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Original Research Article

Knowledge and Attitude of HIV/AIDS Infection Among Medical Students At The Faculty of Medicine, Taif University, Taif, Saudi Arabia; 2017

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ABSTRACT

Objectives: To assess the knowledge and attitude of HIV/AIDS infection among the medical students of Taif university.

Subjects and Methods: It is a Cross-sectional descriptive study among the medical students at the faculty of Medicine, Taif University. A sample of 284 students was included, (46.8%) males and (53.2%) females. The tool of the study was a self-administered questionnaire, which consists of demographic data, knowledge about HIV/AIDS infection and questions about their attitudes regarding HIV/AIDS infected persons.

Results: The study included 284 medical students. Slightly more than half of them (53.2%) were females and majority of the students were unmarried (73.1%). Majority of students (95.4%) agreed that HIV/AIDS can be transmitted through sexual intercourse and blood transfusion. Concerning mother to child transmission of HIV/AIDS infection, 167 students believed it is mainly in-utero, 194 responded at the time of birth whereas only 142 realized the transmission through breast milk. Majority of them (74.6%) agreed that it can be prevented from use of disposable syringes and (62.0%) of them by screening of blood and blood product.

Conclusion: Thought the general level of knowledge of students about HIV/AIDS was good, they had number of misconception about it.

Key word: Knowledge, Attitude, HIV/AIDS Infection, Medical Students.

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INTRODUCTION

Human immunodeficiency virus infection and acquired immune deficiency syndrome (HIV/AIDS) is a multiple conditions due to infection that caused by human immunodeficiency virus (HIV).[1-3] Initially the patient may not complain of any symptoms or may has symptoms of influenza-like illness for a short period.[4] Typically, this period is followed by a long duration without symptoms.[5] As long as the infection progresses, it interferes more with the immunity of the patient, that increases the susceptibility to get infected of common infections as tuberculosis as well as infections that caused by opportunistic organisms and also may at risk of malignancies that rarely affect people who are immunocompetent.[4] These symptoms of previous conditions are referred to as AIDS.[5] Weight loss often one of the associated symptoms at this stage.[5]

There are three main routes for transmission of HIV :unprotected sexual activity with infected partner, significant exposure to body fluids or tissues of infected patient , and vertical transmitted from mother to child during pregnancy, delivery, or breastfeeding.[6] Some fluids of body, such as saliva and tears, do not transmit HIV.[7] People who exposed to feces, nasal secretions, saliva, sputum, sweat, tears, urine, or vomit these are not at risk of acquiring HIV unless they contaminated with blood.[8] In a condition known as HIV superinfection it is possible to be co-infected by more than one strain of HIV.[9]

Ways to prevent HIV transmission include protected sex, male circumcision, needle exchange programs and treating the patients whose infected with HIV.[4] Antiretroviral medication given to both mother and child to prevent the newborn from infected by HIV.[4] Antiretroviral medications can slow the progression of the disease and may lead to a close to normal life expectancy but there is no curable treatment or vaccine.[5,10]

When the diagnosis is made the treatment is recommended.[11] The average survival rate after infection is 11 years for untreated cases.[12] HIV/AIDS has had a huge impact on community, both as a health issue and as a source of discrimination.[13] The disease also has big financial influence.[13,14] There are many mistaken thoughts about HIV/AIDS for example the belief that non-sexual contact could be one of the routes of transmission.[15]

The total number of all identified cases since the start of 1984 and up to the end of 2013 reach to 20,539 cases, 5,890 of whole cases were Saudis and 14,649 were non-Saudis. In 2013, about 1,777 new AIDS cases were detected, 542 of that number were Saudis and 1,235 non-Saudis. There is an obvious increase in the detected patients of AIDS among Saudis by 26% in 2013, compared to the detected patients in 2012, and by 18% for the, 2011. In 2013, the proportion of females to males of the detected and recorded cases amongst Saudis was around 5:1.[16]

RATIONALE

To implement the development of more effective primary HIV/AIDS prevention programs for young adults in Saudi Arabia, the country needs more educated persons or health care providers**.**

RESEARCH DESIGN AND METHODS

Study Design

A cross sectional descriptive study.

