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Awareness about HIV/AIDS Among Pregnant Women Attending PPTCT Centre RIMS, Ranchi, Jharkhand

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Abstract

Background: HIV/AIDS is one of the most dreaded entity that modern medicine has ever had to tackle. Heterosexual route of HIV transmission is much more common than any other route in India. Women are not only at higher risk of acquiring HIV infection, but they have got a unique role in transmission of HIV infection to children. The prevention of

HIV infection is more important, therefore awareness of the various aspect of HIV deserve the ultimate important from the strategic point of view. **Objectives:** 1) To assess awareness about HIV/AIDS among pregnant women. 2) To find association between sociodemographic variables and awareness about HIV/AIDS among pregnant women. **Material and Methods:**

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A hospital based, cross sectional study conducted at PPTCT centre, RIMS, Ranchi from July 2013 to December 2013. Consecutive sampling method was adopted to draw the sample. Informed consent was taken from pregnant women prior to interview. Semi structured questionnaire was used for data collection. **Statistical analysis:** Data were entered in MS Excel. Frequency distribution and Descriptive analysis was done using SPSS software. **Results:** 300 pregnant women were interviewed. Majority of them were Hindu (76.3%). Most of the patients (56.3%) belong to rural area. 58.7%

Introduction:

HIV/AIDS continues to be an important public health problem despite advancement in knowledge about this dreaded infection. AIDS is one of the manifestations of HIV infection which remains unrecognizable especially during early period of infection. Current HIV prevalence in India is approximately 0.27%, and it is estimated that around 20.89 lakh people living with HIV/AIDS in the country.¹ Heterosexual route of HIV transmission is still most common across the globe including India though regional variation exist. Generally women are more vulnerable to HIV infection because a larger surface is exposed and semen

pregnant women heard about HIV/AIDS and 95.4% of them were aware on heterosexual route of transmission. Ethnicity, area of residence, education and pregnancy order of pregnant women were significantly related with awareness about HIV/AIDS. Mass media was main source of information for 81.2% of aware pregnant women. **Conclusion:** Awareness about HIV/AIDS among pregnant women was not very satisfactory in the present study.

Key words: Awareness, HIV/AIDS, Pregnant women, PPTCT centre.

contain higher concentration of HIV than vaginal and cervical fluids.² Most of the risk behaviours are attributable for HIV infections among adults; however, a child gets infection from his/her mother most of the time. UNAIDS states that mother to child transmission is the largest source of HIV infection in children below 15 years of age. In fact, in countries where blood for transfusion and blood products are regularly screened, and where clean syringes and needles are widely available in health centres and hospitals, mother to child transmission (MTCT) is virtually the only source of infection in young children.³ Women are not only at higher

risk of acquiring HIV infection; they have got an unique role in transmission of HIV infection to children. This problem exaggerates if women are not aware about various aspects of HIV infection. The prevention of an infection is more important, therefore awareness of the various aspect of HIV deserve the utmost important from the strategic point of view. In India thousands of HIV infected babies are expected to be born every year. Despite effective intervention the identification of HIV infected pregnant women prior to delivery is major problem especially in a developing country like India. Lack of awareness, social stigma and poor health seeking may be the contributory factor of this problem. According to District Level Household and Facility Survey-3 (DLHS-3; 2007-08), in India 58.6% women had heard of HIV/AIDS with a considerable

difference between rural (48.8%) and urban (79.9%) areas. As per DLHS-3, 25.4% women had heard of HIV/AIDS in Jharkhand. Difference in awareness was higher between rural and urban area as only 18.7% women from rural area and 68.3% women from urban area had heard of HIV/AIDS. However, DLHS involved women of reproductive age group irrespective of their pregnancy status and there are only few studies have done for pregnant women only.

Rajendra Institute of Medical Sciences (RIMS) being a tertiary health care centre of Jharkhand cater a large population from different socio-economic strata from both rural and urban areas. Present study was conducted to assess awareness about HIV/AIDS among pregnant women attending PPTCT centre of RIMS.

