STUDY OF KNOWLEDGE, ATTITUDE AND PRACTICES TOWARDS HIV/AIDS AND SEXUALLY TRANSMITTED INFECTION AMONG MBBS PRECLINICAL STUDENTS IN UCMS, NEPAL

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ABSTRACT

INTRODUCTION

Knowledge, attitude and behavior of a medical professional play an important role in the quality of care that an HIV/AIDS positive person receives and in shaping their attitude towards the disease. Thus, it is important that medical students, who would be treating such persons in near future, have the appropriate knowledge and attitudes. This study explores both these factors among pre-clinical medical students in Nepal.

MATERIAL AND METHODS

A cross sectional study was carried out among 200 first and second year MBBS students at Universal College of Medical Sciences Teaching Hospital, Nepal. A pre-tested, structured questionnaire was used to evaluate respondents' knowledge towards of HIV causes and transmission and their attitudes towards HIV/AIDS and people living with it.

RESULTS

Knowledge among respondents was high overall and showed an improvement from first to second year. Some improvement areas regarding transmission from lactating mother to infant, transmission via sweat, kissing etc and infant's BCG vaccination management were found. Respondent's attitudes too were generally positive but with some significant stigmatizing notions such as isolation and entry bans of HIV positive people.

CONCLUSION

Knowledge of pre-clinical MBBS students is generally high though there are some improvement areas in HIV transmission. The attitude too is positive overall with a small minority holding stigmatizing views. Progression from first to second year has a positive impact on both knowledge and attitudes.

KEYWORDS

HIV/ AIDS, Knowledge, Pre-clinical medical students

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INTRODUCTION

Acquired Immunodeficiency Syndrome (AIDS), is a fatal illness caused by a retrovirus known as the Human immunodeficiency Virus (HIV). It impacts the infected person's immune system, increasing her vulnerability to a host of life-threatening infections, unusual malignancies and neurological disorders.[1]

First cases of HIV/AIDS in Nepal were reported in 1988.[2] Young and productive age groups of the population are at the center of the epidemic in Nepal.[3] Sexual transmission accounts for more than 85% of new HIV infections in Nepal. Coinciding with the civil unrest, a spike in infections was recorded starting in 1996. Though the adult infection rate in Nepal is estimated to be below the 1% threshold considered as "generalized and severe", this macro level statistic does not reveal the nature of a concentrated epidemic among at-risk populations. Economic, political and demographic factors such as low literacy, poverty, gender inequality and political instability along with social taboos are hurdles in preventing the spread of HIV.[4]

Medical students are the future physicians of people living with HIV/AIDS (PLWHA), it is essential that they possess the appropriate knowledge and attitudes regarding them. There is a research gap when it comes to studying these factors among preclinical MBBS students in Nepal. This study aims to bridge that gap and arrive at recommendations for improving knowledge levels and optimizing attitude.

MATERIAL AND METHODS

A cross-sectional, descriptive study was conducted to assess the knowledge, attitude and practices of Preclinical MBBS Students on HIV/AIDS and sexually transmitted infection after taking ethical clearance from Institutional Review committee (IRC) with the Ref. No.UCMS/IRC/129/19 of Universal College of Medical Sciences.

The study cohort included all MBBS students at UCMS-TH in their preclinical years. Complete enumeration system of first and second year students (up to 2nd year students are not exposed to the clinical subjects). 200 first and second year students were part of the study. The study instrument was a structured, pre-tested self-administered questionnaire constructed of questions derived from several previously validated questionnaires which were part of relevant previous studies.[5] The content validity of questionnaire was ensured with the help of subject matter experts and a pre-testing was done post the modifications identified during the content validation process.

The questionnaire was pre-tested on 10% of the total sample size. Questionnaire had 22 dual option questions testing respondents' knowledge on HIV/ AIDS and sexually transmitted diseases (STI) and twelve descriptive questions related to the transmission, protection, attitude and stigma with HIV/AIDS in addition to eight items capturing demographic information of the respondents. 17 items captured the attitude of respondents towards HIV, high risk groups and HIV positive people.

