

A Study of Knowledge, Attitude and Practices (KAP) of College Students Regarding HIV Infection and its Prevention in Patna District

Puja¹, Shiv Shankar Kumar², Rehana Anjum³, Amita Sinha⁴

¹Tutor, Department of Community Medicine PMCH Patna

²Tutor, Department of Community Medicine NMCH Patna

³Tutor, Department of Community Medicine PMCH Patna

⁴Associate Prof. & HOD, Department of Community Medicine NMCH Patna

Received: 09-01-2023 / Revised: 10-02-2023 / Accepted: 30-03-2023

Corresponding author: Rehana Anjum

Conflict of interest: Nil

Abstract:

Background and objectives: HIV infection is a newly emerged, globally spread infection. Though all ages and both sexes are equally affected, 50% of HIV infections occurred in the age group of 15-24 years of age group. This vulnerable age group is of adolescent and young adulthood, mostly available in schools and colleges. It is well proved that creating awareness can act like 'social vaccine. Accordingly as a part of global consensus School Aids Education(SAEP) and College AIDS Education Programmes (CAEP) were conducted through NACO (National AIDS Control Organization) and SAPS (State AIDS Prevention Society).

Methods: A cross-sectional study conducted in Patna district, i.e Stratified random technique was used to select required sample from each strata. Pre-tested questionnaire was used to collect data. To study the levels of awareness regarding infection and prevention among college students, Study duration of Nine months.

Conclusion: Student population had better knowledge levels regarding HIV infection and prevention in all seven strata. There appear to be gaps in awareness regarding services concerned. Reinforcement activities are need at times to keep awareness levels at higher level. More emphasis should be given to degree and PU students.

Keywords: HIV / AIDS, Awareness, Knowledge, Prevention, Practice.

This is an Open Access article that uses a funding model which does not charge readers or their institutions for access and distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>) and the Budapest Open Access Initiative (<http://www.budapestopenaccessinitiative.org/read>), which permit unrestricted use, distribution, and reproduction in any medium, provided original work is properly credited.

Introduction

HIV infection is a silent but slowly progressing disease entity from healthy stage to clinically manifesting disease stage. It is the disease of iceberg phenomenon. The tip of it is clinically manifested as Acquired Immuno Deficiency Syndrome (AIDS). The submerged major portion is HIV infection.

It is a newly emerged health problem since 1980, caused by a retrovirus named Human Immunodeficiency Virus (HIV). By breaking down the body's immune system, it makes victim vulnerable to life threatening Opportunistic Infections (OI) and followed by death. [1] The first AIDS case was reported on June 5th of 1981. [2,3] The CDC reported cluster of Pneumocystis

Carinii Pneumonia (PCP) in 5 homosexual men in Los Angeles. [4] The task force set up in 1981 for naming introduced the term 'AIDS' in August 1982. [5] The first case of HIV infection from India was reported at Chennai in 1986. India falls under pattern III of HIV epidemic. In India epidemic shifts from the high risk group to bridge population and then to general population. The prevalence of HIV infection is 2.27 million in India. Humans are the only reservoirs of HIV infection. HIV virus is a mutant of SIV (Simian virus), a normal commensal of West African Chimpanzees and Rhesus monkeys. [5] It is not known that any one is immune to HIV infection. No vaccine available with considerable efficacy. No proved herd immunity. It is acquired in nature. Prolonged asymptomatic HIV stage for years to decades. Catastrophic end stage as AIDS. Infection invariably progress to disease AIDS. AIDS invariably leads to death. There is treatment available to manage the condition but no cure yet. As of now it is a chronic manageable condition. But needs life-long treatment. [6] The best example of HIV prevention by awareness is North American countries. After inception sex-education and life skill education these countries have attained declining trend in HIV prevalence. The same model pilot tested in Indian context in Mumbai metropolitan city and after the success gained through this strategy, For the past so many years HIV awareness programmes are being conducted by NACO and State AIDS Prevention Societies (SAPS). At district level District Aids Prevention and Control Unit (DAPCU) is managing programme activities closely. Lot of information is being given to public through press and mass media. NGOs are actively involved in this endeavour; more than in any other National Programmes. School AIDS Education Programmes (SAEP) and College AIDS Education Programmes (CAEP), Red Ribbon clubs in colleges and AIDS Day celebrations etc. are part of such efforts. College students are

