

**IJCRR**

Vol 05 issue 09  
Section: Healthcare  
Category: Research  
Received on: 21/03/13  
Revised on: 14/04/13  
Accepted on: 30/04/13

## AWARENESS ABOUT HUMAN IMMUNODEFICIENCY VIRUS/ ACQUIRED IMMUNODEFICIENCY SYNDROME AMONG YOUNG WOMEN IN RURAL INDIA- A CROSS-SECTIONAL STUDY

Nilajkumar Bagde<sup>1</sup>, Madhuri Bagde<sup>1</sup>, Poonam Varma Shivkumar<sup>1</sup>, Shuchi Jain<sup>1</sup>,  
Mahadeo Walde<sup>2</sup>

<sup>1</sup>Department of Obstetrics and Gynecology, MGIMS, Sewagram, Wardha, MH, India

<sup>2</sup>Department of Pathology, Peoples Medical College, Bhopal, India

E-mail of Corresponding Author: maildrmadhuri@gmail.com

### ABSTRACT

**Background:** Health seeking and preventive behavior is directly influenced by knowledge and awareness about disease. The UN secretary general's message on world AIDS day 2012 of Zero new HIV infections, zero discrimination, and zero AIDS-related deaths by 2015 is achievable only if people know about the disease. We undertook this study to determine the level of awareness regarding HIV/AIDS in rural India and their perception of this fatal disease as it is an important determinant of ultimate preventive behavior. **Methods:** A systematically drawn convenience sample of 360 young women that had never been tested for HIV attending the Obstetric and Gynecology clinic formed the study subjects that responded to a preformed structured questionnaire including open and closed ended questions. **Results:** 70% females had heard about the terms HIV/AIDS and the main source of information was television. Only 17% felt they were vulnerable to infection, 36% knew that testing was provided free of cost and 18% knew of at least one correct intervention to prevent transmission.

**Conclusion:** Level of knowledge for HIV/AIDS was poor among women of rural India and interventions are needed to improve this scenario.

**Keywords:** HIV/AIDS, awareness, sources of knowledge, testing, treatment, young women.

### INTRODUCTION

Despite huge initial reluctance to accept the fact that HIV prevails in India, today it has managed to pave inroads in the roots of society. The origin of HIV in India dates back to 1986 when the first case was reported from Tamil Nadu in southern India.<sup>1</sup> The scenario has changed dramatically since then and today it is estimated about 2.9 million people in India carry the virus and is a major global challenge for the healthcare system. India is home to over 1.2 billion people therefore despite a low prevalence of HIV (0.3%) it ranks third worldwide in terms of absolute number of HIV infected population.<sup>1</sup> Fortunately, the country has recovered and responded well thus helping to curtail the epidemic. One dilemma with HIV in India is that

most of the interventions are targeted towards high risk groups leaving the general population grappling with the actualities of the disease. Women are vulnerable to HIV and social norms mitigate their choices of safe sexual practices. Women in rural India, have lesser access to information that compounds the social stigma associated with this disease.

Awareness regarding infection alters high risk behavior. We undertook this study to comprehend awareness regarding HIV and AIDS in rural women of central India as well as their sources of knowledge and their understanding of preventive practices for HIV.

## METHODS

**Study design and sampling:** This was a cross sectional survey of young women (age  $\leq$  25 years) attending the obstetric and gynecology out-patient clinic of a rural tertiary care center. The subjects were informed about the study and those that wished to participate were enrolled. The target population estimated was 3,932 calculated from the list of females aged 18-25 years in the hospital database. With a 95% confidence level and a 5% error, the sample size estimated was 350 over a one year period. We decided a monthly target of 30 surveys extrapolating into a total figure of 360 surveys. Every third eligible female was systematically sampled with a conservative estimated response rate of 30%.

**Inclusion criteria:** Adult women with age  $\leq$  25 years attending the out-patient clinic of obstetrics and gynecology department were enrolled in the study irrespective of their diagnosis.

**Exclusion criteria:** Women that had already been tested for HIV were excluded as counseling for HIV is an integral part of testing in India.

Out of 745 women approached, 360 consented to participate with a response rate of 48.32%. A verbal consent was taken for the survey and a structured questionnaire containing closed and open ended questions was administered by two trained data collectors. The questionnaire had been piloted on 20 patients to assess any lacunae and they were discussed and corrected by consulting all the authors. Major variables tested were knowledge about HIV, sources of knowledge, routes of transmission, tests for detecting infection, willingness to get tested, and perception regarding vulnerability to HIV. Data was analyzed using Stata version 10 and summary statistics obtained. At the end of the questionnaire patients were provided information regarding HIV/AIDS and their queries were satisfied.

