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KNOWLEDGE AND AWARENESS REGARDING HIV/AIDS AMONG FIRST YEAR MEDICAL UNDERGRADUATES: A CROSS SECTIONAL STUDY

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ABSTRACT

Background: HIV/AIDS affects the most productive age group, the knowledge of which is clouded with many myths and misconceptions. **Objective:** To determine the knowledge and awareness about various aspects of HIV/AIDS among the students of MBBS first year. **Methodology:** The students were asked to fill a pre-designed, structured, semi open ended questionnaire. All efforts were made to ensure the originality of the responses. **Statistical Analysis:** The data collected so, was analysed, tabulated and presented in the forms of percentages and proportions. Appropriate statistical tests applied, wherever applicable. **Results:** Among the total of 122 respondents, all of them have heard about HIV/AIDS and that it is caused by a virus. About 43.4% students believed that HIV infection means AIDS. The place where HIV testing is done, was known to about 78%. Knowledge about the routes of spread included; through infected injections (100%), through blood transfusion (98%), Unprotected Sexual contact (97.5%), Infected Mother to child (86%). The respondents were aware that it doesn't spread through touching/hand shaking (99.2%), sharing food (93.4%), using common cups/glasses (89%), used clothes/towels/soap (88.5%). About 80% responded to have discussed about HIV/AIDS ever with anybody, while about 82% considered safe working with a patient of HIV/AIDS. **Conclusion:** Most of students were aware about the basic knowledge while they also had a misconception which implies that the students should be equipped more, especially since the beginning of their career.

INTRODUCTION

AIDS was recognised as an emerging disease in the early 80's but has spread its tentacles throughout the world, responsible for millions of the deaths within less than twenty years. It affects the most productive age group and causing premature deaths thereby. According to the annual report of National Aids Control Organization India has the third highest number of estimated people living with HIV in the world as per the HIV estimations 2012, with the estimated number of people living with HIV/AIDS in India to be 20.89 lakh [1]. Also, India has world's largest youth population with people in the age group of 15-29 years comprising almost 25 percent of the country's population and account for around 31% of HIV/AIDS burden [2]. Moreover, still there are many myths and misconceptions prevalent in the society regarding HIV/AIDS. For instance, in a study conducted among the general public in Karnataka (southern state of India), about one third of the respondents thought it to be spread it just by touching a patient who is HIV positive [3]

Many studies have been conducted among the youth population belonging to different streams such as students of high school [4, 5], senior secondary school [6,7], college students [8], nursing students [9], medical students [10] etc. These studies reflect varied knowledge and awareness regarding this subject. The Medical students constitute an important stakeholder as far the prevention of AIDS is concerned, both in terms of being at the risk of contracting this deadly infection during their hospital training (and in their professional carrier afterwards) as well as by virtue of being a future doctor and educator. So, they need to be inculcated on the basic human values along with the medical skills. Attitude of the health care provider towards the patient, be he is a doctor or paramedic, has a tremendous impact on the patients' perceptions of their own health. Very few studies have been conducted on the knowledge, awareness of HIV/AIDS among medical students. Present study is one time cross sectional survey based study conducted among the students of MBBS first year in a private medical college in western Uttar Pradesh.

Aims & Objectives: To determine the knowledge and awareness about various aspects of HIV/AIDS among the first year medical students.

MATERIALS & METHODS

Study design: This study is a cross-sectional survey based study

Ethical Consideration: Ethical approval taken from the institutional ethics committee. Confidentiality was assured and a health education session on HIV/AIDS was conducted after completing the survey.

Inclusion criteria: The first year medical students (both sex) at FH Medical College, Tundla, Firozabad. Only

those students were included into the study who were present in the class.

Sample size: A total of 122 subjects were included into the study out of the total strength of 150.

Methodology:

The students were asked to fill a semi open ended questionnaire, which was self-designed. The questionnaire was pre-tested before the data collection. The nature and purpose of the study was explained to students. All of the study participants were to complete the questionnaire in a single sitting in the lecture theatre. To ensure the originality of the responses, the staff of community medicine department was present in the lecture theatre, invigilating the session. The students were emphasised on to put/mark their original responses, and no subsequent survey was done among the students who were left due to possibility of questions being leaked out thereby responses might be biased.

Statistical analysis: The data collected so, was analysed, tabulated and presented in the forms of percentages and proportions. Appropriate statistical tests applied, wherever applicable.

RESULTS

A total of 122 students took part in the study comprising of 76 (62.3%) males and 46 (37.7%) females. All of them (100%) had heard about HIV/AIDS and that it is caused by a virus while the source of information being from multiple sources. About 43.4% (i.e. 53) students believed that HIV infection means AIDS. The place where HIV testing is done, was known to about 78% (96).

