

**CHAPTER IV**

**SOCIO, ECONOMIC AND DEMOGRAPHIC  
CHARACTERISTICS & KNOWLEDGE ABOUT HIV/AIDS  
AND PPTCT AMONG HIV POSITIVE WOMEN**

#### **4.1. Introduction**

In India HIV/AIDS is concentrated among high risk groups. The first AIDS case was detected in 1986 and since then HIV infection has been reported in all the states and union territories. India had responded promptly to the HIV/AIDS challenge at the initial stage itself by setting up an AIDS Task Force under the Indian Council of Medical Research and a National AIDS Committee headed by the Secretary, Ministry of Health & Family Welfare. The first National AIDS Control Programme (NACP) was launched in 1992 for prevention and control of HIV/AIDS. This is followed by NACP-II in 1999, NACP-III in 2007 and NACP-IV (2012-2017). The National Family Health Survey (NFHS-3) which was held in 2006 suggests that two-thirds of women in Odisha heard of AIDS. Here only 11 per cent of women and 25 per cent of men had comprehensive knowledge of HIV/AIDS (NFHS-3, 2005-06). As per the HIV estimation, 2011, the total number of people living with HIV/AIDS (PLHIV) in India was estimated at around 20.9 lakh. Children less than 15 years of age accounted for 7 per cent (1.45 lakh) of all infections, while 86 per cent were in the age-group of 15-49 years. Of all HIV infections, 39 per cent (8.16 lakh) were among women. India was estimated to have around 1.16 lakh new HIV infections annually among adults and around 14,500 new HIV infections among children in 2011. Of 1.16 lakh estimated new infections in 2011 among adults, the previously high HIV prevalence states of Andhra Pradesh, Karnataka, Maharashtra, Tamil Nadu, Manipur and Nagaland accounted for 31 per cent of new infections, whereas some low prevalence states (Odisha, Jharkhand, Bihar, Uttar Pradesh, West Bengal, Gujarat, Chhattisgarh, Rajasthan, Punjab and Uttarakhand) together accounted for around 57 per cent of new infections. Adult HIV prevalence of Odisha was estimated as 0.40 per cent and 1,03,862 estimated number of new HIV infection.

Having discussed the methodology, data and sample in Chapter II and Prevention of Parent to Child Transmission Programme in Chapter III, this chapter examines the empirical findings of socio-demographic characteristics of HIV positive women. Apart from their socio-demographic characteristics, this chapter discusses the access of PPTCT services, knowledge on HIV/AIDS and PPTCT of the sample respondents. Different socio-economic factors which are likely to influence access of PPTCT services and knowledge

on HIV/AIDS of the respondents have also been examined. It begins with demographic characteristics of HIV positive women with respect to type of hospital attended.

#### **4.2. Socio-demographic characteristics of HIV positive women**

Socio-economic and demographic characteristics of HIV positive women are depicted in the Table 4.1. In this study, 152 HIV positive women were interviewed from three different government hospitals in the selected districts. The name of the hospitals is kept as confidential due to sensitive nature of the study. The following table presents the percentage distribution of HIV positive women by age, marital status, residence, religion, caste, type of family and income of the family.

Age of mother is an important determinant for risk indulging in HIV/AIDS. An equal proportion of respondents, that is 39 per cent HIV positive women, were found to be in the age groups 20-24 years and 25-29 years. These age groups indicate that young people were at a greater risk of HIV infection. The mean value of the age of the HIV positive women is 24 years. About 16 per cent of HIV positive women were below 20 years whereas at the higher age group of 30-34 years they were only 5.3 per cent. The average age of HIV positive women was 28 years, indicating that the middle aged women were very much prone to HIV/AIDS. Disaggregating the data by availability of facilities at different institutions with respect to age, it is found that a large proportion of HIV positive women in the age group of 20-24 years availed of the treatment at the selected hospital of the Cuttack and Ganjam district, i.e., 48.1 per cent and 41.6 per cent respectively. On the other hand, more than six out of ten (66.7 per cent) respondents enrolled in the selected hospital of Khordha district for treatment were in the age bracket of 25-29 years. The proportion of the HIV positive women availing of health facility for the treatment of HIV/AIDS varied across the three different health centres according to their age. Thus, most of the HIV positive women were found to be in the age group of 25-29 at Khordha district. However, in the other two hospitals a higher percentage HIV positive woman in the age group of 20-24 years availed of health facility. Similarly, the age of husbands of the sample respondents reveals that most of the husbands (60 per cent) were in the age group of 30-34 years and more were in the health facility of Cuttack and Ganjam district. However, in the case of most of the HIV positive women (63.6 per cent) enrolled in the selected hospital of Khordha district, their husbands were in the age group of 35-39 years. As for the marital status of respondents, most of the HIV positive women (91 per cent) were married and the rest of them are separated, divorced and widows. The HIV positive

women who separated, divorced and widowed constituted a small number, i.e., 14 out of 152. HIV infection among widows may be due to their conjugal relations with the deceased HIV infected husbands.

