International Journal of Community Medicine and Public Health
Chauhan G et al. Int J Community Med Public Health. 2018 Aug;5(8):3435-3439
http://www.ijcmph.com
pISSN 2394-6032 | eISSN 2394-6040

DOI: http://dx.doi.org/10.18203/2394-6040.ijcmph20183076

Original Research Article

Knowledge and awareness of AIDS among first year students of MBBS, BDS and BPT of Sumandeep Vidyapeeth University, Piparia- Vadodara

Grishma Chauhan[1], Jatin Chhaya[1]*, Sanidhya Karve[2], Ronak Kankrecha[2], Dhruval Khurana[2]

[1]Department of Community Medicine, SBKS Medical Institute & Research Centre, Sumandeep Vidhyapeeth University, Piparia, Vadodara, Gujarat, India
[2]Part I MBBS Student, SBKS Medical Institute & Research Centre, Sumandeep Vidhyapeeth University, Piparia, Vadodara, Gujarat, India

Received: 04 May 2018
Revised: 04 June 2018
Accepted: 05 June 2018

***Correspondence:**
Dr. Jatin Chhaya,
E-mail: dr.jatinchhaya@gmail.com

ABSTRACT

Background: Catastrophic potential of the pandemic of AIDS may still not have been fully apprehended in 21st century, even though disease was exploded since 1981. Lack of public health awareness is only identifiable factor that is responsible for disastrous effect of HIV/AIDS. It is more even danger if future doctors unaware of diseases dynamics of HIV infection or AIDS diseases. So, the current study was planned to know level of awareness regarding of HIV/AIDS among medical and paramedical students of Sumandeep Vidhyapeeth University.
Methods: Two hundred and eighty five students of Sumandeep Vidhyapeeth University were interviewed with the help of pre-designed questionnaire to know the awareness of HIV/AIDS among students.
Results: The students were knowledgeable about causative agent and modality of diagnosis. However, only half of students were agreed with the fact that, the treatment is available for AIDS. On contrary, 24.60% students had wrong belief that the vaccine against HIV/AIDS is available. A very few number of students had the misconceptions about modes of transmission. Knowledge of prevention of HIV infection was good among students. Media and doctor/ health worker were the most frequently reported sources of information as reported by 56.49%% and 34.39% of the students respectively.
Conclusions: The students had a satisfactory knowledge on many aspects of HIV/AIDS, but also along with some misconception about transmission of disease.

Keywords: Awareness, HIV/AIDS, Modes of transmission, Misconception of disease

INTRODUCTION

AIDS, the acquired immune deficiency syndrome, is a fatal illness caused by a retrovirus known as the human immune deficiency virus (HIV) which interrupt the body's immune-system, leaving the victim vulnerable to a host of life-threatening opportunistic infections, neurological disorders or unusual malignancies.[1] With epidemiological transition, the major cause of death and disability are found to be shifted from nutritional deficiencies to infectious disease.[2] AIDS was one among the infectious diseases, which was responsible for 1.1 million death in the world in the year of 2016.[3] If we look at global HIV statistics, 17 million people were accessing antiretroviral therapy at the end of 2015, 36.7 million people globally were living with HIV in 2016 and 1.8 million people became newly infected with HIV in 2016.[3,4] In the year of 2016, 36.7 million people were living with HIV.[5]

Route of transmission of HIV infection are: unprotected sexual intercourse (vaginal or anal), and oral sex with an infected person; contaminated blood transfusion; and the sharing of contaminated needles, syringes, surgical equipment or other sharp instruments. Vertical transmission is also seen between a mother and her infant during pregnancy and also can transmit through childbirth and breastfeeding.[6] Thirty nine percent of all new HIV infection occurred in the young people of aged between 13-29 years as per Centers for Disease Control and Prevention.[7] CDC also reported, 9 out of 10 new HIV infections could be prevented by identifying people living with HIV and confirming they have early, ongoing HIV treatment.[8]

HIV is a disease that does not differentiate and anyone can get this deadliest disease. So, it is important for students, in special concern to medical students most as they will be future healthcare providers, to be aware of to protect themselves and prevent the transmission of HIV. Furthermore misconception in regards of HIV/AIDS can be more dangerous in future.

