



AWARENESS ON TRANSMISSION, PREVENTION AND TREATMENT OF HIV/AIDS AMONG COLLEGE STUDENTS IN KANCHEEPURAM.

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ABSTRACT:-

Background: - AIDS, the acquired immunodeficiency syndrome is a fatal illness caused by a retrovirus known as the Human Immunodeficiency Virus (HIV) which breaks down the body's immune system, leaving the victim vulnerable to a host of life-threatening opportunistic infection, neurological disorders, or unusual malignancies. It poses serious challenges not only to health professionals but professionals across all industries. Stigma reduction and increasing the awareness on transmission among younger generation will be a stepping stone in prevention of the disease.

Aim: -This study was designed to assess the knowledge, attitude, and behaviour regarding HIV/AIDS among college students in an urban area of Kancheepuram.

Methods: -A cross-sectional study was conducted among 200 college students in an urban area of Kancheepuram from April 2019 – June 2019. A self-administered questionnaire was given and the results were tabulated and analysed. The data was entered in excel sheet and analysed using SPSS software. Ethical committee clearance has been obtained.

Results: -Out of 200 students, 113 (56.5%) were females and 87 (43.5%) were males. Maximum students (87%) indicated they know about mode of transmission of HIV/AIDS. 98.5% of the students responded that blood transfusion can transmit HIV infection. Few misconceptions regarding the risk of spreading by drinking and eating in common utensils and by mosquito bites are still present. Only a small total of 17% of individuals agreed that there is no cure for HIV/AIDS.

Conclusion: -It was observed that the knowledge of the college students was quite satisfactory for most of the variables like modes of transmission of the disease. Students need to be delivered knowledge on available treatment options for AIDS such as Antiretroviral Therapy (ART) and Highly active antiretroviral therapy (HAART), although not completely curable but can improve the life span of infected individuals.

Key Words: -Knowledge, attitude, Prevalence, stigma

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INTRODUCTION: -

AIDS, the acquired immunodeficiency syndrome is a fatal illness caused by a retrovirus known as



the Human Immunodeficiency Virus (HIV) which attacks the body's immune system, leaving the person vulnerable to life-threatening opportunistic infection, neurological disorders, or malignancies [1] HIV/AIDS which is existing since 1981 as a minor disease, has been able to reach the status of important public health diseases within decades. It is now the leading cause of mortality in Africa and the fourth leading cause of death worldwide [2]. The first AIDS case in India was detected in Chennai in 1986. Now India accounts for 10% of world's infected population and is a home for second largest population of HIV infected individuals. According to UNAIDS 2015 report, the total number of people living with HIV/AIDS are 36.9 million out of which 34.3 million are adults and 2.6 million are less than 15 years. Studies indicated that 4 million HIV-infected people are living in India [3,4]. In India, during 2001–2003 HIV was at its peak prevalence with 0.38%. Since then, there has been a gradual decline with the prevalence being 0.26% in 2015. [5] Manipur, Undivided Andhra Pradesh and Telangana state were reported to be the states with the highest number of people living with HIV [6]. Despite the fact that there has been enormous improvement in the number of antiretroviral therapy (ART) centres and the provision of HIV services in the country, [7] Social stigma remains salient reason in the inhibition of HIV-affected people from using HIV services. [8] All the high prevalence states show a clear declining trend in adult HIV prevalence [9]. But young people are vulnerable to HIV infections because of their curious nature and risk involving behaviour and negligent attitude towards preventive measures [10]. According to the World Health Organization, young population are at a higher risk of exposure to HIV/AIDS [11]. Younger age group people who undergo various behavioural as well as physiological changes are more vulnerable for sexually transmitted diseases (STDs) such as HIV/AIDS. This burden is increased with lack of safe sex education and awareness about preventive measures of disease. [12]. Cultural heritage Indian society is hesitant in educating their younger generation about these issues. There is a need to lay foundation for healthy lifestyle, safe sexual habits, as well as healthy