**Table 4.1 Socio-economic and demographic characteristics of HIV positive women**

Variables	Ganjam	Cuttack	Khordha	Total	No. of women
	per cent	per cent	per cent	per cent	No.
<b>Age of positive women</b>					
<19	15.0	14.8	25.0	15.8	24
20-24	41.6	48.1	0.0	39.5	60
25-29	38.1	33.3	66.7	39.5	60
30-34	5.3	3.7	8.3	5.3	8
<b>Age of husband</b>					
<30	11.7	12.5	18.2	12.3	17
30-34	64.1	66.7	9.1	60.1	83
35-39	20.4	8.3	63.6	21.7	30
40 & above	3.9	12.5	9.1	5.8	8
<b>Marital status</b>					
Married	91.2	88.9	91.7	90.8	138
Separated	2.7	7.4	0.0	3.3	5
Divorced	1.8	3.7	8.3	2.6	4
Widowed	4.4	0.0	0.0	3.3	5
<b>Religion</b>					
Hindu	84.1	85.2	83.3	84.2	128
Muslim	8.0	14.8	16.7	9.9	15
Christian	8.0	0.0	0.0	5.9	9
<b>Caste</b>					
General	23.0	92.6	33.3	36.2	55
OBC	43.4	0.0	0.0	32.2	49
SC	16.8	3.7	66.7	18.4	28
ST	16.8	3.7	0.0	13.2	20
<b>Education of the clients</b>					
Illiterate	16.8	22.2	58.3	21.1	32
Elementary school	53.1	51.9	16.7	50.0	76
High school	23.0	22.2	16.7	22.4	34
Intermediate	7.1	3.7	8.3	6.6	10
<b>Occupation of the positive women</b>					
House wife	76.1	70.4	33.3	71.7	109
Daily wage labourer	11.5	22.2	58.3	17.1	26
Employee (Govt .& Pvt. job)	6.2	3.7	0.0	5.3	8
Business (petty & big)	5.3	0.0	0.0	3.9	6
Others	0.9	3.7	8.3	2.0	3

Contd...

Variables	Ganjam (Per cent)	Cuttack (Per cent)	Khordha (Per cent)	Total (Per cent)	No. of Women
<b>Husband's education</b>					
Illiterate	3.5	0.0	0.0	2.6	4
Elementary school	22.1	40.7	0.0	23.7	36
High school	38.9	44.4	83.3	43.4	66
Intermediate	35.4	14.8	16.7	30.3	46
<b>Husband's occupation</b>					
Daily wage labourer	36.3	29.6	8.3	32.9	50
Employee (govt. & Pvt.)	23.9	7.4	83.3	25.7	39
Migrant worker (seasonal wage labourer)	29.2	44.4	8.3	30.3	46
Business	9.7	7.4	0.0	8.6	13
Others	0.9	11.1	0.0	2.6	4
<b>Residence</b>					
Rural	51.3	25.9	16.7	44.1	67
Urban	48.7	74.1	83.3	56.0	85
<b>Type of family</b>					
Nuclear	42.5	18.5	33.3	37.5	57
Joint	57.5	81.5	66.7	62.5	95
<b>Income of family (in Rs.)</b>					
<2000	22.1	7.4	0.0	17.8	27
2001-3000	21.2	44.4	66.7	28.9	44
3001-5000	36.3	37.0	0.0	33.6	51
5001-10000	15.9	11.1	8.3	14.5	22
> 10000	4.4	0.0	25.0	5.3	8
<b>Total</b>					<b>152</b>

Source: computed from the primary data.

With regards to religion, 84.2 per cent of the respondents were Hindus, followed by 9.9 per cent Muslims and 5.9 per cent Christians. As for the caste status of the HIV positive women, a higher proportion of them from the upper caste communities were affected by HIV/AIDS as compared with other caste groups. As many as 36.2 per cent of HIV positive women belonged to general category, followed by Other Backward Classes (32.2 per cent). A considerable proportion of HIV positive women (18.4 per cent) were found to be of Scheduled Castes (SCs) and remaining 13 per cent of Scheduled Tribes (STs). Disaggregating the data by hospitals, it is found that most of these women (92.6 per cent) at the hospital of Ganjam district belonged to general social category while a higher proportion of respondents (43.4 per cent) were from OBCs in the health facility of Cuttack

district. In the Khordha district, a majority of them (66.7 per cent) belonged to STs. The result shows that the percentage distribution of women varied across all caste groups at different health facilities.

