, trichomoniasis, genital herpes, genital warts, and human immunodeficiency virus (HIV) and hepatitis B infections. STDs are one of the important public health problems in both developed and developing countries as they are seen frequently, cause serious complications and sequelae, and give rise to significant economic losses^{2,9,10}. According to 2009 WHO estimates, 448 million new cases of curable STIs (syphilis, gonorrhoea, chlamydia and trichomoniasis) occur annually throughout the world in adults aged 15-49 years. One in 20 young people is believed to contract a curable STI each year, excluding HIV and other viral infections (WHO, 2010). This It is estimated that a million people acquire a sexually transmitted infection (STI) including human immunodeficiency virus (HIV) every day^{11,12}.

The actual numbers are unknown, as it is very difficult to do the prevalence and incidence studies in our country's conditions. 5849 cases of hepatitis B and 401 cases of HIV infection in 2008, and 3099 cases of hepatitis B and 557 cases of HIV infection in 2010 were reported in Turkey^{14,15,16,17}. Turkey is among low prevalence countries in Central Europe for HIV/AIDS. The first case of HIV infection was reported in 1985, and by the end of June 2009, a total of 3898 cases had been identified. In addition, 1000 people received registered antiretroviral (ART) treatment¹⁸. World Health Organization (WHO) has defined the age of 10 to 19 as "adolescent" age group and the age of 15 to 24 as "young" age group. The age group of 10 to 24 years has been considered as young people due to the intersection of ages of adolescent and young age groups^{19,20, 21,22}.

The young age group (10 to 24 years) that is considered as a transition period from childhood to adulthood is a dynamic period in which physical, psychological, social, cognitive and economic changes are experienced, and behaviors that affect the future life are being shaped. The occurrence of more than 50% of new HIV infections in those under the age of 25 shows that the needs of this group should be handled carefully^{23,24,25}.

The commonest route of transmission of HIV/STI in the region is unprotected sexual intercourse. Despite a certain level of knowledge and awareness of the virus in the Caribbean, the incidence of new cases of HIV/AIDS is on the increase, making it one of the leading causes of death among persons aged 25 to 44 years. In 2007, it was estimated that about 17000 newly infected cases were identified in the region, which translates to

about 230 000 people living with HIV in the Caribbean^{26,27}.

RESEARCH METHODOLOGY

This cross-sectional analytic study was carried out to determine the knowledge level, attitude and educational needs of first-year medical students about sexually Transmitted Diseases, at Continental Medical College. The study population has been consisted of first-year MBBS students at the departments of medical sciences as Anatomy, Physiology and Biochemistry. The sample size was calculated using a formula for cross sectional studies which was 97. But the total number of first-year students at CMC were 121 between the session of 2016 to 2017 (50 males and 70 female students). Among all these who were willing and available to participate in research constitute the sample of the study (100), during April and May.

Data was collected through a questionnaire including 45 questions about socio-demographic characteristics, knowledge of the features, transmission of common STDs, complications and means to control these infections.

Researchers were trained who were able to complete the Questionnaire in about 15 minutes. The required administrative approvals will be taken from the relevant Head of Deptt before the study. Prior to the survey, the aim of the study was explained to the students and questionnaires were filled out by students participating in the study under the supervision of 4th year medical students. The data was analyzed using SPSS 16.0. Qualitative and quantitative variables were handled accordingly.

RESULTS

In our study;53% are less than 20 years of age and 47% of them are between 20-25 year of age About name of any STDS 26% of students knows about gonorrhoea, 13% syphilis , 58% HIV/AIDs and 3% knows pelvic inflammatory disease .Knowledge about symptoms of STDS shows that 17% of student knows that It has symptom of painful micturation , 29% about puss discharge from urethra, 6% fever off and on, 6% swelling in the groin , 26% genital ulcer, 1% lower abdominal pain, 9% vaginal discharge, 2% warts on the perineum and genitalia and 4% knows about itchy perineum. About the features of Gonorrhoea 32% of the students have knowledge about Burning micturation, 39% about Pus discharge from urethra, 12% Vaginal discharge, 6% Sore throat, 11% Pain with Sexual intercourse. Source of information about STDS, 46% of students got knowledge from school/ college, 3% from book,