relationship [13]. United Nations Programme on HIV/AIDS (2008) had emphasized improving awareness of prevention methods of HIV/AIDS as the most significant strategy in fighting against HIV/AIDS. [14] In India, the National AIDS Control Program (NACP) focuses on enhancing HIV/AIDS awareness and knowledge through behavior change preventive practices. [15] Although doctors, nurses and health workers are the major messengers of information between the medical community and general population, college students also play a major role in both highlighting facts and bringing to rest myths about diseases such as HIV/AIDS. Given the burden of HIV/AIDS and its enormous impact on health system, it is important to know the level of knowledge about HIV/AIDS among college students. Hence the present study was conducted to assess awareness, knowledge, attitude, and behaviour regarding HIV/AIDS among college students. This opportunity was also used to educate and remove misconception about HIV/AIDS.

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MATERIALS and METHODS:-

Study Design, Study Area And Study Population:

This was a cross sectional observational study carried out in Chromepet, an urban area of Kancheepuram district among students of Medical, Arts and Engineering college between June 2021 to December 2021. Students in the age group of 19-25 years who are willing to participate in the study. Students present in college at the time of data collection.

Study Sample Size:

According to NACO [16] the burden of HIV/AIDS among young population is 31%. With this the sample size was calculated to be 175 using the formula $n=4PQ/D^2$ with 7% absolute precision. To this adding 10% non-response, minimum sample size was calculated to be 193, which was rounded off to 200.

Study Tool, Sampling Method and Data Collection Methods:

Data collection was started after obtaining clearance from Institutional ethics committee. Informed consent was obtained before data collection was initiated. The study tool was a pretested structured questionnaire which included questions to assess knowledge on



transmission, prevention and treatment of HIV/AIDS and also attitude related questions. It was a self-administered questionnaire. Study was done among students studying in three different colleges (Medical, Arts and Engineering) , in the Chromepet area of Chennai . Responses were collected from 200 students by using Probability proportional to size (PPS).

Statistical Analysis:

Data will be entered in Microsoft excel and analyzed using SPSS version 21. Frequency, descriptive statistics were used for analysis. P value <0.05 was considered statistically significant at 95% confidence interval.

RESULTS:-

Out of the 200 respondents in this study, 113 (56.5%) were female while the rest 87 (43.5%) were male. Table 1 shows the responses given

by the participants when asked questions pertaining to transmission of HIV/AIDS. It depicts that they have considerably fair knowledge about modes of transmission. When asked about preferred mode of delivery in pregnant women with HIV/AIDS, 109 students (54.5%) had opted for Caesarean section, 29 students (14.5%) have chosen vaginal delivery and 62 of them (31%) did not know the answer. Figure 1 involves the questions to assess their attitude towards HIV infected people. Most of the respondents felt that there should not be discrimination towards HIV infected people in the community. Table 2 depicts the responses on preventive measures of HIV. Although majority of them had knowledge about preventive measures but still few of them had chosen the response as Don't Know.

Table 1: Awareness on Modes of transmission of HIV/AIDS:- (n=200)

HIV/AIDS spreads	Yes	No	Don't know
1. Through unprotected sexual contact.	198 (99%)	2 (1%)	Nil
2. From mother to unborn child.	183 (91.5%)	10 (5%)	7 (3.5%)
3. Through blood transfusion.	197 (98.5)	1 (0.5%)	2 (1%)
4. Through breast feeding by infected mother.	163 (81.5%)	15 (7.5%)	22 (11%)
5. Through IV drug use and sharing needles.	198 (99%)	2 (1%)	Nil
6. By drinking and eating in common utensils.	25 (12.5%)	159 (79.5%)	16 (8%)
7. By touching or shaking hands.	4 (2%)	187 (97.5%)	9 (4.5%)
8. By mosquito bite.	33 (16.5%)	133 (66.5%)	34 (17%)
9. By sharing clothes, soaps etc...	15 (7.5%)	167 (83.5%)	18 (9%)