Education was one of the most important factors that influenced HIV/AIDS characteristics of the respondents (NACO, 2006). Thus, the respondents are placed in four categories according to their educational levels including the HIV positive women who have had no education. Women who had education are grouped into three different educational levels as elementary, high school and intermediate. Half of HIV positive women had elementary education and almost a same proportion of them were illiterate (21.1 per cent). HIV positive women who had education up to intermediate constituted 22.4 per cent. The mean years of schooling of the HIV positive women is 2 years. Table 4.1 shows that little more than half of the respondents (53.1 per cent) availed of health care at Ganjam district. In Cuttack district 52 per cent women completed elementary education. The highest proportion of women (58 per cent) who were provided health facility at Khordha district was illiterate. The percentage of HIV positive women with primary school education was higher in Ganjam district as compared with Cuttack and Khordha district. No HIV positive women with high school education availed of health care facility at Khordha district. With regard to the education of husbands of HIV positive women, less than one-third (30.3 per cent) of husbands acquired higher secondary level of education, while a little higher proportion of husbands (43.4 per cent) completed secondary education. Husbands who qualified elementary level of education constituted 23.7 per cent. A higher proportion of husbands of women who availed of health care at Ganjam district had up to higher secondary level of education compare with health facility of Cuttack and Khordha district.

The occupation of respondents played a vital role in prevalence of HIV/AIDS (NACO, 2006). The above table reveals that maximum numbers of respondents (72 per cent) were housewives and a significant percentage of them (17 per cent) worked as daily wage labourers. A very small proportion of HIV positive women were engaged in government or private job (5.3 per cent), business (4 per cent) and other livelihood activities (2 per cent). In comparison of occupational categories of women across the type of hospital, a greater percentage of daily wage labourers affected by HIV/AIDS (59 per cent) were treated in the health facility of Khordha district as against their counterparts in Ganjam and Cuttack district. Information on occupational status of the husbands of HIV

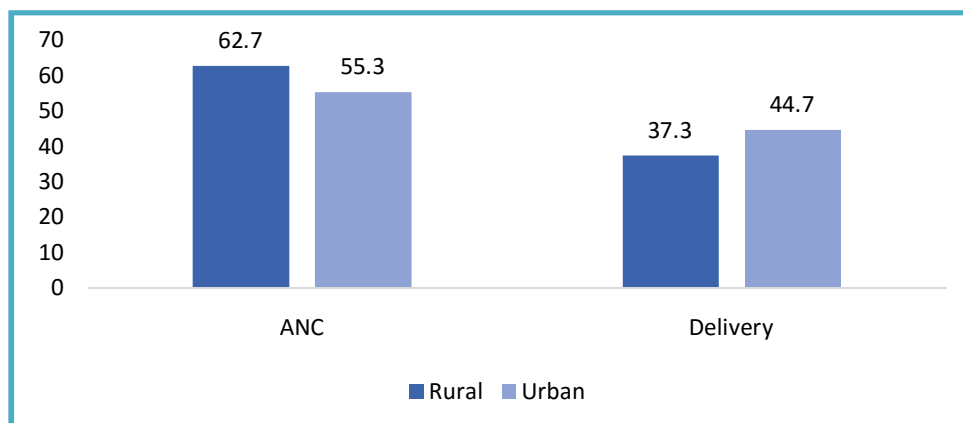
positive women revealed that about one-third of them (33 per cent) were daily wage labourers. It is noted that 34 per cent of them were businessmen and employees. Among the HIV infected women, 83.3 per cent of them whose husbands were employees were treated in the hospital of Khordha district.

As far as family income of the respondents is concerned, 62.5 per cent of them had meagre family income of Rs. 2000 to Rs. 5000. Of 152 respondents, 34 per cent of them earned merely Rs. 3000-5000 per month, while 28 per cent earn between Rs. 2001-3000 per month. Only 18 per cent respondents had monthly income of less than Rs.2001. Around 20 per cent of respondents' monthly family income was above Rs 5000. Thus, most of the sample HIV positive women belonged to low economic as well as educational strata of the society. Evidence shows that poor people are more vulnerable to HIV/AIDS infection.

#### 4.3. Visit of HIV positive women to health facilities

Visit of HIV positive women to different health facilities to avail of health care has been portrayed in this section to ascertain primarily antenatal and delivery care by their different background characteristics. Figure 4.1 shows the access of health services (i.e., ANC and delivery care) across place of residence. Comparatively a higher proportion of HIV positive women residing in rural areas (63 per cent) received ANC as compared with their counterpart in urban areas (55 per cent). In contrast, the situation in case of delivery care was different as a higher proportion of HIV positive women in urban area (45 per cent) received it as against their rural counterpart (37 per cent).

**Figure 4.1 Visit of HIV positive women to health facilities for PPTCT services by residence (per cent)**



Source: computed from the primary data.

