

## AWARENESS ABOUT HIV/AIDS IN CLIENTS ATTENDING STI CLINIC: A CROSS SECTIONAL STUDY FROM SOUTH-EAST RAJASTHAN, INDIA

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### ABSTRACT

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#### BACKGROUND

India bears a large burden of HIV/AIDS on globe. Major weapons against HIV/AIDS are treatment which is not curative, vaccine which is far from reality and accurate & adequate information about the disease which is practically acceptable and cost effective way of prevention in form of social vaccine and is a good tool for HIV/AIDS in developing countries like India. In India there is inadequate & inaccurate knowledge about the disease in general population.

#### AIM

In present study we tried to analyze the knowledge & awareness about HIV/AIDS in clients attending the STI clinic at Jhalawar Hospital and Medical College at south east part of Rajasthan, India.

#### MATERIAL & METHODS

We assessed 500 clients at STI clinic by using a predesigned questionnaire which gathers their knowledge regarding HIV/AIDS. All the clients above the age of 18 years who attended the STI clinic were enrolled for the study voluntarily. Participants were finally assessed as good/poor or unaware according to their level of knowledge.

#### STATISTICAL ANALYSIS

SPSS version 20.0 (trial) was used to analyze all the data. Chi square test was used to find association between knowledge and their literacy level & occupation.

#### RESULTS

142(28.4%) of the participants had never heard about HIV/AIDS among them females were significantly more than males. Both low level of literacy and unemployment or house wives were associated with unawareness about HIV/AIDS. For the 358(71.6%) participants who had heard about HIV/AIDS, mass media was the main source of information (53.07%) in which television contributes the major part, followed by friends and colleagues (24.02%). While the knowledge about HIV transmission and prevention was good but the extent of misconceptions was also high (64.8%).

#### CONCLUSION

Our study is highly suggestive of the strong need to increase the level of HIV awareness among Indian population via proper education and through various resources on information.

#### KEYWORDS

HIV/AIDS, ICTC, Awareness, Misconception, Social Vaccine.

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**INTRODUCTION :** HIV/AIDS is a major global health problem & and is sixth leading cause of death on the globe.<sup>(1)</sup> An estimated 36.9 million people across the world are infected with HIV.<sup>(2)</sup> Majority of HIV infected individuals reside in the developing world. Though the HIV prevalence is

low in India but with population of more than 1.2 billion, India has the world's third largest number of people living with HIV/AIDS (PLWHA).<sup>(3)</sup> Thus India bear the significant global burden of HIV/AIDS with nearly 2.39 million people presently infected with the disease in the country.<sup>(4)</sup> Despite low prevalence of HIV in India a high population with low level of knowledge makes the country more fertile ground for HIV to spread. Besides this, low literacy, poverty, early age of sexual exposure, gender inequality, poor access to health services, inadequate and inaccurate information about modes of transmission and misconceptions and myths about HIV/AIDS are other factors responsible for increasing net of HIV.<sup>(5)</sup> In addition to helpful in spreading the disease, poor knowledge

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is also responsible for social stigma and discriminations with HIV infected. Due to false perception of HIV/AIDS as synonymous with mortality people avoid to test their seropositivity status and create a hidden group of HIV positive individuals which may spread the virus silently in uninfected general population. Low literacy is also responsible for poor knowledge of preventive methods of HIV transmission. Another important dangerous aspect of HIV in India is that it is no longer a disease of high risk group, it has now penetrated in the general population like house wives, children, students etc.<sup>(6)</sup> By spreading knowledge and awareness about the HIV/AIDS we can prevent the disastrous outcome of this fatal disease. Different government and nongovernment agencies are doing this effort from last many years by various modes of media. Integrated Counseling & Testing Centers (ICTC) is one of them which is situated at district hospitals and medical colleges where individual can come directly or can be referred by medical personnel to know more about transmission of HIV, preventive measures, pre & post-test counseling, testing for HIV and other STDs, further guidance for management and treatment of HIV. Treatment of HIV/AIDS is now available at ART centers free of cost at medical college level. But the important aspect of presently available antiretroviral drug is that they can reduce the multiplication of HIV in the host but can't eliminate it from the body. Effective HIV vaccine is also far from reality. So in present situation practically acceptable and cost-effective way particularly in developing countries like India, would be to spread correct, accurate, and complete knowledge about HIV/AIDS transmission modes, risk factors, preventive measures, and available therapeutic options in general population. In this context, by educating people we can inject the dose of prevention which can later on decrease the chances of acquiring HIV in individual as well as in society, in form of "social vaccine".<sup>(7)</sup>

In this study we tried to assess the knowledge about HIV/AIDS in clients who attend the STI clinic and compared it with various sociodemographic criterions.