An explicit informed consent of participants was recorded via a form which outlined the purpose of study and data confidentiality assurance. The participation was purely voluntary with participants having the option of withdrawing at any stage.Study was conducted by the principal investigator and the study duration was of three month. Site of the study was – Universal College of Medical Sciences Bhairahawa, Nepal.

Data was entered into Microsoft (MS) Excel for tabulation and analyzed by SPSS 16. Descriptive statistics were worked out for better understanding of data.

RESULTS

The mean age of the participants was 20.5 years with the range being 17 – 26 years. The demographics are presented in Table 1

Table 1. Demographics

Variable	Frequency (N=200)	%Age
Gender:		
Male	135	67.5%
Female	65	32.5%
Age:		
17-19	47	23.5%
20-22	143	71.5%
23-26	10	5.0%
Year:		
First Year	100	50.0%
Second Year	100	50.0%

Awareness of HIV/AIDS and STI

100% of students were aware of HIV& AIDS and were able to correctly state their full forms. However, only 93% of students in first year were able to state the correct full form of STI as opposed to 100% in second year. 100% of students across both years correctly identified HIV as a virus, however only 89% in the first year and 96% in the second identified the distinction between HIV being a virus and AIDS a disease.

Modes of transmission

Figure 1 shows the percentage of correct causality attribution of various factors of HIV transmission. Expectedly, second year students have a higher correct percentage as compared to first year. The percentage of correct answers for both the years in seven out of 10 questions is greater than 90%. However when it comes to transmission via tears, sweat & saliva and through lactating mother to child, the correct answer percentage drops to 70% among the first year respondents and 82% among second year.

Modes of HIV transmission

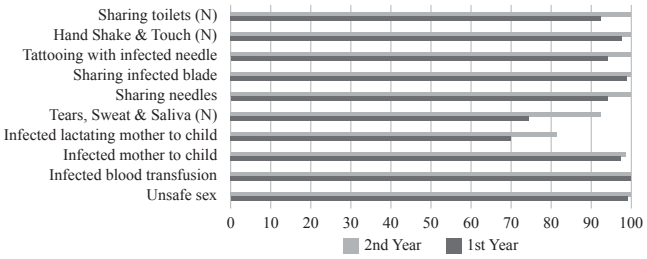

Figure 1. Identification of Modes of HIV Transmission

*(N) denotes that this was identified as non-reason of transmission by the percentage of students represented by bar lines

Linkage between HIV & STI

95% of first year & 94% of second year respondents correctly identified HIV as non-curable. However only 51% of first year students correctly identified STIs as curable (2ndyear - 100%). 90% of first year & 97% of second year respondents correctly identified STIs as a risk factor for HIV.

HIV infected child - Vaccination & Breast Feeding

Only 50% of respondents were aware that HIV infected child can be vaccinated with BCG. 35% respondents were of the opinion that an HIV infected mother can breastfeed her child. This is a complex area where medical opinion differs depending on the geographical and socio-economic factors. The risk of transmission in such cases is well established hence prompting organizations such as CDC in US to advice against breastfeeding. However, organizations such as WHO recognizing the trade-off between the risk of transmission due to breastfeeding and risk of malnutrition in absence of it, take a more nuanced approach.

Prevention of HIV Transmission

Students of both the years displayed100% awareness of the link between use of condom; safe, tested blood and HIV prevention. However only 82% of respondents in first year (vs 99% in second year) displayed understanding of use of sterilized surgical instruments in HIV prevention. Respondents of both the years demonstrated high level of awareness of use of disposable syringes, not having multiple sex partners and not having sex with HIV positive person in preventing HIV transmission.

Awareness of HIV tests and HIV carriers

Only 73% & 69% of respondents were aware of ELISA and Western blot tests respectively. These awareness levels are low considering the respondents are medical students. Overall, only 77% respondents were aware that HIV positive people can infect others.

Awareness about Voluntary Counseling and Testing Center (VCTC) and Prevention of mother-to-child HIV transmission (PMTCT). Only 20.5% respondents (7% of 1st year and 41% of 2nd year) were aware of the full form of VCTC reflecting the low awareness of Government testing center and the fact that most of suspected cases are being referred to private pathology labs for testing. 73% of respondents are aware of the full form of PMTCT with the second year students having higher awareness.

