

# KNOWLEDGE, ATTITUDE, AND PRACTICES (KAP) STUDY ON HIV/AIDS AMONG HIV PATIENTS, CARE GIVERS AND GENERAL POPULATION IN NORTH-EASTERN PART OF INDIA

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## ABSTRACT

**Background:** HIV, the disease, whose mode of transmission is known and is largely preventable, but due to lack of knowledge and practices about HIV/AIDS in general population causes its rapid spread.

**Aims & Objective:** To assess and compare the knowledge, attitude and practices about HIV in patients group, care giver and in general population.

**Material and Methods:** A total of 102 HIV/AIDS patients, 60 care givers (35 attendant, 19 nurses, 6 doctors) and 40 general population (control) were included in the present study. The patients who were registered for study were followed up for three visits. The responses were recorded on a pre-designed and pre-tested, semi- structured questionnaire.

**Results:** Illiteracy was more common in HIV patient group (27.5%) . A high proportion of HIV/AIDS cases were engaged in transport/ production industry (24.5%). Electronic media and print media are major source of information. 35.3% patients, 22.9% care givers and 47.5% general population group thought that with medication HIV is curable. Sexual contact (63.8%) was the commonest mode of transmission. 80.0% medical staff thought that a newly diagnosed HIV person, first to talk with doctor. After 6 month follow up: 82% patients write sexual contact as major mode of transmission, and Use of condom was most important preventive measure (68%).

**Conclusion:** Understanding the KAP about HIV/AIDS of Patients, care givers and in general populations will help us in formulating strategy for prevention and treatment.

**KEY-WORDS:** KAP; HIV; Care Givers; Medical Staff

## Introduction

HIV/AIDS epidemic has emerged as one of the most serious and enormous health problems within about two decades in India.<sup>[1]</sup> HIV, the disease, whose mode of transmission is known and is largely preventable, but due to lack of knowledge and practices about HIV/AIDS in general population makes it rapid spread in our country. Widespread ignorance, poor information and misconceptions about the disease in society are responsible to cause in social stigma and discrimination and stigmatization. Understanding about the knowledge, attitude and practices about HIV/AIDS of people having HIV/AIDS (source of infection), care givers(including patient attendant and medical staff) and in general populations will help us in formulating strategy for prevention, treatment and improving compliance to treatment

of HIV/AIDS. Most of the KAP study done either in general population or in high risk group (including care givers).<sup>[2-5]</sup> HIV/AIDS patients are source of infection and they must know about various modes of transmission of HIV and ways of protection against it. So, in this study we plan to assess and compare the knowledge, attitude and practices about HIV in patients group, care giver and in general population.

### Objectives:

1. To study the knowledge, attitude and practices about HIV in HIV patients, care givers of HIV/AIDS patients and care giver of non HIV patients.
2. To study the social stigma and discrimination attached with disease at family and hospital levels.

## Materials and Methods

The study was carried out in hospital of Institute of Medical Sciences, Banaras Hindu University, Varanasi, India. A total of 102 newly registered confirmed HIV/AIDS patients attending the "Infectious Disease section / ART clinic" for the first time as OPD patients were included in the present study. To study the knowledge about HIV/AIDS and attitude towards patients, one closest adult person (total 35 attendants) accompanying the patient were included in the study. The closest person may be family member, relatives or friends. To assess the attitude of medical staff towards HIV/AIDS patients, 19 nurses and 6 doctors who providing care to HIV patient in ward were also included in the study. As a control group, 40 patient attendant (non HIV patient) coming to other OPD (surgery, radiology, orthopaedics, nephrology, cardiology etc.) were included in the study. All the routine investigations especially CD4 cells estimation were done. Pre-test and post-test counselling was done to all such patients. The patients who were registered for study were followed up for three visits. One closest attendant of HIV/AIDS patients was also interviewed. The interview was done in a private place. The responses were recorded on a pre-designed and pre-tested, semi-structured questionnaire. The interview with male patients was conducted without any assistance, however, in case of female patients; assistance of female counsellor who was always present within the

clinic was sought, particularly for questions related to sexual behaviour. The informed consent was obtained before initiation of the interview. Study was approved by ethical committee of BHU, India.

