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Assessment of public knowledge towards HIV/AIDS in the Saudi community

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Abstract
Background and objectives: HIV/AIDS is one of the major global health problems. Although the prevalence of HIV in Saudis is low, educational and awareness program could play major role in controlling and preventing the spread of the disease. Present study aimed at to assess the public's general knowledge towards HIV/AIDS among Saudis.
Methods: The present descriptive cross sectional community based survey study was conducted by self-administered questionnaire in Riyadh, Saudi Arabia.
Results: A total of 400 respondents was included in the present study. The mean age was 18.7 ± 5.41 years, education was mostly secondary, 63.8% were single and 53.8% were students. Several misconceptions and erroneous beliefs were found including 53.75% thought that the use of public swimming pools and toilets, 51.25% mosquito bite, 47.5% coughing and sneezing may cause HIV transmission. However, about 90% respondents have shown some good piece of knowledge that contaminated razors and toothbrushes, sexual intercourse without condom, needle addiction, and blood transfusion may cause HIV transmission. 48.75% thought HIV symptoms are similar to flu.
Conclusion: The finding highlighted warrant consideration to increase general knowledge, public awareness and preventive measurement for HIV/AIDS among Saudis.

Keywords: respondents, HIV, AIDS, survey, cross sectional study

1. Introduction

Acquired immune deficiency syndrome (AIDS) caused by the human immunodeficiency virus (HIV), first time identified in 1981 among homosexuals in the United State of America (USA), Since, the beginning of the epidemic, more than 70 million people have been infected with the HIV; of which 35 million people have died of HIV worldwide. Globally, an estimated 36.7 million people were living with HIV at the end of 2015; of these, 0.8 % of adults aged 15-45 years were infected with HIV[1,2].Young people are particularly vulnerable to the HIV pandemic and over 40 % of new infections are among young age ranging15-24 years[3].As per an estimate USA alone, contributing half of all new infections belong to under age of 25 years, of which most of them was sexually infected[4].

Almost 5000 young people in the world infected with HIV per day which add on almost 2 million new infections annuall[5].United nation program on HIV/AIDS reported around 500,000 HIV positive individuals in the Middle East and North Africa region[6].The prevalence of AIDS increases sharply from 87,000 in 2003 to 152,000 in 2005 in the Middle East and North Africa[7,8].

Till know, 22,952 cases were reported in Kingdom of Saudi Arabia (KSA), of which 6,770 cases were Saudis and 16,182 were non Saudis. In 2015, only 1,191 cases were registered in which 436 patients were Saudi while 755 were non Saudi[9].

The low occurrence of AIDS cases in KSA may be related to Islamic culture and its influence on the behaviors of the people residing in this society[10].Omanis has reported the low prevalence of HIV/AIDS and reason suggested was the religious and cultural values[11].Furthermore, the low rate of HIV infection as compared to other societies thought to be associated with conservative culture, which strictly forbids sexual relationships outside marriage[12].

In Saudi Arabia, the prevalence of HIV is more common in male then female with a ratio about 3:1, this might be explained by the large number of males traveling to other countries with high prevalence of HIV. More than 60% of HIV cases reported in KSA have been registered in Jeddah, Riyadh and Dammam. This could be attributed to high populations of these areas, in addition to the presence of illegal sex workers. The majority (46%) of HIV/ AIDS cases reported in Saudi Arabia have been found to be associated with sexual activity while 17% were as a result of blood transmission, 5% through mother to child transmission. However, 29% of the affected population did not know how they got HIV infection, 2% by intravenous drug abuse and 1% by organ transplant[13].

Several factors are responsible for increased incidence of AIDS mainly the risky practices, lack of proper health information, casual attitudes towards premarital sex, media advertisement, fall of traditional and moral values, economic exploitation, regional and national conflicts, mass migration, inconsistence use of condoms and drug of abuse[14,15].The community's awareness and knowledge based program on HIV/AIDS among youth in Saudis can play a crucial role in controlling the disease.

Therefore, it is essential to promote general knowledge, awareness about transmission, symptoms and risk of HIV in young generation before planning appropriate preventive

measures and laws. The present survey study aimed to collect and analyze survey data based on general knowledge of HIV/AIDS among Saudis.

