HIV/AIDS KNOWLEDGE AND ATTITUDE OF ADOLESCENTS TO PREVENT AIDS IN
ISFAHAN CITY

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ABSTRACT

This study assessed the knowledge, attitude of preventive of HIV/AIDS among adolescents in Isfahan city. Method: 250 adolescents were selected by simple randomly sampling from four public high schools (males=130 and females=120). Descriptive statistic was used for the analyzing. Result: Majority, 84.0% of the adolescents were aware of the existence of HIV/AIDS; commonest source of information being electronic media though their knowledge of routes of transmission and modes of prevention of the disease was erroneous and inadequate due to several misconceptions. There was generally an intolerant attitude towards HIV infected people and many adolescents will like to know their status if the test was free. There was poor practice of preventive measures among the adolescents Conclusion: for this purpose we had suggestion provision of free HIV counseling and screening test centers in or high school and college campuses, inclusion of sex education in high school curriculum, and organization of health education/HIV preventive programmes for adolescents.

KEYWORDS: Knowledge, Attitude, Preventive Measures, HIV/AIDS, Adolescents, Iran

INTRODUCTION

Human immunodeficiency virus (HIV) is the etiological agent of acquired immunodeficiency syndrome (AIDS). The illness was described in 1983 and within a quarter of a century, AIDS has become a major health problem worldwide and its world epidemiologic pattern is still disastrous. AIDS is not only a fatal disease but also of socioeconomic burden on both the health system and patients (Mazloomy et al., 2006).

AIDS is an emerging disease which has become known as ‘the plague of the century’ (Tavoosi et al., 2004). Although HIV is on the downward trend in a number of countries, the general trend globally is upward (UNAIDS, 2008, 2010; Nejat et al., 2006), and it continues to challenge human communities with its health, social, economic, cultural, and political consequences.

The HIV/AIDS pandemic is without doubt the greatest health problem challenging science and may remain so for a long period of time (Salako, 2003). While not yet recognized at the onset, the HIV/AIDS epidemic is considered an important health risk for morbidity and mortality among adolescents which should not be disregarded. An estimated 10.3 million young people aged between 15 and 24 are living with HIV/AIDS and half of all new HIV infections- almost 6000 per day occur amongst this age group (United Nations, 2006).

More than 15.2 million children under the age of seventeen had been orphaned by HIV/AIDS in 2005 and this number is expected to double by 2010 (United Nations, 2006). The prevalence of HIV/AIDS among young people varies widely among regions and countries.
According to WHO report, the prevalence rate of HIV/AIDS in Iran has risen from low to concentrated (Center for Disease Control, 2008). The prevalence in the overall population is below 1%; this rate, however, has surpassed 5% in some high-risk groups such as IDUs (Mojtahedzadeh et al., 2008; UNAIDS, 2004).

For effective management and planning on the prevention and control of HIV, it is crucial to attend to the number of people living with HIV (PLHIV) and to identify prime high-risk groups. As well as focusing on the HIV/AIDS epidemic in the country and its longitudinal patterns of changes (Khalili, 2008; Husain et al., 2007; Gouws et al., 2006; Montazeri, 2005; Pisani et al., 2003).

Despite raised awareness of the HIV problem, many countries, including Iran, do not have a clear figure for HIV prevalence. This lack of information can be explained by the longevity of the incubation period of HIV infection before emergence of clinical symptoms and the iceberg features of this disease; concealing the disease due to social stigma; lack of public access to counselling, testing, and HIV/AIDS diagnosis services both in high-risk groups and the general public; underreporting, and/or no reporting; culminating in the identification of only a limited percentage of PLHIV. The limited availability of data in Iran is due partly to the fact that most studies on HIV have been carried out fairly recently (Nasirian et al., 2011).

Based on the data case registry system, a total of 23497 People Living with HIV (PLWH) had been identified in Iran until September 21, 2011: 91.3% of them men and 8.7% women. So far, 3168 of these identified cases have entered AIDS stage and 4419 people were dead. Some 46.4% of HIV infected cases are in the 25-34 age and this is the highest in any age group. (AIDS Control Office, 2011)

The HIV transmission routes in all the cases which have been registered since 1986 are (in order of magnitude) sharing injection equipment among injecting drug users (69.8%), sexual intercourse (10.1%), blood transfusion (1.0%), and mother-to-child transmission(0.9%). The route of transmission among 18.2% of this group is unknown (AIDS Control Office, 2011). In comparison to all reported cases, transmission routes in those reported from 20 March 2009 to 20 March 2010 include IDU, 66.1%, sexual transmission 20.8%, and mother to child transmission 2.5%. In 10.6% of the identified cases in this year, the transmission mode was unknown and no new cases of transmission through blood transfusion were reported (AIDS Control Office, 2011).