## Results

Majority of patients (48.0%) are in age group of 30-39 years and most of cases were married. Illiteracy was more common in HIV patient group (27.5%) than patient attendant (14.3%) and general population group (10.0%). Female cases (43.2%) were more illiterate than males (18.5%). More than three fourth of the cases (78.4%) were from joint families. A high proportion of HIV/AIDS cases were engaged in transport/production industry (24.5%), business (16.7%) and service class (8.8%) [Table 1]. 37.3% Patients heard HIV/AIDS first time when they went to health worker for their disease. Electronic media and print media are major source of information in care giver and general population. Most of the study subjects were agree that HIV /AIDS can be prevented but 42.2% patient do not know and 8.8% patients believe that it cannot be prevented [Table 2]. 35.3% patients, 22.9% care givers and 47.5% general population group thought that with medication complete cure of the disease was possible. Sexual contact (63.8%) was the most common mode of transmission, followed by contaminated syringe (10.8%) and contaminated blood (7.8%) [Table 3].

**Table-1: Profile of the Subjects**

Profile		HIV/AIDS Patients				Care Giver		General Population	
		Male		Female		No.	%	No.	%
		No.	%	No.	%				
Marital Status	Unmarried	5	7.7	0	0.00	16	26.66	15	37.50
	Married	59	90.8	36	97.3	44	73.34	24	60.00
	Widow	0	0.00	1	2.7	0	0.00	1	2.50
	Widower	0	0.00	0	0.00	0	0.00	0	0.00
	Separated	1	1.5	0	0.00	0	0.00	0	0.00
	Total	65	100	37	100	60	100	40	100
Occupation	House Wife	0	0.00	37	100	8	22.9	7	17.5
	Unemployed	4	6.2	0	0.00	2	5.7	1	2.5
	Students	0	0.00	0	0.00	11	18.33	11	17.5
	Service	9	13.8	0	0.00	24	40.0	7	17.5
	Business	17	26.2	0	0.00	6	17.1	6	15.0
	Agriculture	4	6.2	0	0.00	5	14.3	4	10.0
	Unskilled work	6	9.2	0	0.00	2	5.7	3	7.5
	Transport/Skilled Work	25	38.5	0	0.00	2	5.7	1	2.5
Total	65	100	37	100	60	100	40	100	

Note: [Out of 60 total care givers, 35 were patients' attendant and 25 were Medical staff (19 nurses and 6 doctors)]

**Table-2: Response of the Subjects**

Response	HIV/AIDS Patients N (%)	Care Givers N (%)	General Population N (%)
<b>Source of Information</b>			
Print Media	10 (9.8)	7 (20)	11 (27.5)
Electronic Media	30 (29.4)	14 (40)	14 (35)
Friends/Relatives	13 (12.7)	3 (8.6)	5 (12.5)
Health Worker/Doctor	38 (37.3)	6 (17.1)	5 (12.5)
Poster	4 (3.9)	3 (8.6)	2 (5.0)
Don't Know	7 (6.9)	2 (5.8)	3 (7.5)
<b>Can HIV/AIDS be prevented?</b>			
Yes	50 (49)	18 (51.5)	30 (75)
No	9 (8.8)	5 (14.3)	3 (7.5)
Don't Know	43 (42.2)	12 (34.3)	7 (17.5)
<b>Complete cure of disease?</b>			
Possible	36 (35.3)	8 (22.9)	19 (47.5)
Not possible	19 (18.6)	14 (40)	13 (32.5)
Don't Know	47 (46.1)	13 (37.1)	8 (20)
<b>Screening of HIV/AIDS in community before marriage?</b>			
Yes	74 (72.5)	25 (71.4)	32 (80)
No	11 (10.8)	3 (8.6)	2 (5)
Can't say	17 (16.7)	7 (20)	6 (15)