#### **4.4. Knowledge about HIV/AIDS**

Table 4.2 reveals the knowledge of respondents about HIV according to their demographic characteristics. For measuring knowledge, basic questions related to knowledge were assessed using participants' correct responses. The five questions had a total of 16 points. Each correct response was given a score of 1 for 'Yes' response and a wrong response a score of 0 for 'No' response. The points assessed basic knowledge on transmission ( five points – knowledge on transmission of HIV, unsafe blood transfusion, sharing needles with an infected person, mother to child transmission and unprotected sexual intercourse), risk factors ( six points – knowledge of the risks of HIV transmission, unprotected sexual intercourse with an infected person, multiple sexual partners, having sexually transmitted infections, intravenous drug abuse) and preventive measures (five points – abstinence, having one faithful sexual partner, using condoms correctly during sexual intercourse, use tested blood and use only newly sterilized needles). On assessment, Modified Bloom's cut off points were used during analysis which were adopted from Ms Nahida's KAP study (Questionnaire shows Bloom's cut off points). A score of 75 – 100 per cent, 50 – 74 per cent and less than 50 per cent placed the respondents in good, moderate and poor basic HIV/AIDS knowledge respectively. Increases in the age of respondents are positively associated with increases in the levels of knowledge. For example, a higher percentage of HIV positive women aged 30-34 years (33 per cent) possess good knowledge as against HIV positive women of less than 19 years (18 per cent). A small difference is noticed regarding good knowledge of HIV among married women (23 per cent) and women in divorced / widowed category (20 per cent). The respondent's level of education has positive and significant relationship with the knowledge of AIDS as 45 per cent women who were qualified intermediate had good knowledge of HIV as against illiterate women (14 per cent). A higher proportion of respondents employed in business sector/daily labour had good knowledge of HIV as compared with housewives. Special attention to awareness about HIV through mass media, meetings and training to the housewives is the need of the hour.



**Table 4.2 Association between demographic characteristics and level of knowledge on HIV**

Background characteristics	Knowledge level			P value
	Good	Moderate	Poor	
<b>Age</b>				
<19	18.3	37.1	45.4	
20-24	24.9	42.8	32.3	0.012
25-29	38.4	48.0	23.6	
30-34	33.1	44.2	22.7	
<b>Marital status</b>				
Married	23.2	50.6	27.3	0.027
Separated	17.8	51.3	30.9	
Divorced	20.0	65.0	15.0	
Widowed	20.0	70.0	10.0	
<b>Education</b>				
Illiterate	14.2	33.2	52.5	0.006
Primary school	29.6	42.4	28.1	
High school	44.2	48.1	7.7	
Intermediate	45.1	44.6	10.1	
<b>Occupation</b>				
Housewife	28.4	44.6	23.0	0.000
Daily labourer	46.2	33.4	20.4	
Employee	71.4	19.8	8.6	
Business	61.6	25.6	12.4	
Others	55.4	35.6	8.9	

Source: Computed from the primary data.

#### **4.5. Comprehensive knowledge regarding HIV/AIDS among HIV positive women**

Comprehensive educational and awareness programmes have been implemented with mandates to increase prevention and control of HIV/AIDS in India. Under the National AIDS Control Programme, educational programmes have focused on enhancing people's knowledge about HIV/AIDS and building behavioural skills to enhance prevention practices (NACO, 2005). The following table presents the comprehensive knowledge about HIV/AIDS among HIV positive women. Information has been collected from the respondents after pre-test and post-test counselling at the health facility. The distribution of comprehensive knowledge is illustrated in Table 4.3. The study presents misconceptions about HIV/AIDS and HIV transmission. The positive women were asked whether it was possible for a healthy looking person to have HIV/AIDS? They were also asked whether a person could get HIV/AIDS by mosquito bites, hugging someone having HIV/AIDS, or

sharing food with a person afflicted with HIV/AIDS? The HIV positive women who came from the urban areas had adequate knowledge of HIV/AIDS. More than 60 per cent of HIV positive women reported that HIV could not spread by mosquito bites, hugging the persons having AIDS, or sharing food with HIV/AIDS afflicted persons.

**Table 4.3 Comprehensive knowledge about HIV/AIDS among HIV positive women by background characteristics (Per cent)**

<b>Background characteristics</b>	<b>HIV/AIDS cannot be transmitted by mosquito bites</b>	<b>HIV/AIDS cannot be transmitted by hugging persons having AIDS</b>	<b>HIV/AIDS cannot be transmitted by sharing food with others</b>	<b>Healthy looking persons can have HIV/AIDS</b>	<b>Percentage of HIV positive women who have comprehensive knowledge of HIV/AIDS</b>
<b>Place of residence</b>					
Rural	35.7	43.4	33.9	28.9	32.8
Urban	58.9	62.4	65.9	65.4	61.4
<b>Age group of respondents</b>					
<19	42.3	44.4	53.2	61.1	51.2
20-24	55.8	58.9	42.8	41	48.9
25-29	44.4	38.9	39.5	36.6	39.8
30-34	40.1	41.9	40.5	42.3	42.2
<b>Marital status</b>					
Married	51.5	53.2	51.1	54.8	53.2
Separated	34.3	38.2	35.6	41.2	37.6
Divorced	39.4	42.2	37.2	40.5	40.0
Widowed	34.9	42.1	33.2	37.2	37.1
<b>Religion</b>					
Hindu	58.9	59.1	57.3	58.8	58.6
Muslim	36.2	34.3	33.2	38.9	35.6
Christian	51.3	53.4	48.9	47.7	51.0
<b>Caste</b>					
General	57.2	62.5	58.1	56.3	58.6
OBC	44.2	38.4	42.6	39.1	42.2
SC	32.1	27.3	30.1	22.4	31.2
ST	22.2	18.9	17.3	18.2	20.6

