

A CROSS SECTIONAL STUDY OF HIV/AIDS AWARENESS AMONG COLLEGE STUDENTS AND INFLUENCE OF LIFESTYLE

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ABSTRACT:

Background: Early phase of youth is a delicate period due to inadequate mental, physical and social maturity. An incomplete psychological development during this period and peer group influence results in adopting risky behaviour making them more vulnerable to HIV/AIDS.

Objectives: To assess the awareness regarding HIV/AIDS among college students in South Chennai and to evaluate the association between level of awareness and the influence of certain existing lifestyle issues.

Materials and Methods: This was a cross sectional study done on 400 randomly selected undergraduate students of Arts and Science colleges in South Chennai using self-administered questionnaire. Data entry and analysis was done using SPSS 8.0 version and Epi info softwares.

Results: Knowledge of awareness regarding, the disease to be viral in etiology, mode of transmission, prevention and treatment was known to 86.3%, 83.8%, 83.8% and 40.5%

respectively. Students who did not have risky behaviour had a better knowledge about cause and prevention. Awareness about modes of transmission was better among students indulging in risky lifestyle. Knowledge about treatment was low regardless of their lifestyle. Most common source of information was television and the commonest misconception about HIV transmission was mingling with HIV patients.

Conclusion: This study highlights an overall satisfactory level of knowledge on all aspects of HIV except treatment. Students adopting risky lifestyle showed a varied pattern of awareness. Information dissemination should be designed in such a way as to bring about healthy behavioural change targeting the risky lifestyle group. A regular assessment of attitude and level of awareness towards HIV/AIDS is essential to design changes in future educative programmes.

Key words: Awareness, college, HIV, lifestyle, students
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INTRODUCTION:

Acquired Immunodeficiency Syndrome (AIDS) caused by Human Immunodeficiency Virus (HIV) is a modern pandemic affecting industrialized and developing countries. Asian AIDS epidemic has risen enormously and about 7.2 million people are presently living with HIV/AIDS in this region.^[1] About fifty percent of the new cases occur in individuals below 25 years of age. It is a matter of concern that India holds the second largest absolute number of HIV cases in the world.^[1] Though prevalence of HIV has an uneven distribution in India, Southern India and North-eastern states have predominant number of reported cases.^[1] To control this epidemic an overall awareness need to be created in general population and especially high risk groups. HIV / AIDS epidemic is worst among the youths as they tend to experiment with practice of risky behavior often with little awareness of the danger. This group is more vulnerable due to incomplete social, emotional and psychological development resulting in risky behavior.^[2, 3] Many of them are not prepared to make safe decisions at this age, and without adequate parental monitoring they may be especially susceptible to risky behaviour. Peer group influence paramounts in this period of growth and hence, vulnerability to HIV also increases in individuals with friends who support risky behaviour.

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We need to further concentrate on this younger generation especially the college going students as they represent the country's future. Due to an increase in the incidence of HIV in this younger generation the economy of country would be affected considerably unless further steps are taken to prevent the transmission of this dreadful disease. The young population are the manpower and resource for a economically stable country. Hence, this population being affected means loss of human resources thereby resulting in downfall of economy.^[4] Since prevention is the key to AIDS control, empowerment of youth with knowledge about high-risk behaviour and its ominous relation with HIV is one of the most effective tool to control this pandemic.^[3]

AIM

A cross sectional study on awareness and life style issues related to HIV/AIDS, among Arts and Science colleges in South Chennai.

OBJECTIVES

This study was done to assess the awareness regarding HIV/AIDS among college students in South Chennai and to evaluate the association between the level of awareness with the influence of certain existing lifestyle issues related to HIV.

MATERIAL AND METHODS

STUDY DESIGN: Cross sectional study comprising of descriptive and analytical components.

STUDY AREA: Arts and Science colleges in South Chennai

STUDY POPULATION: Undergraduate Arts and Science students (Non medical) from randomly selected colleges in South Chennai.

SURVEY PROTOCOL AND SAMPLING: There are 30 Arts

and science colleges in South Chennai. An appeal was made to all the colleges seeking permission to undertake the study. Ten colleges granted permission. A questionnaire was framed relevant to this study population based on various existing issues on awareness of HIV/AIDS from previous studies. Initially a pilot study was carried out among 20 randomly selected students in one Arts and Science college. The inconsistencies were identified during the piloting phase and the questionnaire was modified accordingly to suit the study population. Predominantly these were closed ended questions with few open ended ones. Questionnaire comprised of personal characteristics, their knowledge and awareness about various aspects of HIV/AIDS like aetiology, mode of transmission, diagnosis, treatment and sources of information and lifestyle characteristics of study participants. Confidentiality of the students was ensured. Consent was obtained from students and importance of the study was emphasized before administering the questionnaire.

