



Original Research Article

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## Awareness of condoms role in preventing HIV transmission in MMMC students of Manipal.

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### Abstract

**Background:** AIDS stand for Acquired Immune Deficiency Syndrome and is a pattern of devastating infection caused by the Human Immunodeficiency Virus (HIV), which attacks and destroys certain white blood cells which are essential for the body's immune function. In an attempt to eradicate HIV, there is a need to educate people, most especially the youths who are sexually very active. **Objectives:** The objective of the study was to assess the level of awareness among medical students of Second year MBBS of Melaka Manipal Medical College about HIV and its prevention. **Methods:** Questionneria based study with properly validated questions. **Results:** Many students are unaware that oral sex, homosexual and breast feeding are also ways in which HIV can be transmitted. There are 44.03% of females who do not know that oral sex can be a way by which HIV can be transmitted, as compared to male with a percentage of 32.41%. Females have least awareness that homosexuality is a mode of transmission for HIV. **Conclusion:** In the absence of preventive and curative medicines for HIV/ AIDS, there a need to raise awareness, bring about behavioral change in vulnerable segments of society, remove the stigma and discrimination associated with HIV/ AIDS. This is achieved by promoting the preventive and care seeking behaviors among young people especially in medical students.

**Keywords:** Medical students, HIV, Prevention.

### Introduction

Acquired immunodeficiency syndrome (AIDS) has adopted the shape of pandemic in the world. It is a burning public health problem not only in the developed countries but also in the developing world. AIDS stand for Acquired Immune Deficiency Syndrome and is a pattern of devastating infection caused by the Human Immunodeficiency Virus or HIV, which attacks

and destroys certain white blood cells that are essential to the body's immune system. According to UNAIDS (1) more than 70% of people who have contacted HIV live in sub-Saharan African and Asia. Understanding into why people engage in unprotected sex given the severe consequences that it may lead to is of major importance in reducing the global spread of HIV.

HIV prevalence rates are not decreasing as fast as hoped for given the large amount of effort and money spend on HIV prevention. It therefore remains important to gain a better understanding of what specific knowledge and awareness factors have actually increased the use of preventive measures, so as to better focus prevention efforts. In an attempt to eradicate HIV, there is a need to educate people, most especially the youths who are sexually very active. According to Kaiser Family Foundation (2), teens and young adults are in the center of the epidemic because young people ages 15-24 account for approximately half of new adult HIV/AIDS infections and 28% of the global total adults living with HIV/AIDS. Also United Nations Population Fund (3) confirmed that young people are at the centre of the HIV/AIDS epidemic in terms of rates of infection, vulnerability and of the 1.5 billion young people worldwide, 11.8 million are estimated to be living with HIV. It is also reported that every day between 5,000-6,000 young people (ages 15-24) contract HIV and that many of them still lack comprehensive and correct knowledge about to prevent the infection. In HIV education, knowledge is very important. However studies of researchers like Diclement, *et al.* (4) have also reported a poor correlation between knowledge and sexual behavior since knowledge have been shown not to be enough, studies have shown that people practice unsafe sex despite their knowledge of HIV/AIDS. Ignorance about the infection and how the virus is transmitted can generate fear and prejudice towards those who are infected, so the important role of adequate information dissemination, education and communication cannot be ignored.

Available evidence documented that HIV is transmitted through unprotected heterosexual and homosexual relationship, infected blood during transfusion, injections with unsterile needles (intravenous drug abuse) and accidental needle stick injuries, mother to child transmission. Research findings have shown that persons living with STD have three to five fold increases in the risk of being infected with HIV than those who are not having sexually transmitted diseases (5).

Condoms play an important role in HIV prevention. The question is not whether condom

promotion is a successful public health strategy for HIV prevention but how to effectively position the use of condoms within a comprehensive HIV prevention strategy. Condom programming is an integral component in a range of prevention strategies which include informed, responsible and safer sexual behavior exemplified by delayed age of onset of sexual activity, abstinence, condom use and reduction in the number of sexual partners (6).

The present study was designed to assess the level of awareness among medical students of second year MBBS of Melaka Manipal Medical College about HIV transmission and its prevention.

## Materials and Methods

The population under consideration is the students of health sciences of MMMC Manipal. The students of the fourth semester of their studies were approached and asked to participate in the study. The students who filled the questionnaire are our sample and it is considered as convenient sampling. The purpose of the study was explained to all the participants. Information was collected on a pre-designed, pre-tested and self-administered questionnaire. They were informed that the whole exercise was confidential, anonymous, voluntary and purely for research purpose. Questionnaires were distributed to all the students simultaneously during their regular morning classes.