**Table-3: Probable Mode of Transmission in Our Patients**

Mode of Transmission	Patients N (%)
Unsafe Sexual Contacts	65 (63.8)
Contaminated Syringe	11 (10.8)
Contaminated Blood /Blood Transfusion	8 (7.8)
Others	9 (8.8)
Not known	9 (8.8)

**Table-4: Attitude of Medical staff towards HIV/AIDS Patients (HIV/AIDS Patients should be taken care in hospital with?)**

Mode of Transmission	Patients N (%)
General Patients	4 (16)
Kept in isolation and treated separately	20 (80)
Kept in isolation without treatment	1 (4)
Do not know	0 (0)
Total	25 (100)

In a direct question, only 34 patients (33.3%) accepted that they had pre /extra marital sex and among these 82.35% patients never used condom during sex. Only 2.9% patients, 2.9% care givers and 2.5% general populations know that breast feeding should be discontinued preventing HIV positive mother to child transmission. 36.3% patients, 37.1% care givers and 40.0% general population know that with medicine complete cure of the disease not possible. Most of patients (60.8%), care givers (62.9%) and general population (57.5%) did not marry their son/daughter in family where a HIV/AIDS patient

live. Most patients (85.3%), care givers (73.3%) and general populations (65%) thought that HIV patients should not produce children. More than 60.0% patients, care givers and general population believed that banning prostitution can control HIV/AIDS. Most of patients, care givers and general populations believed that children should be taught about HIV/AIDS in school. 80.0% medical staffs thought that HIV patients should be treated separately in isolated place [Table 4]. 68.0% medical staffs thought that identity of HIV patient disclosed in community. 100% medical staff would be supportive to their HIV positive friends. 48% staff thought that AIDS patient pay the price of immoral life. 80.0% medical staff thought that a newly diagnosed HIV person, first to talk with doctor. After 6 month follow up: 82% patients write sexual contact as major mode of transmission, which was initially 66.7%. Use of condom was most important preventive measure (68%), which was initially 30.4% [Table 5].

**Table-5: KAP Study in HIV Patients after 6 Month Follow-Up**

Parameters	Patients N (%)
<b>Knowledge about Probable Mode of Transmission</b>	
Unsafe Sexual Contacts	41 (82)
Contaminated Syringe	33 (66)
Contaminated Blood /Blood Transfusion	32 (64.0)
Mother to Baby	11 (22.0)
Others	10 (20.0)
Not known	6 (12.0)
<b>Knowledge about Preventive Measures of HIV/AIDS (by Open Question Method)</b>	
Use of condom	34 (68.0)
Avoid unsafe Sex	27 (54.0)
Avoid untested Blood transfusion	23 (46.0)
Use disposable syringe	21 (42.0)
Avoid breast feeding	16 (32.0)
Others	10 (20.0)
Not answered	11 (22.0)

## Discussion

The HIV/AIDS is acquired due to high risk behaviour of people which helps the virus to enter the body. The major issues related to HIV /AIDS is social stigma and discrimination which exist at individual, family and societal level. Stigma and discrimination fuel the HIV /AIDS epidemic. The reasons behind these issue are wide spread ignorance, poor information and misconceptions about HIV /AIDS. Understanding about the knowledge, attitude and practices about HIV/AIDS

of people having HIV/AIDS (source of infection), care givers (including patient attendant and medical staff) and in general populations will help us in formulating strategy for prevention, treatment and improving compliance to treatment of HIV/AIDS. In the absence of any preventive vaccine or curative treatment to this dread disease till date, prevention remains the only measure to apprehend the transmission of disease. More than 95% of patients were in age group of 20-49 years and the mean age was 33.92 year. It clearly indicates that it is the young and productive population which is mostly affected by the disease. Majority of patient were males (65/102) and male to female ratio was 1.8:1. Females acquired the disease earlier than the males (33.75 Vs. 34.09).