Sample size was calculated using the formula
$$n = \frac{Z\alpha^2 pq}{L^2}$$

N: Sample size

Z α : 1.96

P: Prevalence of awareness of HIV was assumed to be 32% based on literature review as furnished below.

Q: 100-p = 100-32 = 68%

L: Limit of accuracy 5%

Accordingly,
$$n = \frac{(1.96)^2 \times 32 \times 68}{5^2} = 335$$

Sample size arrived was 335 + 65 = 400 (We added 65 more to take care of any drop outs or refusal to participate in the study).

List of all students of the 10 colleges were obtained and from each college 40 students were randomly selected using a table of random numbers for a total of 400 of students. Following questionnaire completion, health education was also imparted and their queries were solved.

Data entry and analysis was done using the SPSS 8.0 version and epi info softwares. Frequency was calculated for the variables and X² test was used wherever necessary to estimate the level of significance.

RESULTS

There were 188 Arts and 212 Science students of which 40% were males and 60% were female students in the age group 17 to 25 years with a mean age of 19.46 years and S.D of 1.17 years. Seventy two percent of students belonged to nuclear families 72% and 28% were from joint family. As per Prasad's Classification [5] 71% of students belonged to class I, 25.3% to class II, 3.3% to class III and 0.4% belonged class IV. Fathers of 32% students and mothers of 8.25% students were employed in skilled jobs.

Lifestyle issues studied showed higher proportion of males indulged in unfavourable activities as compared to female students. Comparison of risky lifestyle practice adopted with respect to gender is furnished in Table 1.

Table – 1: Life Style Issues among Male and Female students

Life Style Issue	Male Students		Female Students	
	Number	Percentage	Number	Percentage
Alcohol Use	50	12.5	15	3.8
Drug Abuse	9	2.3	Nil	—
Sexual Exposure	31	7.8	9	2.3
Late night partying	20	5	9	2.3

Overall level of awareness regarding various aspects of HIV was satisfactory except knowledge regarding treatment (Table 2).

Table – 2: Awareness about various aspects of HIV/AIDS among the college students.

Aspects of HIV	Number Aware	Percentage	95% Confidence Interval
Cause	345	86.3	82.67 – 89.93
Mode of Transmission	393	98.3	97.02 – 99.58
Treatment	162	40.5	32.94 – 48.06
Prevention	311	83.8	79.70 – 87.90

The awareness about cause of HIV was known to 84.2% of males and 87.6 % of females. Awareness about cause of HIV by certain lifestyle issues is shown in Table 3. Awareness about one or more modes of transmission was known to 98.1% of the males and 98.3% of the females. All students who consumed alcohol knew one or more routes of transmission of HIV while awareness about transmission among non alcohol users was 98% (Table 4). All the 9 students who were abusing drugs, had awareness about one or more modes of transmission of HIV while awareness among non drug abusers about transmission was 98.2%.

Table 3: Awareness of cause of HIV with respect to certain lifestyle issues

Characteristic	Total Number	Number Aware	Percentage
Alcohol Use			
User	65	55	84.6
Non-User	335	290	86.6
Drug Abuse			
User	9	4	44.4
Non-User	391	341	87.2
Sexual Exposure			
Yes	38	31	81.6
No	362	314	86.7
Late Night Partying			
Yes	29	24	82.8
No	371	321	86.5

Table 4: Awareness of Transmission of HIV by certain Life Style Issues characteristics

Characteristic	Total Number	Number Aware	Percentage
Tobacco Use			
User	53	53	100
Non-User	347	340	98
Alcohol Use			
User	65	65	100
Non-User	335	328	97.9
Drug Abuse			
User	9	9	100
Non-User	391	384	98.2
Sexual Exposure			
Yes	38	38	100
No	362	355	98.1
Social Gathering			
Yes	29	29	100
No	371	364	98.1

All the 38 students who had sexual exposure knew about some modes of transmission of HIV while awareness about transmission among students who had no sexual exposure was 98.1%. All the 29 students who liked going for social gathering had awareness about some modes of transmission of HIV while the awareness about transmission among those who did not like going for social gathering was 98.1%.

Of the various modes of transmission, sexual route was known to most of the students (89.9%), which was followed by blood transfusion (84.8%), mother to baby (78.3%), using unsterilized needles (70.5%) and sharing razor (25%).