Opinions towards high risk groups & responsibility of agencies

High Risk Groups

Respondents were asked their opinion as to whether they think certain groups are vulnerable to higher risk of contracting HIV or not. Figure 2 presents the total and year wise response. Overall between74.5% to 99% of the respondents identified the various groups as vulnerable. Notable exceptions were lower percentages of first year respondents identifying Homosexuals (58% for 1st year & 90% for 2nd year), Migrant Labor (60% for 1st year and 94% for 2nd year) and Truck Drivers (61%for 1st year & 88% for 2nd year) as vulnerable.

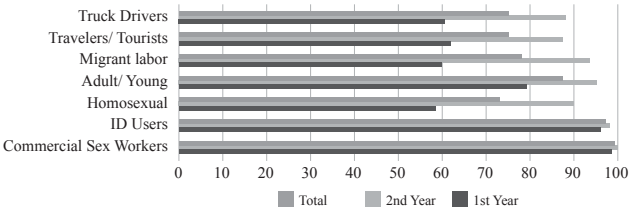

Figure 2. Opinion towards high risk groups

Attitude towards HIV+/AIDS patients

Close ended questions explored the respondents' attitudes towards social stigma and myths regarding PLWHA and their place in society. 91% of students did not think that HIV is due to a 'curse of God'. 66% of respondents (1st year – 89%; 2nd year – 43%) disagreed with statement that HIV patients were of suspect moral character. They also felt that PLWHA were discarded from society (74%; 1st year – 56%, 2nd year – 92%), workplace (77%; 1st year – 75%, 2nd year – 79%) & schools (77%; 1st year – 78%, 2nd year – 76%). This highlights the extent of stigma and taboo associated with the disease.

Responsibility of Agencies

89% respondents were of the view that prevention and control of HIV/AIDS is the individual's responsibility, emphasizing the importance of awareness among general population. Respondents also view the Government (65%), NGOs (57%) & Health Department (69%) as the agencies responsible for prevention of HIV.

Table 2. Responsibility of agencies

Agencies Responsible	1st Year	2nd year	Total
Individuals	83.0%	95.0%	89.0%
Government	59.0%	71.0%	65.0%
NGO/INGO	64.0%	50.0%	57.0%
Health Department	80.0%	58.0%	69.0%

Source of Information about HIV/AIDS

Teachers and Text books (84%) were the top source of information on HIV/AIDS for respondents followed by Friends & Peer Group (77%) and TV (72%). Parents were a source of information only for 53% of the respondents highlighting the need for greater parental involvement in creating awareness for HIV/AIDS.

Table 3. Source of Information

Sources of information	1st Year	2nd year	Total
Teachers & Text book	87.0%	81.0%	84.0%
T.V.	69.0%	75.0%	72.0%
Radio	57.0%	43.0%	50.0%
News paper	60.0%	56.0%	58.0%
Friends & Peer group	80.0%	74.0%	77.0%
Parents	60.0%	46.0%	53.0%
Magazine	54.0%	78.0%	66.0%

Impact of Information on HIV/AIDS and STI on youth

Respondents viewed information on HIV/AIDS as increasing awareness (88.5%) and change in thinking (86%) among youth. Perception of behavior change (63%) though was not as strong.

Attitude & behavior of respondents towards HIV/AIDS factors & patients

100% respondents supported compulsory sex education in schools & colleges, 92% supported commitment to one sexual partner. Respondents view commercial sex workers (92%), girls' trafficking (75%) and migrant husbands (94%) as factors contributing to HIV transmission. Reflecting the reality of a male dominated society 84.5% of respondents think that wives are unable to refuse sex to husbands even when it exposes her to risk of HIV transmission.

Respondents do not support PLWHA people getting married (70%) or having children (61%). Surprisingly 13% of the respondents support the notion that HIV positive people be kept in isolation, and 6% favor banning their entry in school/colleges and workplaces. 81% of respondents favoring isolation and 83% favoring entry ban are from first year and an additional year of education does seem to have a positive impact on their thinking. Complete table of results is provided in Table 4.