Contd...

Background characteristics	HIV/AIDS cannot be transmitted by mosquito bites	HIV/AIDS cannot be transmitted by hugging persons having AIDS	HIV/AIDS cannot be transmitted by sharing food with others	Healthy looking persons can have HIV/AIDS	Percentage of HIV positive women who have comprehensive knowledge of HIV/AIDS
<b>Education</b>					
Illiterate	24.6	20.6	29.9	33.8	28.3
Primary school	38.9	33.8	35.6	42.2	37.6
High school	48.7	45.9	45.3	51.4	48.9
Intermediate	68.9	55.1	65.1	66.7	65.1
<b>Occupation</b>					
Housewife	33.1	36.3	37.5	34.1	35.2
Daily labourer	37.9	38.2	42.6	41.4	40.2
Employee	54.2	47.7	53.2	55.4	52.6
Business	58.9	57.8	57.3	57.2	57.8
Others	45.7	49.2	53.7	56.2	51.2
<b>Income of the family (in Rs.)</b>					
<2000	33.3	47.2	42.2	37.7	40.9
2001-3000	37.8	52.1	49.1	43.4	46.2
3001-5000	45.1	54.8	53.4	51.4	54.2
5000-10000	46.2	58.1	59.9	60.1	56.1
10001 & above	63.1	67.9	65.4	66.3	66.4
<b>Total</b>	<b>44.3</b>	<b>53.5</b>	<b>55.9</b>	<b>46.4</b>	<b>46.1</b>

Source: Computed from the primary data.

About 56 per cent of HIV positive women believed that HIV could be transmitted by sharing the food with persons who had HIV/AIDS, followed by hugging the persons having HIV/AIDS (54 per cent) and mosquito bites (44 per cent). The definition of comprehensive knowledge about HIV/AIDS has been borrowed from the NFHS-3. It is defined as: 1) knowing that both condom use and limiting sex partners to one uninfected faithful partner are HIV/AIDS prevention methods; 2) being aware that a healthy-looking person can have HIV/AIDS; and, 3) rejecting the two most common misconceptions that HIV/AIDS can be transmitted through mosquito bites and by sharing food. In total, 46 per cent of HIV positive women have comprehensive knowledge about HIV/AIDS. The HIV positive women from the community had higher knowledge than their rural counterpart. The proportions of women and men who rejected these common misconceptions, who knew that a healthy-looking person could have HIV/AIDS, or who have comprehensive

knowledge about HIV/AIDS decreased with age. With regard to marital status, married HIV positive women had higher knowledge than their counterparts. Comprehensive knowledge about HIV/AIDS increased with increase of education. About 62 per cent of HIV positive women had comprehensive knowledge about HIV/AIDS compared with illiterate women (28 per cent). Similarly, income of the family had positive association with comprehensive knowledge about HIV/AIDS. The proportion of HIV positive women who rejected the three common misconceptions increased steadily with increase in the income of their family.

#### **4.6. Knowledge of PPTCT**

HIV/AIDS can be transmitted from parent to child during pregnancy, labour and delivery, and during breast feeding. It can be reduced by using anti-retroviral drugs. NACP implements single dose of Nevirapine for both infected mothers and exposed children for preventing mother to child transmission of HIV. To obtain information relating to the PPTCT, HIV infected women were asked, “Have you heard the term PPTCT?” Responses were collected from the options ‘yes’ and ‘no’. The following table provides the logistic regression of knowledge of PPTCT by background characteristics:

Table 4.4 illustrates that a positive relationship exists between family income and knowledge about PPTCT. Women from higher income families were more likely to have knowledge of PPTCT than those from low income groups (OR=10.815 and at CI=p<0.05). The variables, i.e., age of husband and religion did not have a significant effect on knowledge about PPTCT. Increasing level of women’s education had a positive effect on knowledge level at p<0.05 and at p<0.001 level of significance here odds ratio ranged from 2.828 to 7.523. It means that women with a higher educational level had more than twice to four times more chances of having knowledge of PPTCT. Social group is an important predictor for woman’s knowledge as women belonging to OBC and general category were more likely to have this knowledge than those belonging to SC/ST categories (OR=2.018 & 7.986 at p<0.001). Similarly, women other than wage labourers and housewives were thrice more likely to have this knowledge as compared with their counter- parts elsewhere (OR=3.737).