## RESULTS

The mean age of females was  $22.04 \pm 2.28$  years ranging from 17 to 25 years (Table 1). Most of them (55%) belonged to upper lower socioeconomic class.<sup>2</sup> Approximately 70% females had heard about the terms HIV and/or AIDS from some source (Table 2). About one third females had heard about HIV from more than one source. Amongst those that had ever heard about HIV/AIDS (N=254), television was the commonest source in 79.31% followed by posters (24.13%), and only 6.89% had received information about HIV by talking to a nurse or health care personnel. Only 0.81% had knowledge about an HIV positive person within their circle of relatives, friends, acquaintances or neighborhood (Table 3). When asked if there was any difference between HIV and AIDS, 36.59% answered that they were same and only 4.8% had correct idea about the difference. When asked about how HIV/AIDS is transmitted, 39% did not have any idea. Sexual transmission was one of the commonest routes reported by 34.15%, followed by exposure to blood, 21.95%. The main routes of transmission were sexual (21.95%) and needle stick injury in 12.2%, while 41.46% did not have any idea about any routes. Fever and weakness were reported as symptoms of the disease by 9.6% and 80% of the women did not have any knowledge about symptoms of HIV/AIDS. The commonest investigation needed to detect the disease was reported as a blood test by 48.78% followed by X-ray (7.32%) while 41% did not have any idea about which investigations need to be performed to detect infection. Testing for HIV was available at government hospitals was reported by 39%, private hospitals by 21.95% and 34.15% did not know where to undergo testing for HIV. Only 36.59% knew that the test was provided free of cost but 80% were willing to undergo testing if it was provided free. When asked if they were aware about any treatment available for patients with HIV/AIDS 24% felt

that a treatment is available and 21% felt that the disease could be completely cured with treatment. When asked if they felt they were vulnerable to the disease, only 17% felt that they may get infected. When asked about why they felt they were not vulnerable, 85% did not have any knowledge. 48% thought that HIV/ AIDS were preventable conditions but only 18.68% knew about at least one correct intervention to prevent infection.

## DISCUSSION

The women enrolled in this study were young (mean age  $22.04 \pm 2.28$  years), likely to attempt pregnancies and sexually active. Most of them had heard about the terms HIV/ AIDS. However, 95% were not aware of the meaning of these terms. They were not able to identify if these terms meant two different entities or were one and the same.

Regarding sources of information, overall 56.09% women had heard about HIV and AIDS from television. Television is an effective and easy media for rapid spread of information 42% households in rural areas are equipped with a television set.<sup>3</sup> However, social stigma associated with HIV is a huge barrier for transmitting information. A survey in rural women of southern India found that women continue to believe it is, quote, “wrong to talk about sex” and “wrong to talk about AIDS in a respectable family”.<sup>4</sup> Thus it is more likely that a channel displaying information related to HIV would be changed if women are watching television with their families. Also lack of availability of information is another issue as channels may not prefer to provide content that is less likely to be viewed. According to a study by the ‘Centre for media studies in India’, illiterate and lower classes are least likely to view social issues on television due to non availability of such programs on their preferred channels.<sup>5</sup> Chatterjee N in his paper on role of HIV related information in mass media and its

extrapolations in social discussions reveals that women are more likely to discuss AIDS related information with their husband and that too in the context of AIDS as a general social issue rather than a personal risk. Despite its limitations, television continues to be the commonest source of information and its capacity to reach and influence masses in the current era is an advantage that needs to be tapped to further spread awareness about HIV/AIDS.

The second commonest source of information was posters. Approximately 22% of the total women and 24.13% of those that had some information regarding HIV/AIDS had received it through posters. Posters surmount certain social dogmas like discussing issues related to sex and hence become effective sources of information. However a study of rural youths in Gujarat reported friends as the main source of information (77.39%) followed by television (69.28%). Posters were reported as a source by only 7.84% compared to 21.95% in our study. This study included both males and females which may account for the difference in distribution of sources of information as the social dogma associated with discussing sex is more prominent in females, especially from rural background. In addition lesser enrolment in schools<sup>6</sup>, early marriages and pregnancies<sup>7</sup> preclude further exposure to information in females.

