

Awareness of High School Students Regarding Modes of Spread and Complications of HIV/AIDS

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Abstract

Background: Worldwide HIV/AIDS is a major public health issue. Since its discovery in early 1980s, scientists have worked hard for its prevention and control. It still continues to haunt human life especially in the developing countries. No country in the world is immune to HIV/AIDS; hence almost all Islamic countries including Kingdom of Saudi Arabia are facing the problem of HIV/AIDS. Health education especially sex education increases the awareness and subsequently decreases the HIV transmission. It has shown promising results in the prevention and control of HIV/AIDS from 35% to 20% in countries like Uganda, and Nigeria through positive influences on knowledge and behaviors.

Objectives: The purpose of the current study was to assess the knowledge regarding the modes of transmission of HIV among high school students at Sakaka-Aljouf in Saudi Arabia.

Results: The majority of students (79%) were aware that blood transfusion from an infected individual could lead to infection by the virus. Similarly, 82%; 79%; 83% respectively knew that sharing contaminated needles and sharp tools; sexual contact and infected mother to infant are also means by which the virus can be transmitted. However, only 66% of the surveyed students were aware that contaminated dental instruments could lead to the transmission of HIV. Over 60% preferred not to discuss and share any information regarding HIV/AIDS with either family members or health care workers.

Conclusion: This survey clearly demonstrated that the majority of the high school students in Sakaka-Aljouf Saudi Arabia were aware of the modes of transmission and complications of HIV.

Keywords: HIV; Awareness; Modes of transmission; KSA

Introduction

Worldwide HIV/AIDS is a major public health issue. The early 1980s, scientists have worked hard for the prevention and control of the disease. Despite progress it continues to haunt human life especially in developing countries [1]. The world continues to debate HIV/AIDS in almost all scientific forums [2]. Currently about 40 million people are living with HIV/AIDS globally. In the year 2003, AIDS killed 3 million people, and resulted in more than 5 million new infections. Summary data from the United Nations Program on AIDS [3] showed that 20 million people have died since the first case of HIV/AIDS [3,4].

No country in the world is immune to HIV/AIDS; hence the Kingdom of Saudi Arabia is no exception. In almost all Islamic countries including Saudi Arabia the actual problem of HIV/AIDS remains poorly defined. There is lack of any authentic data and no availability of published surveillance material on this culturally and religiously sensitive issue. Islam forbids behaviors such as sexual intercourse outside marriage, homosexuality and intravenous drug use, which are the most important routes of transmissions. Based on these religious

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beliefs both the incidence and prevalence of this dreaded disease is expected to be less in countries practicing Islam as their major religion [5].

A study carried out by Madani, *et al.* [5] provided data on the HIV situation in Saudi Arabia from 1984 to 2001 where 6,046 HIV infections were diagnosed. Of these cases; 1,285 (21.3%) were among Saudi citizens and the remaining cases were among expatriates. The authors described that at the time of HIV diagnosis, 600 (12.6%) of non-Saudi patients, and 157 (12.2%) of Saudi patients had the infection. Studies identified that heterosexual contact, blood transfusion; intravenous drug use; perinatal transmission, and organ transplantation were the common modes of transmission of the disease in the Kingdom [5,6]. Comparison of these results was not possible as data regarding HIV/AIDS from neighboring countries was scarce. However, the belief remains that the prevalence of HIV/AIDS in Islamic countries is low [7,8].

Health education especially sex education increases awareness and subsequently decreases HIV transmission. Sex education has shown promising results in the prevention and control of HIV/AIDS from 35% to 20% in Uganda during the years 1992-1996 [9]. Similar results were observed in Nigeria through the positive influences of knowledge and behaviors [9]. The aim of the current study was to assess the knowledge of the modes of transmission and complications of HIV/AIDS among high school students at Sakaka-Aljouf in Saudi Arabia.

Subjects and Methods

This was a cross-sectional study aimed at male high school students at Sakaka city, which is located in the northern part of the Kingdom of Saudi Arabia (Aljouf Region). A multistage method approach was followed which involved interviewing students and collecting data. For family concerns, girls were excluded from the study as well as 2nd year high school boys. All students who participated gave their written consent to participate in the study.

A questionnaire was used for data collection, which was later entered into an excel SPSS V.17 sheet. A descriptive analysis including mean, frequencies and percentages was carried out.

Results

The results regarding the knowledge of students about the methods of HIV transmission as shown in Table 1 indicated that the majority of students (79%), were aware that blood transfusion from an infected individual can lead to the transmission of the virus. Similarly, 82%; 79%; 83% knew that sharing contaminated needles and sharp tools; sexual contact and infected mother to infant are also means by which the virus can be transmitted respectively. However, only 66% of the 100 surveyed students were aware that contaminated dental instruments could lead to the transmission of HIV.

Knowledge	Yes Response		No Response	
	Frequency	%	Frequency	%
Blood transfusion is a mode of HIV transmission	79	79%	21	21%
Sharing needles and sharp tools	82	82%	18	18%
Sexual contact	79	79%	21	21%
Infected mother to infant	83	83%	17	17%
Contaminated dental instruments	66	66%	34	34%

Table 1: Table shows the response of 100 students to the questions regarding the modes of transmission of HIV.