Knowledge about four classical modes of transmission: The participants were asked to mention the classical modes of transmission in the form of open ended questions. Only about 9% (11) students could reproduce/mention all the four classical modes of spread (i.e. sexual, infected needles & syringes, infected blood transfusion and mother to child). Majority of the respondents i.e. around 36.9% could mention only two modes of transmission, while 27% and 13.9% respondents could be able to mention three and one route of spread, respectively (table 1). No significant difference was observed between knowledge of these classical routes of transmission and gender of the respondents.

Knowledge about other routes of transmission: In this part the students were asked about the routes of transmission in the form of a closed ended questions. The knowledge about various routes was as follows (as shown in table 2); through infected injections (100%), through blood transfusion (98%), Unprotected Sexual contact (97.5%), Infected Mother to child (86%). As far as awareness regarding non-spread is concerned then the respondents were aware that it doesn't spread through touching/hand shaking (99.2%), sharing food (93.4%), using common cups/glasses (89%), used clothes/towels/soap (88.5%). Regarding other routes the participants responses included- spread through breast feeding (26.2%), oral sex (32.8%), kissing (23%) and mosquito bite (23%). As many as 34% and 68% believed it to not spread through surgery and tooth extraction while around 18% responded it to be spread through coughing.

Knowledge about High Risk Groups: The awareness about existence of high risk groups for HIV/AIDS was found to be as follows (table 3); female sex worker (70.5%), Clients of Female Sex Workers (59.8%), patients suffering from sexually Transmitted Diseases (56.6%), recipients of repeated blood transfusion (54.1%), intra venous drug users (45.9%), truck drivers (34.4%), men having sex with men (29.4%). There was no significant difference observed between the awareness of high risk groups among boys and girls ($p>0.05$)

Knowledge about prevention & treatment and Attitude towards HIV/AIDS: Among all of the study participants about 34% believed that HIV means AIDS. As shown in table 4, about 3.3% respondents believed that there is a permanent cure available for HIV/AIDS, the availability of any drug effective against this virus was known to only 36.9%. About 80% (about 82% females and 78.9% males) respondents admitted to have discussed about HIV/AIDS ever with anybody, while about 82% considered safe to working with a patient of HIV/AIDS. Significantly higher percentage of females (97.8%) than males (84.2%) believed that the HIV/AIDS patient should not be excluded from the society. The percentage of respondents who admitted to have no problem in sharing room with a patient of HIV was 64% which was significantly higher ($p<0.05$) among females (78.3%) than males (56.6%).

Table 1: Knowledge about four classical modes of transmission*

Knowledge about modes of spread	Male (n=76)	Female(n=46)	Total (N=122)
All four routes* reproduced/mentioned	6 (7.9%)	5 (10.9%)	11 (9%)
Only 3 routes reproduced/mentioned	19 (25%)	14 (30.4%)	33 (27.0%)
Only 2 routes reproduced/mentioned	33 (43.4%)	12 (26.0%)	45 (36.9%)
Only 1 route reproduced/mentioned	11 (14.5%)	6 (13.0%)	17 (13.9%)
None or none correctly reproduced/mentioned	7 (9.2%)	9 (19.6%)	16 (13.1%)
χ^2=6.715, d.f.=8, p value=0.568, Not Significant			

***** participants were asked to mention routes of transmission in the form of open ended question (the correct response taken to be 1.unsafe sexual contact, 2. from infected mother to child, 3. transfusion of infected blood and 4. through infected needle and syringes)

Table 2: Knowledge/Awareness about other routes of transmission (N=122)

Spreads through-	Yes	No	Don't Know
Injections	122 (100%)	00 (00%)	00 (00%)
Infected Blood Transfusion	120 (98.4%)	02 (1.6%)	00 (00%)
Unprotected Sexual contact	119 (97.5%)	03 (2.5%)	00 (0%)
Infected Mother to child	105 (86.1%)	10 (8.2%)	7 (5.7%)
Tattooing or ear piercing	86 (70.5%)	26 (21.3%)	10 (8.2%)
Breast Feeding	32 (26.2%)	72 (50.0%)	18 (14.8%)
Oral Sex	40 (32.8%)	58 (47.5%)	24 (19.7%)
Kissing	28 (23%)	91 (74.5%)	03 (2.5%)
Mosquito Bite	28 (23%)	81 (66.4%)	13 (10.7%)
During surgery	73 (59.8%)	42 (34.4%)	7 (5.7%)
During Tooth Extraction	22 (18%)	83 (68%)	17 (14%)
Coughing	23 (18.9%)	89 (73%)	10 (8.1%)
Touching/hand shaking	00 (00)	121 (99.2%)	01 (0.8%)
Sharing Food	06 (4.9%)	114 (93.4%)	02 (1.6 %)
Using common cups/glasses	11(9%)	109 (89.3%)	02 (1.6%)
Used clothes/towels/soap	10 (8.2%)	108 (88.5%)	04 (3.3%)