The questionnaires consisted of personal data (excluding names), demographic characteristics and knowledge about HIV/AIDS, its causes, modes of transmission, signs and symptoms as well as their attitudes regarding HIV/AIDS. Each questionnaire took 10 -15minutes to complete.

Awareness level was measured in terms of proportion/ percentage of respondents providing correct answers. Percentages were used to describe the data.

## Results

The results of the study are shown in Table 1 and in Charts 1-4. The survey has been done based on their age group, religion and gender. From the

data collected, most of the students are aware that HIV or AIDS can be prevented. Out of the sample size, there are only 7 students who are not aware that there is no cure for HIV. In the questionnaire, we also surveyed the awareness of the students about the various modes of HIV transmission and correct way of using condoms. Many students are unaware that oral sex, homosexual and breast feeding are also ways in which HIV can be transmitted. The percentage of unawareness for males and females were:

- (i) Oral Sex [38.84 %]
- (ii) Homosexual [14.88 %]
- (iii) Breast Feeding [23.55 %]

There are 39% of females who do not know that oral sex can be a way by which HIV can be transmitted, as compared to male with a

percentage of 29.80%. Females have least awareness that homosexuality is a mode of transmission for HIV. There is a difference of 11.49% between female and male in this case. 27% of females lack awareness of breast feeding in HIV transmission. Out of the methods to prevent HIV, there are 30% female and 24% male students who do not know that sexual abstinence can prevent HIV. Based on our evaluation on the correct way of using condom, only 14 students who know exactly all the steps in correct orders.

There are 45.36% of females think that condom can be used to prevent cervical cancer. The percentage of males in this case is 31.52%. Most of the students know that HIV controls, pregnancy prevention and other STIs preventions are the purpose of condom use.

**Table 1: Awareness of medical students about HIV infection and its prevention**

	Females				Males			
	Yes	No	Not Responded	%	Yes	No	Not Responded	%
1.	4	129	1	3.0	5	102	1	4.67
2	129	5	0	96.26	106	2	0	98.14
<b>3</b>	<b>Modes of transmission</b>							
3a	116	11	7	91.33	100	6	2	94.33
3b	132	2	0	98.50	107	1	0	99.07
3c	4	119	11	3.25	7	98	3	6.66
3d	132	2	0	98.50	107	1	0	99.07
3e	2	120	12	1.63	5	100	3	4.76
3f	100	21	13	82.64	85	20	3	80.95
3g	128	3	3	97.70	100	5	3	95.23
3h	106	19	9	84.8	100	8	0	92.59
3i	75	48	11	60.97	73	31	4	70.19
<b>4 Is HIV prevented</b>								
4a	108	17	9	86.4	97	10	1	90.65
4b	106	24	4	81.53	92	13	3	87.61
4c	21	102	11	17.07	4	101	3	3.80
4d	77	33	24	70	64	32	12	66.66
<b>5. Correct way of using condom</b>								
Correct	6	88	40	6.38	8	88	13	8.33
Wrong	1	3	2	25	5	1	2	83.33
No response	10	60	18	14.28	44	30	14	59.45
<b>6. Personal thoughts of condom use</b>								
6a	97	4	33	96.03	94	1	13	98.94
6b	103	3	28	97.16	94	8	6	92.15
6c	44	53	37	45.36	29	63	16	31.52
6d	95	4	35	95.95	91	4	13	95.78