The problem with HIV is social. It is generally accepted that the disease occurs because of socially unacceptable behaviors and this hinders disclosure of sero status.<sup>8</sup> This may be one of the reasons only 0.8% knew an HIV positive person amongst their friends, peers, relatives, or neighbours. Even in those that had heard about HIV/AIDS, misconceptions were rampant. Only 4.8% of the total women were able to narrate the correct difference between HIV and AIDS. The remaining 95% were unaware of the actual meaning of the two terms. About 39% women

did not have any knowledge regarding any route of transmission. A similar result was reported in a study of women of rural Garhwal region where 21% did not have clear knowledge about routes of transmission.<sup>9</sup> In India HIV is spread most commonly through unprotected heterosexual contact.<sup>1</sup> Sexual route was identified as one of the route of transmission by 34% and was identified as the main route of transmission by 21% women in this study. In a study of young adults in Karachi, 44.4% females identified sexual route as one of the routes of spread.<sup>10</sup> Infectious agent and water borne infection were also cited as transmission routes by a small number of women. Cough droplets were the main routes of transmission according to 2.4% women respectively. We feel that general awareness regarding HIV is low in this population but those females that have heard of the disease are aware of at least one correct route of transmission. However, we are worried about ignorance regarding sexual route as being the prime mode of spread as all of our women were sexually active and hence potentially vulnerable to infection. Blood and infected needles were identified more commonly as routes of spread than sexual transmission. Also, vertical transmission from mother to child was not reported by any woman. Poor hygiene has been reported as a cause of HIV by 4.88% women in our study and 5.6% women in the Karachi study.<sup>10</sup> Knowledge about symptoms of HIV/AIDS was particularly poor in this group in accordance to the study in rural Garhwal.<sup>9</sup> A similar ignorance about the investigations that need to be performed for detecting HIV and availability of these investigations free of cost at government institutes is an issue despite the National AIDS Control Program providing free counseling and testing for HIV at 7,533 testing centers throughout the country. About 24% women felt that treatment is available once a person is infected with HIV and 21.67% felt that the disease was completely

curable. A study of reproductive aged women from rural coastal Maharashtra in India found that 17.95% females felt that HIV was curable.<sup>11</sup> In our study more than 75% females were not correctly aware of the consequences of the disease and availability of treatment. We also feel that a false sense of security prevailed amongst certain women who felt that the disease was curable.

Vulnerability to this disease was dismissed by most of the women and 85% did not know why they were not vulnerable. This appears more of a denial response rather than an aware one. More than half the women did not have any idea about how HIV could be prevented. Only one fifth knew about one correct way of prevention and misconceptions regarding prevention were seen in the remaining population. These results are worrisome as women despite being biologically more susceptible to HIV are more ignorant about it. At the same time they are living in a false sense of security that they may not be exposed to infection. However, willingness to get tested for HIV if testing was provided free of cost was an encouraging finding.

### LIMITATIONS

The cross sectional nature of the study is a limitation although all possible efforts have been made to eliminate selection bias. Also the rural setting limits extrapolation of finding to the whole nation in general. However the issue is an important one and efforts are needed to address the low awareness levels regarding this lethal infection in rural women.

### CONCLUSIONS

This study throws insight into the level of knowledge, perceptions and misperceptions in young females regarding HIV and AIDS. Even though most women have heard about HIV/AIDS, they are unaware about the exact implications of these terms and the potential impact of HIV on their lives. There is an urgent

need to create awareness in this group regarding HIV through various informative aids like television, newspapers, talks and discussions so that they may protect themselves from this fatal disease.

### ACKNOWLEDGEMENT

Authors acknowledge the great help received from the scholars whose articles cited and included in references of this manuscript. The authors are also grateful to authors / editors / publishers of all those articles, journals and books from where the literature for this article has been reviewed and discussed. Authors are grateful to IJCRR editorial board members and IJCRR team of reviewers who have helped to bring quality to this manuscript.

