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Assessment and Comparison of HIV Awareness among Medical and Non-Medical Undergraduates

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Abstract:
Context: *Acquired Immuno Deficiency Syndrome(AIDS) is a rampant disease that is plaguing the world today and mainly affects the younger population. Studies done in India also confirm that upto 32% of AIDS cases comprise of adults aged 15-29 years. The spread of HIV in a community is largely determined by the knowledge and attitude of its members. This study was done to assess the awareness regarding HIV awareness among undergraduates and to compare the levels of awareness among the medical and non-medical branches of undergraduates in Mangalore city(South India) in 2013.*
Aims*: To assess and compare the awareness of undergraduate medical and non-medical students in Mangalore regarding HIV/AIDS.*
Settings and Design: *Cross-sectional descriptive study.*
Methods and Material: *This study was carried out among 200 medical and non-medical undergraduates from two selected colleges using questionnaires.*
Statistical analysis used: *Data collected was analysed by frequency,percentage and mean.*
Results: *Most of the students in both the branches of the study medical(46%) and the non-medical (42%)had heard of HIV/AIDS between 10-13 years of age.It was noted that 86% of the medical undergraduates knew the difference between HIV and AIDS while only 57% of the non-medical undergraduates claimed to know the difference. Also,53% medical students over-estimated the prevalence to be between 10-30% while most of the non-medical students agreed that the prevalence of HIV infection in the city was <10%. Only 11% of the medical students knew that there are medications available for HIV in comparison to 22% non-medical students who claimed the same.*
Conclusions: *Though this study revealed an impressive knowledge regarding HIV/AIDS , it also brought to attention some deep-rooted misconceptions and wrong attitudes regarding the disease. Thus, this study demonstrates the need for strengthening our health education system to achieve a significant control in the spread of this disease.*
Key-words:*HIV/AIDS awareness, medical undergraduates, non-medical undergraduates,Mangalore,South India*
Key Messages: *Do our undergraduates know enough to combat the deadly AIDS? This study reveals potholes knowledge and biased attitudes towards AIDS. It is a clarion call to empowering our current health education system.*

I. Introduction

Globally, per year the number of people living with HIV is estimated to be nearly 33.4 million as per the 2008 data. Nearly, 40% of new HIV infection was found among the age group of 15-24 years[1] .In India, overall HIV prevalence continues to reflect the concentrated epidemic situation in the country with 2.3 million people living with HIV/AIDS and estimated adult prevalence of 0.34% (0.25-0.43%) [2].
Hence, it is imperative to continue to gauge the level of HIV/AIDS knowledge at regular intervals so as to provide feedback to health care planners for fine tuning of educational activities. With this background, a study was conducted to assess the level of awareness regarding HIV/AIDS among medical and non-medical undergraduates in the city of Mangalore in 2013.

II. Subjects And Methods

Objective: To assess and compare the awareness of undergraduate medical and non-medical students regarding HIV/AIDS in Mangalore city.

III. Materials And Methods

Source of data: A questionnaire will be circulated among 200 medical and non-medical undergraduates from two selected colleges in Mangalore.

Method of collection of data(including sampling procedure if any): A total of two hundred students(100 each from the medical and non-medical sreams) are to participate and complete the questionnaire after open recruitment of medical and engineering students from the above mentioned two colleges.
Design of the study: Cross-sectional descriptive study.
Duration of the study: The study was carried out in September 2013.
Inclusion Criteria: All the students (aged upto 21 years) of the medical and engineering college who gave consent for research study were included in the study.
Exclusion Criteria: Students who were not willing to participate or refused to give consent for the study were excluded.

IV. Results

Two hundred students agreed to participate and completed the questionnaire after open recruitment of students in the selected two colleges.Thus, we achieved 100 percent of the sample size we set for our study.In the total study population of 200 students, 100 students belonged to the medical undergraduate stream while 100 students belonged to the non-medical undergraduate stream. The mean age of participating students was 20 years. A majority of the students in both the medical(46%) and the non-medical (42%) branch had first heard about HIV/AIDS between 10-13 years of age. 34% among the medical undergraduates and 33% among the non-medical undergraduates had first heard about HIV/AIDS at school.69% in both the branches concurred that they were most at ease discussing these topics with their friends rather than their parents.

It was noted that 86% of the medical undergraduates knew the difference between HIV and AIDS while only 57% of the non-medical undergraduates claimed to know the difference.Upto 94% of the medical undergraduates and 90% of the non-medical undergraduates knew that HIV is spread by infected blood transfusion. It was also noted that 98% of the medical undergraduates answered that HIV infection could spread from mother to child while 88% of the non-medical undergraduates also agreed with the same.Upto 78% medical undergraduates and 74.% non-medical undergraduates could identify common misconceptions regarding AIDS transmission.94% medical and 93% non-medical undergraduates correctly answered that HIV could spread by sexual contact.Most of the students (94%) medical and (78%) non-medical undergraduates agreed that there are ways to protect yourself from HIV infection. Only 6% medical and 4% non-medical undergraduates acknowledged that AIDS patients could be identified by their appearance.

