



## Study on Awareness of TB, HIV and STD among Young Adults in Colleges of Pondicherry

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### Abstract

**Introduction:** Awareness and knowledge on highly prevalent communicable diseases in the population is important for early diagnosis, treatment and their prevention. The knowledge on Tuberculosis (TB), Human Immunodeficiency Virus infections (HIV) and Sexually Transmitted Diseases (STD) are important among young adults in India.

**Aims and Objectives:** To find the awareness and knowledge on cause, spread, treatment facility and social stigma about TB, HIV or AIDS and STD among young adults in colleges of Puducherry.

**Materials and Methods:** A Cross-sectional and descriptive study was carried out in the month of June 2015 in Puducherry among young adults in different colleges having arts, science, engineering, veterinary sciences, graduation and post graduation courses. Data was collected using pre tested semi open ended questionnaire by direct interviewing the subjects in their college premises after getting the consent.

**Results:** Total of 600 young adults (390 males and 210 females) were the subjects from various educational backgrounds. The overall awareness about disease, aetiology, spread, free treatment, treatment duration, complaints and social stigma for TB was 94, 72, 40, 77, 22, 75 and 72 percent respectively. Similarly they were 96,66,70,69,19,42 and 71 percent for HIV, and 40,22,22,29,1,5, and 46 percent for STDs. The overall awareness and knowledge is not adequate irrespective of their educational backgrounds. Smoking and alcohol consumption was prevalent among 20 and 26 percent of male subjects.

**Conclusion:** The overall TB, HIV and STD awareness is inadequate among young adults. It is necessary to improve awareness at periodic intervals by lectures and group discussions.

**Key words:** TB, HIV, STD, Awareness, Knowledge, College Students, Puducherry

## Introduction

The transition of the health problems from communicable to non communicable diseases is inevitable due to the lifestyle, environment, economical and socio cultural changes in India. But some of the infectious diseases are remaining as prevalent at alarmingly at high rate especially for Tuberculosis (TB), Human Immunodeficiency Virus infections (HIV) and Sexually Transmitted Diseases (STD). All three diseases are having high prevalence rate in India compared to other countries in the world.<sup>[1,2]</sup> Tuberculosis accounts for 20 percent of the global cases. STD is not notified in India, as a result the exact prevalence is not known but prevalence is high.<sup>[2]</sup>

There is a relationship in spread of agents and clinical manifestations are dependent on one other. These three diseases are affecting reproductive age population indirectly reflects economic situation of the family and country.<sup>[1,3,4,5,6]</sup> As a result the knowledge of these diseases is important to the adults in India in order to prevent from further transmission, complications and mortality. Since these diseases mostly effect the young adults but it can be preventable through Information, Education and Communication. The periodic assessment in all regions with different educational background will provide information on the level of awareness of these diseases.<sup>[6,7,8]</sup> With this background, the present study was conducted with an objective to find out the level of awareness and knowledge on cause, spread, complaints and treatment facilities about TB, HIV and STD among the college students of Puducherry.

## Methodology

This was a cross sectional study, descriptive, quantitative and qualitative study conducted in semi urban area in Puducherry, during the month of June 2015 among the students of different colleges. Request letter was sent to all colleges in Puducherry seeking permission to carry out the study and nine colleges gave permission and representative samples were collected from each

course. A pilot study was conducted to finalise the data collection by questionnaire. The questionnaire was semi open ended to complete the awareness and knowledge on variables under the study. Data included details on TB, HIV and STD on awareness, cause, and route of spread, symptoms, complications, treatment, social stigma and life style characteristics of study participants. The study was approved by the Institution ethical committee (Human). Consent was obtained from subjects and each participant was interviewed separately in a comfortable atmosphere in their college premise and the information given verbally by the them was documented. The average time taken to complete each questionnaire was about 10 minutes. The consistency of the information was assessed among 5 percent of the subjects by repeating the data collection by different interviewers.

600 college students were interviewed for the study from arts and science, Engineering, Veterinary Sciences and Animal Husbandry, Polytechnic and University colleges. The subjects were classified for the analysis purpose into different categories such as arts and science, veterinary sciences, polytechnic, engineering, post graduate and post doctoral students. The variables were analysed for awareness, aetiology and treatment services, complaints for each disease in relation to the objective of the study.

## Statistical analysis

The data were analysed with SPSS statistical software version 18. Proportions, mean, standard deviation were applied for the analysis.