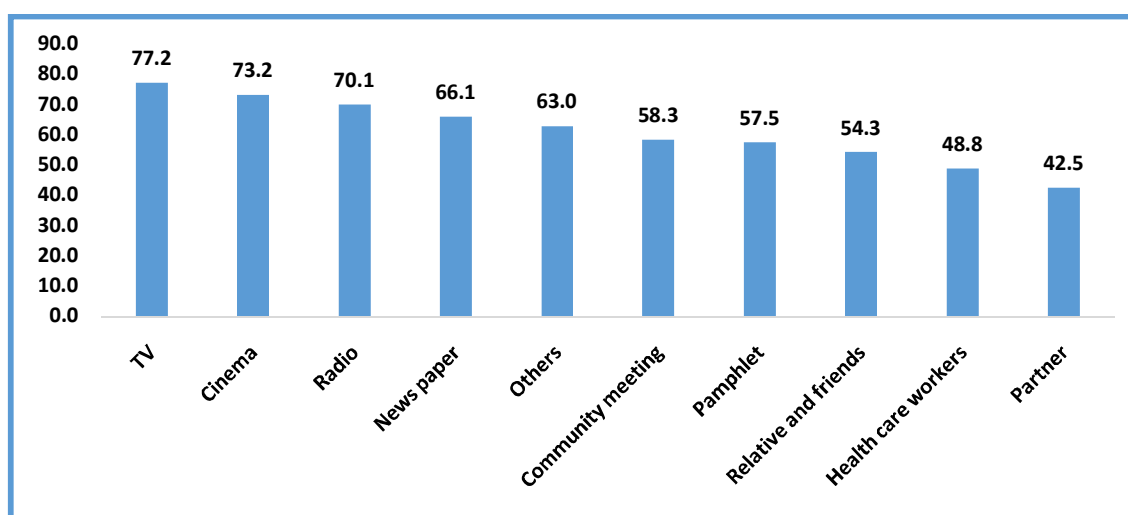
**Table 4.4 Logistic Regression on chances of women having knowledge on PPTCT by background factors**

Factors	Knowledge on PPTCT		
	S.E.	Exp(B)	
<b>Place of residence</b>			
Rural <sup>(R)</sup>			
Urban	1.022	2.278	***
<b>Age group of respondent</b>			
24 & below <sup>(R)</sup>			
25 to 35 years	1.087	1.708	**
<b>Age of husband</b>			
Below 30 <sup>(R)</sup>			
30 – 35	11.341	0.998	
> 35	3.341	0.998	
<b>Social group</b>			
ST/SCs <sup>(R)</sup>			
OBCs	0.965	2.018	***
General	0.143	7.960	***
<b>Religion</b>			
Hindu <sup>(R)</sup>			
Others	5.459	1.579	
<b>Educational status of respondent</b>			
Illiterate <sup>(R)</sup>			
Primary & UP	0.999	6.087	**
Secondary & above	1.564	7.523	***
<b>Educational status of husband</b>			
Illiterate <sup>(R)</sup>			
Primary &UP	1.195	2.828	**
Secondary & above	1.058	4.819	**
<b>Occupation of respondent</b>			
Housewife <sup>(R)</sup>			
Wage labourer	7.427	3.481	
Others	0.971	3.737	**
<b>Occupation of husband</b>			
Wage labourer <sup>(R)</sup>			
Employee	1.083	1.278	***
Others	1.173	3.061	*
<b>Family income</b>			
Below Rs. 2000 <sup>(R)</sup>			
Rs.2000 to 5000	0.916	0.842	
Above Rs. 5000	1.588	10.815	**
<b>Type of family</b>			
Nuclear(R)			
Joint	0.959	1.156	*
Constant	11.341	2.762	0.998

**Note:** ® reference category; Significant at: \*p<0.01, \*\*p<0.05 & \*\*\*p<0.001.  
Source: Computed from the primary data.

NACP implements PPTCT programme and it has been gaining strength in the country since 2004. NACO disseminates the programme through Information, Education & Communication (IEC) and Behaviour Change Communication (BCC) – Mass Media Campaigns through Radio and TV, Mid-media campaigns through Folk Media, display panels, banners, wall writings, etc. A special campaign through music and sports, flagship programmes such as Red Ribbon Express, etc. (NACO, 2012). Figure 4.6 shows the percentage of HIV positive women who received the information regarding PPTCT from various sources.

**Figure 4.2 Percentage of HIV Positive women who heard of HIV/AIDS by the sources of information**



Source: Computed from the primary data.

More than three-fourths of HIV positive women reported the source of information as television (77 per cent), followed by cinema (73 per cent), radio (70 per cent) and newspaper (66 per cent) and so on.