Material and Methods:

A descriptive, cross sectional study was conducted at the PPTCT centre of RIMS from October 2013 to March 2014. Considering awareness on HIV/AIDS among 25% women in the state of Jharkhand (DLHS - 3) we calculated a sample size of 300 using formula $4pq/d^2$. Precision (d) of the study was considered as 5%. Consecutive sampling method was adopted to meet the sample size of 300

pregnant women. Women were interviewed between 9:30 AM to 11:30 AM on each working day. First six pregnant women used to be interviewed during each day of data collection. All participating women were interviewed before counselling for HIV/AIDS done by counsellor at PPTCT centre. Data collection was completed in two months. A pre-tested semi structured questionnaire

was used for data collection. Informed consent prior to interview was taken from all pregnant women who participated in the study. Data were entered in MS excel

and analysed in SPSS software. Chi-square test was used to find the association between sociodemographic variables and awareness about HIV/AIDS.

Results:

Among 300 pregnant women, 224 (74.7%) were in age group 15-25 years whereas only 8 (2.7%) women were in age group 36-45 years. Mean age of pregnant women was 23.96 (SD-3.97) years. Majority were Hindus (229; 76.3%) followed by Muslims (47; 15.8%) and Christians (24; 7.9%). Among 300 pregnant women, 84 (28%) were tribal women whereas 216 (72%) were non tribal. Proportion of pregnant women coming to PPTCT centre from rural (56.3%) was little higher from urban area (43.7%). Among all pregnant women in the study, 80 (26.7%) women were

illiterate, 110 (36.7%) were studied below 10th standard and remaining 110 (36.7%) were educated 10th standard or above. Most of the pregnant women were housewife (193; 64.3%) whereas only few had government job (8; 2.7%). Among our study subjects, 95 (31.7%) were pregnant for first time and remaining 205 (68.4%) were of second or more pregnancy order. Most of the pregnant women belonged to social class 4 (118; 39.3%) and social class 5 (92; 30.6%) as per modified Prasad's classification 2013.⁴(Table-1)

Table 1: Sociodemographic profile of pregnant women (n=300)

Variables		Frequency	Percentage
Age category	15-25	224	74.7
	26-35	68	22.7
	36-45	8	2.7
Religion	Hindu	229	76.3
	Muslim	47	15.8
	Christian	24	7.9

Ethnicity	Tribal	84	28.0
	Non-tribal	216	72.0
Residence	Rural	169	56.3
	Urban	131	43.7
Education	Illiterate	80	26.7
	Below 10 th stand.	110	36.7
	10 th or above	110	36.7
Occupation	House wife	193	64.3
	Agriculture	82	27.3
	Manual labourer	17	5.7
	Government job	8	2.7
Type of family	Nuclear	92	30.7
	Joint/ extended	208	69.3
Order of pregnancy	First	95	31.7
	Second or more	205	68.4
Social classification	Class-1	22	7.3
	Class-2	26	8.7
	Class-3	42	14.0
	Class-4	118	39.3
	Class-5	92	30.6

Out of 300 pregnant women, 176 (58.7%) had heard of HIV/AIDS. Among those who had heard of HIV/AIDS, 168 (95.4%) were aware of at least any one route of HIV transmission. Out of those 168 pregnant women, 165 (98.2%) pregnant women were aware of sexual route, 104 (62.6%) were aware of by infected blood

transfusion, 86 (51.6%) of mother to child route (MTCT) and 70 (41.7%) were aware of use of contaminated needle and intravenous drug use as route of HIV transmission. 70 (41.7%) out of those 168 pregnant women were aware of all four major route of HIV transmission i.e. sexual route, mother to child route,

intravenous drug use (IDU) & sharing of unsterile/infected syringes and infected blood transfusion. Three pregnant women were aware of transmission of HIV by infected blood transfusion only. Out of 176 pregnant women who have heard of HIV/AIDS, 75 (42.6%) had misconception that HIV/AIDS can be cured by using medicine. Only 54 (30.7%) were aware

that HIV/AIDS is not curable and remaining 47 (26.7%) were clueless about curability of the disease. 103 (58.5%) women were aware that HIV can be prevented by adopting certain precautionary measures, 26 (14.8%) opined that it can not be prevented and 47 (26.7%) had no awareness regarding prevention of HIV infection.