The awareness regarding prevention of HIV was known to 89.9% of males and 94.6% of females. A comparison of level of awareness about prevention of HIV, among students who indulged and did not practice risky behaviour is shown in Table 5.

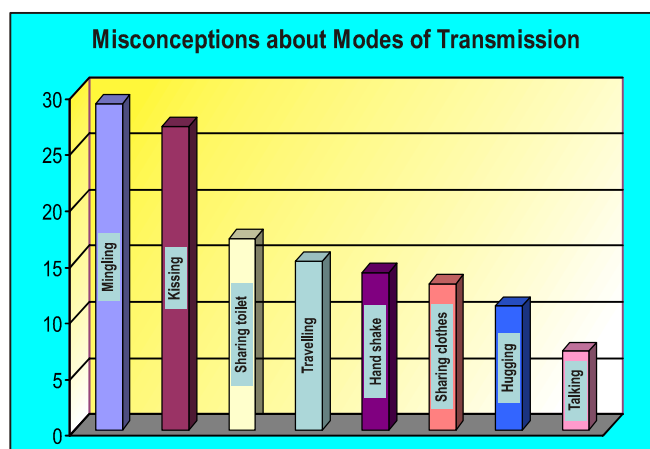
Table 5: Awareness of prevention of HIV with respect to certain lifestyle characteristics

Characteristic	Total Number	Number Aware	Percentage
Alcohol Use			
User	65	55	84.6
Non-User	335	316	94.3
Drug Abuse			
User	9	9	100
Non-User	391	362	92.6
Sexual Exposure			
Yes	38	34	89.5
No	362	337	93.1
Late Night Partying			
Yes	29	25	36.2
No	371	346	93.3

Condom was the most common method mentioned for prevention of HIV (77.8%). The awareness about modes of prevention of HIV among drug abusers was 100% and among non drug abusers was 92.6%. The awareness about modes of prevention of HIV among students who had sexual exposure was 89.5% and among those who did not have sexual exposure was 93.1%. The awareness about modes of prevention of HIV among students who liked going for social gathering was 89.5% and among those who did not like going for social gathering was 93.1%.

Commonest misconceptions about spread of HIV was mingling with HIV patient mentioned (7.3%), kissing (6.8%), sharing toilet (4.3%), traveling (3.8%), spread by handshake with HIV patient (3.5%), sharing clothes (3.3%), hugging (2.8%) and 1.8% students felt HIV spreads by talking to HIV patient (Fig.1).

Fig. 1 : Misconceptions about Modes of Transmission



The awareness about treatment of HIV was 43.0% and 38.8% among males and females respectively. Level of awareness regarding treatment of HIV with respect to lifestyle is shown in Table 6.

Table 6: Awareness of treatment of HIV by certain lifestyle issues

Characteristic	Total Number	Number Aware	Percentage
Alcohol Use			
User	65	37	56.9
Non-User	335	125	37.3
Drug Abuse			
User	9	5	55.6
Non-User	391	157	40.2
Sexual Exposure			
Yes	38	18	47.4
No	362	144	39.8
Late Night Partying			
Yes	29	14	48.3
No	371	148	39.6

Majority of students 83.3% gathered information from television followed by radio 51% (Table 7).

Table 7: Sources of information of HIV

Information obtained	Number	Percentage
Television	333	83.3
Radio	204	51
Books	198	49.5
Magazines/Newspapers	188	47
Teachers	186	46.5
Friends	180	45
Posters	138	34.5
Internet	132	33
Health personnel	127	31.8
Hoarding	73	18.3

Statistics derived

Difference in sex wise awareness about modes of transmission was not statistically significant (χ^2_1 0.03, $p=0.85$). The awareness about modes of transmission of HIV among alcohol users and non users was not statistically significant (χ^2_1 1.38, $p=0.24$). The awareness about modes of transmission of HIV among drug abusers and non drug abusers was not statistically significant (χ^2_1 0.16, $p=0.69$). The awareness about modes of transmission of HIV among students who had sexual exposure was 100% and among those who did not have sexual was not statistically significant (χ^2_1 0.75, $p=0.39$). The difference in awareness about modes of transmission by students attending late night parties and those not attending was not statistically significant (χ^2_1 0.56, $p=0.46$).