**MATERIAL AND METHODS:** The present study was carried out at STI clinic governed under the department of dermatology, venereology and leprology, SRG Hospital & Medical College, Jhalawar, Rajasthan, India. All the clients above 18 years of age who attended the clinic were enrolled voluntarily for this cross sectional study. A total number of 500 clients were the part of this study which was conducted over a period of 3 months (September, October, November 2015). The clients referred to the clinic were mainly from the department of dermatology and of obstetrics & gynecology with an average monthly client load of 350. All the participants were interviewed by two STI counselors (each male & female) under the scrutiny of the HOD of dermatology department. A predesigned proforma consisting of a series of questionnaires was presented before each client and their responses were recorded on the same. Initial part of the questionnaire consisted of their sociodemographic characteristics as age, sex, education status, marital status, occupation, residence, religion etc. while later part was to

assess their knowledge & awareness about HIV/AIDS which comprised of a series of questions regarding HIV/AIDS. The very first question was if they had ever heard of HIV/AIDS. Responses were recorded as 'yes', 'no' and 'no response'. The clients with a 'no' or 'no response' were categorized as "unaware". Only the clients with a 'yes' were further interviewed to explore the knowledge concerning their source of information, modes of transmission, any misconceptions about transmissions, any acknowledgeable preventive measures, role of HIV testing and treatment. Among these respondents both 'no' or 'don't know' responses were included under category "poor" while remaining with a 'yes' response were considered as "good". Finally after analysis of all the data from questionnaires respondents were analyzed as good/poor/unaware as their scale of knowledge regarding HIV/AIDS. We used SPSS (statistical package for social sciences) 20.0 trial version for analyzing the data. Chi square test was used to find association between knowledge of the clients about HIV/AIDS and their educational status & occupation. The corresponding P-value was found to assess the level of significance. A written consent was taken from each participant after explaining them the object of the study in area's local language. No names or any other identity of the participants were noted to keep confidentiality of the clients. A permission regarding this study was granted from the ethical committee of the institution.

**RESULTS:** In this present study the age of the clients ranged from 18-55 years. Among them 227(45.4%) were males while 273(54.6%) were females. A major proportion of the clients were married 388(77.6%) and of these 323(64.6%) were in monogamous relationship while 65(13%) admitted of being in polygamous relationship. Of all the clients, 18% were illiterate, 39% had primary education, 26.6% had secondary education, 13.4% were graduates while only 3% had post-graduation level education. According to their occupation client were distributed as unemployed (57.2%) (which includes housewives, students & unemployed men), unskilled workers (22.8%), skilled workers (10%), professional (fixed salaried) (7.4%) and business class (2.6%). 52.8% were from rural area while 47.2% were from urban area. Of all the clients, 292(58.4%) were Hindus, 179(35.8%) were Muslims, 23(4.6%) were Sikhs while remaining 6 clients (1.2%) belonged to other religion. Sociodemographic characteristics of participants are shown in Table 1.

Of all the 500 participants 358(71.6%) had heard about HIV/AIDS, though males (92.07%) were more aware or had heard about HIV/AIDS than females (54.58%). Among various sources of information on HIV/AIDS, mass media (mainly television) was the major source (53.07%) followed by friends and colleagues (24.02%), health personnel (8.1%), school/teacher (7.82%), sex partner (5.87%) & family (1.12%). Various sources of information for HIV/AIDS are shown in Pie chart.

Of all respondents who had heard of HIV/AIDS only 23.18% could tell the full form of HIV/AIDS but a higher proportion (75.69%) of these respondents were aware of the fact that HIV/AIDS is a fatal disease. 68(18.99%) of them

thought that HIV/AIDS is treatable while regarding existence of any HIV vaccine, 58(16.2%) of them responded 'yes'. Out of 358 respondents who had heard of HIV/AIDS, 168(46.93%) were aware about ICTC or any kind of other laboratory testing center for HIV/AIDS in the area while only 76(21.23%) respondents knew about the availability of any kind of treatment in India. A few of these respondents (20%) had the knowledge about main clinical features of AIDS. 115 (32.12%) of the respondents knew that HIV decreases individuals immunity against the various diseases while only 15(4.19%) respondents knew that females are more vulnerable to get HIV through heterosexual route. General knowledge about various aspects of HIV/AIDS are shown in Table 2.