Table 4. Attitude and behavior of respondents towards HIV/AIDS factors &patients

Attitude Toward HIV	1st Year	2nd year	Total
Compulsory Sex education in school & college	100.0%	100.0%	100.0%
HIV + people can't marry	61.0%	80.0%	70.5%
Commercial sex worlers are source HIV transmission	84.0%	100.0%	92.0%
Commitment to one sexual partner	84.0%	100.0%	92.0%
HIV+ person should be put in isolation	21.0%	5.0%	13.0%
Girl's trafficking is a cause for HIV transmission	93.0%	57.0%	75.0%
HIV+ person should not have children	74.0%	48.0%	61.0%
Ban on entry of HIV+ person in school/college & workplace	10.0%	2.0%	6.0%
Wife is not able to refuse sex to husband	91.0%	78.0%	84.5%
Housewives are at rick of HIV infection from their migrant husbands	99.0%	89.0%	94.0%

DISCUSSION

Study revealed high awareness levels of HIV/AIDS among the respondents though the awareness of its linkage with STI is an area of improvement. Similar study conducted in India and in other countries among medical students had shown good knowledge and some misconceptions about HIV/AIDS & STI.[6,7]

Respondents displayed a high level of awareness of most transmission causes though transmission between lactating mother & child and non-transmission through tears, sweat & saliva are important areas where awareness should be higher. Low percentage of respondents being aware of vaccination implications of an infected child and breast feeding implications of infected mother is a cause of concern as it impacts infant not just from HIV perspective but general health and nutrition perspective as well.[8,9]

There is very high level of awareness of key preventive measures like use of condoms finding for condom use was similar to the study-knowledge and attitude of students in a Caribbean Medical school towards HIV/AIDS[10-12] and not having multiple sex partners. However lower awareness levels of use of sterilized surgical instruments as a preventive measure and of ELSA & Western blot tests among first year respondents are an unexpected finding.

Overall, respondents have high awareness levels of high risk groups with exceptions of migrants, drivers and homosexuals as vulnerable groups by first year students.[13] When seen along with the HIV transmission risks that migrants' and drivers' spouses face this, becomes all the more critical. However, the much higher level of identification among second year students show that this issue gets resolved with additional education. A British study conducted in Cambridge and London[11,13] students of Cambridge had better knowledge but more negative attitude than London. According to the seniority and clinical exposure the difference in knowledge was also reported in studies conducted in Malasia[14] & Pakistan.[15]

Attitudes towards HIV/AIDS & PLWHA among respondents are also largely positive with 90%+ not seeing the infection as a divine punishment and high awareness of societal challenges that PLWHA face.[16] This point towards a likely empathetic approach when the respondents become practicing doctors, though challenges remain as exemplified by the small minority favoring isolation and entry bans for PLWHAs. Discriminatory behavior by health care service providers against PLWHS has been documented in many countries,[17] in different studies.

Top sources of information on HIV/AIDS for respondents are Teachers/Text Books, Friends/Peer Group and TV. This shows the importance of having sex education as a part of curriculum and the significant influence that TV holds as a media. Parents being a source of information for only 53% of respondents highlight the need for more open discussions on the topic. These data are similar with data of other studies conducted in other countries as shown in .[14,18,19]

Education program on sex and sexually transmitted infection recommended with medical students playing an important

role. Study conducted in Nigeria – systematized HIV/AIDS education for student nurses at the University of Ibadan resulted desirable changes in Knowledge and Attitude.[20,21]

CONCLUSION

Across all the parameters of knowledge, attitude and behavior there is a marked improvement from first year to second year respondents showcasing the important role of an additional year of education. Efforts should be made to increase the baseline scores of first year students on low-scoring parameters. A further extension of this approach would be to strengthen the awareness of HIV/AIDS and challenges of PLWHA in secondary school level education.

Among the first year students efforts should be to clear misconceptions about HIV transmission and social treatment of PLWHA (isolation, entry bans etc) that seem to held by a small minority of students. Also to bridge the gap between knowledge of HIV/AIDS & STIs. As one of the main reasons for the large gap between the estimated and recorded HIV cases in Nepal is theorized to be lack of VCTC awareness and stigma & discrimination, pre-clinical students should be made more aware of the government testing facilities and implications of migrants/drivers being a high risk group. More effort should be made on increasing knowledge level on infected infants especially regarding vaccination and breast feeding.

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