Figure 1: Attitude towards HIV/AIDS patients:-

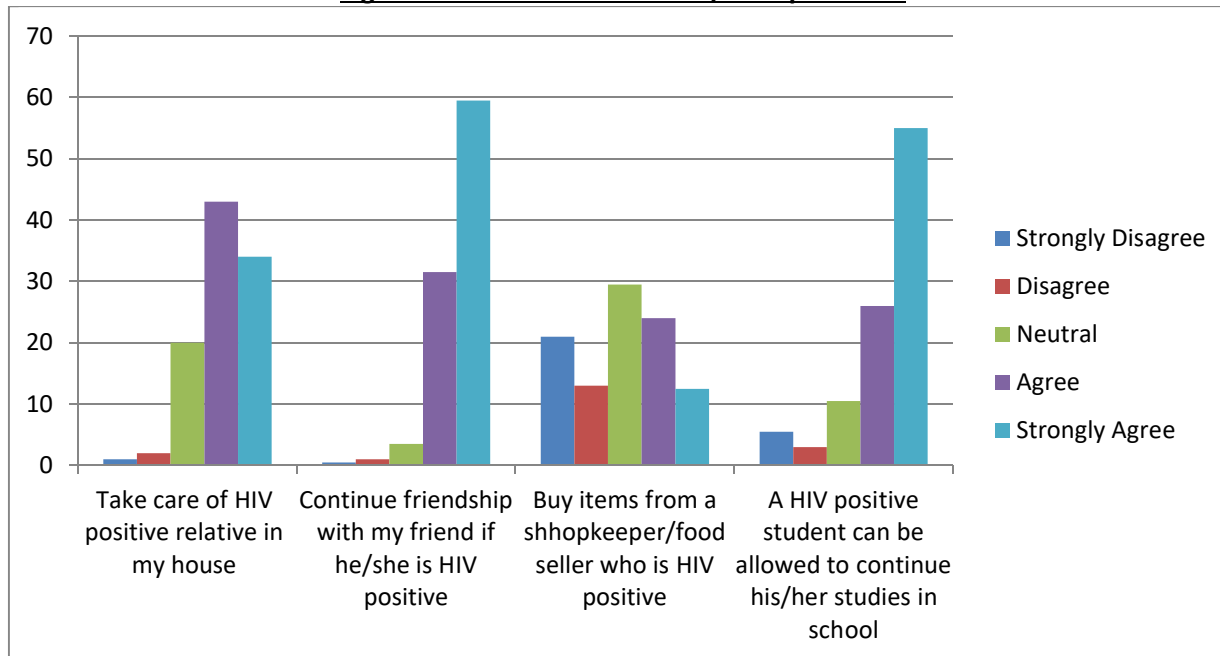


Table 2: Awareness on Prevention of HIV/AIDS: (n=200)

Preventive measures	Yes	No	Don't know
1. Condoms provide protection from STDs including HIV.	183 (91.5%)	6 (3%)	11 (5.5%)
2. HIV screening program for pregnant women.	162 (81%)	8 (4%)	30 (15%)
3. Washing hands after exposure to HIV.	73 (36.5%)	69 (34.5%)	58 (29%)
4. Wearing goggles, gowns and masks if splashing of body fluids is expected.	148 (74%)	18 (9%)	34 (17%)
5. Using disposable syringes & needles for medication & blood collection.	195 (97.5%)	2 (1%)	3 (1.5%)
6. Bagging & labelling contaminated linen.	154 (77%)	9 (4.5%)	37 (18.5%)

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Out of 200 students, 98 students (49%) answered 0.5% Sodium Hypochlorite which was correct while 51 students (25.5%) answered Formaldehyde and the other 51 students (25.5%) answered Hydrogen Peroxide.

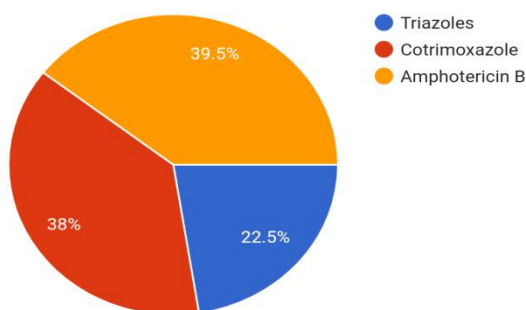
Prophylaxis for HIV: Figure 2 depicts the responses given by the participants on the best prophylactic medicine given to prevent opportunistic infections among HIV infected people. Co-trimoxazole is the best therapy but there are some mixed responses pertaining to it as amphotericin B is also chosen by some of them as the best prophylactic therapy.

