

Knowledge, attitude, and perception of disease among persons living with human immunodeficiency virus/acquired immuno deficiency syndrome: A study from a tertiary care center in North India

Mrinal Gupta, Vikram K. Mahajan, Pushpinder S. Chauahn, Karainder S. Mehta, Ritu Rawat, T. N. Shiny
Department of Dermatology, Venereology and Leprosy, Dr. R. P. Government Medical College, Kangra (Tanda),
Himachal Pradesh, India

Address for correspondence:

Dr. Vikram K. Mahajan, Department of Dermatology, Venereology and Leprosy, Dr. R. P. Government Medical College, Kangra (Tanda) - 176 001, Himachal Pradesh, India. E-mail: vkm1@rediffmail.com

Abstract

Background: Although modification of behavioral practices among human immunodeficiency virus (HIV)-affected patients is important in decreasing HIV disease transmission, the knowledge, attitude, and perception studies about HIV infection rarely include persons living with HIV/acquired immuno deficiency syndrome (AIDS). **Aims:** To assess knowledge, attitude, and perceptions of persons living with HIV/AIDS for the disease and other epidemiological aspects. **Materials and Methods:** One-hundred and fifty consecutive persons living with HIV/AIDS were enrolled for this questionnaire-based cross-sectional, descriptive study. **Results:** These 150 patients comprised 93 men and 57 women, aged between 14 and 78 (mean 37.13) years. The majority, 112 (74.67%) patients were between 20 and 50 years of age and 116 (77.3%) patients were either illiterate or high-school dropouts. Drivers, laborers, and self-employed comprised 69 (46%) patients among affected males. Only 129 (86%) respondents had heard about HIV/AIDS and knew about its heterosexual transmission. Ninety-eight (65.3%) respondents were aware of disease transmission from infected blood or needle pricks. Interestingly, 106 (70.7%) respondents were aware of the importance of using condom in preventing disease transmission. Television/radio was the most common sources of information for 135 (90%) patients. Nearly, 69% respondents disfavored disclosing their disease to friends/colleagues fearing stigmatization. **Conclusions:** Information, education, and communication activities are imperative to educate persons living with HIV/AIDS about life-long nature of the disease, modes of its transmission, and significance of preventive measures to bridge the gaps in their knowledge. While improvement in individual economic status, education, and health services remains highly desirable, mass media can play a pivotal role in creating awareness among masses.

Key words: Acquired immuno deficiency syndrome, condom, heterosexual transmission, Himachal Pradesh, human immunodeficiency virus

INTRODUCTION

Human immunodeficiency virus (HIV) infection is one of the most serious public health problems worldwide particularly among developing nations

of Africa and South-East Asia. The estimated number of persons living with HIV/acquired immuno deficiency syndrome (AIDS) in India

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was 20.89 lakhs, with an estimated adult prevalence of 0.27% in 2011.^[1] Although the disease prevalence is low, India still houses the third largest HIV-infected population in the world after South Africa and Nigeria. Since specific behavior patterns are associated with high risk of transmission of infection, it is imperative that persons living with HIV/AIDS have adequate knowledge of different modes of its transmission and overall impact of the disease on personal and social health of an individual. Adequate knowledge and accurate information about HIV infection and its ultimate outcome are also important both for the general population and HIV-infected persons in particular for bringing a behavioral change and preventing the transmission of infection. This will not only reduce the risk of HIV transmission to the uninfected but also prevent other secondary infections and coinfections such as hepatitis B and tuberculosis as well. Identification of correlates of poor knowledge, casual attitude, and wrong perceptions among affected persons will also help in planning interventions to reduce HIV transmission. HIV-related knowledge among uninfected persons and at-risk groups (antenatal women, drivers, and commercial sex workers) or certain population cohorts (students, youth, slum dwellers, and general population) delineating a positive correlation between knowledge of HIV and risk reduction behavior has been well studied.^[2-8] However, there is a paucity of literature on the level of knowledge, attitude, and perceptions of persons living with HIV/AIDS *per se* as they are rarely included in such studies despite being a primary source of infection for the susceptible population.^[9,10] This study assesses the knowledge, attitude, and perceptions of persons living with HIV/AIDS in Himachal Pradesh, a small hill state of Northern India.