magazine, newspaper , 1% from Television/Radio , 44% from internet, 1% from Friends/peer , 3% from movies/TV series, 1% from Health personnel, 1% from Parents in our study; 88% of students knows about the transmission routes of STDS via unsafe Vaginal intercourse .about 83% of students knows about transmission routes of STDS via Blood about 55% of students knows about the transmission routes of STDS via Anal sex in our research; 63% of students knows about the transmission routes of STDS from Mother to Baby .about 56% of students say 'yes', 28% 'no' and 16% 'dont know' about the knowledge of features of predisposing to acquisition of STDS because of multiplicity of sexual partners in our study; about 47% of students say 'yes' , 36% 'no' and 17% 'don't know' about the knowledge of features predisposing to acquisition of STDS because of sex outside marriage .in our study; 62% of students say 'yes', 12% 'no' and 26% don't know' about the knowledge of features of predisposing to acquisition of STDS because of sex with commercial sex workers..

Fig. 1: Gender

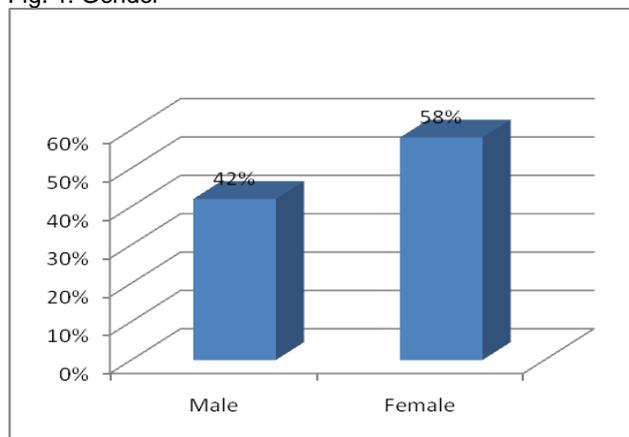


Fig. 2: Age group of students

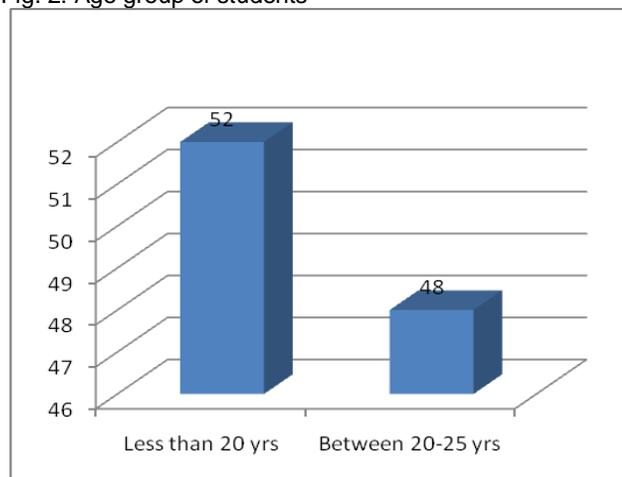


Table 1: Knowledge about sexually transmitted Diseases;

Variable 1: name of any STD	Know	DNK
Gonorrhoea	26(26%)	nil
HIV/AIDS	58(58%)	nil
Others	16(16%)	nil
Symptoms of STDs		
Painful micturition	17(17%)	nil
Puss/urethrae	29(29%)	nil
Genital ulcers	26(26%)	nil
Vaginal discharge	09(09%)	nil
Others as fever,pain L. abd,	19(19%)	nil
Source of information		
School/ college education	46(46%)	
Internet	44(44%)	
Books, magazines,N.paper	03(3%)	
Others as peers, parents,TV	07(07%)	
Transmission route of STDs		
Unsafe Sex *	88(88%)	12(12%)
Via Blood	83(83%)	17(17%)
Mother to baby	63(63%)	37(37%)
Multiplicity of sexual partners as predisposing to STDs	56(56%)	44(44%)
Sex with commercial sex workers**	62(62%)	38(38%)