Death due to this preventable disease is not acceptable. Public health education with behaviour change actions are the only way to root out this deadliest disease.

Objective

- To assess correct knowledge about HIV/AIDS in all aspects (cause, source of information, mode of transmission, available treatment options and prevention of diseases) among the first year students of Medical (MBBS) and Paramedical (B.D.S/B.P.T) students of Sumandeep Vidhyapeeth University.
- To study the knowledge regarding of misconceptions of HIV/ AIDS among the first year students of Medical (MBBS) and Paramedical (B.D.S/ B.P.T) students of Sumandeep Vidhyapeeth University.

METHODS

Study design and study participants

This was a cross sectional study done among the first year students of Medical (MBBS) and Paramedical (B.D.S/ B.P.T) students of Sumandeep Vidhyapeeth University, Piparia – Vadodara.

Sample size and sampling method

Due to constraint of resources, convenient sampling was used and a total of 285 students including; 150 students of MBBS, 32 students of BDS and 103 students of BPT were interviewed.

Study time

The study was done during the time period between May to September 2017.

Study tool

Pre-designed and pre-tested questionnaire was used to know the awareness of HIV/ AIDS among students.

Inclusion criteria

Inclusion criteria were first year students of M.B.B.S, B.D.S and B.P.T of Sumandeep Vidyapeeth University, Piparia, Vadodara got admission during academic year 2016-17; Participants who will give written informed consent.

Exclusion criteria

Exclusion criteria were all other years of MBBS, BDS and BPT students.

Methodology

the study was done as a part of Evidence Generating Community Health Intervention Project (EviGenCHIP), which is a unique innovative programme initiated by Medical Education Unit of Smt B.K Shah medical institute & research centre. The study was commenced after approval of Sumandeep Vidyapeeth Institutional Ethical Committee (SV IEC). Necessary permission was obtained of conduction of study from Dean, SBKS Medical institute & Research Centre and also from the Dean, K. M. Shah Dental College & Hospital and Principal of College of Physiotherapy. Students were approached in the classroom, canteen and hostels to fill pre-tested questionnaire. Students were informed about importance of study and assured about confidentiality of information provided by them.

Statistical analysis

Data was entered in Ms Excel and descriptive analysis was done using Statistical Package for the Social Sciences (SPSS) V.16 and converted in to information.

RESULTS

A total of 285 students of MBBS, BDS & BPT streams of the university, responded to questionnaire, 203 (71.23%) were females and 82 (28.77%) were males. Table 1 show that, the students were knowledgeable about infectious agent of disease (93.3%), availability of diagnosis (95.8%), and also knew that the disease is incurable (74.51%). However, only half (58.60%) of students understood the fact that, the treatment is available for HIV/ AIDS. On contrary, 24.60% students had wrong belief that the vaccine against HIV/AIDS is available (Table 1).

Table 1: Percentage of students having correct knowledge of HIV/AIDS.

Sr no.	Question	Number of students gave correct response			
		MBBS (n=150)	BDS students (n=32)	BPT students (n=103)	Total students (n = 285)
1	Have you heard about HIV/AIDS	150 (100)	32 (100)	103 (100)	285 (100)
2	Do you know the causative agent of HIV/AIDS	144 (96.7)	29 (90.6)	93 (90.3)	266 (93.3)
3	Is the diagnosis available for HIV/AIDS	147 (98.0)	28 (87.5)	98 (95.1)	273 (95.8)
4	Is the treatment available for HIV/AIDS	77 (51)	23 (71.9)	67 (65.0)	167 (58.6)
5	Can any of get cured from HIV/AIDS	109 (73)	23 (71.9)	82 (79.6)	214 (75.1)
6	Is there any vaccine available for HIV/AIDS	118 (79)	26 (81.3)	71 (68.9)	215 (75.4)

Table 2: Awareness and misconception about modes of transmission of HIV/AIDS.