MATERIALS AND METHODS

All HIV/AIDS-affected patients attending outpatient/inpatient dermatology clinic during October 2013 to September 2014 were enrolled for this questionnaire-based, cross-sectional, descriptive study. Children aged <14 years and severely ill patients were excluded from the study owing to their inability to comprehend or respond to the questionnaire. After informed written consent and assuring confidentiality, they were asked to answer a predesigned, structured questionnaire in their native language. The questionnaire had two parts with the first section for their sociodemographic details and the second section comprised questions aimed at assessing their knowledge, attitude, and perception for the disease [Tables 1 and 2].

Table 1: Baseline characteristics of patients studied

Baseline characteristics	Number of patients (%) n=150
Gender	
Males	93 (62)
Females	57 (38)
Male:female	1.63:1
Age (years)	
Range (mean)	14-78 (37.13)
<20	10 (6.7)
20-50	112 (74.7)
>50	28 (18.7)
Social background	
Rural	118 (78.7)
Urban	32 (21.2)
Occupation	
Men	
Drivers	34 (36.6)
Laborers	18 (19.4)
Self-employed	17 (18.3)
Government employed	14 (15)
Defense personnel	06 (6.5)
Students	04 (4.3)
Women	
Homemakers	51 (89.4)
Students	06 (10.5)
Education status	
Under 10 th standard/school dropouts/illiterates	116 (77.3)
10 th standard or more	34 (22.7)
Mode of disease acquisition	
Heterosexual	138 (92)
Mother to child (vertical)	04 (2.7)
Blood transfusion	02 (1.3)
Unknown	06 (4)
Sources of information for the disease	
Health personnel	97 (64.7)
Television	82 (54.7)
Radio	53 (35.3)
Newspaper	31 (20)
Family and friends	28 (18.7)
Books	19 (12.7)
Internet	4 (2.7)
No information	21 (14)

RESULTS

These 150 patients comprised 93 (62%) men and 57 (38%) women, aged between 14 and 78 (mean 37.13) years. Their baseline demographic features are shown in Table 1. The majority, 112 (74.7%) patients were of 20–50 years age group and 118 (78.7%) patients were ruralites. The most, 116 (77%) respondents were either illiterate, under matric, or school dropouts. The majority, 69 (74.2%) patients were drivers, staying-alone laborers, and self-employed among males whereas

Table 2: Results of questionnaire on human immunodeficiency virus/acquired immuno deficiency syndrome knowledge, attitude, and perception

Questions	n=150 (%)		
	Number of yes	Number of no	Number of don't know/no response
General			
Have you heard about HIV/AIDS?	129 (86)	21 (14)	0
AIDS is caused by a virus	32 (21.3)	26 (17.3)	92 (61.3)
HIV weakens the immune system	66 (44)	23 (15.3)	61 (40.7)
Modes of transmission			
By unprotected sexual intercourse	124 (82.7)	7 (4.7)	19 (12.7)
Using infected needles and syringes	98 (65.3)	19 (12.7)	33 (22)
Using infected blood	106 (70.7)	18 (12)	26 (17.3)
From infected mother to the child	58 (38.7)	29 (19.3)	63 (42)
From breast milk to the child	34 (22.7)	27 (18)	89 (59.3)
By sharing personal items	40 (26.7)	69 (46)	41 (27.3)
By kissing	32 (21.3)	62 (41.3)	56 (37.3)
By holding/shaking hands	8 (5.3)	94 (62.7)	48 (32)
By living together	17 (11.3)	79 (52.7)	54 (36)
By using public toilet	13 (8.7)	73 (48.7)	64 (42.7)
By coughing or sneezing	41 (27.3)	72 (48)	37 (24.7)
By insect/mosquito bite	46 (30.7)	60 (40)	44 (29.3)
By infected razors/blades	56 (37.3)	39 (26)	55 (36.7)
Modes of prevention			
By complete abstinence	24 (16)	77 (51.3)	49 (32.7)
By using condoms	106 (70.6)	16 (10.7)	28 (18.7)
By avoiding any physical contact	43 (28.7)	62 (41.3)	45 (30)
By separating personal items	28 (18.7)	68 (45.3)	54 (36)
By avoiding smoking, alcohol, drugs, etc.	51 (34)	67 (44.7)	32 (21.3)
Cure of the disease			
Do you think it is curable?	38 (25.3)	61 (40.7)	51 (34)
Do you think it is curable with early treatment?	47 (31.3)	55 (36.7)	48 (32)
Do you think it is preventable by vaccination?	18 (12)	37 (24.7)	95 (63.3)
Attitude			
Would you tell your disease status to your family?	76 (50.7)	39 (26)	35 (23.3)
Would you tell your disease status your friends and colleagues?	11 (7.3)	104 (69.3)	35 (23.3)
Would you take care of your spouse and family normally?	98 (65.3)	8 (5.3)	44 (29.3)
Would you keep your clothes and utensils separate from other family members?	28 (18.7)	74 (49.3)	4 (32)
Would you attend social gathering and interaction as before?	111 (74)	7 (4.7)	32 (21.3)