The results of a survey in Madagascar showed that 68% of participants in the study did not know that vaginal sex with a properly used condom is low risk (Lanouette et al., 2003). A study of students in the Islamic Republic of Iran demonstrated that the knowledge of students about HIV/AIDS was moderate (Tavoosi et al., 2004) and a study of high-school teachers showed that only 63.3% had a good level of knowledge (Nouhi Siahroudi et al., 2003).

Therefore an important factor fuelling the spread of HIV/AIDS in developing countries is believed to be poor knowledge about how the disease is spread and how it can be prevented.

The aim of this study was to assess the knowledge, awareness and attitude of adolescents in Isfahan city about HIV/AIDS, because adolescents have an important role to play in national strategies towards HIV/AIDS prevention

MATERIALS AND METHODS

The study was descriptive and utilized cross-sectional survey method to gather information about knowledge, awareness and attitude of HIV/AIDS preventive among in adolescents in Isfahan city in Iran. The researchers selected a total of 250 adolescents, (130 males and 120 females) from four high public schools. The aged 13-18 years were evaluated. Data analysis was done using Statistical Package for Social Sciences (SPSS) Version 17. Descriptive statistic was applied
to whether preventive for HIV/AIDS of demographic characteristics, knowledge, awareness of preventive and attitude towards the disease. Simple random sampling was utilized to select four high schools (two male’s schools and two female’s schools) in this study.

A semi-structure pre-tested questionnaire was administered to the high school students to gather information about their socio-demographic characteristics, knowledge about the means of transmission of the infection and modes of prevention of the infection, perception of self-vulnerability to HIV infection and attitude towards HIV prevention, infected people and voluntary counseling and testing, and practice of preventing measures.

**SCORING OF OUTCOME VARIABLES**

**Questionnaire**

The study instrument was a self-administered questionnaire which comprised of four parts. Part A related to respondent’s socio-demographic background, part B on knowledge regarding HIV/AIDS, Part C on AIDS Attitude Scale, and Part D on high risk behavior or practice related to HIV/AIDS transmission.

The knowledge, attitude and practice questionnaire was modified from the instrument used by a survey on HIV/AIDS knowledge, attitude & practice (KAP) reported by the Department of Education, Free State South Africa (2006) which was adopted from the WHO AIDS Questionnaire (WHO 1990). Knowledge was assessed using a 31-item questionnaire which includes knowledge on ways of infection, myths, disease detection and progression, and treatment and prevention of HIV/AIDS. Attitude was assessed using a 10-item questionnaire on attitude towards HIV/AIDS and with HIV/AIDS patients.

The questions on high risk behaviors had 11 items related to unprotected sex and needle sharing. Prior to the survey, the questionnaire was pre-tested to assess its clarity, sequencing and time needed to complete. Pre-test of questionnaire was done on twenty adolescents who were chosen to ensure that the questions are easily understood. The result of the pre-test was used to improve the phrasing of questions in the questionnaire. Questionnaire validation tests showed that the Alpha Cronbach was 0.87 for knowledge, 0.71 for attitude and 0.72 for risk behaviors.

**Scoring**

For knowledge, each right response was given a score of 1 while a wrong or unsure response was scored 0. Total knowledge scores can range between 0-31. Knowledge scores from 0 to 15 were considered as poor knowledge while knowledge scores more than 15 was considered as having good knowledge regarding HIV/AIDS. Attitude towards HIV/AIDS patients was assessed using a 10-item questionnaire where attitude scores between 0 to 5 were considered as negative attitude, and scores 6 to 10 were considered as positive attitude. High risk behavior or practice was assessed using an 11-item questionnaire where report of at least one negative behavior related to HIV transmission is considered as having high risk behavior.