The difference in awareness about modes of prevention with respect to gender is not statistically significant (χ^2_1 3.21, $p=0.07$). The risk of lesser awareness about modes of prevention of HIV among males is 1.98 times. The awareness about modes of prevention of HIV among alcohol users was 84.6% and among non alcohol users was 94.3% and this awareness about modes of prevention by alcohol consumption was statistically significant (χ^2_1 7.64, $p=0.006$). Alcohol users have the risk of lesser awareness about modes of prevention to the extent of 3.02 times. Awareness about modes of prevention by students who abused drugs and did not use was not statistically significant (χ^2_1 0.72, $p=0.40$). The awareness about modes of prevention of HIV among students who had sexual exposure and among those who did not have sexual exposure was about modes of prevention by sexual exposure was not statistically significant (χ^2_1 0.67, $p=0.41$). The awareness about modes of prevention of HIV among students who liked going for late night parties and who did not was not statistically significant (χ^2_1 1.99, $p=0.16$).

DISCUSSION

The alarming rate of spread of HIV, lack of curative therapy and vaccine to prevent it mandates a need for

ongoing and consistent health education programme. AIDS prevention largely depends on health education and behavioural changes based on AIDS awareness, particularly among young adults who are prone to high risk behaviour. Before we undertake such kind of awareness programme, we need to know the existing level of awareness of the target population in those areas. An evaluation of HIV awareness is required for two reasons. One to get baseline epidemiological data regarding the existing knowledge and attitude prior to implementing an awareness programme and another reason is to assess the effect or reach of educative campaigns.^[3]

The lifestyle characteristics of these students were analysed in order to relate it to level of awareness of HIV. Earlier studies have concentrated on specific groups as high risk groups or a more specific population groups such as nurses, naval officers without any association with lifestyle.^[6] In this study, we chose the particular youth as risk groups as listed in the results tables to compare awareness of HIV among them and students with non-risky lifestyle. Substance addiction by youth mainly includes alcohol, tobacco and drugs. Addiction of these substances can result in direct and indirect consequences affecting their health and one substance abuse can also add to another. In a study conducted by Slesnick et al, about 56% of youth indulged in more than one substance-use disorder and 14% in three.^[7]

The concept of rave parties started in the '80s in the west where people gathered in weekends around a fire and had enjoyment with disc-jockeys and other electronic dance music. Over time, means of enjoyment in these parties have changed and have been replaced by weird things. In recent years, rave parties and Drug cocktails are becoming the in-thing for college going youth, high salaried executives and young white-collared corporate elite with little knowledge as to how to spend it properly. Now-a-days these parties go on all night with consumption of drugs like cocaine, Marijuana, hash, Ecstasy, acid and speed which results in dreadful consequences.^[8]

High risk behaviour was seen in both male and female students. Most common addiction in both genders was alcohol consumption. Though drug addiction was found in 5.7% of males, there were no female students who mentioned that they abused drugs. Considering the nature of subject being explored, the chances of hiding information cannot be ruled out. Probably greater sensitization and confidentiality might be needed for the respondents to come out with more correct responses. Another reason could be that the contact with them was for a brief period without adequate familiarity. Frequent contact and interaction would be beneficial in creating greater confidence and getting a true information regarding these issues.

Majority of respondents (86.3%) were aware of a viral etiology of this disease. Awareness of cause of etiology is quite high in this study as compared to another study done by Bhalwar et al^[3] who found less than 50% of students with this knowledge which could be due to the fact that they studied the knowledge of rural students and AIDS

awareness and education programme organized by different agencies are usually concentrated in urban areas.^[3] Another reason felt was access to modern facilities (including mass media) which is more in urban areas.^[9] A similar finding among drug abusers was noticed by Bhalwar et al.^[3] The present study along with other studies mentioned above show a higher level of awareness among girls about cause which could be due to girls being more serious in learning and knowing about this dreadful disease.^[10, 11] On analysis of awareness of cause of HIV and certain lifestyle issues, it was found that there was not much of difference between students who consumed alcohol, had sexual exposure, party goers and who did not do these activities. Present study showed that awareness of cause of disease was lower among drug abusers. In a Chinese study, the college going students were even aware of the difference between HIV and AIDS.^[12]

Awareness regarding transmission of HIV in this study was high and a better level of awareness about transmission in this study may be due to massive campaigns by Tamilnadu state AIDS control society (TANSAC) and National AIDS control organization (NACO). Sexual route was the single most mode of transmission mentioned by almost 90% of students. Other similar studies have also reported maximum number of respondents being aware of sexual route of HIV transmission.^[3, 11]

Only one third of the students were aware that HIV infection can be transmitted by sharing razor in our study. Kore et al found a better response with 85% of males and 64% of female college students who were aware that HIV spreads by sharing razor.^[10] This needs to be dealt more seriously since using razor is one of the daily needs of a male gender. Hence, awareness has to be created among the mass about this mode to prevent the infection by this route. The present study showed a good number of students being aware of blood and perinatal transmission of HIV.