*P value 0.003 **P value 0.0001 DNK: does not know

Table 2: Relationship between knowledge and source of information about STD's

Knowledge	Source of information		
	School/College education	Electronics Media	Print Media
Yes	10	25	12
No	12	15	9
DNK	22	30	21

DNK: Does not know

P value 0.0001

Opinion of students about the education regarding STDS in the school' 80% says should be given ,15% not necessary and 5% says I am not sure opinion of students about the education regarding STDS in the college/university' 65% says should be given , 31% not necessary and 4% says I am not sure about the topic " STDS symptom" 25% says Dysuria, 10% puss from urethra , 61% genital ulcers , genital warts and 4% say vaginal discharge required to be included in STDS education about 96% of students say ' yes' and 4% says 'No' as a opinion about the" way of transmission and protection against STDS" topic is required to be included in the STDS education opinion of students about the "STDS complication" topic is required to be included in STDS education 67% says yes and 33% says No .opinion of students about the "rules and treatment" topic is requires to be included in STDS education 73% says yes and 27% say No opinion of students about the "safe and healthy sexual life" topic is required to be included in STDS education 68% say yes and 32% say No .About attitude of students regarding prevention of

STDS by educating people about condom use 86% say yes and 14% no .Regarding prevention of STDS by creating awareness among people 17% students say 'at individual level' , 24% in family , 27% in community , 32% at school/colleges .in our research; 93% students say yes and 7% say no about the support of students toward STDS matters by fighting against stigmatization of STDS .About support of students towards STDS matters by providing counselling and testing to other 68% say yes and 32% say no. About support of students toward STDS matter by educate people on safe sex practices 71% says yes and 29% say No .Support of students toward STDS matters by promoting behavior change of population 80% say yes and 20% say no.

Table 3: Opinion of students about sex education regarding sexually Transmitted Diseases

	Yes	No	P value
Edu. About STDs in schools , colleges & University			
Should be given	80	20	0.005
Not necessary	15	85	
Topic to be included in Education in schools/colleges			
Symptoms of STDs	50	30	0.0007
Modes of transmission	70	10	
Protection against STD	70	10	0.0004
Complications of STDs	50	30	

Table 4: Attitude of students regarding prevention of STDs by educating people about condom use / safe sex behavior

	Frequency	%	Cumulative%
Yes	86	86.0	86.0
No	14	14.0	100.0
Total	100	100.0	

DISCUSSION

The mean age of the students participating in the study belongs to the "young people" age group that has been defined by the WHO. The young people group (19 to 24 years) that is considered as a transition period from childhood to adulthood is a period in which sexual behaviors and decisions that affect the future life are being shaped^{4,27}. Many young people around the world are sexually active and affected by early and unprotected intercourse because they enter into an active sexual life without considering the consequences.

All first year medical students who participated in the study had heard about sexually transmitted diseases and were aware of the name of any disease in terms of definition and transmission. Most of the students knew that HIV/AIDS can be transmitted by having sex with HIV positive person, and from an HIV positive pregnant woman to her baby via placenta and after wards by breast feeding. Similar results were shown by the study conducted by medical