	Percentage of student gave correct response			
	MBBS (n=150)	BDS (n=32)	BPT (n=103)	Total (n=285)
Route of transmission				
Multiple sexual partners (%)	94.7	100.0	96.12	95.79
Transfusion of blood products (%)	89.3	100.0	92.23	91.58
Usage of contaminated sharp equipment (%)	95.3	93.8	93.20	94.39
Intravenous drug users through sharing of needles (%)	63.3	87.5	60.19	64.91
Mother to child transmission (%)	79.3	84.4	82.52	81.05
Misconception about route of transmission	**Percentage of student have misconception**			
Biting, scratching, and spitting	3.33	6.25	1.94	3.86
Casual contact and kissing	6.67	0.00	9.71	7.02
Sharing common clothes/utensils/food	3.33	3.13	9.71	5.61
Organ donation are safe	7.33	18.75	0.00	5.96

Table 3: knowledge of prevention of HIV/AIDS.*

University course	Faithful to your life partner n (%)	Use of barrier contraceptive n (%)	Always use screened blood n (%)	Always use disposable needle n (%)	Avoid injection drug use n (%)	PPTCT n (%)
MBBS (n=150)	141 (94)	139 (92.67)	101 (67.33)	110 (73.33)	75 (50)	86 (57.33)
BDS (n=32)	29 (90.63)	31 (96.88)	23 (71.88)	26 (81.25)	21 (65.63)	18 (56.25)
BPT (n=103)	94 (91.26)	87 (84.47)	62 (60.19)	75 (72.82)	48 (46.60)	62 (60.19)
Total (n=285)	264 (92.63)	257 (90.18)	186 (65.26)	211 (74.04)	144 (50.53)	166 (58.25)

*multiple answer accepted

Table 4: Sources of HIV/AIDS information among students.*

University course	Media	Family/friends	Doctor/health worker	Other (lectures, material reading etc..)
MBBS (n=150)	97 (68.67)	40 (26.67)	43 (28.67)	35 (23.33)
BDS (n=32)	15 (46.88)	10 (31.25)	18 (56.25)	3 (9.38)
BPT (n=103)	49 (47.57)	20 (19.42)	37 (35.92)	14 (13.59)
Total (n=285)	161 (56.49)	70 (24.56)	98 (34.39)	52 (18.25)

*multiple answer accepted

The study also shows that the students were aware of the route of transmission of AIDS through multiple sexual partners (95.79%), transfusion of contaminated blood products (91.58%), vertically from mother to child (81.05%) and by using contaminated needle or syringes (94.39%). On the other side, only two third students knew that HIV/AIDS also spread through sharing of needles among intravenous drug users. It was delightful to observe that a very few in numbers of students had the misconceptions about modes of transmission (Table 2).

Knowledge regarding prevention of HIV/AIDS is very good. However only half of students knew that HIV/AIDS can be prevented also through avoidance of injection drug use, by prevention of parents to child transmission (PPTCT), and by using of screen blood/ blood products (Table 3).

Media and doctor/health worker were the most frequently reported sources of information related to HIV and AIDS as reported by 56.49%% and 34.39% of the students respectively, whereas information from friends/family (24.56%) and reading material (18.25%) were less frequently reported as a source of information (Table 4).

DISCUSSION

As HIV is incurable diseases, the best way to prevent HIV is only it's prevention through awareness of disease among people.[9] Simple measures of prevention are use of condoms for unprotected sex, certainly not share needles or other injecting equipment, faithful to your life partner, and always used screened blood.[10] Awareness of HIV/AIDS, positive attitude and appropriate practices to root out causes of infection as essential component of training of doctors and curriculum of medical and paramedical study as they are future doctor of treating this deadliest disease.