#### **4.7. Modes of transmission of HIV from parent to child**

HIV can be transmitted from parent to child during pregnancy, labour and delivery, and breastfeeding. HIV positive women were asked about their knowledge regarding HIV transmission from parent to child and various prevention methods. Tables 4.5 shows the percentage of HIV positive women who reported modes of transmission of HIV from parent to child.

It shows that many women residing in rural areas lacked accurate knowledge about the ways in which HIV/AIDS could be transmitted from mother to child. More than two-thirds of women residing in rural areas (77 per cent) knew about the transmission of HIV from parent to child as compared with women living in urban areas (81 per cent). About 42 per cent of HIV positive women in rural areas had knowledge on transmission of HIV during pregnancy. While 51 per cent of HIV positive women in urban areas had knowledge on the same. It was found that rural women lagged behind their urban counterpart. Knowledge of HIV transmission during delivery is higher compared with other ways of transmission.

The study found positive association between levels of knowledge of transmission of HIV and age of the respondents. Increase in the age of respondent's leads to a higher level of knowledge of transmission of HIV from mother to child. Nearly half of women aged less than 19 years had inadequate knowledge of HIV transmission from parent to child during the pregnancy. The level of awareness of transmission of HIV from parent to child reached 81 per cent for the women aged 30-34 years. Similarly, more than two-thirds of mothers (67 per cent) in the under-19 years age group were aware of transmission of HIV during delivery, which increased to 68 per cent for the women aged 30-34 years. More women (78 per cent) in the age group of 25-29 years had knowledge of transmission of HIV from parent to child and transmission of HIV during pregnancy.

The higher proportions of married HIV positive women have knowledge on transmission of HIV to the child and 67 per cent had knowledge about transmission of HIV to child during delivery. Less than half of married women had knowledge about HIV transmission during pregnancy and during breast feeding. However, the married women were poor with respect to their knowledge of HIV transmission during pregnancy and delivery.

Caste is associated with knowledge of different ways of HIV/AIDS transmission from mother to her baby indicates backward communities possessed poor knowledge about it. There were, however, large differentials in knowledge on all aspects. More than three out of every mothers belonged to the general castes had awareness of transmission of HIV during breast feeding as compared with OBCs (43 per cent), SCs (53 per cent) and STs (20 per cent). ST women had poor knowledge of different modes of transmission of HIV to the child. This is probably due to lack of education and awareness.

Level of education of the mother is strongly associated with the knowledge of different modes of transmission of HIV from mother to child. Improvement in the level of education helped to raise the level of awareness on mode of transmission of HIV. Disaggregating the data by level of education shows that 76 per cent women completed education up to high school level knew well about transmission of HIV from parent to child compared with women having primary education (65 per cent) and illiterate (58 per cent). Likewise, a higher proportion of HIV positive women who completed high school and intermediate level had awareness of transmission of HIV during pregnancy, delivery and breast feeding as against the primary level educated and illiterate women.

With regard to occupation, nearly 87 per cent of HIV positive women in employment category had knowledge of transmission of HIV during pregnancy, whereas the proportion was only 43 per cent among housewives and 46 per cent among daily labourers. The low awareness regarding mode of transmission of HIV among daily labourers / housewives is a matter of serious concern and requires special attention.

The level of income of the family is strongly and positively associated with mode of transmission of HIV from mother to child. The proportion of HIV positive women regarding knowledge of HIV transmission from parent to child increased steadily from 75 per cent for HIV positive women whose family income was less than Rs 2000 to 88 per cent for women whose family income was more than Rs 10000. However, the result does not support any significant relationship between increases in income of the family and transmission of HIV from mother to her baby via breast feeding, delivery and pregnancy.