This observation is similar to a study done in India (Zaheer *et al.*, 2003)<sup>[6]</sup>, (Singh *et al.*, 2002)<sup>[7]</sup>. Marital status has been analysed as it is an important factor associated and HIV/AIDS. Majority of the cases (Patient group 91.1%), care givers (73.34%) and general populations (60.0%) were married. One patient was widow. The cause of death in their spouse was HIV/AIDS. Paranjape (1998)<sup>[8]</sup>, reported that HIV/AIDS patients were mostly married and only 6% were widow. It has been observed that one fourth of total cases were illiterate. Illiteracy was more common in HIV patients group (27.5%) than patient's attendant (14.3%) and general population group (10.0%); female cases (15.7%) were more illiterate than males (11.8%). NFHS-2 (1998-1999) showed a figure higher illiterate than our study. However, it cannot be said by the present hospital based study that educational states is a determinant of HIV/AIDS. In our study more than three fourth (78.4%) of cases were belonged to joint family. However, in the eastern region of U.P., just over half of all household (51.6%) are joint family households (NFHS-2). In the joint family system migration to outside for earning livelihood is more common. As it is evident, more than half (66.6%) of the male patients had migrated to different places outside their native place for better job opportunities. Majority of them were engaged in transport or production work (38.4%) followed by business (26.1%). However, one third male patients were those who have never moved out of their place of residence suggesting indignation of

the HIV transmission. All the women's were Housewife at their native place except one whom living with her relatives outside the native place. None of HIV positive females were unmarried, suggesting that sexual promiscuity / extra marital sex affair are uncommon in unmarried females in this part of country. All these infected ladies were wives of HIV positive spouses. Majority of care givers (58.3%) and general populations (77.5%) were living at their native place and involved in agriculture, service and business job [Table 1]. Some studies conducted in India found that the professions like business and transport involving long period of stay away from the family members is a risk factors adaptation of high risk behaviour (Zaheer *et al.*, 2003<sup>[6]</sup>; Kothari *et al.*, 2001<sup>[9]</sup>; Paranjape 1998<sup>[8]</sup>).

#### **KAP Study in HIV/AIDS Patients, Patient's Attendants and Care Givers of Non HIV Patients (General Population)**

More than 90% of the cases (93.1%), patient's attendants (94.3%) and care giver of non HIV patients (92.5%) had heard about the disease. These findings are much better than the result of Behaviours Surveillance Surveys (BSS) under taken by NACO (NACO-2001), Ganguli *et al.*, (2002)<sup>[13]</sup>, Kumar *et al.* (1996)<sup>[15]</sup>, Singh *et al.*, (2002)<sup>[7]</sup>. According to the present study Electronic media (TV, radio) was the main source of information in care givers (40.0%) and general population (35.0%) who had heard about HIV/AIDS. Print media (20.0% of care giver and 27.5% of general population) was the next important source of information [Table 2]. Among patients group 37.3% patients heard HIV/AIDS first time when they went to health worker for their disease. Electronic media (29.4%) (Table 2) was 2nd most important source of information in patients groups. Findings are similar to Report of NFHS-II (1998-99)<sup>[10]</sup>, Singh *et al.*, (2002)<sup>[7]</sup>. Most of HIV patients (49.0%), care givers (51.4%) and general population (75.0%) agreed that HIV/AIDS can be prevented but large number of patients (42.2%) did not know whether it is preventable or not. 8.8% patients believed that it cannot be prevented. 35.3% patients, 22.9% care givers and 47.5% General population thought that with medication complete cure of the disease was possible [Table 2]. Our study finds that majority of

patients, care givers and general population had correct knowledge of transmission of infection by sexual route (86.3% Vs 94.3% Vs. 87.5%), by transfusion of infected blood (84.3% Vs 91.4% Vs. 80.0%) and by using unsterilised needle and syringe (82.4% Vs 88.6 Vs 82.5). Knowledge about the modes of transmission was also less in general population in our country according to BSS (2001).<sup>[11]</sup>