Table 3: Knowledge/awareness about High Risk Groups

Knowledge about High Risk Groups	Male (n=76)	Female(n=46)	Total (N=122)	P value*
Truck Drivers	28 (36.8%)	14 (30.4%)	42 (34.4%)	>0.05
Female Sex worker (FSW)	49 (64.5%)	37 (80.4%)	86 (70.5%)	>0.05
Patients suffering from STDs	42 (55.3%)	27 (58.9%)	69 (56.6%)	>0.05
Intra Venous Drug Users	33 (43.4%)	23 (50.0%)	56 (45.9%)	>0.05
Men Having Sex with Men	21 (27.6%)	10 (21.7%)	31 (29.4%)	>0.05
Clients of FSWs	44 (57.9%)	29 (63.0%)	73 (59.8%)	>0.05
Recipients of repeated Blood transfusion	38 (50.0%)	28 (60.9%)	66 (54.1%)	>0.05

*p>0.05 Non significant, p<0.05 Significant

Table 4: Knowledge/ Awareness about prevention & treatment and Attitude towards HIV/AIDS

Variables concerned	Male (n=76)	Female(n=46)	Total (N=122)	P value
HIV positive means patient is having AIDS	33 (43.4%)	20 (43.5%)	53 (43.4%)	>0.05
Availability of any drug against HIV	31 (40.8%)	14 (30.4%)	45 (36.9%)	>0.05
Permanent cure for HIV/AIDS available	2 (2.6%)	2 (4.3%)	4 (3.3%)	>0.05
Ever discussed HIV/AIDS with anybody	60 (78.9%)	38 (82.6%)	98 (80.3%)	>0.05
Working with a patient of HIV/AIDS is safe	60 (78.9%)	41 (89.1%)	101 (82.8%)	>0.05
HIV patient should not be excluded from society	64 (84.2%)	45 (97.8%)	109 (89.3%)	<0.05
No problem in sharing room with a patient of HIV	43 (56.6%)	36 (78.3%)	79 (64.8%)	<0.05

DISCUSSION

Present study was conducted among the first year students of MBBS, who have spent just 3 months in the medical curriculum, at the time of survey. As far as the basic knowledge about HIV/AIDS is concerned, then all of the respondents were aware about the viral aetiology, most of the students were aware about the routes of transmission. This is similar to a study conducted among first year medical students in Karnataka in which most of the students were aware about routes of transmission [10]. In our study no significant difference was observed between the knowledge of transmission among male and female student, similar to Joshi et al [11].

Most of the students were aware that it doesn't spread through touching/hand shaking. In a study conducted among general population in Karnataka, about one third of the respondents thought it to be spread it just by touching a patient who is HIV positive. Some misconception were also revealed in our study such as, up to 36% students believed it to be spread through mosquito bite, 18.9% students believed it to be spread by coughing and 9% believed it to be spread by using common utensils. The misconception of spread through mosquito bite has also been reported among medical students by Joshi et al and Basavayya [12]. In a study conducted among young college student 6.3% participants believed that it can be transmitted by mosquito bite [8].

Knowledge and awareness regarding high risk groups was varied in our study, on one hand as much as 70% considered the female sex workers to be a risk group the awareness went on to decrease up to the level that only 29.4% considered the MSMs to be a high risk group. In a

study conducted among the college students, only 47% were aware that STDs are at high risk of AIDS [11].

In our study only 3.3% participants believed that there is a permanent cure available for HIV/AIDS, while in a study conducted among the college students 10% believed so [8] whereas 45% students in Kerala were aware that AIDS is non-curable at present time [11].

In our study as many as 89% believed that HIV patients should not be excluded from the society, while 64% reported to be having no problem in sharing room with a HIV patient. About 74% college students in another study in Lucknow, agreed to share a room with a HIV patient [8].

CONCLUSION

In our study the knowledge and awareness about HIV/AIDS among first year medical students was found to be variable. On one hand most of students were aware about the basic knowledge while on another hand they had misconceptions similar to non-medico students. Considerable percentages of students were having misconceptions related to transmission such as through mosquito bite, coughing and sharing utensils. The awareness regarding the high risk groups for HIV/AIDS was also found to be very low.

Recommendations: The medical students should be equipped more especially since the beginning of their career. The students should also be engaged in the health education session whereby they can learn by doing, once they start explaining to the community, automatically their hidden potentials of the learning will eventually unfold.

Limitations: The questionnaire used was not a standard questionnaire but was self-designed, thereby there remains chances of missing many aspects so this may be counted as a limitation of the study

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Conflict of interest: Nil

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