### REFERENCES

1. NACO. Annual report 2010-2011. New Delhi: National AIDS Control Organization. Department of AIDS control.2010-2011.
2. Kumar N, Gupta N, Kishore J. Kuppaswamy's socioeconomic scale: updating income ranges for the year 2012. *Indian J Public Health*. 2012 Jan-Mar;56(1):103-4.
3. Census of India 2011 [database on the Internet]. Government of India. 2011 [cited 18.03.2013]. Available from: [http://www.devinfo.org/indiacensus2011/libraries/aspx/Home.aspx?refer\\_url=catalog&jsonAreasTopics={%22apn%22:%2235%22,%22i%22:%22Availability%20of%20asets:%20Television%20-%20Households%22,%22i\\_n%22:%22144%22,%22a%22:%22India%22,%22a\\_n%22:%221%22}](http://www.devinfo.org/indiacensus2011/libraries/aspx/Home.aspx?refer_url=catalog&jsonAreasTopics={%22apn%22:%2235%22,%22i%22:%22Availability%20of%20asets:%20Television%20-%20Households%22,%22i_n%22:%22144%22,%22a%22:%22India%22,%22a_n%22:%221%22}).
4. Bradley J, Rajaram S, Moses S, Bhattacharjee P, Lobo AM, Ramesh BM, et al. Changes in HIV knowledge, and socio-cultural and sexual attitudes in South India from 2003-2009. *BMC Public Health*. 2011;11 Suppl 6:S12.
5. Das N. A STUDY ON SOCIAL & ENVIRONMENTAL IMPACT OF T.V AND RADIO PROGRAMMES. A Report by CMS ENVIS Centre, Centre for Media Studies (CMS).
6. Chattopadhyay A, Durdhawale V. Primary schooling in a tribal district of Maharashtra: Some policy relevance. *Journal of Education Administration and Policy Studies*. 2009;1(5):70-8
7. Raj A, Saggurti N, Balaiah D, Silverman JG. Prevalence of child marriage and its effect on fertility and fertility-control outcomes of young women in India: a cross-sectional, observational study. *Lancet*. 2009 May 30;373(9678):1883-9.
8. Mawar N, Sahay S, Pandit A, Mahajan U. The third phase of HIV pandemic: Social consequences of HIV/AIDS stigma & discrimination & future needs. *Indian Journal of Medical Research*. 2005;122(December):471-84.
9. Singh A, Bandhani A, Nagaonkar S. Awareness of HIV/AIDS and Tuberculosis among women of hilly regions of Garhwal – Uttarakhand. *Indian Journal of Maternal and Child Health*. 2012;14(2):1-10.
10. Syed F, Johansson E, Krantz G. What do young adults know about the HIV/AIDS epidemic? Findings from a population based study in Karachi, Pakistan. *BMC Infectious Diseases*. 2009;9(38).
11. Hirve SS, Singh PV. AIDS awareness among married women in reproductive age group from rural areas of three coastal districts. *AIDS Research and Review*. 1999;2(4):156-60.

**Table 1: Demographic profile**

Characteristic	Level	Percentage (%)
Education	Uneducated	15.61
	Primary school	16.1
	Middle school	26.67
	Secondary school	31.7
	Graduate	7.32
	Post graduate	2.44
Socio economic status	Lower	2.5
	Upper lower	55
	Lower middle	20
	Upper middle	15
	Not available	7.5

**Table 2: Sources of information**

	N = 205	Percentage (%)
Heard about HIV	Yes	70.74
	No	29.26
Number of sources of information	0	29.26
	1	36.58
	2	19.51
	3	12.19
	4	2.43
Actual source	Television	56.09
	Paper	4.87
	Radio	2.43
	Friends	4.87
	Husband	14.63
	Poster	21.95
	Nurse	7.31

**Table 3: Knowledge about HIV/AIDS**

Question	Response	Percentage (%)
Aware of any person infected with HIV or case of AIDS	Yes	0.81
HIV/AIDS different or same	Same	36.59
	Different	12.20
	Don't know	51.22
Aware about difference between HIV and AIDS	HIV is infection and AIDS is disease	4.88
	Don't know	95.12
Routes of transmission*	Blood	21.95
	Needle	9.76
	Sex	34.15
	Infectious agent	7.32
	Poor hygiene	4.88
	Water	2.44
	Don't know	39.02

Main route of transmission	Exposure to Blood	7.32
	Blood and sex	4.88
	Blood transfusion and donation	2.44
	Cough droplets	2.44
	Needle	12.2
	Poor hygiene	4.88
	Sex	21.95
	Don't know	41.46
Symptoms of infection	Fever and weakness	9.6
	Weight loss	2.44
	Fall ill	4.88
	Swelling over body	2.44
	Vomiting	1.46
	Rash	3.42
	Anemia	2.44
	Don't know	80.49
Samples or investigations needed for diagnosis	Blood	48.78
	X ray	7.32
	Blood and urine	2.44
	Don't know	41.46
Facility where the investigations is/are performed	Private hospital	21.95
	Government hospital	39.02
	Don't know	34.15
	All hospitals and health care facilities	4.88
Aware if investigations for detecting infection are provided free of cost?	Yes	36.59
	No	17.07
	Don't know	46.34
Will you undergo testing if testing is provided free of cost?	Yes	80.2
	No	9.8
	Unsure	10
Any treatment available for the disease	Yes	24.39
	No	31.71
	Don't know	43.90
Can the disease be completely cured?	Yes	21.67
	No	23.33
	Don't know	55.00
If the women felt she is at risk of acquiring infection from any source	Yes	17.07
	No	39.02
	Don't know	43.8
Reason why the woman feels that she is not at risk to acquire infection (n=174)	Faith in husband	0.81
	Does not practice high risk behavior	4.88
	Follows safe sexual practice	8.94
	Don't know	85.37
Is it possible to prevent infection?	Yes	48.78
	No	2.44
	Don't know	48.78

\*more than one response given by respondents,