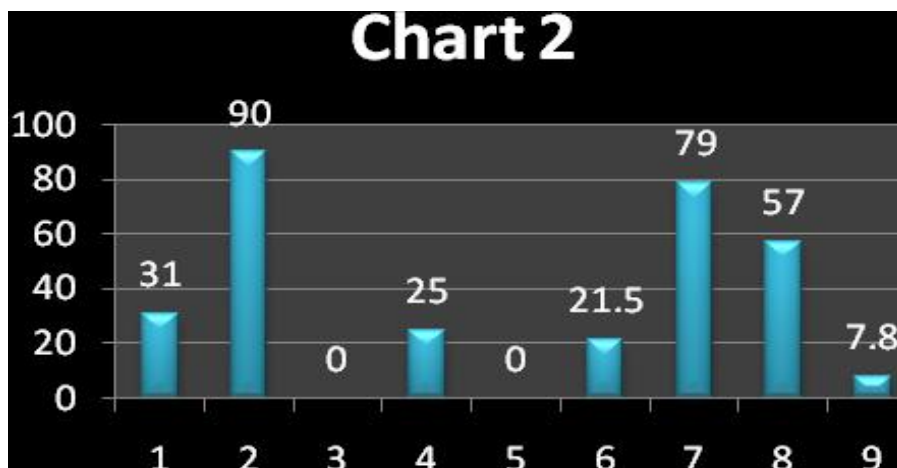
1. Are you aware that HIV or AIDS can be prevented? 2. Are you aware that there is no cure for HIV? 3. Modes of transmission-a) Heterosexual b) Blood transfusion c) Skin to skin contact d) Needle sharing e) Clothes sharing f) Breast feeding g) Mother to foetus h) Homosexual i) Oral sex . 4)Is HIV prevented a) Through correct and consistence condom use during intercourse b) Having one unaffected faithful partner c) By oral contraceptive pills d) By sexual abstinence . 5. Correct way of using condom 6. Personal thoughts of condom use a) Prevents HIV b) Prevents pregnancy c) Prevents cervical cancer d) Prevents STD's

**Chart 1: Number of students having knowledge about the modes of transmission of HIV**



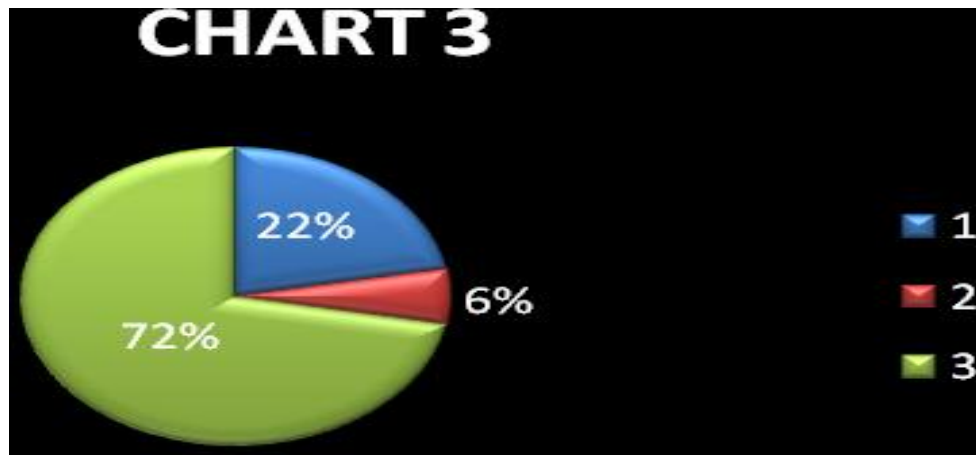
**Keys:** 1. Heterosexual 2. Blood Transfusion 3.Skin to skin contact (intact skin) 4.Needle Sharing 5.Clothes Sharing 6. Breast Feeding 7. Mother to Fetus 8.Homosexual 9. Oral Sex

**Chart 2: Actual percentage of the different modes of transmission in causing HIV**



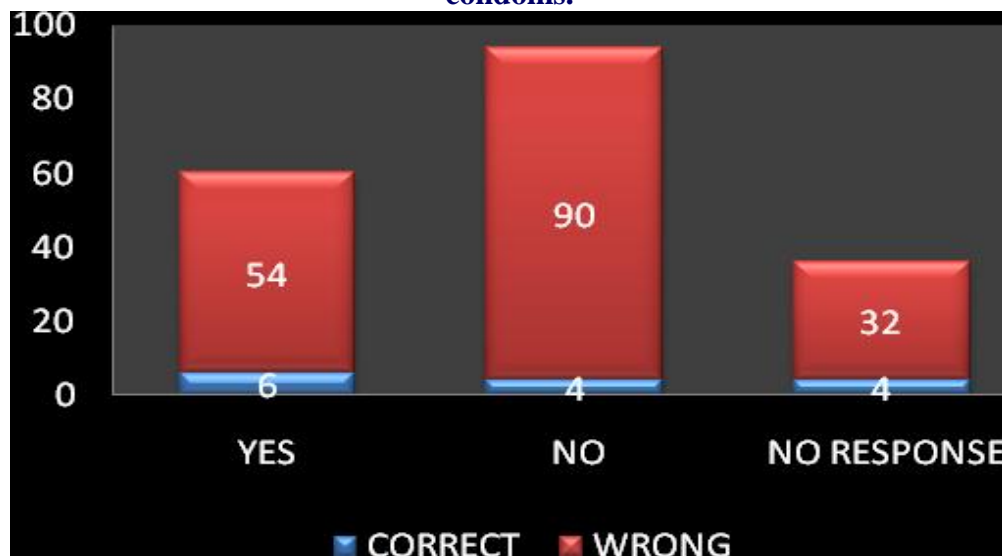
**Keys:** 1. Heterosexual 2. Blood Transfusion 3.Skin to skin contact (intact skin) 4.Needle Sharing 5.Clothes Sharing 6. Breast Feeding 7. Mother to Fetus 8.Homosexual 9. Oral Sex