2. Methods

The present cross sectional descriptive study was carried out among respondents who went to medical outpatient clinic of Prince Sultan Military Medical City (PSMMC), Riyadh, at various mall and public places in Riyadh, KSA. The present study was conducted between December, 2015 to June, 2016. A total number of four hundred respondents (n = 400) were included after explaining the objectives and purpose of the study. A questionnaire was designed covering all major aspect of HIV/AIDS. It includes 13 closed ended relevant questions about the basic knowledge, mode of transmission, attitude, preventive measurement and high risk category of HIV/AIDS. It was reviewed by Dr. Magda Bayoumi, Faculty of Nursing, Beni Suef University, Egypt and a panel of experts at Prince Sultan Military Medical City, Riyadh, KSA to ascertain their face and content validity. The tools were also reviewed for clarity, relevance, comprehensiveness, understanding, applicability, and ease for implementation.

The questionnaire comprised of five parts in which Part- A related to respondents demographic background, Part- B on general knowledge related AIDS, Part- C on methods of transmission of HIV, Part -D on symptoms accompanying AIDS and part E on the most susceptible group for the HIV. The respondent less than 13 and above 50 years old were excluded from the study. All information obtained at each course of the study was kept confidential.

3. Statistics

In the present study, the data were analyzed by using excel 2007 version and SSPS for windows version 21.0 (Chicago, IL, USA). Data were sorted on the basis of similarity and matching. Further, grouped data were presented as histograms and Tables. Quantitative data were expressed in mean ± SD.

4. Results

The age of respondents were ranging from 13 to 50 years and the mean age was 18.7 ± 5.41 years (Figure 1). The educational status of the students revealed that 58.8% belong to secondary however, only 1.3 % were from higher education (Figure 2).The prevalence of sex distribution was almost equal for male and female. The major class of the respondents was students (53.8%) followed by employees (40%) and employed (6.25%) as shown in figure 3. More than half of the respondents were single (63.8%) and 36.2% were married as shown in figure 4. When the data for the respondent view about general knowledge and mode of transmission of HIV was analyzed we found several misconceptions and erroneous beliefs. In the present study, 53.75% thought swimming pools and public toilets, 47.5% expected sneezing and coughing, 51.25% mosquito sting and sting of other insects, 19.75% hand shaking 23.8% told AIDS is a hereditary disease. 50% had opinion that HIV infected people are not immunologically compromised, 47.5% were thought that death due to AIDS since from beginning is not in million, 30% thought it's not infectious disease (Table 1). However, some of the questions were well answered, 93.8% stressed that the contaminated razors and toothbrushes, 88.75% drug abuse and homo sexuality 93.35% sexual intercourse without condom, 88.75% blood transfusion, 61.5% HIV infected mother can transmit it to fetus during or after delivery through lactation, 39.75% said dentist tools may transmit HIV (Table 1). In our survey study 45.75% of respondents said that AIDS is the tenth leading cause of death, worldwide, 52.5% said diagnosis of AIDS doesn't depend upon the emergence of symptoms, 36.25 % said symptoms doesn't appear some times for 10 years, 14.5% said there is the time period in which even infected person gives the negative results. In the present survey study, 48.75% thought that it looks like symptoms of flu, fever and headache (Table 2).

The symptoms accompanying AIDS and categories of persons who are most vulnerable for the transmission of HIV were also presented in Table 2. 52.25 % of the respondents said AIDS can affect all age with same degree, 88.75% said homosexual and druggies are most vulnerable to AIDS.