adventurous and keen on experimenting. They seek role models during this period. They like to mix with opposite sex. Their value system establishes during adolescence, decision making and critical thinking starts. The values imbibed are permanent throughout their life. Hence this is the right juncture to mould their attitudes. To make them aware of HIV transmission and prevention, they may become major partners in HIV prevention activities. Hence the present study is an attempt to assess the knowledge, attitude and practices of HIV infection and its prevention among college students of Patna district, Bihar state.

Objective

To assess the knowledge, attitude and practices regarding HIV infection and its prevention among college students of Patna district.

Material and method

A cross-sectional study conducted in Patna district, i.e Stratified random technique was used to select required sample from each strata. Pre-tested questionnaire was used to collect data. To study the levels of awareness regarding infection and prevention among college students, Study duration of Nine Months.

Inclusion Criteria

College students who were willing for the study.

Exclusion criteria

College students who were not willing to participate in the study.

A pilot study was conducted involving college students to assess proportion of students having good knowledge regarding HIV and its prevention, which showed only 10% of college students having good knowledge regarding HIV prevention, where as 90% of college students having poor knowledge about HIV and its prevention.

Table 1: Showing strata of colleges with sample portions

Sl. No	Strata	Sampling fractions
1	Medical students	280
2	Pharmacy students	90
3	Nursing students	690
4	Engineering students	560
5	B.Ed students	150
6	Degree students	900
7	PU students	1110
Total sample size		3780

In the present study 7 strata of student population were taken as study subjects. Accordingly medical, nursing, pharmacy, engineering, B.Ed, degree and PU students representing entire district were considered. Prior permission was taken at district level from district heads of institutions. Total no of institutions in respective strata were enlisted and randomly selected for data collection. All the institutions in each stratum listed separately and planned for visiting the institutions as per scheduled dates. Before finalising the date of visit the heads of the institutions consulted for availability of students and also to avoid inconvenience from team's visit. Students found the subject was interesting. After collecting responses it was allowed for interaction to fill the gaps in their understanding as a part of health education. Students were enthusiastic to know the subject in depth. Both boys and girls were equally interested in understanding the nature of disease and its prevention.

Results

In the present study, 1794 (47.46%) were males and 1986 (52.53%) are females out of 3780 study subjects. Females exceed males as there were more female students in nursing and B.Ed faculties. In all other groups males exceed females. In the present study, 151 (53.9%) males, 129 (46.1%) female out of 280 medical students. 47 (52.22%) males, 43 (47.77%) females out of 90 pharmacy students, 169 (24.5%) males, 521 (75.5%) females out of 690 nursing students, 312 (55.7%) males, 248 (44.3%) females out of 560

engineering students, 61 (40.66%) males, 89 (59.33%) females out of 150 B.Ed students. 458 (50.88%) males, 442 (49.11%) females out of 900 degree students, 596 (53.7%) males, 514 (46.3%) female out of 1110 PU students In a study conducted by Ganguli S K on 'Adolescent Health' (1996-97)²⁸ among undergraduate students of Arts, Commerce and Science divisions; in Arts (25.86% males, 73.13% were females) and Commerce (27.35% males, 59.82% females) divisions, females exceeded males. Singh SP et al³¹ in their study on first year degree students, out of 403 degree students, 178 (44.16%) were males and 225 (55.83%) were females. Lal P et al in their study on senior secondary school students in Delhi, 1037 (40.1%) males, 1555 (59.9%) were females In the present study out of 280 medical students 279 (99.64%) were aware of HIV. Out of 3500 other students (Pharmacy, Nursing, Engineering, B.Ed, Degree and PU) 3321 (94.88%) were aware of HIV. In the present study out of 280 medical students 279 (99.64%) had heard of AIDS. And out of 3500 other students (Pharmacy, Nursing, Engineering, B.Ed, Degree and PU) 3314 (94.88%) had heard of AIDS. In the present study out of 280 medical students 277 (98.92%) responded that HIV virus as cause of HIV infection. And out of 3500 other students (Pharmacy, Nursing, Engineering, B.Ed, Degree and PU) 3167 (90.48%) were knowing the cause of HIV infection. The difference observed between the two groups for all the three responses was highly significant ($P < 0.01$).