There are wrong beliefs that HIV could be transmitted by various means such as mosquito bites, sharing meals, casual contact, and using public swimming pools and toilets.^[4] Commonest misconceptions about HIV transmission identified in our study was mingling with HIV patients. Chatterjee et al found school children having various misconceptions such as hand shaking, kissing, sharing toilets and exchanging clothes.^[11] Kissing as a mode of transmission was a major misconception (37%) in a Nigerian study by Gugnani et al done on non medical students as compared to 6.8% in our study.^[13] In a Chinese study on college students, on asking if they would like to be involved in the treatment of HIV/AIDS patient, 37.8% answered that they would not discriminate, 31.8% were not sure and 27.1% replied that they would treat an infected person differently.^[12] HIV stigmatization can result in mental trauma to those living with HIV causing loss of self-esteem as well as deterioration in social interactions with others.^[14] It is the inadequate knowledge that results in such misconceptions, attitude and behavioural differences towards HIV patients. Steps should be taken to remove apprehensions in common man for a better attitude towards affected individuals.

The predominant preventive method mentioned by students was condom. Similar results were obtained by Kore et al and Ganguli et al in their study on college students.^[10, 15] The reason for such awareness could be attributed to educative programmes.

Our study showed no significant difference in the level of awareness regarding modes of transmission of HIV among groups with respect to lifestyle. The association of awareness of HIV prevention and students who did not consume alcohol was statistically significant in this study ($p < 0.05$). These data suggest a higher level of awareness among students with no addiction. On reviewing the literature such kind of association has not been evaluated by any study in the past. The present study has revealed that high risk group of population are still ignorant about preventive measures in HIV transmission. Low level of awareness regarding HIV prevention seen in late night party goers, reason can be probably due to their engagement in activities such as partying and not spend time in reading educative books and watch educative programmes. This group needs to be identified and implementation of more elaborate programmes focusing this group of population should be done at a place where they frequently visit. Hoardings, posters, music on HIV awareness can be available by concerned authorities near such kind of places as this group needs to be approached in order to educate them as they would never bother to look into such issues themselves.

The level of awareness about treatment was better among males 43% than females 38.8%. Although the level of awareness regarding treatment in our study is low, it was still better than the results obtained by Kore et al in a similar study.^[10] The knowledge that HIV is not curable, however, progression can be delayed to some extent by giving symptomatic treatment has to be emphasized and spread across in order to educate the mass. Another reason is for them to bring their known ones for symptomatic treatment. In educative programmes, emphasis has to be given that HIV is not curable but preventable by specific means and treatment options are available to treat the symptoms and delay the progress of disease thereby extending their lifespan.

Among various means of communication television was the main source of information of respondents which was followed by radio in this study.^[16, 17] Similar study done by Lal et al^[9] among college students of Kerala, reported newspaper as the major source of information followed by television and radio. In this study knowledge from print media was only 47% which indicates need for motivation of students to read scientific books to update their knowledge. In the present study teachers also played a vital role in imparting knowledge about HIV. At the school level students are much more mouldable in their thoughts and receptive to their teachers so educative lessons on HIV should be introduced in their school curriculum.

In spite of large number of hoardings in Chennai still only 18.3% gathered information from this source. This maybe either due to less number of hoardings in public areas or the presentation was not impressive enough to make

an impact. This study revealed poor performance of health personnel in disseminating HIV related knowledge among college students (31.8%). Doctors remain occupied with clinical work and have less time to impart health education so it is important to train existing paramedical staff, social workers, anganwadi workers and community health volunteers for creating awareness.^[18] This could be overcome by increasing the interaction with health personnel and constant motivation by them.

CONCLUSION

The present study demonstrates an overall satisfactory level of awareness on routes of transmission and prevention of HIV/AIDS. Analysis on lifestyle revealed that students indulging in risky behaviour had an overall low level of awareness regarding modes of prevention of HIV. We need to target high risk group for dissemination of knowledge on HIV, especially with regards to preventive measures. Newer strategies need to be formulated and executed to draw the attention of this vulnerable younger population in order to educate and also correct their false beliefs to curb this epidemic. A continuous such surveys at regular intervals would further help to assess the level of awareness and attitude toward HIV/AIDS for designing future educative programmes.

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