## Results

This study had more number of male subjects than females. The male and female students accounted 65 and 35 percent respectively as shown in Table 1. There were no female subjects in polytechnic and post doctoral courses. The mean age of the subjects was  $21 \pm 3$  year ranging from 20 to 28 years. Table 2 shows the awareness and knowledge on spread and aetiology is better on

TB and HIV compared to STD. The awareness of polytechnic students had poor knowledge and awareness on all three diseases; however the veterinary students were better in their knowledge and awareness compared to all other groups.

Table 3 shows 69 and 29 percent of subjects are aware about free treatment for TB, HIV and STD, however awareness about duration of treatment and complications are less than 40 percent in each categories. Table 4 depicts the complications of TB diseases was known to 75% and it is less than 50 and 6 percent on HIV and STD respectively. Only 53 percent of the subjects have seen the patient suffering from TB and less than 20 percent had seen HIV patient. Social stigma is prevalent on all three diseases irrespective of education background.

### Discussion

The proportion of adults is high in India compared to other countries in the world. The median age of India population is 25.5 years according to 2011 census.<sup>[9]</sup> Thus their health status is important for the betterment of the community and country. Due to changes in lifestyle among young adults, they are prone for communicable and non communicable diseases. This study highlights the status of awareness among adults about three important diseases in Puducherry.

The proportion who knew that TB is caused by germs is unsatisfactory (40%), despite the health education messages in audio visual media as shown in Table 2. However nearly three fourth of young adult subjects are aware about the viral aetiology for HIV and 1 the awareness was very poor on aetiology for STD (22%). The awareness about aetiology for TB, HIV and STD are poor compared to studies done with similar socio, cultural and educational backgrounds.<sup>[3,6,7,8,10]</sup> In both male and female awareness about TB and HIV (96% and 95%) is almost equal compared to STD (40%).

The awareness on STD was strongly unsatisfactory among all categories of college students except for veterinary and post graduate

students. It was surprise to state that few subjects had mentioned disease is transmitted by contaminated water, bite of mosquitoes, direct touch and genetic origin. The similar misconception about the spread was noted in the general population.<sup>[3,8,11]</sup>

The duration of treatment for all three diseases was poor in all the categories of students as shown in Table 3. Most of the students do not know about the duration of treatment for STD and this poor knowledge refers to the veterinary science students in this study. The complications of STD are many but only 5 percent of study subjects knew about it.

The STD, HIV and TB are closely interring related diseases due to common risk and chances of acquiring infection are high. It is a well known fact that ulcerative STD facilitates HIV viruses' entry to the host and suppression of immunity by HIV makes prone for TB. Secondly all three diseases are affecting the young adults and economically productive to the community. Hence a poor knowledge among educated group or young adults exposed to awareness on diseases at different level leads to high risk of disease acquiring and transmission.

The duration of treatment remains 6 to 9 months in most of the TB cases and inadequate treatment duration leads to the development of drug resistant to the TB germs. This knowledge appears to be very poor in this study. Similarly HIV treatment requires lifelong treatment in many cases in order to have good quality of life. This awareness is appears to be not different from studies conducted in other parts of this country.<sup>[1,8,9]</sup>

TB patients were diagnosed with symptoms of two weeks of cough with or without sputum production, fever, haemoptysis, loss of appetite and weight. Many such symptomatic were diagnosed either with microscopic examination of the sputum for presence of Mycobacterium tuberculi bacilli or X ray of chest or biopsy reports. Nearly 7 percent of the young adults were aware about symptoms of TB. This study did not elicit the source of information. Similarly the

history of complaints of HIV infection or AIDS diseases is vague but many of them will manifest with loss of weight and repeated infections followed by emaciation. This fact is known to less than 50 % college students in this study as shown in Table 4. The sexually transmitted infections or diseases presenting symptoms are variable from mild to severe and some of them could be subclinical in nature. It is difficult for the common man to know the specific symptoms as STD. The level of awareness of STD is unsatisfactory in present study in this area which accounts for less than 5%. The knowledge appears to be similar to other studies.<sup>[5,6,11,12]</sup>

It is important that the background of the adults will influence on acquiring and sharing the knowledge .In this contrast, young adults in this study are having the prevalence of tobacco use and alcohol consumption of 20 and 26 percent respectively among males. Nearly 5 % of unmarried young adults stated that they already experienced sexual intercourse. The knowledge learnt is equally responsible not only to acquire academic activities but also to be equally important on risks for various diseases due to their personal habits.