Knowledge about transmission of infection from mother to child was 78.40% in patients, 71.4% in case givers and 62.50% in general populations. Misconception is also prevailing in general population. According to this study, the major misconception was spread of infection by mosquito bites (26.5% Vs. 17.1% Vs. 32.5%). 15.7% patients, 17.1% patients attendants and 12.5% in general populations thought that they got the infection by superficial kissing with HIV patients. 15 to 30% study population thought that sharing meal or cloth with HIV patients and even with sitting together with HIV patients can transmit the infection. Misconceptions about transmission of disease were more in general population group than patients group. Singh et al., (2002)<sup>[7]</sup>, also found misconception among pregnant mothers in urban population of Delhi.

Few studies reported that these misconceptions were less among students Chatterjee et al., (2001)<sup>[12]</sup>, (Ganguli et al., 2002)<sup>[13]</sup>. But Bhalwar et al., (2003)<sup>[14]</sup>, reported higher level of misconception in school and college going students in rural areas of Maharashtra. In an open question about the disease transmission 26.5% patients, 37.1% care givers and 27.50% general populations did not answer the question.

In our patient groups 63.8% got the infection by sexual contacts, 10.8% by contaminated syringe and 7.8% by contaminated blood/blood transfusion (table 3).

52.3% male HIV patients accept that they had pre-marital or extramarital sexual contact and 82.35% among than never used condom during sex. According to our study (open question), use of condom (Patients - 30.40%, case givers 54.30% and general population 52.5%) was most important preventive measure. Other methods are

Avoid unsafe sex, avoid untested blood transfusion and use disposable syringe etc. These data's are little bit similar to BSS (2001)<sup>[11]</sup>, Kumar et al., (1999)<sup>[15]</sup> records. Only 3 patients (2.9%), 1 care giver (2.9%) and 1 general population (2.5%) wrote Avoid breast feeding as preventive measure 42.2% patients did not answer the question and nearly 20% study population also mention other preventive measures.

Kumar et al., (1996)<sup>[15]</sup>, in their study among nursing students in Delhi found that use of sterilized needles and syringes (75%) and HIV free blood for transfusion (82%) were important for prevention. Low level of awareness about preventive measures in our study was due to good number of study population not give the answer.

In an open question, According to 53.9% patients, 54.3% care givers and 60.0% general population HIV/AIDS is most common sexually transmitted disease where as a significant number of patients (44.1%), case givers (42.9%) and general population 40% did not know a single disease transmitted sexually. These are a lot of wrong knowledge about STDs, one fifth of patients (21.6%), 14.3% care giver and 17.5% general population thought tuberculosis as STD. Surprisingly, only 1 patient and 1 care giver mentioned correctly syphilis, gonorrhoea as STDs.

HIV/AIDS is very closely related with other sexually transmitted disease and high risk behaviours. In this study 46.1% patients, 45.7% care giver and 57.5% general population accepted that a person with STDs is more prone to getting HIV infection but large no. of study population not able to say anything. A study conducted among migrant workers in India (Gupta K et al., 2002)<sup>[16]</sup>, showed that the proportion of migrants who have knowledge of STDs is much lower. A study shows that condom use increased to 52% and STD rates declined to 49% (Sarkar S et al., 1998).<sup>[17]</sup>

### Attitude and Practices

Most of patients (60.8%), case givers (62.9%) and general population (57.5%) did not want to marry their son/daughter in a family where HIV/AIDS patients live. Most of patients (62.7%), care givers