Table 2: Awareness about HIV/AIDS among pregnant women

Variables		Frequency	Percentage
Heard about HIV/AIDS	Yes	176	58.7
	No	124	41.3
Aware about any route of HIV transmission	Yes	168	95.4
	No	8	4.5
Awareness about different route of HIV transmission	Sexual	165	98.2
	IDUs	78	46.4
	MTCT	87	51.8
	Blood transfusion	104	61.9
	Contaminated needles	70	42.2
Whether HIV/AIDS is curable	Yes	75	42.6
	No	54	30.7
	Don't know	47	26.7
Whether HIV/AIDS is preventable	Yes	103	58.5
	No	26	14.8
	Don't know	47	26.7
Whether treatment available in any form for HIV/AIDS	Yes	107	60.8
	No	69	39.2
Use of medicine can prevent HIV among children acquired from mother*	Yes	46	52.9
	No	41	47.1

Source of information	Mass media	143	81.2
	Family members	16	9.1
	Friends	21	11.9
	PPTCT centre	57	32.4
Visited PPTCT centre earlier**	Yes	73	35.6
	No	132	64.4

*Question was asked from only those pregnant women who knew MTCT route.

**Question was only for second or higher order pregnancy.

Among those who were aware that HIV is preventable, 41 (39.8%) women said that it can be prevented by avoiding unsafe sex only. Remaining women had awareness on preventive measure of HIV as by avoiding unsafe sex & regular health check (21, 20.4%); avoid unsafe sex, use of medicine

& regular health check-up (3, 2.9%); avoid unsafe sex & be careful while blood transfusion (21, 20.4%); avoid unsafe sex and use of contaminated needle (16, 15.5%); and by using clean needle only (2, 1.9%). (Table-3)

Table 3: Awareness regarding preventive measures for HIV infection among pregnant women

Awareness	Frequency	Percentage
Avoid unsafe sex	41	39.8
Avoid unsafe sex and be careful while blood transfusion	21	20.4
Avoid unsafe sex and use of contaminated needle	16	15.5
Avoid unsafe sex and regular check up	21	20.5
Avoid unsafe sex, regular check up and use of medicine	3	2.9
Use of clean needle	2	1.9

109 (60.8%) out of 176 pregnant women were aware that treatment in some form is available for those who are infected with HIV whereas remaining 69 (39.2%) pregnant women were unaware about it. Among 87 pregnant women who were aware about mother to child transmission of HIV, 46 (52.9%) said that by use of proper medicine risk of mother to child transmission can be decreased.

Mass media was main source of awareness among majority (143, 82.1%) of pregnant women. PPTCT centre was also an important source of information for 57 (32.4%) pregnant women. Friends and family members were source of information for 21 (12.1%) and 16 (9.1%) pregnant women respectively. Among 205 pregnant women of second or higher pregnancy order, 72 (35.6%) had visited PPTCT centre earlier. (Table-2)

Awareness about HIV/AIDS and mode of transmission among pregnant women differs according to ethnicity,

education, area of residence and pregnancy order. Non tribal women (132; 61.0%) were more aware than tribal women (36; 42.8%) and this difference in awareness found to be statistically significant ($\chi^2 = 8.179$, p-value = 0.004, df = 1). Pregnant women from urban area (94; 72.0%) were better aware than those belonged to rural area (74; 43.8%) and again difference in awareness was statistically significant ($\chi^2 = 23.428$, p-value = 0.000, df = 1). Awareness about HIV/AIDS among pregnant women was associated with their literacy status as pregnant women who had studied 10th standard or higher were better aware than those who studied less. This association was also found to be statistically significant ($\chi^2 = 76.251$, p-value = 0.000, df = 2). Women who were pregnant for second or more time (123; 60.3%), aware more than first time pregnant women (45; 47.2%) and this difference in awareness was also statistically significant ($\chi^2 = 4.2$, p-value = 0.04, df = 1). (Table-4)

Table 4: Association between sociodemographic variables and awareness about HIV/AIDS

Socio-demographic variables		Awareness			Chi square test results
		Aware	Not aware	Total	
Ethnicity	Tribal	36(42.8%)	48(57.2%)	84	$\chi^2 = 8.179$, p-value = 0.004, df = 1
	Non tribal	132(61.0%)	84(39.0%)	216	