HIV=Human immunodeficiency virus; AIDS=Acquired immuno deficiency syndrome

51 (89.5%) women were homemakers. Heterosexual contact was the most common mode of disease acquisition in 138 (92%) patients. While 2 (1.3%) patients implicated past blood transfusion and vertical transmission observed in 4 (2.7%) patients, none of the patients had acquired the disease from homosexual or intravenous injection route. Analysis of the questionnaire [Table 2] revealed that 129 (86%) patients had heard about HIV/AIDS, and 66 (44%) patients were aware that it weakens the immune system. Although only 32 (21.3%) patients knew that it is due to a virus, 124 (82.7%) knew that disease could be transmitted by unprotected sexual intercourse. Among other causes, 106 (70.7%) patients considered transmission from transfusion of infected blood and 98 (65.3%) patients considered

infected needles, and syringes are the cause. Only 58 (38.7%) and 34 (22.7%) respondents, respectively, were aware of transmission from an infected mother to her unborn child or that from breastfeeding. On the other hand, 46 (30.7%) patients believed insect/mosquito bites, 40 (26.7%) patients considered sharing of personal items (towels, utensils), and 56 (3.3%) patients thought infected razors/blades are its other transmission routes. Nearly, 131 (87.3%) patients also considered public toilets, coughing/sneezing, hugging/kissing, shaking hands, and living together as other modes of disease transmission. The majority, 106 (70.7%) respondents were aware of prevention of HIV/AIDS from use of condoms but only 24 (16%) favored complete abstinence as a preventive measure. Surprisingly, 43 (28.7%) patients

and 28 (18.7%) patients, respectively, also believed that avoiding physical contact and separating personal items would prevent disease transmission. Avoidance of smoking, alcohol, and drugs was also considered useful in preventing disease transmission by 51 (34%) patients. Sixty-one (40.7%) patients knew that the disease is incurable at present whereas 47 (31.3%) patients considered it curable with early treatment. While 87 (58%) patients were comfortable in sharing their disease status with family, friends, and colleagues, 104 (69.3%) patients were not comfortable with sharing such information with them fearing stigmatization. The most patients were not hesitant to take care of their family and social interactions as before.

Television and radio were the major source of information for 135 (90%) patients followed by health personnel for 97 (64.7%) patients, respectively [Table 1]. Newspaper and books or family and friends were not the common information sources. Twenty-one (14%) patients had no source of information regarding the disease, a significant number of patients were also in the group of “don't know/no response” respondents.

DISCUSSION

Despite an impressive 57% decline in annual new HIV infections in adults from 2.74 lakhs in 2000 to 1.2 lakhs in 2011, India still house a large number of HIV-infected people with Andhra Pradesh, Maharashtra, Tamil Nadu, and the Northeast states topping the list.^[1] Himachal Pradesh with approximately 70- lakh population has an estimated 8000 (approximately) people living with HIV/AIDS (adult prevalence 0.17%).^[11] Although the antiretroviral therapy (ART) significantly slows down the disease progression, a definitive cure of HIV remains elusive despite significant advances made in HIV therapeutics during the last few decades. Apart from high-risk behaviors and practices, poverty, poor availability of health facilities, low education, and ignorance for various aspects of HIV/AIDS increases the vulnerability of population to the disease. Taraphdar *et al.*^[10] made similar observations in all their patients. Sudha *et al.*^[8] noted nearly 80% and 75% of general population interviewed were aware of HIV/AIDS and its transmission from unprotected sexual contact, respectively. Factors such as low education and rural background have been associated with low HIV/AIDS-related knowledge and increased high-risk behavior in another study.^[9] Goswami *et al.*^[2] also observed that 22% of illiterate pregnant women had heard of HIV/AIDS as compared to 99% of literate women. Only 32% of general population

