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Original Research Article

Assessment of awareness, perception and attitude about sexually transmitted diseases (STDs) among medical undergraduates in tertiary care teaching institute of Vidarbha region in Maharashtra state

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Abstract

Objectives: The study was designed to evaluate awareness, perception and attitude about sexually transmitted diseases (STDs) among medical college undergraduates in tertiary care teaching institute.

Methods: Detailed questionnaire elicited information on demographic characteristics as well as information about knowledge, perception and attitude of the respondents towards STDs was administered to 151 second M.B.B.S students. This self administered questionnaire was used for data collection. The data was collected, compiled and then univariate analysis (percentages and frequencies) was calculated.

Results: One hundred and thirty-six (96.5%) respondents had heard about sexually transmitted infections, the three most important sources of information being teachers (76.59%); internet (70.21%) and electronic media (60.28%) while information about treatment centers for STDs being govt. hospital/health centers (88.65%) and private doctors/clinics (65.24%). Ninety nine percent of the respondents knew one STD i.e. syphilis and the two most commonly mentioned ones were gonorrhea (97.87) and HIV/AIDS (96.45). 95.74% of the students knew the unprotected sex as modes of transmission of STDs while some (5-13%) of them equally had misconceptions. The most important symptoms mentioned were ulcer/sores in genital area (Male-82.26% and Female-79.43%) and discharge from vagina (73.75%). Most (50-95%) of the respondent 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 STD infected people.

Keywords: Sexually transmitted diseases, STDs, Medical undergraduates, Syphilis, HIV/AIDS, Gonorrhea

1. Introduction

Sexually transmitted infections (STIs) appear to be major health problem not only in developing countries but developed countries. In India, the prevalence of STIs is around 6% according to National Aids Control Organization (NACO). Sexually active adolescent and young adults aged 15-24 years are more at risk for STIs than older adults. The WHO estimates that 20% persons living with HIV/AIDS and one out of 20 adolescent contracts STI each year [1]. STIs are spread primarily through person-to-person contact, although some of the pathogens that cause it, especially Human immunodeficiency virus (HIV) and syphilis, can be transmitted from mother to child during pregnancy and childbirth, and through blood products and tissue transfer[2,3]. Sexually transmitted infections caused by more than 30 different bacteria, viruses and parasites which are transmitted through sexual intercourse. The most common STIs are the bacterial infections: Chlamydia, syphilis, gonorrhea; and the viral infections: human papilloma virus (HPV), HIV, hepatitis B [4].

Adolescence group is more vulnerable to several factors like incomplete social, biological, emotional, psychological development resulting in risky behavior which serves to increase the risk of contracting STIs[5]. Some of most common behavioral contributors are use of alcohol and tobacco, diet and activity pattern, as well as use of illicit drugs and sexual behavior are initiated during adolescence [6]. High rates of teenage pregnancies and increasing number of STIs in adolescents have led to more attention being paid to adolescent sexual and reproductive health worldwide [7]. Furthermore most of the published data on the prevalence and incidence come from developed countries. In developing countries like India where society is conservative and social

and cultural factors form many obstacles where privacy and confidentiality are important barriers for seeking medical care among adolescent with possible STIs. The discussion on sexual and reproductive health of adolescents which have been held over several decades and the concern was raised that adolescents in developing countries are not well informed about the STIs.

Literature survey reveals that diverse epidemiological studies on knowledge and awareness of STIs were performed among school-going adolescent in various countries. None of the study was conducted in medical undergraduate. Hence the present research envisaged with an intension to conceived the idea of conducting cross sectional survey in medical undergraduates in the age group 18-22 years of age of both sex for one week in tertiary care teaching institute of Vidarbha region in the Maharashtra state to asses awareness, attitude and perception towards STIs by asking to complete anonymous questionnaire on it.

2. Materials and Methods

A design was a prospective cross-sectional descriptive study enrolling total 151 medical undergraduates students of either sex, who just passed out their first M.B.B.S and studying in first term of second M.B.B.S in, tertiary care teaching institute Yavatmal in Maharashtra State, India. The study was conducted during last week of February 2016 Major ethical concern was that of confidentiality of subjects. The questionnaire was completed privately and anonymously. All records and relevant material were–stored in locked cabinet and had access to authorized person only. Written informed consent obtained from all subjects.

A self structured, close ended questionnaire consisting of 33 questions, elicited information on demographic characteristics as well as information about knowledge, perception and attitude of the respondents towards STDs was administered to medical undergraduates who just passed out their first M.B.B.S. This self-administered questionnaire was used for the data collection. The questionnaire was filled out in our presence and care was taken that no one missed out from answering any question in questionnaire. The questionnaire was administered by a single investigator and students were told to approach the investigator in case any doubts regarding any of the questions in the questionnaire. However, 10 subjects were dropped out from the study due to incomplete questionnaire forms. The data was collected, compiled and then univariate analysis (percentages and frequencies) was calculated.