Study Population

Conducted among the medical students at the faculty of Medicine, Taif University.

Sample Size

The total number was 306 medical students, 284 of them fully completed the questionnaire133 males and 151 females.

Time Period

A Two-week period in April 2017.

Inclusion Criteria

All the medical students from the 1st year to the 6th year.

Exclusion Criteria

We excluded 22 subjects for refusal to participate and missing data.

Data Collection Methods

The questionnaire was distributed to all the medical students from the 1st year to the 6th year after explaining the aims of the study and obtaining verbal consents from them.

All subjects were clearly advised that participation in this study was anonymous, voluntary and their personal information are confidential. A self-administered questionnaire was used. The questionnaire was taken from another similar study.[17] It was completely written in the English language.

It consists of three parts. First part included questions about demographic characteristics, second part consisted of questions explore knowledge about HIV/AIDS infection including mode of transmission, high risk behaviors and preventive measures. The third part included questions about their attitudes regarding HIV/AIDS infected persons, sexual behaviors as well as sex education.

Data Analysis

Statistical Package for Social Sciences (SPSS) for Windows version 16.0 was used for analysis. A chi-square tests ($\chi 2$) analysis was performed for the association and/or the difference between two categorical variables. For all statistical tests done, P-value equal or less than 0.05 was considered statistically significant.

Ethical Considerations

Before conduction of the study, all necessary approvals were obtained.

Table 1: Socio-demographic characteristics of the study population (N=284)

Socio-demographic variables		Number	%
Gender	**Male**	133	46.8%
	Female	151	53.2%
Age in years	**19-21 years**	129	45.4%
	22-24 years	138	48.6%
	25-27 years	17	6.0%
Marital State	**Unmarried**	98	73.1%
	Married	34	25.4%
	Divorced	2	1.5%
Academic Years	**1st year**	39	13.7%
	2nd year	44	15.5%
	3rd year	43	15.1 %
	4th year	43	15.1%
	5th year	52	18.3%
	6th year	63	22.2%

Table 2: Knowledge regarding transmission of HIV/AIDS infection (N=284)

Mode of transmission	Yes n (%)	No n (%)	Not sure n (%)
Sexual Intercourse	271 (95.4%)	2 (0.7%)	11 (3.9%)
Blood Transfusion	271 (95.4%)	5 (1.8%)	8 (2.8%)
Close physical contact e.g. hugging, handshaking	18 (6.3%)	241 (84.9%)	25 (8.8%)
Contact with infected sweat, saliva and intact skin	123 (43.3%)	126 (44.4%)	35 (12.3%)
Sharing of utensils	94 (33.1%)	97 (34.2%)	93 (32.7%)
Kissing when oral ulcer is present	210 (73.9%)	34 (12.0%)	40 (14.1%)