Table 1: General knowledge and perception about AIDS

General knowledge	Yes (%)	No (%)	Don't know(%)
AIDS is as an infectious disease	200 (50)	120 (30)	80 (20)
AIDS can be a hereditary disease	95 (23.8)	215(53.8)	90 (22.5)
AIDS is one of the ten leading causes of death	183 (45.75)	64 (16)	153 (38.25)
Since from beginning total death due to AIDS is in million	180 (45)	190 (47.5)	30 (7.5)
AIDS infected are immunologically compromised	150 (37.5)	200 (50)	50 (12.5)
Mode of HIV transmission			
Sharing of food utensils or meals with infected person	77 (19.25)	215 (53.75)	108 (27)
Hand shaking	79 (19.75)	46 (11.5)	275 (68.75)
Coughing and sneezing	190 (47.5)	40 (10)	170 (42.5)
Mosquito stings and stings of other insects	205 (51.25)	50 (12.5)	145 (36.25)
Using public toilets and public swimming pools	215 (53.75)	46 (11.5)	79 (19.75)
Contaminated razor blades or tooth brush	375 (93.8)	15 (3.8)	10 (2.5)
Drug abuse and homo sexuality can cause AIDS	355 (88.75)	35 (8.75)	10(2.5)
Sexual inter course without condom	375 (93.35)	15 (3.75)	10 (2.5)
Dentist tools	159 (39.75)	131 (32.75)	110 (27.5)
Blood transfusion processes	355 (88.75)	30 (7.5)	15 (3.75)
HIV infected mother can transmit it to fetus during or after delivery through lactation	246 (61.5)	105 (26.25)	49 (12.25)

Figure in parenthesis indicate percent values

Table 2: Symptoms and most vulnerable people for the transmission of HIV

Symptoms accompanying AIDS	Yes (%)	No (%)	Don't know (%)
Some infected personsdo not show symptoms for many years (up to ten years)	145 (36.25)	52 (13)	203 (50.75)
There is a period of time in which infected person infected gives negative result	85 (14.5)	105 (26.25)	210 (52.5)
Diagnosing of HIV infected person does not depend on the emergence of symptoms only	210 (52.5)	40 (10)	150 (37.5)
AIDS symptoms are similar to flu, fever, headache, fatigue, nausea and diarrhea	195 (48.75)	20 (5)	185 (46.25)
Children are susceptible to AIDS through their infected mother	215 (53.75)	75 (18.75)	110 (27.5)
The most susceptible people for the transmission of AIDS virus			
AIDS affects all age groups with the same degree of risk	210 (52.5)	80 (20)	110 (27.5)
Druggies and homosexuals are the most susceptible for AIDS	355 (88.75)	10 (2.5)	35 (8.75)
Children are susceptible to be infected with AIDS from their mothers who are infected	215 (53.75)	75 (18.75)	11(2.75)

Figure in parenthesis indicate percent values

5. Discussion

The present survey study was designed to assess general knowledge, awareness and risk related to HIV/AIDS in Saudi population. Till now, only few survey studies were conducted in Saudi population and data collected so far are not sufficient and conclusive to design any policy[13,16,17].The present survey study may contribute positively to the refinement of HIVcontainment, prevention plans and programs in Saudi Arabia. Our survey study demonstrates, ≤ 20 years old respondents were the highest (40%) in number while 21-30 years old were 35%, 31-40 years old were 21.25% and 41-50 years old were only 2.5% (Figure 1). Further, high school and diploma holders represent more than half (58.8%) of the respondents (Figure 2). The students (53.8%) were higher than the employee and employed (Figure 3). The respondents living single werehigher (63.8%) than married (Figure 4). Our study reflects the general knowledge and perception of youths particularly students about HIV/AIDS. The opinion of these group of people regarding HIV infection are of great importance because of its incomparable contribution in the construction and growth of healthy societies. The young age people is highly vulnerable to HIV because of several reasons including engagement in risky practices, sexually most active, lack of maturity, sexual curiosity, inadequate information etc. Our observations are supported by previous survey studies where lower education and lower age both are reported to be known risk factors in spreading HIV/AIDS[12,18].Since, the most of the respondents are school going thus teachers can play an important role in educating and alert them for dangerous consequences HIV/AIDS. This may contribute in postponing their illegal indulgent in sexual activity. The earlier study also observed that school is a common source of HIV and AIDS information which augers well for school based HIV and AIDS programmes[19,20].Intervention programs providing sex education in school have been reported to result in a marked improvement in the general knowledge of students about HIV/AIDS and were found to be associated with a positive change in their attitude towards the disease[21].In the present era, electronic, print and social media became a major source of obscene, vulgarity, and nudeness which provoke the young generation in their sexual indulgent. At the same time it is also a major source of information for the cause and prevention of HIV/AIDS[18,22].The use of internet and its application particularly Facebook, whatsApp, twitter are very common in young age Saudis. Therefore, mobile applications and social media could be useful in spreading general knowledge and awareness about HIV/AIDS at mass level. The outcome of our study could be used in policy designing to overcome the spread of HIV infection among Saudis.