3. Results

Total 151 second M.B.B.S students were in first term willing to participate in the study. The mean age of the study population was 19.7±0.7 (range 18-22 years) and the male/female ratio was 67:74. Students of different religions such as Hindu (82.97%), Muslim (4.96%), Buddhist (9.21%), Jain (1.41%) and Christian (1.41%) were involved in the study. The questionnaire was distributed to all the enrolled students for data collection. A total of 141 out of 151 questionnaires administered were correctly filled out and returned (response rate, 93.37%).

In the study, 96.5% students have heard about sexually transmitted infections while 74.46% students have knowledge about possibility to cure the infection. 63.82% students have correct knowledge about the availability of test to detect the infection among human beings. Majority of students correctly answered the cause of STDs, requirement of treatment and protection from STDs that is 97.87%, 98.6% and 85.81% respectively. While 81.56% knew that few STDs were treated by early treatment and 23.4% have knowledge about alternative medicine use for curing the infection. 65.95% students knew that treatment for STDs is free of cost in government hospitals. Some students (53.9%) have information about fertility of person is affected by STDs. (Table 1).

Table 1: Showing general awareness about the STDs.

Questions	Total No. 141		
	Yes (%)	No (%)	NS (%)
Heard about STDs	96.5	3.5	NA
Possibility to cure STDs	74.46	8.55	17.02
Availability of Tests to detect STDs	63.82	21.877	14.49
STDs catched by sexual intercourse	97.87	2.1	NA
STDs require treatment	98.6	0.7	0.7
Early treatment cures few STDs	81.56	3.5	14.89
Alternative medicine cure STDs	23.4	21.98	54.6
Is treatment free of cost in government centers	65.95	6.2	29.78
STD affect fertility of a person	53.9	24.11	21.98
How to get protected from STDs	85.81	4.25	9.9

The students were fairly knowledgeable about the general symptoms of STDs with females significantly recognizing abnormal vaginal discharge as being suspicious of an STD while males and female both identified ulcer/sores in genital area as the most suspicious feature. Other symptoms of STDs were less well known (Table 2).

Table 2: Awareness about symptoms of STDs

Symptoms	Frequency	Percentage
In Male	**Yes**	
Discharge from penis	79	56.02
Pain during urination	83	58.86
Ulcer/sores in genital area	116	82.26
Lymph node enlargement	65	46.09
In Female		
Discharge from vagina	104	73.75
Pain during urination	64	45.39
Ulcer/sores in genital area	112	79.43
Lymph node enlargement	61	43.26

Most students had heard about common STDs such as syphilis, gonorrhea and HIV/AIDS while the rarer STDs were less well known. Average students have knowledge about curability of syphilis and gonorrhea whereas very few students knew that sexually transmitted infections are curable (Table 3).

Table 3: Awareness about types of sexually transmitted diseases and its curability

Name of STDs	STD %	Curable %		
	Yes	Yes	No	NS
Hiv	96.45	4.9	66.66	28.36
Syphillis	99.29	72.34	7.8	19.85
Gonorrhea	97.87	73.04	3.5	23.4
Herpes simplex	47.51	28.36	8.5	63.12
Thalessemia	2.1	NA	NA	NA
Sickle cell anaemia	1.4	NA	NA	NA
Chlamydia	33.33	35.46	2.8	61.7
Chanchroid	36.87	24.11	2.1	73.75
Trichomonas vaginalis	60.28	36.87	1.4	61.7
Human papilloma virus	38.29	22.69	11.34	65.95
Hepatitis B and C	53.9	34.75	14.18	51.06

As regarding awareness about established routes of transmission, majority of students (70-96%) have correct information about different modes of transmissions viz. sexual route (unsafe sexual practices – 95.74%), transmission through infected blood or its products (70.92%), mother to child transmission (75.17%) and sharing of needle/syringes (74.46%), Misconceptions related to the transmission of infection were also prevailing among these students. Very few students have information about misconception about modes of transmission of STDs. (Table 4).

Table 4: Awareness about modes of transmission and misconception about modes of transmission of STDs

Modes of transmission of STDs	Frequency (Yes)	Percentage (Yes)
Unprotected sex	135	95.74
Blood and blood products	100	70.92
Needles and syringes	105	74.46
Mother to child	106	75.17
Misconception about modes of transmission of STDs		
Coughing or sneezing	16	11.34
Hugging/shaking hands	17	12.05
Sharing toilets	19	13.47
Sharing plates	8	5.6

In the present study, students knew the three most important sources of information being teachers (76.59%); internet (70.21%) and electronic media (60.28%) while information about treatment centers for STDs being govt. hospital/health centers (88.65%) and private doctors/clinics (65.24%). Other sources of information and treatment centers were less known.

Less number of students have knowledge about perception of STDs with regards to condoms are 100% protective from infection (23.4%), STDs are self limiting diseases (19.14%) and person with STD always look emaciated (27.65%) (Table 5).

