January 2007

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Recommended Citation
Available at: http://ecommons.aku.edu/pakistan_fhs_mc_chs_chs/155
Knowledge and beliefs of Adolescents regarding Sexually Transmitted Infections and HIV/AIDS in a rural district in Pakistan

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Abstract

Objective: To assess the knowledge and beliefs of adolescents (15-19 years girls and boys) regarding sexually transmitted infections (STIs) and HIV/AIDS.

Methods: A community based cross-sectional survey was conducted in October 2002 in a rural district (Mirpurkhas) of Sindh province, Pakistan.

Results: A total of 428 adolescent girls and boys were interviewed. Only 44% correctly named at least one STI, while 55% knew at least two modes of transmission for HIV/AIDS. Adolescents with education greater than or equal to secondary level, those who were able to read the newspaper, possessed electricity in their homes and were allowed to meet their friends once in six months had significantly more HIV/AIDS knowledge.

Conclusion: We conclude that rural adolescents of Sindh need more knowledge regarding STIs including HIV/AIDS. There is a need to formulate strategies to raise the levels of awareness and knowledge among adolescents regarding these conditions. Our findings indirectly support the use of mass media and peer education strategies to provide factual information to adolescents (JPMA 57:8;2007).

Introduction

Acquired immune-deficiency syndrome (AIDS) has emerged as a global pandemic. An estimated 5 million people are living with HIV/AIDS around the world. Asia is second only to Africa for HIV infections.1 Pakistan, with an estimated 78,000 persons infected, has until now been considered a low prevalence, high-risk area.1,2 A recently released study showing high prevalence in high risk groups in urban areas of Lahore and Karachi, reveals that we now have a "concentrated epidemic".3 Risk is associated with: red light areas visited by traders, truck drivers, and travelers, re-use of syringes, low literacy, high fertility, low barrier contraceptives use; pockets of intravenous drug abuse; and use of unscreened blood in healthcare.4 Small-scale studies, reviewed elsewhere, give useful information on selected groups5-8 with potential to transmit HIV to the general population.2 More systematic studies are now underway or being planned.3 Ultimately, the concentrated risk now observed among high risk urban groups poses a risk to others in our population, such that there is accordingly a need to assess the state of awareness, beliefs and knowledge in all areas of the country, so as to contribute to the development of evidence-based prevention strategies. In particular, to prevent the spread, information and education initiatives are needed. Effective strategies require estimates of baseline knowledge, attitude and practices.

Most knowledge and behavioral patterns acquired during adolescence last a lifetime and impact adult health. As 22-25% of Pakistan's population is adolescent9, dissemination of preventive measures is key to population health. Although HIV/AIDS studies have been conducted among college students these do not represent Pakistani adolescents, as the vast majority never reach college.10-13 Our study surveys knowledge and beliefs of adolescents from a rural area, regarding STIs, HIV and AIDS and their associated factors.

Methods

A cross-sectional survey was conducted in October 2002 in all three talukas (subdistricts) of rural district Mirpurkhas, Sindh. Based on alpha 0.05, power 0.8, and anticipated odds ratio 2, a sample of 380 was calculated and after inflating by 10% for non-response, the sample size was taken as 418. However, due to the availability of the respondents, 428 were interviewed. Applying Probability Proportionate to Size, villages were randomly selected from each taluka. Within each village, taking the rural health centre as center-point, every third house was selected using the right-hand rule. One adolescent (male or female) aged 15-19 years, resident for over a year, was interviewed from each house. Where more than one adolescent was in the household, selection was done by lottery. Because only girls were available at houses during daytime, selected male adolescents were interviewed where located during the day (e.g. street, shop, field). For villages with insufficient houses, the adjacent village was used to complete the sample. A structured, pre-tested interviewer-administered questionnaire was used for data-collection.
The dependent variable was HIV/AIDS knowledge. Mentioning at least two modes of transmission was classified as "having knowledge". Data were edited and double-entered in Epi-info version 6. Analysis utilized the Statistical Package for Social Sciences version 10. Multivariate analysis determined the effect magnitude of independent variables.

**Results**

A total of 428 adolescents (227 boys and 201 girls) were interviewed. Socio-demographic characteristics (Table 1) showed 162 (38%) of adolescents as employed, and 126 (29%) with no formal education. Irrespective of educational status, 126 (78%) boys and 112 (56%) girls were able to read newspapers. Twenty-two percent of girls and 7% of boys were not allowed to meet friends; 64% boys and 73% girls stated having never seen a movie with friends, and 4% boys and 11% girls had never visited a city (Table 2).

Sixty-two percent knew that sexual contact can transmit disease. However only 44% correctly named at least one sexually transmitted disease (STD). Sixty-nine percent had heard of HIV/AIDS and 55% knew at least two modes of transmission; 19% believed that AIDS is curable while 52% would seek treatment from a doctor/clinic if infected. HIV/AIDS information was derived from friends.
In Pakistan, mean age at marriage is 26.5 years for men and 22 years for women, lower for both sexes in rural areas, and higher for educated women. In our Mirpurkhas sample, early marriage was common (21% before 19 years), and associated with low literacy (29% illiterate); only 11% had intermediate or higher levels of education.

Sixty-nine percent had heard of HIV/AIDS while 55% knew at least two transmission modes. This unexpectedly high level of awareness may relate to media access (the major source for 28%), while 26% obtained information from friends. The fact that the National AIDS Control Program has started a media campaign may also be influencing our population. Adolescents able to read newspapers were 2.2 times more knowledgeable than those unable to read. In settings where the topic of sex is taboo (particularly for females), and not openly discussed, mass media plays an important role. For example, HIV media campaigns in Uganda played a major role during the 1990s, when HIV prevalence among young women declined.

Regarding STIs, 62% were aware of sexual transmission. However, for 44%, AIDS was the only STI they were aware of. Adolescents with intermediate or higher education were 3.6 times more likely to have knowledge of HIV/AIDS than illiterate adolescents. Adolescents meeting friends once in six months were 2.3 times more knowledgeable than those not meeting. Studies show that peers discuss personal matters and significantly disseminate information.

Our study had limitations. Despite systematic sampling, haphazard village housing may have lead to some inappropriate selections. Sensitive issues like premarital sex could not be addressed in this setting. While confidentiality was attempted, friends accompanied some adolescent boys during interview, which could lead to contamination and information biases. Because a guardian's consent is required when enrolling children under 15 years of age in surveys, the views of younger adolescents were not surveyed.

Conclusion

Adolescents from this rural district need more knowledge regarding STIs, HIV and AIDS. Knowledge is associated with education and literacy, promotion of which therefore appears critical. Equally important to disease prevention is that knowledge which is both complete and correct reaches adolescents through media, and shared among peers. Our findings indirectly support the use of mass media and peer education strategies to provide factual information to adolescents.

Acknowledgements

The department of Community Health Sciences, Aga
Khan University, provided financial support for the study. We acknowledge Iqbal Azam, Agha Ajmal, Naila Baig, Ambreen Kazi, Rashid Baloch, Talib Lashari and M Raheel Minhas for their assistance.

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