A significant proportion (27.37%) of the respondents who had heard of HIV/AIDS thought that it can be transmitted through contact like kissing, hugging and handshake etc. 17.31% respondents told that HIV can be transmitted through sharing meal, work place, towels etc. with infected person. Various other misconceptions among respondents like HIV can be acquired by mosquito bite was present in 232(64.8%), coughing and sneezing in 90(25.14%), sharing blades at barbershop in 252(70.39%). Of all 358 respondents who had heard of HIV/AIDS 338(94.41%) of them knew about unprotected sex as a mode of transmission while blood transfusion 324(90.5%), sharing of infected needles 268(74.86%), IV drug use 239(69.55%) and from infected mother to her child 215(60.05%) etc. were few other acknowledgeable modes of transmission. Table 3 shows participants knowledge about modes of transmission of HIV/AIDS.

Of all respondents who had heard about HIV/AIDS, 54.75% considered it as a preventable disease. 97.49% of these respondents had heard of condom and 94.41% considered it as a major tool of prevention of HIV/AIDS. Many of the respondents knew about other preventive methods like screening before blood transfusion, behavioral changes as sex with single partner, use of sterilized needles & disposable syringes, adequate and accurate information regarding HIV, use of ART by HIV infected mother to reduce the risk of MTCT etc. Percent of respondents regarding their knowledge of preventive measures of HIV are present in Table 4.

After analysis of all the data from the study we found that of all 500 participants 210(42%) had good knowledge about HIV/AIDS while 148(29.6%) participants presented with poor knowledge and remaining 142(28.4%) were those who were totally unaware of HIV/AIDS.

A significant direct association (P value=0.0001) was found between the participants and their education level as we noted the illiterate ones were least (11.11%) aware of HIV/AIDS while highest percent (93.33%) was observed in graduates and postgraduates. Regarding occupation of the participants we also found significant association (P-value = 0.0001) between knowledge about HIV/AIDS and their occupation as the participants who were unaware about HIV/AIDS were significantly higher in the group of unemployed men (78.82%) while awareness among professional group was highest (86.49%). Association

between educational status/occupation and knowledge about HIV/AIDS is shown in Table 5.

**DISCUSSION:** AIDS is a preventable disease and adequate and accurate knowledge among general population is the key to the prevention. In the present study 71.6% of the participants had heard of HIV/AIDS before. Similar findings were reported by a study by S. B. Yadav et al.<sup>(8)</sup> According to National Family Health Survey-3 (2005-2006) this data was 64.8% in rural youth of India.<sup>(9)</sup> Similar to a previous study by Bhanu Mehra et al.<sup>(7)</sup> in our study no significant association was found between age group and their knowledge about HIV/AIDS but some other studies has found poor knowledge among the youth category about HIV/AIDS.<sup>(10)</sup>

Our study revealed that among the participants who had heard of HIV/AIDS, mass media followed by friends/colleagues were the most common sources of information. A study by Subramaniam et al & V. Bhatia et al<sup>(11,12)</sup> has also reported the same. In a present world with so advanced technology and social media it is no wonder that general population is getting a major proportion of information through it. But only a very few participants admitted to gain knowledge about HIV/AIDS from their family members which was also observed in a previous study.<sup>(10)</sup> This is a clear reflection of the closed & conservative nature of Indian society in which a person still feels uncomfortable talking about HIV/AIDS or any other sex related issues among his family, mainly observed in rural areas.

About two third of the participants who had heard of HIV/AIDS demonstrated overall a good knowledge about modes of transmission of HIV though it was variable for different modes. As we observed that compare to other modes of transmission participants were less aware of transmission from infected mother to her child. This finding was also observed in a study conducted by Sudha B. Yadav et al.<sup>(7)</sup> Awareness about transmission through mother to child and through unprotected sex was found higher in the married participants. S. Solat et al also reported the same in their study.<sup>(10)</sup>

In our study along with the knowledge about modes of transmission we also explored a significant level of misconception among the clients. Presence of various misconceptions about HIV/AIDS has also been noted in some earlier studies.<sup>(13,14)</sup>

64.8% of the participants thought that HIV can be transmitted by mosquito bite while a significant proportion thought it to be transmitted through hugging, handshaking, sharing meal or working place. These kind of major misconceptions have been reported before in several studies.<sup>(15,16)</sup>

Misconception level was noted higher among the illiterates.<sup>(15,17)</sup> Such kind of behavior further leads to create discrimination and social stigma against HIV/AIDS patients. This is another major concern why awareness & education about HIV/AIDS is a necessity.