(80.0%) and general population (62.5%) thought that community reaction to HIV/AIDS person were not favourable and most of them thought that community raised the objection for living them in own community. For this fear most of patients want that their identity should not be disclosed in the community but most of care givers and general populations were against them. Nearly half of care givers (42.9%) and 37.5% general population thought that HIV patients should be treated in isolated place and 37.1% patients and 40.0% general populations feel a specific centre for HIV patients care. But most of Patients (41.2%) thought that HIV patients should be treated with general patients in hospital and most of them (52.0%) denied any need of specific centre for their care. Most of patients, care givers and general populations thought that HIV patients should not produce children (85.3% vs. 74.3% vs. 65.0%) and HIV patients pay the price for their immoral life (77.5%, vs. 77.1% vs. 77.5%).

More than 60% patients, care givers and general populations thought that banning prostitution can control HIV. More than three fourth of patients, care giver and general population would be supportive to their HIV positive friends and thought that children should be taught about HIV/AIDS in school.

According to male patients, a newly diagnosed HIV person first to talk or discuss with doctors (52.3%) then to partner (26.2%) whereas majority of female patients first to talk with partner (40.5% then doctor's (37.8%). But majority of care givers and general population thought that newly diagnosed HIV positive person first discuss with doctor (48.6% Vs 75.0%) then family member. Difference between male and female patients was statistically significant. A study conducted in Dakshina Kannada district of Karnataka, showed that 34% people felt that HIV infected individual should be kept away from others, and 40% were not willing to accept a family member with HIV (Anand D. et al.,)<sup>[18]</sup>.

### **Social Stigma and Discrimination feel by HIV Patients**

Stigma and discrimination is a burning social issue attached with most of the chronic communicable

diseases. From the moment scientist identified HIV/AIDS as a chronic epidemic disease, psychosocial factors of fear, denial, stigma and discrimination have accompanied the disease. Discrimination of patients occur when negative thought lead people or institutions to take or omit to take, action that treats a person unfairly and unjustly on the basis of their presumed or actual HIV/AIDS status. Stigma and discrimination can occur anywhere,

(i) At society level: In present study, it has been observed that only 20.6% patients felt discrimination. Most of HIV patients were newly diagnosed and most of the patients had not disclosed their HIV states to any one, this probably explained the low level of discrimination in our study, when same question was repeated after 6 month, 72.0% patients felt discrimination at somewhere. In Uganda, Mc Grath et al., (1993)<sup>[19]</sup>, felt the fear of rejection and stigmatization in people living with HIV/AIDS to disclose their serostatus to family members.

### **Knowledge Assessment after Six Month of Follow-Up**

There has been tremendous increase in knowledge after six month of follow-up. In open question (about modes of transmission), 82% patients mentioned sexual contact as most important mode of transmission and other modes are contaminated syringe (66.0%), infected blood transfusion (64.0%) and mother to baby (22.0%). For preventive measures 68.0% patients believed that use of condom as best method for prevention of disease transmission other methods are avoid unsafe sex (54.0%), avoid untested blood transfusion (46.0%) and use disposable syringe (42.0%) [Table 5]. This increase in knowledge probably due to proper counselling and education at ART clinic in each follow up.

### **Conclusion**

Based on the conclusion which is mentioned above the following recommendations are made for service point of view in this part of country:(1) In the metropolitan cities where majority of rural population from this part of country is migrating

special IEC activities should be undertaken to educate them so that they do not indulge in high risk activities. (2) Counselling of family members, relatives and friends of diseased persons should be given the topmost priority to prevent stigma and discrimination so that HIV/AIDS patients can live with their rights. (3) The people living with HIV/AIDS should be counselled so that they can live free from stress and anxiety. They should also be strongly motivated to have safer sex practice to avoid spread of infection. Sex partners of the patients also should be educated about prevention of HIV/AIDS. (4) Mass media should be utilized in a big way to alleviate the misconceptions associated with HIV/AIDS within general population.

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