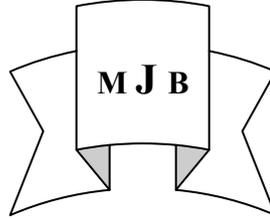


## Knowledge, Attitude and Beliefs of College Students in Baghdad and Mousel / Iraq about AIDS

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### Abstract

The problem of AIDS is being increasingly recognized in the Middle East, and as the disease is fatal and incurable it is important to spread health education messages about prevention and control of the disease which depends mainly on knowledge of mode of transmission of the infectious agent and how to prevent it.

**Aim:** This study aims to identify the level of college students' knowledge and attitudes about the disease and to find out some of their beliefs about it.

**Methods:** this is a cross sectional survey conducted in Baghdad and Mousel among College students as a representative of the educated young adult, males and females. The study sample included 594 students from the 2<sup>nd</sup>, third and 4<sup>th</sup> year. Questions included knowledge about transmission of the disease, and the way to prevent its occurrence, and their beliefs about the most risky group to be infected with that disease and what is their attitude towards infected people.

**Results:** rate for correct response on 70% of questions about knowledge of mode of transmission of the disease was 42.4%. Knowledge of transmission by shared drug injection was 83.3%, by blood 94.4% and by sex 97.3%. As for prevention, 48.5% answered correctly for more than 75% of questions. 97.6% knew that it is prevented by avoiding illegitimate sex, 97.1% said by examination of donated blood and 92.4% said by using disposable syringes. The students believed that the risky group to be infected is women of infected person (82.8%), men who have illegitimate sex (94.9%) and medical and health personnel (62.9%). As for the attitude towards infected people 71.5% of respondents accepted within the community without being isolated in especial places. The source of the students' knowledge was from TV and private readings.

*Key words: Knowledge, students, college*

### معرفة ومعتقدات طلاب الجامعة عن مرض متلازمة العوز المناعي

#### الخلاصة

إن مرض متلازمة العوز المناعي بازدياد في دول الشرق الأوسط، و هو غير قابل للشفاء ولكن من الممكن منع حدوثه وعليه يجب توعية الناس و خصوصا الشباب حول هذا المرض من حيث طريقة العدوى وكيفية الوقاية منه ولغرض التوصل إلى ذلك يجب معرفة أولاً معلومات الناس عن المرض

**هدف الدراسة:** اختبار معرفة طلاب الجامعة عن مرض متلازمة العوز المناعي و التعرف على بعض معتقداتهم حول المرض.

**طريقة الدراسة:** دراسة مقطعية اجريت في مدينة بغداد والموصل وتضمنت طلبة الكليات ليمثلوا شريحة متفقة من المجتمع من كلا الجنسين، كان حجم العينة ٥٩٤ طالب وطالبة من المراحل الدراسية الثانية والثالثة والرابعة. شمل الاستبيان أسئلة حول معرفة الطالب عن طريقة انتقال المرض وطرق الوقاية منه وكذلك أسئلة حول معتقداتهم عن الفئة المعرضة لخطورة الإصابة بالمرض وميولهم تجاه المرضى المصابين بالمرض.

**النتائج:** بلغت نسبة الطلبة الذين اجابوا بصورة صحيحة على ٧٠% من الأسئلة الخاصة بطرق انتقال المرض (٤٢,٤%)، وكانت نسبة الطلبة الذين تعرفوا على انتقال المرض بواسطة الحقن المستخدمة عدة مرات ٨٣,٣%، و ممارسة الجنس ٩٧,٣% و بواسطة الدم ٩٤,٤%. بالنسبة للوقاية من المرض فقد قال ٩٧,٦% من الطلاب بواسطة الاقتنصار على العلاقات الجنسية الشرعية و ٩٧,١% تعرفوا على فحص الدم المعطى للمريض كطريقة مهمة للوقاية و ٩٢,٤% قالوا بوجود استخدام الحقن النبيدة. اعتقد الطلاب ان الرجال الذين لديهم

ممارسات غير شرعية بالجنس هم الأكثر عرضة للخطورة ٩٤,٩% وزوجات الشخص المصاب بالمرض (٨٢,٨%) والعاملين في مجال الطب والصحة (٢٦,٩%). كان مصدر معلومات الطلاب هو التفاز يليه بالأهمية المطالعات الخاصة.