Our study revealed that Saudis general population has erroneous thought and a lot of misconceptions about HIV/AIDS including 30% respondents told AIDS is not infectious disease, 23.8% responded it is hereditary disorder, 47.5% had opinion that death due to AIDS since beginning is not in million, half of the respondent said HIV infected people are not immunologically compromised. When we examine the knowledge about mode of transmission and prevention of HIV, 51.75% were thought that the use of swimming pools and common toilet, 47.5% expected that sneezing and coughing can also cause HIV transmission (Table 1). Similar to our findings recent reports from Taif University, 55% responded that coughing or spitting, 40% responded that mosquito bite can cause HIV transmission[16,23].

Moreover, some good piece of knowledge were also shown, about 90% respondents were stressed that the contaminated razors and toothbrushes, sexual intercourse, homosexuality and druggies, blood transfusion can increase the risk of HIV/AIDS. These observations are in line with the findings of earlier survey study[24].The question relates with symptoms of AIDS, 48.8 % of the respondents replied it looks like symptoms of Flu and 55% were reported have no idea about high risk people for transmission. Al-Mazrou *et al*.,2005 conducted a survey study in health institutes and colleges in different regions of Saudi Arabia and reported several misconceptions including HIV could be transmitted by food and insect bite[13]. In an another study, half of the respondents were not knowing that there is no cure for HIV infection[25].Similar findings were also reported in Turkish, Yemeni, Egyptian, and Iranian[17,26-31].Taher*et al*., 2011 reported 81.4% of the participants incorrectly believed that there is a cure for AIDS in Egyptians[28].

There is some fairly good background knowledge of Saudis related to symptoms accompanying AIDS. 52.5% participants in this study have correctly identified that diagnosis of the infected person does not depend on emergence of symptoms, 53.75% responded children can be infected through HIV infected mother. However, more than half of respondents thought AIDS doesn't affect all age group with same degree. The homosexual and druggis are thought to be the most susceptible to AIDS.