In our study, almost all the students heard about HIV/AIDS (100%), knew cause of agent (93.30%), and also about diagnostic modalities (95.80%) available for HIV/AIDS. The finding is comparable to finding of study conducted by Shridevi and Kiran et al that all the students aware of HIV and its causative agent.[10,11]

Half of students (58.60%) aware of availability of treatment of HIV, on the contrary study conducted by Shridev, 80.88% of total students aware of availability of treatment for the same.[10] Almost, two third of students knowing that AIDS is incurable disease (75.10%) and there is no vaccine available to prevent HIV infection (75.40%) in our study. On the opposing the study conducted at Telangana state of India**,** 91.10% of students knew that, there is no vaccine available of HIV infection.[10] Low level of awareness in our study is the matter of concern and suggesting of a need of further education of HIV infection and AIDS disease.

In the present study, 95.79%, 91.58%, and 94.39% of total students were aware that multiple sexual partner, transfusion of unscreened blood products, and usage of contaminated needle or other sharp instrument act as modes of transmission of HIV infection and only 64.91% and 81.05% were aware about intravenous drug injection and vertical transmission of HIV infection as a modes of transportation of infection respectively. The result are comparable to study conducted by Shridev in in which 91.9%, 99.26%, and 98.52% of total students were aware that indiscriminate sexual relationship, unscreened blood transfusion, and contaminated needles and syringes as the routes of transmission respectively.[10] Another study conducted by Kiran et al also had similar findings in whom, 95.09% were aware of contaminated blood transfusion, 94.12% were aware of infectious sharp instruments, and 84.31% of total students were aware of vertical transfer as a route of HIV infection transmission.[11]

There were some misconceptions regarding the spread of disease that is, 3.86% of total students believed that mosquito biting, scratching, and spitting act as modes of transmission, 7.02% considered casual contact and kissing as a route of transmission, 5.61% deliberated HIV infection can spread through sharing common clothes/ utensils/ food, and 5.96% thought that organ donation cannot spread HIV infection. Comparable prevalence of misconception found in other study as well in whom, misconception found in the study were, hugging and kissing (6.61%), sharing utensils (5.88%), towels and clothes (2.94%), mosquito bite (14.70), staying together (4.42%) as the route of transmission of HIV. Also similar result were found in study conducted by Satheesh et al, where mistaken belief found among medical students were hugging and kissing (7.4%), sharing of utensils (4.4%), sharing of clothes (5.9%), mosquito bite (15.6%).[10,12]

Even though students were well aware of different modes of transmission, knowledge of prevention of HIV infection is not quite satisfactory in our study. Remaining faithful to your life partner (92.63%) and use of barrier contraceptives (90.18%) were known modes of prevention, on the contrary, use of screened blood (65.26%), use of disposable needle (74.04%), avoid injection drug use (50.53%), and awareness of availability of PPTCT centre (58.25%) were less known by students as modes of prevention of HIV infection. Awareness of prevention manners of HIV infection is quite high in the study conducted by Shridev, where nearly all the students aware of use of barrier contraceptive and nearly 89.70% of students aware of use of screened blood for transfusion as a methods of prevention of HIV infection.[10] Remaining faithful to partner will prevent HIV; awareness is quiet better in our study compared to Satheesh et al study (75.6%).[13] The current study was done among the fresher medical and paramedical students can be explained as a possible reason of low level of awareness of preventive measures, still it is matter of distress and need of further education on particular aspects is required.