**RESULTS**

Table 1 shows adolescents’ knowledge of routes of transmission of HIV. Needle sharing (76.8%), blood transfusion (83.2%), sexual intercourse (84.8%), Breast-feeding (78.8%), Mother to child (72.8%), Sharing of clothing (80.8%) were the most known routes of transmission of HIV among the adolescents.
Table 1: Adolescences’ Knowledge of the Routes of Transmission of HIV/AIDS

<table>
<thead>
<tr>
<th>Routes of Transmission of HIV</th>
<th>Knowledgeable Frequency (%), N=250</th>
<th>Not Knowledgeable Frequency (%), N=250</th>
</tr>
</thead>
<tbody>
<tr>
<td>Needle sharing</td>
<td>192 (76.8)</td>
<td>58 (23.2)</td>
</tr>
<tr>
<td>Blood Transfusion</td>
<td>208 (83.2)</td>
<td>42 (16.8)</td>
</tr>
<tr>
<td>Sexual Intercourse</td>
<td>212 (84.8)</td>
<td>53 (21.2)</td>
</tr>
<tr>
<td>Breast-feeding</td>
<td>197 (78.8)</td>
<td>38 (15.2)</td>
</tr>
<tr>
<td>Mother to child (vertical transmission)</td>
<td>182 (72.8)</td>
<td>68 (27.2)</td>
</tr>
<tr>
<td>Sharing of clothing</td>
<td>202 (80.8)</td>
<td>48 (19.2)</td>
</tr>
</tbody>
</table>

Table 2 shows adolescence’ knowledge of preventive measures against HIV/AIDS needle sharing (70%), use of condoms (83.2%), health education (78.8%), abstinence from sex (84.8%) and faithfulness (75.2%), personal hygiene (80.8%) were the commonly known preventive measures.

Table 2: Adolescences’ Knowledge of Preventive Measures of HIV/AIDS

<table>
<thead>
<tr>
<th>Preventive Measures of HIV</th>
<th>Knowledgeable Frequency (%), N=250</th>
<th>Not Knowledgeable Frequency (%), N=250</th>
</tr>
</thead>
<tbody>
<tr>
<td>Needle sharing</td>
<td>175 (70)</td>
<td>75 (30)</td>
</tr>
<tr>
<td>Use Condom</td>
<td>218 (83.2)</td>
<td>42 (16.8)</td>
</tr>
<tr>
<td>Health education</td>
<td>199 (78.8)</td>
<td>53 (21.2)</td>
</tr>
<tr>
<td>Abstinence from sex</td>
<td>212 (84.8)</td>
<td>38 (15.2)</td>
</tr>
<tr>
<td>Faithfulness</td>
<td>188 (75.2)</td>
<td>68 (24.8)</td>
</tr>
<tr>
<td>Personal hygiene</td>
<td>217 (86.8)</td>
<td>48 (13.2)</td>
</tr>
</tbody>
</table>

In this study 62.4% of adolescents believe that HIV/AIDS is curable while 37.6% did not know whether it is curable or not. Perceived curative measures among these adolescents include drugs, herbs, surgery, prayers/miracles and native charms.

Table 3 shows the distribution of adolescents according to categories of knowledge of HIV/AIDS transmission and prevention, attitude towards and practice of HIV/AIDS prevention. Two hundred and eleven (84.4%) adolescents were categorized as having good knowledge, while 63 (25.2%) and 71 (28.4%) were deemed to have poor attitude towards HIV/AIDS and poor practice of preventive measures respectively.

Table 3: Adolescences’ Knowledge of Attitude towards and Practice of HIV Preventive Measures

<table>
<thead>
<tr>
<th>Variables</th>
<th>Frequency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td></td>
</tr>
<tr>
<td>Good</td>
<td>211 (84.4)</td>
</tr>
<tr>
<td>Poor</td>
<td>39 (15.6)</td>
</tr>
<tr>
<td>Attitude</td>
<td></td>
</tr>
<tr>
<td>Good</td>
<td>187 (74.8)</td>
</tr>
<tr>
<td>Poor</td>
<td>63 (25.2)</td>
</tr>
<tr>
<td>Practice</td>
<td></td>
</tr>
<tr>
<td>Good</td>
<td>179 (71.6)</td>
</tr>
<tr>
<td>Poor</td>
<td>71 (28.4)</td>
</tr>
</tbody>
</table>

DISCUSSIONS

HIV knowledge among the adolescents was high 84.4%. This is similar to the findings among secondary school students elsewhere in Nigeria (Okediji et al, 1989; Fawole et al, 1999; Anochie et al., 2001; Ayankogbe et al., 2003; Oyo-Ita et al., 2005; Asekun et al., 2011) but it is contrary to the finding from other developing countries where low awareness of HIV has documented (Dassir et al, 2003).
Majority of adolescents were fairly knowledgeable about the various routes of transmission, however, almost some of the adolescents have some misconceptions about HIV route of transmission.