In present study we found that level of awareness about preventive measures was as good as the awareness level of modes of transmission of HIV/AIDS. But in a district level

household survey it was observed that youth of that area displayed less awareness of prevention methods in comparison to awareness of transmission modes of the disease.<sup>(18)</sup> A study by P. Lal et al also reported a lower level of awareness about preventive measures in their study.<sup>(19)</sup> Almost all (97.49%) of the participants who had heard about HIV/AIDS, were aware about condom though knowledge about condom as a preventive measure besides its other strategy was slight lower (94.91%). Other preventive measures were also acknowledged with a higher percent. But a larger proportion (36%) didn't know that treatment taken by HIV infected mother could reduce the risk of MTCT and that breast feeding is also a potential risk factor for transmission of HIV from mother to child. The same was also observed in a surveillance survey by NACO.<sup>(20)</sup>

Educational status was found to be directly proportional with the level of awareness about HIV in the participants. This finding is also supported by a previous study by ATM Hasibul Hasan & S. Solat et al.<sup>(21,10)</sup> Education provides the ability to assess the information & knowledge about HIV/AIDS and it also reduces the chances to encounter the risk of acquiring HIV infection with a better understanding of various preventive measures. In many previous context health education has also been described as "social vaccine".<sup>(9)</sup>

A significant association between occupation & awareness about HIV/AIDS was found in our study as the level of knowledge between different occupational groups was variable. This difference in knowledge in various occupational group was also reported by R. T. Sudha et al.<sup>(22)</sup> The highest level of awareness was observed in professional group while unemployed men of the category 'unemployed' were the least aware.

Of all the participants who heard about HIV/AIDS, 54.58% were females which were much lower than males (92.07%). The irony in this finding is that biologically the gender which is more vulnerable to get HIV infection is more unaware of the same. Lower level of awareness about HIV/AIDS in female gender was also observed in a study by Gandhi Bhaskar Pathrudu et al.<sup>(23)</sup> This reflects a male dominated society which still prohibits/forbids females to get educated.

**CONCLUSION:** Our study participants are representatives of the Indian population and our analysis highlights that significant proportion (28.4%) is still unaware about HIV/AIDS, the disease which is a major cause of morbidity and mortality. Our findings directly support the role of education by exhibiting client's poor knowledge of HIV/AIDS so it is recommended to raise the literacy level of the general

population. Our study strongly recommends to raise the awareness about HIV/AIDS especially in women, illiterates and labor class of population. Media still plays a good role in spreading knowledge and awareness and also has good impact in general population but this mode must be used more for the same. The level of misconception in population is significantly high which can be washed away by educating them through different media and awareness programs.

SL. No.	Variables	Frequency (%)
1)	<b>Age (Years)</b>	
	a) 18-24	163(32.6)
	b) 25-31	179(35.8)
	c) 32-38	107(21.4)
	d) 39-45	39(7.8)
	e) 46 & Above	12(2.4)
2)	<b>Marital Status</b>	
	Married	388(77.6)
	Never Married	92(18.4)
	Married but divorced	7(1.4)
	Widowed	13(2.6)
3)	<b>Educational Status</b>	
	Illiterate	90(18)
	Upto Primary Education	195(39)
	Upto Secondary Education	133(26.6)
	Graduation	67(13.4)
	Post-Graduation & Higher	15(3)
4)	<b>Occupation</b>	
	Unemployed	286(57.2)
	Unskilled Worker	114(22.8)
	Skilled Worker	50(10)
	Professional (Fixed Salaried)	37(7.4)
	Business class	13(2.6)
5)	<b>Residence</b>	
	Rural	264(52.8)
	Urban	236(47.2)
6)	<b>Religion</b>	
	Hindu	292(58.4)
	Muslim	179(35.8)
	Sikh	23(4.6)
	Any Other	6(1.2)

**Table 1: Sociodemographic Characteristics of the study participants**

Variables	Yes %	No %	Don't Know %
1) Had heard of HIV/AIDS	358(71.6)	142(28.4)	0
2) Knows full form of HIV/AIDS	83(23.18)	275(76.82)	0
3) HIV/AIDS is fatal	271(75.69)	64(17.88)	23(6.42)
4) HIV/AIDS is treatable	68(18.99)	239(66.76)	51(14.25)
5) HIV/AIDS is preventable	196(54.75)	65(18.16)	97(27.09)
6) Anti-HIV vaccine exists	58(16.2)	67(18.71)	233(65.08)