Also,53% medical students over-estimated the prevalence to be between 10-30% while most of the non-medical students agreed that the prevalence of HIV infection in the city was <10%. Only 11% of the medical students knew that there are medications available for HIV in comparison to 22% non-medical students who claimed the same.

Upto 58% medical and non-medical students attributed the rapid spread of HIV to lack of knowledge and 31% medical and 46% non-medical students have acknowledged that they would like more information regarding HIV and AIDS. 34% medical and 59% non-medical students were willing to undergo screening for HIV infection..While a majority of the medical students (35%)preferred to inform a health care center if they came to know that someone they knew had HIV/AIDS, the non-medical students opted to inform a local doctor (31%) or a friend (29%) .Both medical(85%) and non-medical(74%) undergraduates agreed that both men and women were responsible to prevent transmission of HIV during sexual contact .

TABLE 1: Response to questionnaire by medical and non-medical undergraduates

QUESTIONS ANSWERED BY THE STUDY GROUPS	MEDICAL	NON-MEDICAL
Age when you first heard about HIV/AIDS	10-13 YRS (46%)	10-13 YRS (42%)
How did you first hear about HIV/AIDS	Media (48%) School (34%)	Media (41%) School (33%)
To whom do you talk about sex and HIV	Friends (69%)	Friends (69%)
Is there a difference between HIV and AIDS	Yes(86%)	Yes(57%)
How is AIDS spread from one person to another by blood tranfusion	Yes(94%)	Yes(90%)
Does HIV spread from mother to child	Yes (98%)	Yes (88%)
Does HIV spread while eating/drinking from the same plates/cups	No (91%)	No (87%)
Can you get HIV if you wash or change clothes for someone with HIV infection?	No (81%)	No (73%)
Does HIV spread by kissing	No (62%)	No (63%)
Does HIV spread by sexual contact	Yes (94%)	Yes (93%)
Does HIV spread by breast feeding	Yes (77%)	Yes (52%)
Are there ways to protect yourself from HIV infection	Yes (94%)	Yes (78%)
Ways to protect against HIV infection	Protected sex (75%)	Protected sex (70%)
Are there any special groups more often affected with HIV	Yes (57%)	Yes (33%)
Can a person with AIDS be identified by appearance	Yes (6%)	Yes(4%)
How many people in Mangalore are infected with HIV	10-30% (53%)	<10% (45%)
Do you have a friend/relative with HIV/AIDS	Yes (9%)	Yes (7%)

Is there any medicine to cure HIV/AIDS	Yes (11%)	Yes (22%)
How long can HIV infected persons live without medications	5-10 years (36%)	5-10 years (35%)
Why has HIV/AIDS spread so rapidly	Lack of knowledge(58%)	Lack of knowledge(58%)
Have you got enough information on HIV/AIDS	Yes (69%)	Yes (54%)
Would you like to get yourself tested for HIV/AIDS	No (64%)	No (59%)
Would you have children if you were found to have HIV	No (80%)	No (71%)
Whom would you first inform if you found out that someone you know has AIDS/HIV	Health centre(35%) Local doctor(31%)	Local doctor(31%) Friends (29%)
Who is more responsible to prevent transmission of infection during sexual intercourse	Both men and women (85%)	Both men and women (74%)

V. Discussion

A majority of the students in both the medical(46%) and the non-medical (42%) branch had first heard about HIV/AIDS between 10-13 years of age i.e when they were in high school.This factor correlated with the inference that upto 34% among the medical undergraduates and 33% among the non-medical undergraduates had first heard about HIV/AIDS at school.This observation was compared with another study done on preparatory college students in Ethiopia where only 25% had first heard of HIV/AIDS at school[3]. This reflects the effectiveness of school awareness programmes in India. Further, the AIDS awareness and education campaign for high school students in Mangalore was stepped up in 2004 in Dakshina Kannada district following an upward trend in HIV/AIDS cases in the district.

When questioned regarding their comfort levels while discussing sex/HIV with their peers , 69% in both the branches concurred that they were most at ease discussing these topics with their friends rather than their parents. Thus, there was no difference noted among both the groups with respect to this question.