Residence	Rural	74(43.8%)	95(56.2%)	169	$\chi^2 = 23.428$, p-value = < 0.001, df = 1
	Urban	94(72.0%)	37(28.0%)	131	
Order of Pregnancy	First	45(47.2%)	50(58.2%)	95	$\chi^2 = 4.2$, p-value = 0.04, df = 1
	Second or More	123(60.3%)	82(39.7%)	205	
Education	Illiterate	14(17.5%)	66(82.5%)	80	$\chi^2 = 76.251$, p-value = < 0.001, df = 2
	< 10 th stand.	65(59.5%)	45(40.5%)	110	
	≥ 10 th stand.	89(81.0%)	21(19.0%)	110	

Discussion:

Participants of the present study were from different ethnic, educational and religious background from both rural and urban areas. Present study revealed that only 58.7% pregnant women heard about HIV/AIDS. Though awareness among pregnant women was not satisfactory in our study, it was better than a study conducted in New Delhi by Singh S et al, where only 39.3% pregnant women heard of HIV/AIDS.⁵ However, this difference in finding may be attributable to governments' massive effort on all front to contain the pandemic of HIV/AIDS as study in New Delhi was conducted more than a decade ago. A similar study conducted in tertiary care hospital by Goswami S et al found better result than our study where 87.13% pregnant women had heard about HIV/AIDS.⁶ In present

study, among those women who had heard about HIV/AIDS, majority (95.5%) of them were aware of sexual route of HIV transmission and this finding was comparable to other studies where also sexual route of HIV transmission was known to majority of aware pregnant women.^{6,7} Awareness on mother to child route of HIV transmission is no less important than other route of transmission as timely intervention can save baby from HIV infection. In our study, around half (51.6%) of pregnant women who had heard about HIV/AIDS, were aware of mother to child route of HIV transmission. A study conducted in south India by Firth J et al shown a better result (64%) than our study⁷ whereas, another study conducted by Goswami S et al shows a very poor finding (6.83%) in this context.⁶ Separate

studies conducted by Sun Y et al and Luo et al in China also shows a lesser awareness on mother to child route of HIV transmission among pregnant mother.^{8,9} Awareness on other routes of HIV transmission like contaminated blood transfusion and sharing needles were marginally lower in our study as compared to study conducted by Firth J et al in south India. Proportion of pregnant women who were aware of all route of HIV transmission in our study was comparable (41.7%) with the findings of same study (39%).⁷ It is a matter of concern that more than 40% pregnant women who have heard of HIV/AIDS in our study, were having misconception that HIV/AIDS is curable by using medicines. This finding is in contrast with study of Firth J et al which reported that only 10% pregnant women had misconception that HIV is curable.⁷ Andersson M et al found this response just 10% in their study in Papua New Guinea.¹⁰ Present study found that educational status, ethnicity, area of residence and pregnancy order of women was associated with awareness about HIV/AIDS among them. In our study, more than 80% pregnant women who were educated 10th or above, had heard about HIV/AIDS and at least one mode of HIV transmission as compared to illiterate pregnant women of whom only 17.5% were aware. This

difference in awareness was found to be statistically significant ($p=0.000$). Similar results were found in other studies conducted in India and abroad earlier.^{5, 6, 8, 11} Difference in awareness about HIV/AIDS according to ethnicity and pregnancy order was also found in study conducted by Sun Y et al in China. However, statistically significant difference was found with ethnicity and not with pregnancy order of women.⁸ In our study, second or more time pregnant women were far more in number than first time pregnant women and nearly one third of them had their visit to PPTCT centre earlier. This might be the reason for better awareness about HIV/AIDS among those women. Present study found that, mass media (81.2%) was most common source of information for HIV/AIDS followed by health care system i.e. PPTCT/ICTC centre (32.4%). Singh S et al in their study in Delhi also found that mass media (86.3%) was most common source of information for pregnant women and 48.6% had preference to get information on AIDS from doctors.⁵ Present study was hospital based, and hence results can not be generalised which is the major limitation of the study. A detailed community based study will give better insight about awareness regarding HIV/AIDS among pregnant women.

Conclusion:

Awareness about HIV/AIDS among pregnant women was not very satisfactory. Educational status and awareness about HIV/AIDS were associated significantly. Better education may result in more awareness about HIV/AIDS. PPTCT contribution in creating awareness seems to be good but low turnout of pregnant

women at PPTCT centre was disappointing. Misconception regarding cure of HIV/AIDS was not only unacceptable but also harmful for community. Awareness about availability of drugs for HIV infection among these women was also poor.

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