Table 3: Awareness on Treatment of HIV:- (n=200)

Is there	Yes	No	Don't know
1. Cure for AIDS.	34 (17%)	145 (72.5%)	21 (10.5%)
2. Death due to HIV	181 (91.5%)	18 (9%)	1 (0.5%)
3. Vaccine to stop persons from getting HIV.	24 (12%)	148 (74%)	28 (14%)
4. Knowledge of retroviral drugs.	182 (91%)	11(5.5%)	7 (3.5%)
5. Anti – retroviral drugs can only prolong the life and not cure AIDS.	177 (88.5%)	5 (2.5%)	18 (9%)
6. Opportunistic infections follow HIV infections.	174 (87%)	8 (4%)	18 (9%)

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Figure 2: Best prophylactic drug for opportunistic infections in HIV



DISCUSSION:-

The study was conducted to assess awareness, knowledge, attitude, and behavior regarding HIV/AIDS among college students in Chennai, Tamil Nadu. This opportunity was also used to educate and remove misconception about HIV/AIDS. Based on the responses obtained on knowledge on transmission, prevention and treatment, it was found that most of the students knew about the disease HIV/AIDS. But, it was found that a small proportion of them were lacking the knowledge.

In the present study, a significant proportion had adequate knowledge regarding modes of transmission of HIV/AIDS, that it was transmitted through unprotected sex (99% students) and from mother to child (91.5%); (99%) said that it was by sharing injections. Similar findings were observed by Kotech and Patel^[17] in their study carried out in urban slums of Vadodara city and according to which knowledge regarding modes of transmission were the “sexual act” followed by “needles and blood transfusion”. According to the study by Sarkar *et al*^[18] in Pondicherry, 83%



knew one or more modes of spread of this disease. Similarly In the present study, knowledge of students about modes of transmission of HIV is 87%.

In a study by Singh *et al.*,^[19] while responding about availability of cure of HIV/AIDS in rural areas, 11.6% women told that cure was available for the disease. The response was the same by 32.6% women in urban areas about availability of a cure for the disease. In the present study it is interesting to note that 77.5% students were aware of the treatments for HIV which is drastic improvement.

From these results, it can be interpreted that most of the students are well aware of the routes of HIV/AIDS transmission and of the treatment but there are few misconceptions regarding the risk of spreading by drinking and eating in common utensils and by mosquito bites.

CONCLUSION:-

It was observed that the knowledge of the college students was quite satisfactory for most of the variables like modes of transmission of the disease but with few misconceptions among some students. Knowledge of students about curability of HIV/AIDS was just moderate. Therefore, the college authorities and the others concerned should come forward to design awareness campaigns for the benefit of the students so as to help them develop proper understanding of HIV/AIDS, its spread, and prevention. Students need to be delivered knowledge on available treatment options for AIDS such as Antiretroviral Therapy (ART) and Highly active antiretroviral therapy (HAART), although not completely curable but can improve the life span of infected individuals. The sources of information should also be strengthened by all the agencies and organizations of the region to spread knowledge and awareness about HIV/AIDS.