RESULTS

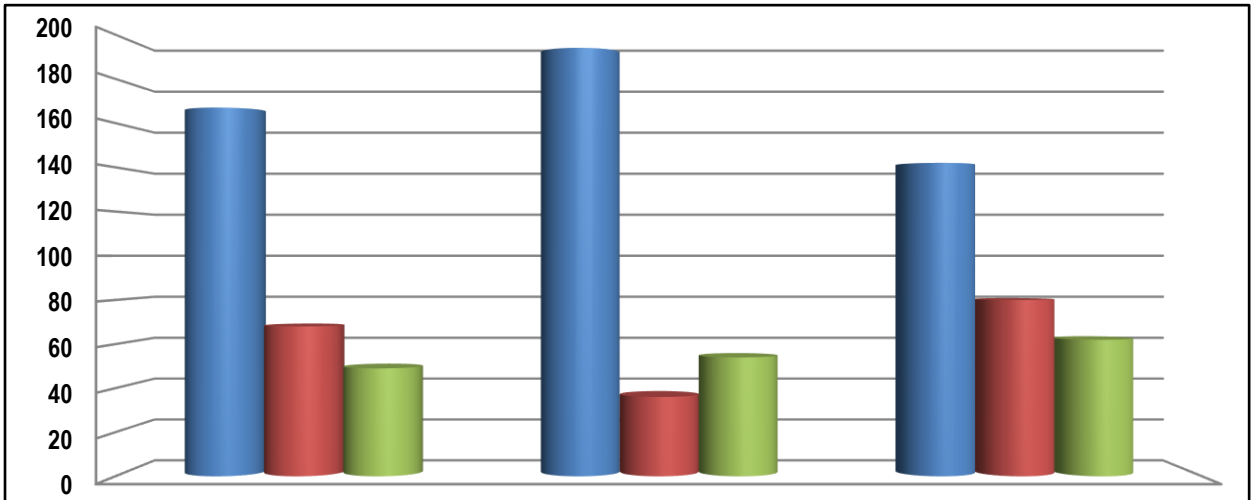
A total of 284 medical students were included in the current study. Their demographic characteristics are shown in the table (1). The participants were 133 males (46.8 %) and 151 females (53.2 %) with the age ranging from 19 to 27 years from the 1st to the 6th years. The majority of the students were unmarried (73.1%).

Table (2) displays the knowledge of students about the modes of transmission of HIV/AIDS infection, majority of students (95.4%) agreed that it can be transmitted through sexual intercourse and blood transfusion followed by kissing when oral ulcer is present (73.9%), contact with infected sweat, saliva and intact skin (43.3%), sharing of utensils (33.3%) and Close physical contact e.g. hugging, handshaking (6.3%).

Concerning mother to child transmission of HIV/AIDS infection, 167 students believed it is mainly in-utero, 194 responded at the time of birth whereas only 142 realized the transmission through breast milk as shown in the figure (1).

As shown in the table (3) persons having multiple sexual partners, Intravenous drug users and Homosexuals were recognized as high risk group of HIV/AIDS infection by 89.4%, 82.0% and 81.7% respectively. However, only 58.1% and 35.9% believed youth and singles as high risk population respectively.

Figure 1: Knowledge regarding transmission of HIV/AIDS from mother to child (N=284)



	In Utero	At the time of birth	Breast Milk
Yes	167	194	142
No	68	36	80
Don't know	49	54	62

Table 3: Knowledge regarding high-risk group for HIV/AIDS infection (N=284)

High risk group	Yes n (%)	No n (%)	Not sure n (%)
Singles	102 (35.9%)	122 (43.0%)	60 (21.1%)
Youth and adolescents	165 (58.1%)	52 (18.3%)	67 (23.6%)
Intravenous Drug Users	233 (82.0%)	18 (6.3%)	33 (11.6%)
Homosexuals	232 (81.7%)	24 (8.5%)	28 (9.9%)
Multiple sexual partners	254 (89.4%)	7 (2.5%)	23 (8.1%)

Table 4: Knowledge regarding prevention of HIV/AIDS infection (N=284)

Prevention	Yes n (%)	No n (%)	Not sure n (%)
Condom Usage	174 (61.3%)	48 (16.9%)	62 (21.8%)
Effectiveness of condoms (60-96%)	148 (52.1%)	66 (23.2%)	70 (24.6%)
Screening of blood and blood products	176 (62.0%)	56 (19.7%)	52 (18.3%)
Use of disposable syringes	212 (74.6%)	28 (9.9%)	44 (15.5%)
Hand washing	71 (25.0%)	169 (59.5%)	44 (15.5%)
Use of facial masks	64 (22.5%)	178 (62.7%)	42 (14.8%)

Table (4) displays the knowledge of the students toward preventive measures of HIV/AIDS infection, majority of them 212 (74.6%) agreed that it can prevented from use of disposable syringes and 176 (62.0%) of them by screening of blood and blood product.