Furthermore, adolescents also exhibited various other misconceptions about preventive measures. For example, personal hygiene, prevention of drug addiction, sex relating other people was some of the preventive measure identified by the adolescents.

These knowledge gaps were consistent with other HIV studies carried on in other parts of the world (Goodman and Cohall, 1989; Hingson et al., 1990a; Maticka-Tyndale et al., 1994; Asekun et al., 2011).

Our results showed that 84.4% of adolescence knew that sexual contact is a method of HIV transmission. This agrees with the results of other studies (13–17), such as the Tanzania DHS survey which showed that 80% of participants knew that the disease could be transmitted through sexual contact (Tanzania DHS survey, 1993).

Similar negative attitudes towards PLWHAs have been documented elsewhere corroborating our findings (Anahita et al, 2004; Lawoyin, 2007). Discrimination against PLWHA impacts negatively on HIV preventive measures and most especially on voluntary counseling and testing (VCT) since people may be overly concerned about who will see their test results and what can happen to them especially when there is no universal ARV treatment (Asekun et al., 2011).

The negative attitudes towards HIV were not surprising, as one could reasonably assume that the misperceptions and misconceptions were in part responsible for the negative attitude towards HIV/AIDS. This finding is consistent with observations about adolescent adolescents in other studies (Walrond et al., 1992; Lau and Tsui, 2005).

Our data show that 85% of participants had previously received HIV and AIDS information, from radio and television. In Madagascar 88% of participants’ information was from radio (Lanouette et al., 2003). In another Iranian study, most information was from television (Tavoosi et al., 2004). In a study in Yemen, television was the most common source of information (Al-Serouri et al., 2002) Agrawal et al (1999) showed that the media are important for disseminating knowledge on HIV/AIDS in India.

Thus it is imperative that the educational counseling in the HIV/AIDS prevention programme/campaign is correct and in-depth, so that person and societal obstacles that impede AIDS prevention efforts (i.e. misconceptions, stigma and discrimination) will become limited. It is also essential that provide social work trainer, individuals and organizations involved in future intervention programmes for this target group tackle these misconceptions if the millennium goals are to be achieved.

One of the major factors causing the spread of HIV/AIDS in Iran is the failure to accept the gross reality of the pandemic; the acceptance of prevention messages depend largely on the degree to which the target population actually feels that AIDS is a real threat to them. This low perception of self vulnerability to HIV infection is significant as it may likely influence the attitude of the adolescents towards risky sexual behavior and uptake of preventive measures. It should be a major point of focus in mass media health/HIV prevention campaigns among this target group.

CONCLUSIONS

The study found high level of HIV knowledge and awareness (84.4%) of route of transmission and prevention though misconceptions about means of transmission. Our results showed that 84.4% of adolescents knew that sexual contact is a method of HIV transmission. The failure to perceive HIV/AIDS as a personal risk has prevented majority of the youths from making commitment to sexual behavioral change. The adolescent’s attitudes also in this study were good (74.8%). Our data show a direct relationship between adolescence’ knowledge of HIV/AIDS and a positive or supportive
attitude toward HIV/AIDS. To achieve success, it is important that adolescence’ knowledge, comfort, and support be taken into consideration during both the development and implementation phases of school-based programmes.

Today’s youths are still vulnerable to HIV/AIDS, better methods of distributing information, education and communication about HIV/AIDS which is very well synchronized with their lifestyles is urgently needed as well as effective and creative strategies to reach and attract these groups. The most important method is youth’s participation in thinking, designing, implementing programmes for their own target group.

We suggestions that HIV prevention campaign should be strengthened by including a comprehensive HIV education into the high school curriculum and employing behavior change communication strategies for this target group. HIV counseling and testing centers should be made accessible to these in sub-urban and rural areas at free/affordable cost.

REFERENCES