When the students asked about the complications of HIV/AIDS; 71% of the responders indicated that fatigue is a major complication of HIV infection. None the less, only 55% and 68% of these students respectively were aware that TB and death are other complications of HIV (Table 2).

Knowledge	Yes Response		No Response	
	Frequency	%	Frequency	%
Fatigue is a sign of HIV infection	71	71%	29	29%
TB	55	55%	45	45%
Death	68	68%	32	32%

Table 2: Table shows the response of 100 students to questions regarding complications of HIV infection.

Of the 100 students surveyed, the majority 60-67% preferred not to discuss and share their personal information with either family members or health care workers. As seen in Table 3, only 16-23% of the student’s showed any interest to share such information with the parties mentioned (i.e. family and health care workers).

Question	Much	Little	None	Total
Favour to discuss and get information from health care workers.	17%	16%	67%	100%
Favour to discuss and get information from family members.	17%	23%	60%	100%

Table 3: Table shows percentage of students willing to share and discuss information with people around them.

Discussion

As shown in Table 1 of the present survey, it was clearly demonstrated that the majority of the high school students in Sakaka-Aljouf Saudi Arabia were aware of the modes of transmission of HIV. For instance, over 80% of those sampled answered correctly that blood transfusion; sharing needles and sharp tools; sexual contact and infected mothers can all lead to transmission of HIV. A previous study conducted in Saudi Arabia [11] showed that the vast majority of students (94%) were aware that HIV/AIDS could be transmitted through sexual intercourse, 85.4% knew about blood transfusions, and 77.8% recognized sharp blades or needles could transmit infection. These figures are comparable to those reported in the present study.

Investigators in other countries reported similar to higher findings. For instance, in Nigeria Ruma, 2009 [10] presented the following figures for the participants in his investigation regarding the major means by which the disease is transmitted: sexual intercourse (96.7%), use of contaminated needles and syringes (82.5%), and blood transfusion (86.7%). Reports from other African countries such as Tanzania also showed that students were highly aware (90%) of the modes of HIV transmission [12].

In western countries, high levels of knowledge about HIV/AIDS were also reported. In Greece, a substantial percentage (72%) of young students aged 15 years demonstrated a satisfactory degree of knowledge [13]. Koksall, *et al.* [14] in Turkey also presented high scores for high school students; they were fully aware that HIV is transmitted through unprotected sexual intercourse (87.1%), transfusion of blood and its components (95.7%), sharing contaminated needles (84.5%), infected mothers to their infants (76.8%). Despite these findings, lower percentage scores regarding knowledge on modes of transmission by high school students were reported by Ekinici, and Goktas [15] in Turkey. Only 60.7% of their students believed that HIV could be acquired by contaminated needles or injections. Similarly, the figures about knowledge regarding modes of transmission of HIV among Saudi students in the present study showed that only 66% were aware that contaminated dental instruments can be a risk of HIV transmission.

As the source of information about HIV/AIDS among these students was not addressed, it was difficult to predict the main reasons regarding these discrepancies in responses by the students. It has been well documented that education was positively correlated with the awareness level among adolescents about the HIV/AIDS and STDs. Similarly, other researchers have also proven that the level of education significantly improved their scores on general knowledge on HIV/AIDS and diminishing their incorrect perceptions [10,16]. Based on these findings it was hypothesized that improvement in sexual health education concerning HIV given in schools should also guide to safer sexual behavior and awareness of HIV/AIDS among young people [17,18].

Although the students in the present survey were only asked about 3 of the main complications of HIV/AIDS; their response to the questions varied. Of the responders 71% indicated that fatigue is a major complication of HIV infection. However, only 55% and 68% of these students respectively were aware that TB and death are other complications. These figures coincide with those reported from Nigeria. Although, the majorities (96%) of the students were aware of the fact that the disease kills, only 66% of them knew that an infected person may die due to infection by HIV [9]. Similarly students in Turkey (55.7%) responded that HIV carriers do not seem to be ill [15].

Of the 100 students surveyed in the present study, over 60% preferred not to discuss and share issues related to HIV/AIDS with either family members or health care workers. As seen in Table 3, only 16-23% of students showed any interest in sharing such information with the parties mentioned. This is in contrast with findings from other countries in Africa. As stated by Musa, *et al.* [19] approximately 80% of their students reported that the source of information regarding HIV/AIDS was through communication with family members. Though, females were more actively involved than males in these communications. These differences of communications are likely to happen in view of the actual state of HIV/AIDS in these different countries such as; Saudi Arabia and Nigeria in Africa. People in Africa tend to speak more openly about HIV/AIDS, whereas, in Arabic countries the issue of HIV/AIDS is still looked at with suspension and controversy.

Although the findings of the present survey may be influenced by certain limitations of the study design and the available data, it is believed that the results provide a valuable insight into the high school student's knowledge about HIV/AIDS in the northern part of Saudi Arabia. For instance, only boys were surveyed in the study and it would be more appropriate to include girls as well as they represent the second half of the nation. Future research should attempt to address some of the concerns indicated here and to use a larger sample size.

Findings of this study suggested that the students had satisfactory levels of knowledge on transmission and some complications of HIV/AIDS. However, they were uncertain when it comes to sharing their status either with their family members or health care workers. This attitude may be expected in view of the religious and cultural beliefs students may have. Such barriers could be bridged by establishment of education and policy concerning HIV/AIDS in the curricula at high schools.

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