Table 5: Perception of STDs

Questions	Yes (%)	No (%)	NS (%)
Are condoms 100% Protective from STDs	23.4	63.82	12.76
Are STDs self limiting diseases	19.14	69.5	11.34
A person with STD always look emaciated	27.65	41.84	30.49

It was observed that changing attitudes of medical students related to care of STDs infected people and majority of the students have positive attitude towards them. The majority of these medical undergraduates student had correct knowledge about the methods of prevention. 75.88% students were agreed that avoidance of multiple sex partners (unprotected sex) was the most important approach for prevention of infection and the 78.72% of students had correct knowledge about use of condoms during sexual activities. 90.07 % student knew that STDs can be prevented by doing blood test before marriage or childbirth. 95.03% students were also correctly in view of use of disposable syringes and needles in various health care activities as important preventive methods against spread of infection. The majority of students (95.03%) were agreed that counseling centre help in prevention and control of STDs (Table 6).

Table 6: Knowledge about prevention of STDs

Questions	Yes (%)	No (%)	NS
Use of condoms	78.72	6.38	14.89
Remaining faithful to single partner	75.88	14.18	9.9
Doing blood test before marriage or childbirth	90.07	3.54	6.38
Not sharing needles or syringes	95.03	2.12	2.83
Counseling centre help in prevention and control of STDs	95.03	0.7	4.25

4. Discussion

Inadequate knowledge and fear of STD infected people have been identified as a serious problem among health care professionals considering themselves to be at risk of contracting the infections in India. These feelings of anxiety and fear concerning STD infected people among Indian health care professional's results in their meting out derogatory behavior towards their STD infected patients. Research in other countries has indicated the central role of medical education in improving knowledge of STD risk and transmission and changing the attitudes of medical students as it is related to care of STD-infected people [8,9]. Although many researchers reported the major area of concern is the awareness regarding prevailing STIs and the factors to be adopted to prevent it. The best single way to prevent this disease is through continuing education and it is a key strategy for the control of the STIs. Studies in India concerning STIs related knowledge and attitudes amongst both health professionals and medical students suggest that educational intervention has the potential to address the gaps both in knowledge and the negative attitudes directed towards infections [10-12].

The results of our study focused on knowledge, view and outlook about sexually transmitted diseases (STDs) among medical college undergraduates. The students in our study have satisfactory general knowledge about the STDs. Majority of students heard about the STDs and their causative agents as well as most of the students have knowledge about treatment and protection from infections. The students were fairly knowledgeable about the general symptoms of STDs with females' having abnormal vaginal discharge while males and female both identified ulcer/sores in genital area as the most suspicious feature. Other symptoms of STDs were less well known. They had adequate knowledge about types of sexually transmitted diseases and its curability. Most of the students heard about common STDs such as syphilis, gonorrhea and HIV/AIDS. Average students have knowledge about curability of syphilis and gonorrhea whereas very few students knew that sexually transmitted infections are curable. It is encouraging to note that the knowledge about transmission of infection through the indiscriminant heterosexual behavior, by blood or its product, mother to child transmission and by use of contaminated needle/syringes were fairly high (70-96%) in our study subjects. Similar high figures of knowledge about the transmission were reported from studies conducted on various populations in our country and abroad [12-19]. Similar to other studies, certain misconceptions about transmission of STDs were also prevalent in our study. Commonest misconceptions prevailed among them were transmission through casual contacts like sitting together or sharing clothes, coughing or sneezing, hugging/shaking hands and sharing toilets and plates. The students have poor knowledge of misconception about modes of transmission of STDs. Awareness about source of information and treatment centers for STDs was satisfactory with knowledge of three most important sources of information being teachers; internet and electronic media while information about treatment centre for STDs being govt. hospital/health centre and private doctors/clinics. However the less number of students have knowledge about perception of STDs.

Several studies [18-23] document the negative attitudes of Indian health professionals toward STDs infected people. Therefore, medical training has the potential to facilitate the development of positive behaviors and attitudes among medical students as they relate to STDs. Also the studies over the past decade among health professionals in India identify the gaps in their knowledge concerning risks and transmission of infections. In our study, all respondents exhibited the willingness to support STDs individuals through several actions; about 94.32% of students prefer to continue their friendship with STDs infected person/friend as well as 82.97% of students sharing their room to infected person. However majority of the students (95.74%) answered to seek help from clinician and 87.23% students' maintained confidentiality of the patients having STD. According to this finding, we reported changing attitudes of medical students related to care of STDs infected people and majority of the students have positive attitude towards them. Similar to the other studies [14,15] most of the students in our study had awareness related to the different preventive approaches.

5. Conclusion

In present study, students had satisfactory levels of knowledge on general awareness, perception, transmission and prevention of STDs with positive attitude towards STD infected people. The study suggested that development and organization of STDs training sessions at regular intervals will promote a good delivery of accurate information on STDs to the public and health care personnel to provide proper patient care. Also introducing health education at the university levels increases students' awareness about the problem and prevention of STDs. Media enlightenment campaigns about these diseases should also be emphasized.

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