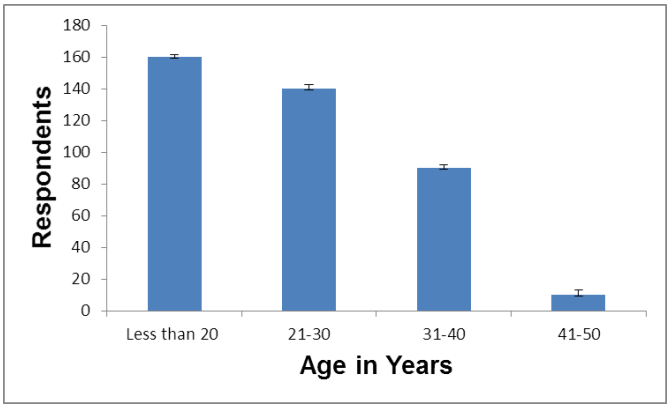

Fig 1: Age distribution of the study population

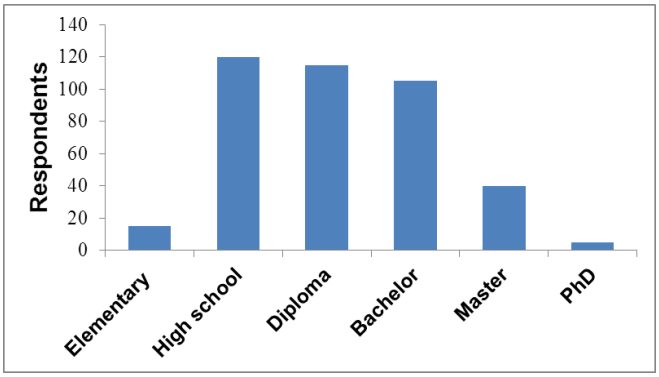

Fig 2: Educational status of the Respondents

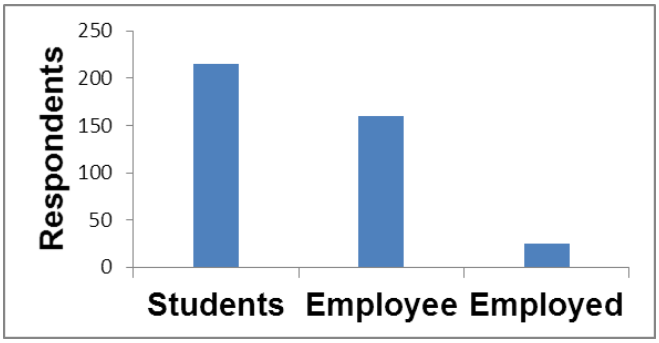

Fig 3: Occupational status of Respondents

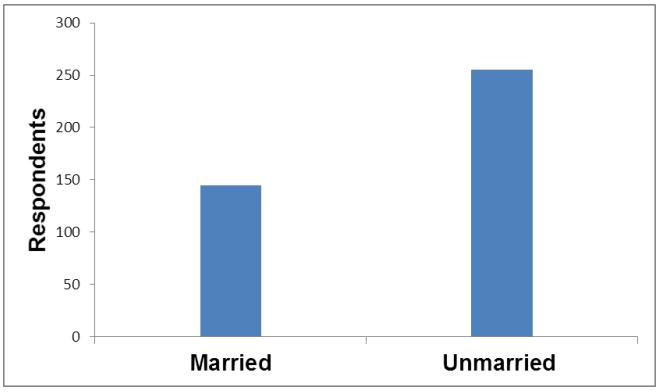

Fig 4: Marital status of the Respondents

6. Conclusion

In our study, youths and students were the major part of respondents whose age was below 20 years and mostly have secondary degree. The majority of the respondents have poor general knowledge and several misconception about transmission ofHIV and its symptoms. This study suggests that the education system needs to implement specific and focused educational programs for general knowledge and awareness among students in school prior to college admission and promote better health education. This will be helpful in removing misconceptions about the disease and improving the general knowledge about HIV infection and its risk in the Saudi population. Further, study with larger number of participants and more relevant questionnaire may strengthen our findings.

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8. Declaration of conflicting interests

The authors declare that they have no conflict of interests.

9. References

1. Al-Mazrou Y, Abouzeid M, Al-Jeffri M. Knowledge and attitudes of paramedical students in Saudi Arabia toward HIV/AIDS. Saudi Med J. 2005; 26:1183-1189.
2. World Health Organization. Global Health Observatory Data. HIV/AIDS. www. who.int/gho/hiv/en. 2015. NICEF. HIV/AIDS Global and Regional Trends. http://data.unicef.org/hivaids/global-trends. 2015.
3. Joint United Nations Program on HIV/AIDS. At the Crossroads: Accelerating Youth Access to HIV/AIDS Interventions. www.un.org/esa/socdev/unyin/documents/aidsunfpa. 28. 2014.
4. Centers for Disease Control and Prevention: Young people at risk: HIV/AIDS among America's Youth. 2002.
5. UNAIDS. Beginning of the end of the AIDS epidemic. The Gap Report.2015.who.int/gho/hiv/en. 2015.
6. UNAIDS. Middle East and North Africa Regional Report on AIDS. Available: ttp://www.unaids.org/en/media/unaids/contentassets/documes/unaidspublication/2011/JC2257_UNAIDS-MENA-report- 2011_en.pdf. Accessed. 2014.
7. Joint United Nations Programme on HIV/AIDS (UNAIDS).World Health Organization (WHO)UNAIDS/WHO-2005.
8. UNAIDS. Middle East and North Africa RegionalReport on AIDS. Available:http://www.unaids.org/en/media/unaids/contentassets/documents/unaidspublication/2011/JC2257_UNAIDS.
9. Ministry health, kingdom of Saudi Arabia, 2015.
10. Obermeyer S. Prevalence of HIV in the Middle East is low but there is noroom for complacency. BMJ. 2006; 333:851-854.
11. Al-Jabri A, Al-Abri. Knowledge and attitudes of undergraduate medical and non-medical students in