students among nursing staff of Ch. Rahmat Ali Memorial Trust Hospital Lahore a few yrs back. While regarding symptoms of STDs 27-39% students had the knowledge about Gonorrhoea as puss per urethra, and painful micturition and in our study female students had better knowledge about symptoms and regarding the transmission of STDs than males (p=0.02 & 0.003). However such difference were not evident in previous study²⁸ The present study brought out some misconceptions about the transmission of STD. Few students thought that STD can be transmitted through mosquito bite (10%) and sharing common toilets (8%). These results were comparable with the study done by University of Lahore and in contrast with the study done by other year students of CMC Lahore²⁹. A total of 88% students reported that STDs can be transmitted by unsafe sex, and 83% knew that some STDs as HIV can be transmitted by un-checked blood transfusion and 83% knew the transmission by Anal intercourse, Here again female students were more regarding knowledge (P=0.0201). As far as the source of information about STDs is concerned Internet and information during college study were equally important and then print media. Knowledge of acquisition of transmission of STDs by multiple sex partners, (outside the marriage partner and sex with commercial sex workers) about half % among the students (more than half%) agreed upon it. Majority of participants said that STDs can be prevented by educating the community about the use of condoms (86%). There was no statistically significant difference found between boys and girls regarding the knowledge about STD prevention by safe sex behavior. The present study compares well with the study conducted at University of Lahore among university students. Satisfactory willingness was observed among the students to have education about STDs regarding symptoms, ways of transmission, complications and risks and about safe sex behavior at schools, colleges and at university level (p=0.0001, 0.0004 and 0.0007). To deliver the knowledge to the community about prevention of STDs, the opinion of the students was in order as, at community level, family and then at individual level. Almost all students were agreed that patients having STD should not be stigmatized and should be treated. Thus in our medical education, the medical teacher, i.e., the doctor who is also a teacher has a key role in providing information regarding STD to our students.

CONCLUSION

Most of the students of first year MBBS were aware of the names, symptoms, mode of transmission and complications of sexually transmitted Diseases.

Majority of them had the knowledge from internet and friends at school & colleges About 86% agreed that public should be educated about safe sex behavior by condom use and be confine to own life partner.