**Chart 3: Pie chart depicting percentage of students with the knowledge of the correct techniques of using condoms, with no knowledge of the correct techniques of using condoms and who have not responded to the questionnaire.**



**Keys:** 1. No Response, 2. Correct, 3. Wrong

**Chart 4: Students personal evaluation of their own awareness on the correct techniques of using condoms.**



**Keys:** 1. No Response, 2. Correct, 3. Wrong

### Discussion

Amongst the health care professionals, medical staffs and students are an important component of the health care delivery system. Since they are the one who are responsible for the constant care of in-patients and thus, they come in close contact with blood and other body fluids of patients. Due to frequent and prolonged contact, they are being identified as a potential risk group for the HIV/AIDS spread. To reduce the transmission, adequate knowledge about the disease and

practice of safety measures are of great importance. Generating awareness regarding HIV/AIDS in this group is crucial for AIDS management and the prevention of HIV spread.

Based on the fact that AIDS is a scourge for the developing countries, as well as for certain developed countries in our world, and primarily afflicts the age group between 20 and 29. When a study on AIDS-related knowledge was conducted in Atlanta on a population of middle-aged women, the ratio of the number of correct answers

to questions was a mere 3.7 to 9 (7). The sample we used stated that they were informed on matters pertaining to AIDS with a percentage of 96.1%, the majority believed that they were aware of how STDs are transmitted and also held that there was no cure for AIDS. In our study 7 students were not aware of cure of HIV infection and many students are unaware that oral sex, homosexual relationship and breast feeding are also ways of HIV transmission.

A study carried out in Oman on students at medical and non-medical schools found that 94% knew that AIDS is a long-term disease and that preventive measures are available, but no vaccine (8). Of all students included in our study, nearly 80% replied that using condoms is a form of protection, and that there is no danger of contracting the disease by handshake. 94.2% answered in the affirmative to the question concerning the haematogenous transmission of AIDS.

In our study there are 39% of females who do not know that oral sex can be a way by which HIV can be transmitted, as compared to male with a percentage of 29.80%. Females have least awareness that homosexuality is a mode of transmission for HIV. There is a difference of 11.49% between female and male in this case. 27% of females lack awareness of breast feeding in HIV transmission. Out of the methods to prevent HIV, there are 30% female and 24% male students who do not know that sexual abstinence can prevent HIV. Based on our evaluation on the correct way of using condom, only 14 students who know exactly all the steps in correct orders.

However, Khan found significant association of knowledge on AIDS with level of education of Adolescents (9). The present study is consistent with the previous study findings. In fact, education is the pathway of communication for any message. Increased age with increased level of education give an opportunity to have more reproductive health information, more use of health care services and support from peer groups. Another aspect of the study was that adolescents having better knowledge on sexually transmitted diseases had better knowledge on AIDS.

This creates an opportunity for programme implementation in the control and prevention of STDs and HIV/AIDS simultaneously, not in isolation or haphazardly.

## Conclusion

Overall females have less awareness as compared to males regarding condom and HIV prevention. Most of the students do not know the correct way of using condom. The findings of the study clearly revealed that there is significant relationship between students' knowledge of HIV/AIDS and the use of condom as preventive measure. Based on the finding it is recommended that, adequate knowledge about reproductive health, especially sex education should be given priority in our medical schools.

In the absence of preventive and curative medicines for HIV/ AIDS, there a need to raise awareness, bring about behavioral change in vulnerable segments of society, remove the stigma and discrimination associated with HIV/ AIDS and promote preventive and care seeking behaviors among young people.

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