Table 2: Distribution of study subjects according to strata (faculty) and sex-wise

Sl. No.	Strata (Faculty)	Sampling fractions		
		Male	Female	Total
1	Medical	151 (53.9)	129 (46.1)	280
2	Pharmacy	47 (52.22)	43 (47.77)	90
3	Nursing	169 (24.5)	521 (75.5)	690
4	Engineering	312 (55.7)	248 (44.3)	560
5	B.Ed	61 (40.66)	89 (59.33)	150
6	Degree	458 (50.88)	442 (49.11)	900
7	PU	596 (53.7)	514 (46.3)	1110
Total sample size		1794 (47.46)	1986 (52.53)	3780

Discussion

Basavaiah et al [7] in their study on medical students reported that 98.5% were aware of AIDS. Edwin Amalraj R et al [9] in their study on first year medical students observed that 99% were aware of cause of HIV infection. Mandelene Alberktsson et al [8] in their study on university students in China reported that 99% students had heard of AIDS. Medical students had higher knowledge than non-medical students. In the present study 276 (98.57%) out of 280 medical students, 2610 (74.57%) other students mentioned unsafe sex as mode of transmission. 270 (96.43%) medical students, 3009 (85.97%) non-medical students mentioned infected blood and blood products. 268 (95.71%) medical students, 2847 (81.34%) non-medical students responded for contaminated needles and instruments. 267 (95.36%) medical students, 2927 (83.63%) non-medical students knowing about vertical transmission as the mode of HIV infection. Compared to other three routes more number of medical students were aware that unsafe sex as mode of transmission. On the contrary, non-medical students mentioned vertical transmission as the major mode of transmission. Even among total study subjects vertical transmission figured as a major route of transmission. In the present study 152 (54.29%) out of 280 medical students, 1996 (57.03%) out of 3500 non-medical students knowing fever as a symptom of AIDS patient. However

difference between two groups was not significant. 159 (58.79%) out of 280 medical students, 1637 (46.77%) out of 3500 non-medical students responded that diarrhea as a symptom. The difference between two groups was highly significant ($P < 0.01$). 205 (73.21%) medical students, 1976 (56.45%) out of 3500 non-medical students responded weight loss as a major symptom. The difference between two groups was highly significant ($P < 0.01$). 190 (67.86%) medical students, 2255 (64.43%) non-medical students aware that fatigue, weakness and tiredness as symptom complex of AIDS. However the difference between groups was not significant. 223 (79.64%) medical students, 1512 (56.8%) non-medical students indicated opportunistic infections as symptom. The difference between groups was highly significant ($P < 0.01$). Singh SK et al (2001) [10] in their study conducted on medical, engineering and agricultural students, 79.12% technical students and 81.13% non-technical students for weight loss, 63.12% of technical students and 41.57% of non-technical students for persistent diarrhoea, 65.12% of technical students and 32.07% non-technical students for persistent fever indicated as symptoms of AIDS. Deb S et al in their study on nursing students found that 97.22% were willing to treat HIV positive patients. Ganguly S K et al (1996-1997) [11] in their study on adolescents among undergraduate students observed that 92.24% students, 61.62% commerce students and 90.59% of

science students were willing to admit HIV positives. Lal P et al [12] in their study on PU students observed that 77.8% had favourable attitude towards PLHA. 33% were in favour of home care. In the present study 272 (97.14%) out of 280 medical students, 3301 (94.31%) non-medical students responded that they were practicing 'no' sex before marriage. The difference between medical and non-medical students was significant ($P < 0.05$). 274 (97.86%) medical students, 3238 (92.51%) non-medical students had opined that they are practicing no I.V. drug abuse. The difference between two groups was highly significant ($P < 0.01$). 228 (81.43%) medical students, 2163 (61.8%) non-medical students were willing to HIV testing before marriage. 254 (90.71%) medical students, 2655 (75.86%) non-medical students were willing to become partners in HIV prevention activities. The difference between two groups regarding practices of HIV prevention was highly significant ($P < 0.01$). Singh SP et al [13] in their study on first year degree students observed that 74.7% were not in favor of premarital sex. Ganguli SK et al in their study observed that 66.5% science students, 31% of commerce students and 88% of arts students were willing to be tested for HIV. Edwin Amalraj R et al [9] in their study on first year medical students' observed that 91.9% were volunteering to educate others. [14]