174 students (61.3%) had knowledge that HIV/AIDS transmission can be reduced by condom usage but only 148 students (52.1%) responded correctly the effectiveness of condoms. Ineffectiveness of hand washing and use of facial masks in the prevention of HIV/AIDS transmission were recognized by 169(59.5%) and 178 (62.7%) respectively.

As shown in the table (5); Most of the students disagree with the beliefs that HIV infected persons are dishonorable (51.1%), have bad sexual habits (52.8%), or have extra-marital affairs (39.1%). Showing no sympathy towards HIV/AIDS patients and the concept of unworthy resource allocation for these persons were not acceptable by 51.1% and 65.5% of students respectively. Strongly believed that sex education session were important in reducing the prevalence of HIV/AIDS infection.

In this study, 111 students (39.1%) disagree for condom used on any sexual encounter whereas 206 (72.5%) believed that condom should never be used. Most of them agreed for easy availability of condoms (62.3%) and importance of knowledge on correct condom usage (77.8%) as shown in the table (6).

Table 5: Knowledge and attitudes toward HIV/AIDS patients (N= 284)

Attitudes toward HIV/AIDS patients	Agree	Disagree	Don't know
HIV positive persons are dishonourable	48 (16.9%)	145(51.1%)	91 (32.0%)
HIV positive persons have bad sexual habits	89 (31.3%)	150 (52.8%)	45 (15.8%)
HIV positive persons have extra-marital affairs	76 (26.8%)	111 (39.1%)	97 (34.2%)
No sympathy towards HIV/AIDS patients	53 (18.7%)	145 (51.1%)	86 (30.3%)
It is not worth spending to treat HIV/AIDS patients	45 (15.8%)	186 (65.5%)	53 (18.7%)
Sex education sessions will reduce number of HIV infected persons	239 (84.2%)	16 (5.6%)	29 (10.2%)

Table 6: Knowledge and attitudes of condom usage (N=284)

Condom usage	Agree	Disagree	Don't know
Condom must be used on any sexual encounter	104 (36.6%)	111 (39.1%)	69 (24.3%)
Condoms should never be used	18 (6.3%)	206 (72.5%)	60 (21.1%)
Condoms should be easily available	177 (62.3%)	42 (14.8%)	65 (22.9%)
Sexually active persons should know about correct condom usage	221 (77.8%)	20 (7.0%)	43 (15.1%)

DISCUSSION

In this study we aimed to assess the knowledge and attitude of HIV/AIDS infection among medical students of 19-27 years of age .The medical students are the future health care providers who would be responsible for educating the public regarding HIV/AIDS information, modes of disease transmission, high risk sexual behaviors as well as effective preventive measures. The knowledge and attitudes of this population play a major role in development of more effective primary HIV/AIDS prevention programs for young adults in Saudi Arabia.

In this study, the majority of the respondents (95.4%) recognized the major routes of transmission of HIV/AIDS infection such as transfusion of infected blood and blood products, unprotected sexual intercourse with an infected person. Similar finding is noted among the medical students of University Malaysia Sabah, a public medical school in Malaysia, where 100% had correct knowledge on the previous routes of transmission.[17]

The great majority of students (84.9%) knew that HIV is not transmitted by close physical contact like hugging and handshaking .This finding is consistent with

Another study under the title of Knowledge and attitudes of undergraduate medical and non-medical students in Sultan Qaboos University toward Acquired Immune Deficiency Syndrome where (92.8 %) of students believed that hugging or holding hands cannot spread HIV.[18]