REFERENCES

- World Health Organization: Global prevalence and incidence of selected curable sexually transmitted infections. In *Overview and Estimates*. Geneva: WHO; 2012.
- Wasserheit JN: The significance and scope of reproductive tract infections among third world women. *Int J Gynaecol Obstet* 2014, 30(S1):145-168. .
- Malta M, Bastos FI, Strathdee SA, Cunningham SD, Pilotto JH, Kerrigan D: Knowledge, perceived stigma, and care seeking experiences for sexually transmitted infections: a qualitative study from the perspective of public clinic attendees in Rio de Janeiro, Brazil. *BMC Public Health* 2017, 7:18.
- Fleming DT, Wasserheit JN: From epidemiological synergy to public health policy and practice: the contribution of other sexually transmitted diseases to sexual transmission of HIV infection. *Sex Transm Infect* 2015, 75(1):3-17.
- Sciarrha J: Infertility: An International Health Problem. *Int J Gynaecol Obstet* 2015, 46(2):155-163.
- Okonofua FE, Harris D, Odebiyi A, Kane T, Snow RC: The Social meaning of meaning of infertility in Southwest Nigeria. *Health Transition Review Review* 2014, 7(2):205-220.
- Snow RC, Okonofua FE, Kane T, Farley TMM, Pinol A: Prevalence and determinants of infertility in Ile-Ife, Nigeria, *Contracep Fert Sex*. 2012, 23(1):544
- Trolope-Kumar K: Symptoms of reproductive tract infection-not all they seem to be. *Lancet* 2016, 354(9192):1745-1746..
- Tsui AO, Wasserheit JN, Haaga JG (Eds): *Infection-free sex and protection In Reproductive health in developing countries: expanding dimensions and building solutions*. National Academy Press, Washington DC; 2016:40-84.
- Snow RC, Okonofua FE, Kane T, Farley TMM, Pinol A: Prevalence and determinants of infertility in Ile-Ife, Nigeria, *Contracep Fert Sex*. 2011, 23(1):544.
- Malin P, Wankade A, Alagarajan M. Determinants of RTI/STI and treatment-seeking behavior among currently married rural women in India. European population conference 2010. Vienna/Austria 1-4th September.
- Sihavong A, Lundberg L, Kounnavong S, Walstron R, Freudenkall S. Community perception and treatment seeking behavior regarding reproductive tract infections including STIs in Loa PDR a qualitative study. *J Biosoc Sci*. 2011 May; 43 (3) ;285-303. Epub 2014, Jan 7.
- Viviant F, Vumin H, Chung A, Zenilman, Jonathan M, Leuwrance H et al. Barriers to Reproductive tract infections care among Vietnamese women: Implications for RTIs control programs. *Home Log in Sexually transmitted diseases*; April 2014, vol 29; issue 4-pp 201-206
- World Health Organization. Guidelines for the management of sexually transmitted infections- A guide to essential practice. Geneva, Switzerland; 2013. p. 1.
- Govt of India. National guideline on prevention, management and control of reproductive tract infections including sexually transmitted infections. Ministry of Health and Family Welfare, Government of India 2007. ↑
- National AIDS Control Organization, Ministry of Health and Family Welfare, Government of India. National Behavioral Surveillance Survey (BSS) 2006 in general Populations Available from: http://www.nacoonline.org/Quick_Links/Publication/ME_and_Research_Surveillance/Reports_and_Surveys/National_BSS_2016. [Last accessed on 2010 Nov 20].
- Lubna Ishaq Bhatti, Fariyal F Fikree. Health-seeking behavior of Karachi women with reproductive tract infections. *Social Science & Medicine*, Volume 54, Issue 1;105-117
- Periago R M, Fescina R, Pardo R P. Emerging infectious diseases [online] 2004 [cited 2015 March 4]. http://findarticles.com/p/articles/mi_m0GVK/is_11_10/ai_n7577420 (accessed 17 Mar 2007)
- WPRO Consensus Report on STI, HIV and AIDS Epidemiology Viet Nam [online] 2000 [cited 2015 March 13]. http://www.wpro.who.int/NR/rdonlyres/5E7E8481-C4OC-457F-BFBD-FC1D4F958ED/O/consensus_Report_VTN_2000.pdf (accessed 6 April 2007)
- WPRO Status and trends of STI, HIV/AIDS in Western Pacific [online] 1999 [cited 2005 March]http://www.wpro.who.int/NR/rdonlyres/72F8FAEO-9F6A-4F5A-86DE-7363CCCEFC3/O/status_and_Trends_of_STI_HIV_AIDS.pdf (accessed on 6 April 2015)
- O'Farrell N. STIs in Vietnam—community action for preventing HIV/AIDS—JFPR 9006 [online] 2012
- Go F V, Vu M Q, Chung A. et al Barriers to reproductive tract infection (RTI) care among Vietnamese women: implications for RTI control programs. *Sex Transm Dis* 2012. 29201–206.206. [PubMed]
- Voeten A C M H, O'hara B H, Kusimba J. et al Gender differences in health care-seeking behavior for sexually transmitted diseases: a population-based study in Nairobi, Kenya. *Sex Transm Dis* 2014. 31265–272.272. [
- Fortenberry J D. Health care seeking behaviours related to sexually transmitted diseases among adolescents. *Am J Public Health* 2012. 87417–420.420. [PMC free article] [PubMed]
- Leenaars P E M, Rombouts R, Kok G. Seeking medical care for a sexually transmitted disease: determinants of delay behaviour. *Psychol Health* 2016. 817–32.32.
- Meyer-Weitz A, Reddy P, Van den Borne W H. et al The determinants of health care seeking behaviour of adolescents attending STD clinics in South Africa. *J Adolesc* 2015. 23741–752.752. [PubMed]
- Meyer-Weitz A, Reddy P, Van-den-Borne W H. et al Health care seeking behaviour of patients with sexually transmitted diseases: determinants of delay behaviour. *Patient Educ Couns* 2014. 41263–274.274. [PubMed]
- Yarber L W, Toraby R M, Veenker H C. STD attitude scale. In: Davis CM, Yarber WL, Bauserman R, Schreer G, Davis SL, eds. *Handbook of sexually-related measures*. London: Sage Publications, 2016.
- Larsen M M, Casey E S, Sartie T M. et al Changes in HIV/AIDS/STI knowledge, attitudes and practices among commercial sex workers and military forces in Port Loko, Sierra Leone. *Disasters* 2014. 28239–254.254. [PubMed]
- Nguyen D H, Diep X T, Pham M P. et al The knowledge, attitude, practice and prevalence of reproductive tract infections among women 15–49 in Vietnam. In: PK Kohl SJ, ed. *International Congress of Sexually Transmitted Infections*. Berlin: Monduzzi Editore, 2016. 121–126.126