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REFERENCES:-

1. Biradar SM, Kamble VS, Reddy S. Study to assess awareness about HIV/AIDS among medical students. International Journal Of Community Medicine And Public Health. 2017 Jan 31;3(1):62-4.
2. Biradar SM, Kamble VS, Reddy S. Study to assess awareness about HIV/AIDS among medical students. International Journal Of Community Medicine And Public Health. 2017 Jan 31;3(1):62-4.
3. Rao KE, Chitturi RT, Kattappagari KK, Kantheti LP, Poosarla C, Baddam VR. Impact of highly active antiretroviral therapy on oral manifestations of patients with human immunodeficiency virus/acquired immuno deficiency syndrome in South India. Indian J Sex Transm Dis 2015;36:35-9.
4. Yadav SB, Makwana NR, Vadera BN, Dhaduk KM, Gandha KM. Awareness of HIV/AIDS among rural youth in India: a community based cross-sectional study. The Journal of infection in developing countries. 2011 Oct 11;5(10):711-6.
5. Reddy A, Bommireddy VS, Pachava S, Chandu VC, Yaddanapalli SC, Lodagala A. HIV knowledge, attitude, and practices among nursing students in Guntur city. Journal of Dr. NTR University of Health Sciences. 2018 Jul 1;7(3):162.
6. India HIV estimations 2015. Technical Report. National AIDS Control Organization. Ministry of Health and Family Welfare, Government of India. Available from: <http://www.naco.gov.in/sites/default/files/India%20HIV%20Estimations%202015.pdf>
7. Assessment of ART centers in India. National report. National AIDS Control Organization. Ministry of Health and Family Welfare, Government of India. Available from: <http://naco.gov.in/sites/default/files/ART%20Assessment%20National%20Report-Final%2028092015.pdf>.
8. Mahajan AP, Sayles JN, Patel VA, Remien RH, Ortiz D, Szekeres G, *et al.* Stigma in HIV/AIDS epidemic: A review of the literature and recommendations for the way forward. AIDS 2008;22(Suppl 2):S67-79.
9. Alvarez-Uria G, Midde M, Pakam R, Kannan S, Bachu L, Naik PK. Factors associated with late presentation of HIV and estimation of antiretroviral treatment need according to CD4 lymphocyte count in a resource-limited setting: data from an HIV cohort



- study in India. Interdisciplinary Perspectives on Infectious Diseases. 2012;2012.
10. Shankar R, Pandey S, Awasthi S, Rawat CMS. Awareness of HIV/AIDS among medical undergraduates. *Indian J Prev Soc Med.* 2011;42(2).
 11. World Health Organization. Dehne KL, Riedner G. Sexually Transmitted Infections Among Adolescents: The Need For Adequate Health Services. World Health Organization And Deutsche Gesellschaft Fuer Technische Zusammenarbeit (GTZ) Gmbh. Geneva: 2005
 12. Chakrovarty A, Nandy S, Roy R, Sengupta B, Chatterjee S, Chaudhuri RN. A study of awareness on HIV/AIDS among higher secondary school students in Central Kolkata. *Indian Journal of Community Medicine.* 2007 Jul 1;32(3):228.
 13. Premkumar B, Gayathri T, Ravichandran S. HIV/AIDS Awareness, Attitude and Perception among School, College Students and Hospital Workers. *Indian Journal of Pharmacy Practice* 2013;6:42-8.
 14. UNAIDS. Report on the Global AIDS Epidemic. Geneva: UNAIDS; 2008. Available from: http://www.unaids.org/sites/default/files/media_asset/jc1510_2008globalreport_en_0.pdf. [Last accessed on 2016 July 15].
 15. National AIDS Control Programme Phase IV (2012-2017) Strategy Document. Department of AIDS Control, Ministry of Health & Family Welfare, Government of India. Available from: <http://www.naco.gov.in/upload/NACP%20-%20IV/NACP-IV%20Strategy%20Document%20.pdf>. [Last accessed on 2016 July 15]
 16. Youth | National AIDS Control Organization | MoHFW | GoI [Internet]. [cited 2022 Jun 3]. Available from: <http://naco.gov.in/youth>
 17. Pais P. HIV and India: looking into the abyss. *Tropical Medicine & International Health.* 1996;1:295-304
 18. Kotech PV, Patel S. Measuring Knowledge about HIV among youth: Baseline survey for urban slums of Vadodara: *Indian J Sex Transm Dis. AIDS.* 2008;29:68–72.
 19. Sarkar S, Danabalan M, Kumar GA. Knowledge and Attitude on HIV/AIDS among Married Women of Reproductive Age Attending a Teaching Hospital. *Indian J Community Med.* 2007;32:82–3.
 20. Singh A, Khan S, Chaudhary V, Narula K, Zaidi ZH. Knowledge and awareness about HIV/AIDS among women of reproductive age in a District of Northern India. *Natl J Community Med.* 2012;3:417–22.