Sultan QaboosUniversity toward acquired immune deficiency syndrome. Saudi Med J. 2003; 24:273-277.
12. Fahimi F. Time to intervene: preventing the spread of HIV/AIDS in the middleeast and North Africa. Population reference Bureau. 2007.
13. Al-Mazrou Y, Al-Jeffri MH, Fidai A, Al-Huzaim N, El-Gizouli S. HIV/AIDS epidemic features and trends in Saudi Arabia. Ann Saudi Med.2005; 25:100-104.
14. Chen FP. HIV/AIDS prevent among young people in East and SouthbEast Asia in the context of reproductive and sexual health. Asia Pac Popul J. 2008;23:7-28.
15. Abebe G, Fekadu A. A health concerns and challenges among high school adolescents. Ethiop J Health Dev. 2000; 10:37-40.
16. Zaini RG, Anjum F. Awareness of HIV/AIDS among Female Students Attending College of Applied Medical Sciences at Taif University. Int J Lab Med Res. 2015; 2:104.
17. Al-Ghanim SA. Exploring public knowledge and attitudes towards HIV/AIDS in Saudi Arabia. A survey of primary health care users. Saudi Med J. 2005;26:812-8.
18. Sudha R, Vijay D, Lakshmi V. Awareness, attitudes, and beliefs of thegeneral public towards HIV/Aids in Hyderabad, a capital city from South India.Indian journal of medical sciences. 2005;59:307-316.
19. Nur N. Turkish school teachers' knowledge and attitudes toward HIV/AIDS. Croat Med J. 2012; 53:271-277.
20. Nubed CK, AkoachereJF.Knowledge, attitudes and practices regarding HIV/AIDS among senior secondary school students in Fako Division, South West Region, Cameroon.BMC Public Health. 2016; 16:847.
21. Agrawal H, Rao R, Chandrashekar S, Coulter J. Knoweledge of attitudes to HIV/AIDS of senior secondary school pupils and trainee teachers in Udupi District Karmataka, India. Ann Trop Paediatr. 1999; 19:143-9.
22. Asekun-Olarinmoye EO, Olajide FO, Asekun-Olarinmoye IO. HIV/AIDS Preventive Measures among In-school Adolescents in a Sub-UrbanCommunity in Southwestern Nigeria. actaSATECH. 2011; 4:81-96.
23. A Study on Knowledge and Awareness of Male Students of the College of Applied Medical Science at Taif University. Journal of AIDS & Clinical Research. 2016. DOI: 10.4172/2155-6113.1000574
24. Janahi EM, Mustafa S, Alsari S, Al-Mannai M, Farhat GN.Public knowledge, perceptions, and attitudes towards HIV/AIDS in Bahrain: A cross-sectional study. J Infect DevCtries. 2016;10(9):1003-1011.
25. Al-Mazrou Y, Abouzeid M, Al-Jeffri M. Knowledge and attitudes of paramedical students in Saudi Arabia toward HIV/AIDS. Saudi Med J. 2005; 26:1183-1189.
26. Abolfotouh MA, A Saleh SA, Mahfouz AA, Abdulfotouh SM, A Fozan HM. Attitudes of Saudi nursing students on AIDS and predictors of Willingness to provide care for patients in central Saudi Arabia. SAGE open. 2013; 3:1-11.
27. Badahdah AM, Sayem N. HIV related knowledge and AIDS stigma among college students in Yemen. East Mediterr Health J. 2010; 16:901-906.
28. Taher E, Abdelhai R. Nurses' knowledge, perceptions, and attitudes towards HIV/AIDS: Effects of a health education intervention on two nursing groups in Cairo University, Egypt. J Public Health Epidemiol. 2011; 3:144-154.
29. Montazeri A. AIDS knowledge and attitudes in Iran: results from a population-based survey in Tehran. Patient EducCouns. 2005; 57:199-203.
30. Bhosale SB, Jadhav SL, Singru SA, Banerjee A. Behavioral surveillance survey regarding human immunodeficiency virus/acquired immunodeficiency syndrome among high school and junior college students. Indian J Dermatol. 2010; 76:33-37.
31. Celik M, Arican O, Celikoz-Ozkan D. Turkish Internet users' awareness of and attitudes toward HIV/AIDS and other STDs. ActaDermatoven APA. 2007; 16:13-20.