### **Introduction**

The global AIDS epidemic continues to grow and there is concerning evidence that some countries are seeing resurgence in new HIV infection rates which were previously stable or declining. There were 4.3 million new infections in 2006 with 2.8 million (65%) of these occurring in sub-Saharan Africa and important increases in Eastern Europe and Central Asia, where there are some indications that infection rates have risen by more than 50% since 2004[1]. HIV data from North Africa and the Middle-East are very sparse. Best estimates are that around 400,000 adults and children were living with HIV in this region at the end of the year 2000. While adult HIV prevalence is at present low (an estimated 0.2%), recent data from Algeria and Sudan give warning signs that HIV may be spreading into the general population[2]. Conflict, displacement, food insecurity and poverty make affected populations more vulnerable to HIV transmission[3]. Young people may be ill equipped to protect themselves against sexually transmitted infections [4]. There is no cure of this fatal disease, therefore the importance of its prevention through efforts to raise awareness about the disease by health education across media and schools. To make these activities more effective, we need an appraisal of what is known by the youth about the disease and what is their attitude and beliefs as they relate to the disease. Knowledge, attitude, and belief surveys have been carried out in several countries, but they rarely include behaviors because of strong reluctance to discuss sexuality [5].

This paper presents findings of survey conducted among college students in Baghdad and Mousel

Universities for the aim of identifying their knowledge and beliefs about the mode of transmission of the disease and the measures needed to prevent it, also to identify their attitudes towards infected people and some believes.

### **Material and Methods**

The study is cross sectional one carried out in Baghdad and Mousel governorates which are cities with large population in Iraq. Data collection had started from 1<sup>st</sup> of November 2006 to the 30<sup>th</sup> of April in 2007.

Sample size was 594 College students chosen by non-probability convenience sampling to represent the educated young adults both males and females excluding first grade students from the study. Students were both from Medical (163 student) and non Medical colleges (431 student). Data were obtained using a self-completed questionnaire adapted from other survey questionnaires used in previous research [6, 7], and included demographic data about each student enrolled in the study, questions about students' knowledge of mode of AIDS transmission, and the way to prevent its occurrence, and their beliefs about the most risky group to be infected with that disease, also there were questions about the source of their information. Questions of knowledge were restricted to the most important and basic information that should be recognized by every one. A pilot study was conducted six months prior to this study when a 100 college students belonging to two colleges were interviewed to determine the feasibility of such a study and to modify the questionnaire. Data analysis was assisted by the Statistical Package of Social Science (SPSS Inc., Chicago, IL) for Windows version 10.0, and data were

tabulated by frequency tables using percentages. Over all score for correct answer was calculated by estimating the rate of students who answered 75% of questions correctly.

**Results**

The total number of respondents was 594 (242 males and 352 females), the mean for age was 21.7 years, 27.5% of them were medical and health students and 72.5% non medical students belonging to different scientific and literature studies.

The over all score for correct answers about mode of transmission of the disease was 42.4%. Accuracy rate for responses towards these questions differed as shown in table 1, most respondents knew that AIDS is transmitted by sharing drug injection (83.3%) and 97.3% said by having extramarital sex and 94.4% knew that it is transmitted by blood transfusion. Transmission of the disease by tattoo was known to 50.5% of respondents only and 61.6% knew that it is not transmitted by hand shaking or by food (58.6%).

Table 2 shows that the over all score for correct answers about prevention of the disease was 48.5%. Most of respondents knew that blood should be tested before being donated (97.1%), and 97.6% of them said that

avoidance of illegitimate sex will prevent the disease, and 92.4% knew the safety of disposable syringes. Relationship of sterilized water and washing vegetables in prevention of AIDS was important to high percentage of respondents and only 44.4% of them knew that safe water is not related to AIDS and 46.6% knew that clean vegetables are not related to the disease as well.

Table 3 shows beliefs of respondents about the most vulnerable group of people to get infection with AIDS, and it reveals that 94.9% of them believed that people with multiple sexual partners are more vulnerable, and 82.8% believed that wives of infected men are vulnerable as well. Also 26.9% of respondents believed that medical and health personnel are at risk.

Table 4 shows that the attitude towards patients infected with AIDS was positive in 71.5% of respondents, as they were ready to accept them in the community and not keep them in isolated units or institutes

Table 5 shows that students' knowledge came from different sources, television being the most frequent source in a rate of 74.6% followed by private readings in the form of journal and news papers in a rate of 71.5%. Schools provided information for 64% of students and friends 34.5%.

**Table 1** Correct response for questions about mode of transmission of AIDS

Questions about mode of transmission	frequency	%
By food and water	384	64.6
By sharing syringes for injection	495	83.3
Illegitimate sex	578	97.3
Blood transfusion	561	94.4
Flies	359	60.4
Tattoos	300	50.5
Hand shaking	366	61.6

*Rate of respondents who scored correctly for more than 70% of questions was 42.4%*

**Table 2** Correct responses for questions about ways to prevent AIDS

Questions about how to prevent AIDS	Frequency	%
Examine donated blood	577	97.1
Avoid illegitimate sex	580	97.6
Use disposable syringes only	549	92.4
Sterilize drinking water	264	44.4
Wash vegetables thoroughly	277	46.6