Conclusion

In general awareness and attitude of students was adequate compared to other studies in all the groups. But knowledge of services available was inadequate in all the groups. Medical students were better compared to non-medical students in all the three components of the study i.e. knowledge, attitude and practice. The knowledge levels of medical students' top all other strata and lower side was by degree students. May be the acquaintance with subject and opportunity to come in contact with HIV patients and other related issues

might be the reason for the difference in knowledge levels.

References

1. Park K. Park's textbook of Preventive and Social Medicine. 21st ed. Jabalpur: M/s Banarsidas Bhanot; 2011
2. Wilkins EGL. Human immunodeficiency virus infection and human acquired immunodeficiency syndrome. In: Nicholas Boon A, Nicki Colledge R, Brain Walker R, John Hunter AA, editors. Davidson's Principles and Practice of Medicine. 20th ed. Edinburgh: Churchill Livingstone; 2006. P.381
3. AIDS InfoNet. HIV life cycle. Fact sheet Number 106. [aidsinfonet.org since 1988]. New Mexico: United States National Library & Medicine; [updated 2011 Nov 20; cited 2011 Nov 22]. Available from: www.aidsinfonet.org
4. CDC. Pneumocystis Pneumonia- Los Angeles. MMWR 1981; 30: 250-2
5. Wikipedia [Internet]. Origin of AIDS, the free encyclopaedia [cited 2009 Aug 2]. Available from: http://en.wikipedia.org/wiki/Origin_of_AIDS.
6. Windows Internet Explorer [Internet]. Surgeon General's Report on AIDS (cited 2011 June 29).
7. Basavaiah GS, Sai TSR, Kolli SKM. Awareness of HIV/AIDS among medical students. Rangaraya Medical college Kakinada, Andhra Pradesh.
8. Madelene Albrektsson, Louise Alm, Xiaodong Tan, and Rune Andersson. HIV/ AIDS Awareness, Attitudes and Risk Behavior Among University Students in Wuhan, China. Open AIDS J. 2009; 3: 55-62. In: Windows Internet Explorer [cited 2011 Sep 29].
9. Edwin Amaraj R, Nirmala Chandrashekar, Sunithi Solomon, Ganapathy, Raja Sambandm P. First year Medical students' AIDS knowledge and attitude. Indian J Com Medicine. 1995; 20: 36-5.
10. Singh SK, Saxena A, Krishna G. A

- profile of HIV infection /AIDS related knowledge among female students of Kanpur district, India. Kathmandu University Medical Journal. 2007; 5 (17): 27-31.
11. Ganguli SK, Pege Rekha P, Gupte N, Charan UA. AIDS awareness among undergraduate students, Maharashtra. Indian J Public Health. 2002; 46 (1): 8-12
 12. Lal p, Anitha Nath, Badhan S, Gopal K Ingle. A study of awareness about HIV/AIDS among senior secondary school children of Delhi. Indian J Com Medicine. 2008 July; 33 (3): 190-192.
 13. Singh SP, Neelu Garg, Mishra RN, Sen P. Indian J. Pre. Soc. Med. 2002; 33(3,4):78-84
 14. Abdulabbas, H. S. ., Abed, S. Y. ., Mahdi , Z. A.-A. ., Al-Hindy, H. A.-A. M. ., Akram, M. ., Laila, U. ., Zainab, R. ., Al-Khafaji, N. S. ., Al-Dahmoshi , H. O. ., & Chabuck, Z. A. G. . (2023). Antiviral effects of medicinal plants: Minireview. Journal of Medical Research and Health Sciences, 6(2), 2424–2429. <https://doi.org/10.52845/JMRHS/2023-6-2-4>