**Table 1:** Distribution of students according to gender and their age

Students	Male N(%)	Female N(%)	Total N(%)	Age in years Mean(±SD)
Arts and Science	15(3.8)	23(10.9)	38(6.3)	20(1.1)
Engineering	160(41)	175(83.3)	335(55.8)	21(1.0)
Veterinary sciences	15(3.8)	9(4)	24(4)	22(1.3)
Polytechnic	121(31)	0	121(20.2)	21(1.1)
Other graduates	40(10)	3	43(7.2)	23(3.1)
Post graduates	39(10)	0	39(6.5)	28(3.7)
Total	390	210	600(100)	21(3.1)

**Table 2:** Awareness, route of transmission and aetiology among students N=600

Students	Tuberculosis			HIV			STD		
	Aware ness	Spread	cause	Aware ness	Spread	cause	Aware ness	Spread	cause
Arts and Science	36(94)	25(65)	15(45)	36(94)	19(50)	27(71)	11(28)	4(10)	7(18)
Engineering	319(95)	237(70)	132(39)	326(97)	211(62)	252(75)	109(32)	53(15)	77(23)
Veterinary sciences	24(100)	22(91)	16(67)	24(100)	21(87)	16(67)	23(95)	17(70)	10(42)
Polytechnic	107(88)	89(73)	49(40)	114(94)	80(66)	73(60)	45(37)	20(16)	15(12)
Other graduates	43(100)	31(72)	15(35)	43(100)	30(69)	27(63)	27(62)	19(44)	9(21)
Post graduates	38(97)	30(76)	13(33)	37(94)	38(97)	22(56)	29(74)	24(61)	12(31)
Total	567(94)	434(72)	242(40)	580(96)	399(66)	417(70)	244(40)	137(22)	130(22)

Numbers in bracket indicates percentage

**Table 3:** Awareness about the free treatment availability, treatment duration and complications. N=600

Students	Tuberculosis			HIV			STD		
	Treat ment	Dura tion	Compli cations	Treat ment	Dura tion	Compli cations	Treat ment	Dura tion	Compli cations
Arts and Science Engineering	24(63)	5(13)	12(31)	24(63)	14(36)	7(18)	9(23)	0	1
Veterinary sciences	266(79)	78(23)	134(40)	255(76)	64(19)	64(19)	92(27)	2	14(4)
Polytechnic	19(79)	4(16)	20(83)	18(75)	3(12)	15(62)	13(54)	0	8(33)
Other graduates	89(73)	22(18)	28(23)	74(61)	15(12)	16(13)	33(27)	2	1
Post graduates	33(76)	14(32)	10(23)	23(53)	10(23)	13(30)	14(32)	0	4(9)
Total	33(84)	11(28)	12(30)	25(64)	11(28)	13(33)	18(32)	3	2
	464(77)	134(22)	216(36)	419(69)	177(19)	128(21)	179(29)	5	30(5)

Numbers in bracket indicates percentage

**Table 4:** Awareness about complaints, seen such patient and presence of social stigma among students N=600

Students	Tuberculosis			HIV			STD		
	Compl aints	Seen such patient	Social stigma	Compl aints	Seen such patient	Social stigma	Compla ints	Seen such patient	Social stigma
Arts and Science Engineering	25(66)	19(50)	37(98)	16(43)	7(19)	36(95)	0	2	26(69)
Veterinary sciences	243(73)	167(50)	239(72)	145(44)	37(12)	237(71)	1	7(3)	135(41)
Polytechnic	21(88)	20(84)	15(63)	5(21)	6(25)	12(50)	11(46)	2	13(55)
Other graduates	89(74)	67(56)	78(65)	52(43)	21(18)	81(67)	1	4	49(41)
Post graduates	35(82)	17(40)	36(84)	14(33)	6(14)	37(87)	7(17)	4	30(70)
Total	35(90)	27(70)	23(59)	15(39)	15(39)	23(59)	9(24)	4	18(47)
	448(75)	317(53)	428(72)	247(42)	92(16)	426(71)	29(5)	23(4)	271(46)

Numbers in bracket indicates percentage

### Conclusions

The awareness and knowledge was unsatisfactory about the aetiology, symptoms, complications, and duration of treatment, free treatment facilities and preventive measures for all the three disease but very poor for STD when compared to TB and AIDS. It is necessary to improve awareness at periodic interval by lectures and group discussions.

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