*Rate of respondents who scored correctly for more than 70% of questions was 48.5%*

**Table 3** Respondents' beliefs about most risky groups to have the disease

Group of people	Yes %	No %
Medical and health workers	26.9	73.1
Men with multiple sexual partner	94.9	5.1
Wives of infected people	82.8	17.2

**Table 4** Attitude of students towards isolation of patients infected with AIDS

Response	Frequency	%
No	425	71.5
Yes	169	28.6
Total	594	100

**Table 5** Respondent' source of information about AIDS

Source of information	Frequency	%
Friends	205	34.5
Private readings	425	71.5
TV	443	74.6
school	380	64

### **Discussion**

In communicable disease control, we must have an appraisal of what is known by population about a disease, and an assessment of habits and attitudes of people that are related to spread and frequency of the disease, so as to be able to present means to remedy observed deficiencies and teach people to adopt a disease risk-free behavior.

Knowledge of people about transmission of AIDS is very good according to different surveys in different parts of the world and among different educational levels. This agrees

with the findings of the current study; as they have high level of knowledge about correct mode of transmission of the disease. They identified sex especially with multiple partners as an important mode of transmission beside re-use of syringes for injection and blood transfusion. Respondents' high rate of knowledge about AIDS transmission by sex was 97.3%, in other surveys this knowledge was high as well, in Yemen [7], and among Chinese medical professionals and students' [8], and the Pakistani female college students' [9] and the American college students [10]. The

knowledge of Turkish high school students about AIDS was not good as only 59% recognized the correct mode of transmission [11]. Saudi drivers who are of lower educational level had a similar level of knowledge about sex being the most important mode of transmission [12]. The over all mean for the score of knowledge about mode of disease transmission was (42.4%), which is a weak score and is due to high rate of misconceptions about transmission of the disease in spite of the high level of knowledge about the correct mode of transmission. These misconceptions were also prevalent in other communities as Sana'a in Yemen [7], who had similar rate of responses, and also Iranian high school students [13]. Saudi bus drivers had better level of knowledge in this respect as less than 10% of them only said that the disease can be transmitted by touching or eating [12]. Misconceptions about transmission indicate panic of the disease among young adults because reports concerning rapid spread of AIDS in various populations have increased the level of anxiety over contagion among adolescents.

The Joint United Nations Program on HIV-AIDS (UNAIDS) estimates that 2.5 million persons (range, 1.8 million to 4.1 million) became infected with HIV in 2007<sup>[14]</sup>, which is a frightening number that make it necessary to know how to avoid the disease as there is no cure yet. Knowledge about mode of transmission of an infectious disease should enable people to predict how to prevent it; and this was reflected on the very good knowledge of students about abstinence from illegitimate sex, the examination of donated blood and to avoid re-use of syringes as being important means to prevent AIDS, yet the over all score for correct answers was 48.5% because about 40% of them did not know that sterilization of water and washing

vegetables can not prevent the disease. In comparison to results from other studies, 61% of Pakistani college students knew that AIDS can be prevented by avoiding promiscuous sex, and around 70% mentioned avoiding re-use of syringes and examination of donated blood [9].

Respondents had positive attitude towards infected people as 71.5% of them accepted them in their community without the need to isolate them; but in the knowledge questions about 50% of respondents had said that the disease is transmitted by touching or eating and if this is true it makes it dangerous to associate with an infected person. Apparently knowledge of students is not associated with practical and logical attitudes towards infected people and although the attitude is positive it contradict their knowledge. In comparison to other studies, 78% of people in Kuwait refused to let infected people free in the community [6].

The respondents had considered men with multiple sexual partners as the most risky group to get the disease followed by wives of infected people, but medical and health workers were considered at risk by 26.9% of respondents only. Pakistani college students had similar beliefs about people at risk, as they pointed out to prostitutes and men with multiple sexual partners to be at risk while health workers to be of the least risk [9].

Private readings and TV had played the highest role in provision of students' information, followed by school which should be the leading tool in this aspect to teach and guide young people about mode of transmission of the disease and prevention. These were the same findings of other researchers [6, 7]. In China an informational lecture on AIDS had lowered the rate of medical students who were unwilling to sit or work with an HIV-infected person from 43% to 21% after the lecture [8], and that represents the role of the academic

institutes in the implant of the correct knowledge and attitudes towards the disease.

### **Conclusion and Recommendations**

The study shows that students have good knowledge about transmission of AIDS but poor knowledge about what does not transmit the disease, and that media have the highest role in educating the public. And based on the above findings the researcher recommends the followings:

1. Increase the health education programs to include subjects that deal with the peoples' misconceptions about the disease as well.
2. Introduce a subject about health education in all types of studies in colleges to teach students about important health issues with special emphasis on AIDS.

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