7) Had heard of existence of ICTC or any Other HIV testing centre in local area	168(46.93)	68(18.99)	236(65.92)
8) Availability of any treatment in India	76(21.23)	95(26.54)	171(47.76)
9) Females are more vulnerable to get HIV infection than males	15(4.19)	51(14.24)	292(81.56)
10) HIV/AIDS weakens the body immunity	115(32.12)	28(7.82)	215(60.05)
11) Clinical Features of HIV/AIDS :			
a) Chronic loss of weight	104(29.05)	50(13.97)	204(56.98)
b) Chronic fever	92(25.7)	15(4.19)	251(70.11)
c) Chronic cough	65(18.15)	25(6.98)	268(74.86)
d) Loss of appetite	54(15.08)	39(10.89)	265(74.02)
e) Chronic Diarrhoea	48(13.4)	32(8.94)	278(77.65)
g) Any other	68(18.99)	9(2.51)	281(78.49)

**Table 2: General knowledge about various aspects of HIV/AIDS**

MODE	YES	NO	Don't Know
1) Contact			
a) Kissing	98(27.37)	21(5.87)	239(66.76)
b) Hugging/Handshake	52(14.52)	211(58.94)	95(26.53)
2) Sharing			
a) Meal/Clothes/Utensils	62(17.31)	258(72.06)	38(10.61)
b) Infected needle/syringes	268(74.86)	14(3.91)	76(21.23)
c) Blade at barber shop	252(70.39)	18(5.02)	88(24.58)
3) Mosquito bite	232(64.8)	105(29.33)	21(5.87)
4) Coughing & Sneezing	90(25.14)	23(6.42)	245(68.44)
5) Unprotected Sex			
a) Heterosexual	338(94.41)	8(2.23)	12(3.35)
b) Homosexual	305(85.19)	8(2.23)	45(12.57)
c) Oral sex	248(69.27)	28(7.82)	82(22.9)
d) Sex with multiple partners	312(87.15)	14(3.91)	32(8.9)
6) IV drug use	239(69.55)	22(6.14)	97(27.09)
7) From infected mother to her child	215(60.05)	13(3.63)	130(36.31)
8) Blood Transfusion	324(90.5)	8(2.23)	26(7.26)

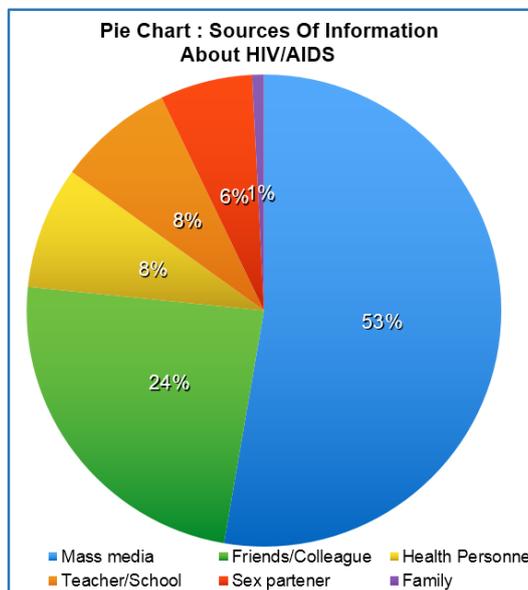
**Table 3 : Knowledge regarding modes of transmission for HIV/AIDS**

Preventive Measure	Yes	No	Don't know
1) Heard of condom	349(97.49)	9(2.51)	0
2) Condom is a preventive measure for HIV/AIDS	338(94.41)	8(2.23)	12(3.35)
3) Monogamous relationship (Behavioural Changes)	312(87.15)	14(3.91)	32(8.9)
4) Use of sterile needle	268(74.86)	14(3.91)	76(21.23)
5) Screening before blood transfusion	324(90.5)	8(2.23)	26(7.26)
6) Health education	324(90.5)	0	34(9.5)
7) Treatment taken by infected mother for HIV/AIDS could reduce the risk of MTCT	215(60.05)	13(3.63)	130(36.31)

**Table 4 : Knowledge about preventive measures of HIV/AIDS**

Educational Status	No. of participants	Knowledge Status			Chi Square (P-value)
		Good	Poor	Unaware	
1) Illiterate	90	0	10(11.11)	80(88.89)	326.00 (0.0001)
2) Upto Primary Education	195	45(23.07)	95(48.72)	55(28.2)	
3) Upto Secondary Education	133	95(71.43)	31(23.31)	7(5.26)	
4) Graduate	67	56(83.58)	11(16.42)	0	
5) Post Graduation & Above	15	14(93.33)	1(6.67)	0	
<b>Occupation</b>					49.6 (0.0001)
1) Unemployed	286	124(43.36)	77(26.92)	85(29.72)	
2) Unskilled Worker	114	28(24.56)	48(42.1)	38(33.33)	

3) Skilled Worker	50	22(44)	15(30)	13(26)
4) Professional	37	32(86.49)	5(13.51)	0
5) Business Class	13	4(30.77)	3(23.07)	6(46.15)



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