interviewed in another study was aware of its cause being a virus.^[8] Nearly 54% of 400 adolescent girls from slum area were unaware of the modes of disease transmission.^[5] Kalasagar *et al.*^[7] observed that 45% of males and 62% females considered sexual contact, contaminated air or water, mosquito bite, and fomites as modes of disease spread. Although 82–86% respondents had heard of the disease and were aware of sexual mode of its transmission, the rural background, low education, high-risk occupations (drivers, stay-alone laborers, and defense personnel), and general ignorance were the common sociodemographic features in our studied population. Our 21.3% respondents knew that a virus causes this disease, and 44% had the knowledge that it weakens the immune system. Most of the respondents in our study were also aware that blood transfusion (70.7%), infected needles/syringes (65.3%), or infected razors/blades (3.3%) could transmit the disease. Surprisingly, a sizeable minority also held a view of disease transmission from living together or sharing personal items (26.7%), insect/mosquito bites (30%), coughing and sneezing (27%), or other modes such as public toilets, hugging, and shaking hands. Such misconceptions and lack of awareness about disease transmission in our study population are perhaps from their low education and poor general awareness. This is also evident from the fact the newspapers/books were not the major source of information for them.

The use of condom for safe sexual practices and disease transmission is highly important and its preventive role remains undeniable. In addition, it helps the HIV-affected persons to lead a socially normal life once the misconception of being a source of infection to the family no longer exists. Similarly, awareness of incurable nature of the disease will be precluding. However, awareness for preventive importance of condoms was noted in only 47% of HIV-infected patients interviewed by Taraphdar *et al.*^[10] whereas 56% males and 71% females in another study held a view that HIV is curable by Western or traditional Indian medicine.^[7] More than 70% of our patients knew the importance of condom use but only 40% of the respondents were aware of the incurable nature of the disease and 31% thought that early initiation of appropriate treatment is curative. This suggests level of their better awareness reflecting positively on information, education, and communication (IEC) activities in the state. It is also evident from our observations that health personnel remain significant source of information for 97 (64.7%) patients. Nevertheless, a sizeable

number of patients were also of the view that keeping personal belongings separate, avoidance of physical contact, and avoidance of smoking and alcohol are also preventive. The problem of social stigma and discrimination of HIV/AIDS patients within the family or at workplace can be gauged from the fact that 48% males and 60% women slum dwellers in Chennai preferred outcasting them from the community.^[7] This can lead to HIV-affected persons to live in isolation and causing great psychosocial distress. Although 58% respondents in our study were comfortable in discussing their disease with family and willing to take care of them or attend social gatherings, 69% of the respondents were reluctant to disclose their disease status particularly to friends/colleagues fearing discrimination at workplace/society. Mass media (television, radio) remains the most common sources of information for our 135 (90%) patients and in previous studies as well.^[8,10] This highlights the pivotal role that mass media can play in generating awareness for various aspects of disease among general population and the patients alike or in eliminating its stigma.

CONCLUSIONS

It is obvious that ART alone will not be enough to contain HIV epidemic or achieving the global target of “zero new infections, zero AIDS-related deaths, and zero discrimination.” It needs to be supplemented with adequate information, education, and counseling of the HIV-affected population. They must be encouraged to adopt safe sexual practices and behaviors to prevent further transmission of the disease among the susceptible uninfected population. Since modification of behavioral practices among HIV-affected patients is important in decreasing HIV disease transmission, it becomes imperative that persons living with HIV must be aware of the disease and its various epidemiological aspects indicating increasing need to scale up IEC activities. While improvement in individual economic status and education and health services remains highly desirable, mass media can play a pivotal role in creating awareness among masses.

Limitations

Small number of respondents and lack of follow-up assessment for postcounseling behavior change and awareness levels are some of the limitations.

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Conflicts of interest

There are no conflicts of interest.

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