A study done in United States of America among the general population indicated that responses of people with less education are less likely to be correct than well-educated persons.[19] Therefore, we can expected from our target group (the medical students) better knowledge and the responses are more likely to be correct. Surprisingly in this study only (34.2%) and (44.4%) of medical students knew that HIV is not transmitted by sharing utensils and contact through saliva or sweat respectively. On other hand (66%) of undergraduate students in Calabar believed that there is no risk of Sharing sheets, towels and clothing with infected person and (24%) of those students believed that there is low risk.[20] In this study, we noted the weakness of students' knowledge concerning mother to child transmission of HIV/AIDS infection, 167 students (58.8%) believed it is mainly in-utero, 194 (68.3%) responded at the time of birth whereas only 142 (50%) realized the transmission through breast milk. In a study done among the medical students of University Malaysia Sabah, a public medical school in Malaysia, 65.2 % of the students had the knowledge of transmission through breast feeding.[17] Similar result of poor knowledge among the health care providers was mentioned in a study among the traditional birth attendants in Nigeria, in which 62% of them recognized breastfeeding as a possible period of transmission while only 31.5% mentioned delivery as a possible method of transmission.[21]

Regarding kissing an infected person in the presence of an oral ulcer just 73.9% of the medical students gave the correct response. Which show us another area of weakness in knowledge of HIV transmission in our study. The Malaysian study also showed limited knowledge.[17]

Most of the participants in our study acknowledged those with multiple sexual partners intravenous drug users and homosexuals as the high risk population for HIV infection .However only a few categorized singles and youth as high risk group.

Our study shows satisfactory response concerning major preventive measures such as use of disposable needles, screening of blood and blood products and condom usage. In addition majority of the students knew the ineffectiveness of hand washing and use of facial mask in the prevention. Abstinence, faithfulness to one's partner and use of condom as means to prevent transmission of HIV was responded by 84.1%, 60.4% and 41.8% of the students, respectively in a study conducted among high school students in Northwest Ethiopia.[22]

In the present study positive attitudes towards people living with HIV/AIDS (PLHA) were noted. Most of the students disagree with the beliefs that PLHA were dishonorable, had bad sexual habits or extramarital affairs. 51.1% in our study disapproved the concept of no sympathy towards PLHA while 30.3% of them answered "don't know" that maybe due to misunderstanding of the question as it was written in English. Similar positive attitudes are seen in The Malaysian study.[17] In contrast negative attitudes were noted among the senior school students in Iran. Majority of the students believed that PLHA should be isolated in designated institutions; they were deserved to death and should not receive care.[23]

Almost all of the participants in our study agreed for health education sessions to reduce the number of infected persons. This reflects the positive attitude of the students for reducing HIV transmission among the community.

In our study 52.1 % answered the effectiveness of condoms correctly while 24.6% were unsure of the extent of prevention of HIV transmission by the use of condom. Satisfactory response about knowledge and attitudes of condom usages the majority agreed that all sexually active persons should know the correct usage of condoms and the condoms should be easily available .Similar finding is seen in a study in India, where 80% believed that condoms should be easily available and 90% agreed for condom usage in prevention of HIV transmission.[24] In our study There were only 18 students (6.3%) who believed that condom should never be used. 36.6% responded that condom must be used on any sexual encounter, but 39.1% disagreed because of Saudi Arabia is an Islamic country, almost all sexual intercourse will be under the umbrella of marriage and extramarital sex is prohibited.

Knowledge and attitude about HIV/AIDS is important for the medical students and health care providers in general because of the increasing prevalence of this infection. Our study reveals lack of awareness of some areas especially on breastfeeding, sharing utensils and contact through saliva or sweat. To improve students' knowledge we needs more HIV/AIDS related education.

CONCLUSIONS

Knowledge among the medical students was good, although there were some knowledge inadequacies and few minorities of the students held some misconception.

There is a need to consider the basic knowledge of the students about HIV/AIDS and to clear the misconceptions regarding the disease by the medical teachers. Another area that needs to be addressed is the attitude of students towards people living with HIV.

Finally HIV education should be part of curriculum among medical students to prepare health science students to handle HIV/AIDS patients better and also contribute to health education in society.

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