In the present study, majority (56.49%) got the knowledge by media, next (34.49%) from the health care providers, family and friends (24.56%), and other sources (18.25%) like lectures and printed materials. Similar findings were noted by Kiran et al and Shridevi.[10,11]

CONCLUSION

The students had a satisfactory knowledge on the communicability of the disease, the causative agents, diagnostic modalities available, non-availability of

vaccine. They were aware of route of transmission but with some misconception of transferring infection through biting, scratching, spitting, causal contact, and fomites act as modes of transmission were also prevalent among students. It is quite disappointing, only few manners of prevention of HIV infection were known by students and many remains unknown that is the wakeup call for program planner, and demanding need of more health educational programs.

Limitations

Our result is used to strengthen the existing literature, but convenient sampling and not being a community based study weaken our result and applicability to general population. Researcher feels need of same type of study with more sample size is required.

ACKNOWLEDGEMENTS

The authors thank to Smt. B. K. Shah Medical Institute & Research Centre, Sumandeep Vidhyapeeth University for providing opportunity to conduct this study through EviGenCHIP – Evidence Generating Community Health Project.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the from Sumandeep Vidyapeeth Institutional Ethical Committee (SV IEC)

REFERENCES

1. Mansuri S, Chhaya J, Chaudhri A, Patel P, Malek R. Impact of induction training on facilitated integrated counseling and testing centre (F-ICTC) of the Medical Officers: pretest and post-test analysis. Int J Med Res Rev. 2015;3(10):1124-7.
2. Chhaya J, Devalia J, Kirti R, Chaudhri S. Behavioral Risk Factors of Diabetes and its Prevalence in the Faculty Members of Teaching Institutes of Ahmedabad city, Gujarat. IOSR J Dental Med Sci (IOSR-JDMS). 2015;14(9):23–8.
3. Fact sheet - Latest statistics on the status of the AIDS epidemic. Available at: http://www.unaids.org/en/resources/fact-sheet.
4. WHO. 17 million people with access to antiretroviral therapy. WHO. Available at: http://www.who.int/hiv/mediacentre/news/global-aids-update-2016-news/en/.
5. Global statistics: The Foundation for AIDS Research: HIV / AIDS Research. 2017. Available at: http://www.amfar.org/worldwide-aids-stats/.
6. WHO. HIV/AIDS. WHO. 2017. Available at: http://www.who.int/features/qa/71/en/.
7. Indiana University Of Pennsylvania: HIV and AIDS Awareness - Awareness Campaigns - Health and Wellness Promotion. 2018. Available at: https://www.iup.edu/health-wellness/campaigns/hiv-and-aids-awareness/.
8. American Institute of Research. Raising Awareness of HIV/AIDS Prevention. American Institutes for Research. 2017. Available at: https://www.air.org/resource/raising-awareness-hiv-aids-prevention.
9. HIV/AIDS News from Medical News Today. Available at: https://www.medicalnewstoday.com/categories/hiv-aids.
10. Shridevi K, Srigouri T. HIV awareness among first year MBBS students in a private medical college, Telangana, India. Int J Community Med Public Health. 2017;4(6):1906–11.
11. Nikam K, Arun J, Bhagyashri J, Rajashekhar K, Shashikant N, Anjana B. A Cross-Sectional Study of HIV/AIDS Awareness Among Paramedical Students Of Bims, Belgaum. J Adv Res Med Sci. 2013;5(4):336–40.
12. Gugnani A, Ukeje MA. A study on existing knowledge about AIDS among undergraduates of a Nigerian University. J Commun Dis. 1993;25(2):52–6.
13. Satheesh BC, Thilak SA, Sarada AK, Madusoodanan KV, Venugopalan PP. A study on awareness of HIV among first year MBBS students in a private Medical College, Kerala, India. Int J Community Med Public Health. 2016;3(8):2305–8.

Cite this article as: Chauhan G, Chhaya J, Karve S, Kankrecha R, Khurana D. Knowledge and awareness of AIDS among first year students of MBBS, BDS and BPT of Sumandeep Vidyapeeth University, Piparia-Vadodara. Int J Community Med Public Health 2018;5:3435-9.