It was noted that 86% of the medical undergraduates knew the difference between HIV and AIDS while only 57% of the non-medical undergraduates claimed to know the difference. This finding correlated with the study done on health care students in Haryana, where upto 82.3% knew the difference between HIV and AIDS[4].Another study done on university students(non-medical) in Kazakhstan showed that only 54% knew the difference between HIV and AIDS[5], which correlated with the findings among the non-medical group in our study.Most of the students ,94% of the medical undergraduates and 90% of the non-medical undergraduates knew that HIV is spread by infected blood transfusion. This observation was compared to a study done among college students in Khammam, Andhra Pradesh , where only 79.03% students knew that blood transfusion could spread HIV [6]. This reflects better general awareness among students in the city of Mangalore.

When asked if HIV could spread from mother to child, 98% of the medical undergradutes answered in affirmation while 88% of the non-medical undergraduates also agreed with the same. These findings concurred with the study done on health care students in Haryana[4], where 94.5% students knew that HIV could spread from mother to child. There was another study done among community college students in Boston, where upto 92% students claimed to know that HIV could spread from mother to child[7].

Upto 78% medical undergraduates and 74.% non-medical undergraduates could identify common misconceptions regarding AIDS transmission. This again reflected better general knowledge and awareness regarding AIDS among the students when compared to the study done on college students in Khammam ,Andhra Pradesh, where only 56.5% students could identify these misconceptions[6]. However, 77% medical undergraduates agreed that HIV could spread through breast feeding while 52% of the non-medical undergraduates concurred with the same.

94% medical and 93% non-medical undergraduates correctly answered that HIV could spread by sexual contact. This finding corroborated with the study done on health care students in Haryana[4], where 98.7% students knew that HIV could spread on sexual contact.

Most of the students 94% medical and 78% non-medical undergraduates agreed that there are ways to protect yourself from HIV infection. Also, most of the study population, 75% medical and 70% non-medical knew that protected sex prevents spread of HIV infection. This showed a relatively disappointing trend when compared to the study on health care students in Haryana[4], where 98.7% students knew that protected sex could prevents transmission of AIDS infection. The Mangalore students also showed a certain degree of lack in awareness when only 57% medical and 33% non-medical undergraduates concluded that there were some special groups more often affected by AIDS. This lackluster awareness was compared to the study on health care students in Haryana, where 72.7% knew of these special groups who had increased susceptibility to contract AIDS[4].

Interestingly,only 6% medical and 4% non-medical undergraduates acknowledged that AIDS patients could be identified by their appearance. This was compared to a study done on college students in Iran[8] and Boston[7] where upto 10% and 79% students respectively agreed that AIDS patients could be identified by their appearance.

Though the prevalence of HIV infected individuals in the Mangalore city is less than 1% , 53% medical students over-estimated the prevalence to be between 10-30% while most of the non-medical students agreed that the prevalence of HIV infection in the city was <10%. Further, only 9% medical and 7% non-medical students acknowledged that they knew a friend/relative with HIV infection. This can be attributed to the strong stigma associated with the disease and affected individuals even among the literate sections of the society.

Surprisingly, only 11% medical students knew that there are medications available for HIV in comparison to 22% non-medical students who claimed the same. When compared to a study done among university student sin Delhi, where only 28.6% knew of anti retroviral medications [9]. This lack of knowledge and awareness is appalling in spite of availability of free anti-retroviral medications in India since 2004.A majority of medical and non-medical students agreed that HIV-infected patients can survive without medications for 5-10 years. This finding also is contrary to the findings from a study done on medical and non-medical students in China, where higher knowledge of antiretrovirals were noted among medical students[10].

Upto 58% medical and non-medical students attributed the rapid spread of HIV to lack of knowledge and 31% medical and 46% non-medical students have acknowledged that they would like more information regarding HIV and AIDS. However , when compared to the study done among college students in Iran, where 94% students wanted more information regarding the disease , the stigma surrounding HIV and AIDS seems more evident in India. Further, only 34% medical and 59% non-medical students were willing to undergo screening for HIV infection. A majority of the students did not want to be screened . When compared to the study done among college students in Ethiopia, where upto 50% requested screening for HIV, the biased Indian social stand on HIV is evident.

A majority of the students also declared that they would not want to have children if they tested positive for HIV. This correlates with their knowledge regarding parent to child transmission of HIV infection . While a majority of the medical students (35%)preferred to inform a health care center if they came to know that someone they knew had HIV/AIDS, the non-medical students opted to inform a local doctor (31%) or a friend (29%) . This can probably be attributed to easier access to a health care centre for the medical undergraduates. Lastly, both medical(85%) and non-medical(74%) undergraduates agreed that both men and women were responsible to prevent transmission of HIV during sexual contact and this responsibility does not lie on any one sex alone.

VI. Conclusion

Though this study revealed an impressive knowledge regarding HIV awareness/AIDS, It also brought to attention some deep-seated misconceptions and wrong attitudes regarding the disease. Thus, this study demonstrates the need for strengthening our health education system to achieve a significant control in the spread of this disease.

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