**Table 4.5 Knowledge of prevention of HIV transmission from a mother to her baby (per cent)**

<b>Background characteristics</b>	<b>HIV Can be transmitted from parent to child</b>	<b>HIV can be transmitted during pregnancy</b>	<b>HIV can be transmitted during delivery</b>	<b>HIV can be transmitted during breastfeeding</b>	<b>Total</b>
<b>Place of residence</b>					
Rural	68.0	41.8	65.7	47.8	67
Urban	81.0	50.6	69.4	51.8	85
<b>Age group of respondent</b>					
<19	52	54.2	66.7	45.8	24
20-24	65.0	48.3	65.0	51.7	60
25-29	78.0	41.7	68.3	50.0	60
30-34	81.0	50.0	73.0	50.0	8
<b>Marital status</b>					
Married	83.0	45.7	67.4	49.3	138
Separated	80.0	52.0	55.2	51.1	5
Divorced	76.0	55.0	62.0	65.0	4
Widowed	60.0	0.0	40.0	0.0	5
<b>Religion</b>					
Hindu	84.0	43.0	68.0	50.0	128
Muslim	71.0	66.7	66.7	53.3	15
Christian	70.0	66.7	66.7	44.4	9
<b>Caste</b>					
General	85.0	52.7	70.9	65.5	55
OBC	68.0	53.1	77.6	42.9	49
SC	63.0	42.9	67.9	53.6	28
ST	60.0	20.0	35.0	20.0	20
<b>Education</b>					
Illiterate	58.0	28.1	43.8	31.3	32
Primary school	65.0	43.4	67.1	52.6	76
High school	76.0	64.7	82.4	55.9	34
Intermediate	85.0	70.0	100	70.0	10
<b>Occupation</b>					
Housewife	64.0	43.1	65.1	46.8	109
Daily labourer	76.0	46.2	61.5	50.0	26
Employee	87.1	87.5	87.5	87.5	8
Business	80.2	33.3	100	33.3	6
Others	72.1	60	65	80	3
<b>Income of the family</b>					
<2000	75.0	51.9	70.4	51.9	27
2001-3000	81.0	56.8	70.5	59.1	44
3001-5000	89.0	47.1	72.5	49.0	51
5000-10000	86.3	22.7	54.5	31.8	22
10001 & above	87.5	37.5	50.0	50.0	8
<b>Total</b>	<b>84.0</b>	<b>46.7</b>	<b>67.8</b>	<b>50.0</b>	<b>152</b>

Source: Computed from the primary data.

#### **4.8. Association between demographic characteristics and level of knowledge of PPTCT**

Parent to Child Transmission (PPTCT) of HIV remains the major source of HIV infection in young children. Targeting pregnant women attending antenatal clinics provides a unique opportunity for implementing PPTCT programme against HIV infection of newborn babies. This study aims to find the relationship between demographic characteristics and level of knowledge of PPTCT. Table 4.6 shows the awareness of women on MTCT by background characteristics.

More than half (51 per cent) of the HIV positive women in the age group of 19 years and below possess poor knowledge about MTCT is a matter of concern and requires urgent attention. One third of HIV positive women in the age group of 20-24 years and one in every four HIV positive women belong to the age group 25-29 years have poor knowledge of MTCT. There are noticeable differences in knowledge about MTCT according to marital status of women. Married women possess poor knowledge about the same. Poor knowledge of married HIV positive women about MTCT is higher (50 per cent) as against separated (29 per cent) and divorced (16 per cent) HIV positive women. Nearly one-third of respondents belong to minority communities (i.e., Muslims and Christians) have poor knowledge of MTCT as compared with Hindus (18 per cent).

One of the interesting findings of knowledge about MTCT across social groups is that HIV infected women belonging to SCs (35 per cent) and OBCs (23 per cent) had good knowledge about MTCT as against their general counterpart. Poor knowledge of MTCT was the highest among HIV positive women who had no education or were illiterate (72 per cent) and it decreased as educational level increased, that is, to 35 per cent for women who completed primary school and 26 per cent for those who qualified secondary education. More number of housewives (34 per cent) and daily labourers (33 per cent) as compare with employees (15 per cent) had poor knowledge of MTCT which draws a special attention towards proper awareness and need to provide appropriate information regarding it.

**Table 4.6 Association between demographic characteristics and level of knowledge of PPTCT**

Background characteristics	Knowledge level			P value
	Good	Moderate	Poor	
<b>Age (in years)</b>				
<19	11.8	37.3	51.2	P = 0.009
20-24	14.2	52.8	33.2	
25-29	28.1	48.2	24.1	
30-34	25.3	45.5	29.2	
<b>Marital status</b>				
Married	11.6	39.2	50.4	P= 0.027
Separated	17.5	53.4	29.1	
Divorced	18.8	65.3	15.9	
Widowed	17.8	64.2	18.2	
<b>Religion</b>				
Hindu	17.8	64.2	18.1	P= 0.012
Muslim	13.3	51.8	34.9	
Christian	13.1	53.7	33.3	
<b>Caste</b>				
General	11.9	54.2	34.1	P= 0.007
OBC	22.7	45.2	32.1	
SC	34.7	50.4	14.9	
<b>Education</b>				
Illiterate	9.5	18.2	72.3	P = 0.000
Primary school	13.3	51.8	34.9	
High school	18.2	55.3	26.5	
Intermediate	34.4	53.6	12.3	
<b>Occupation</b>				
Housewife	14.3	51.7	34.3	P = 0.000
Daily labourer	13.2	53.7	33.3	
Employee	46.2	38.5	15.4	
Business	12.8	51.8	35.4	
Others	8.8	16.7	75.2	
<b>Total</b>				

Source: Computed from the primary data.

Effects of different background factors on knowledge of HIV positive women about HIV transmission are shown in Table 4.7. Positive relationship exists between women's background factors like education of HIV positive women, family income, place of residence, occupation, etc., as these are significant predictors of chances having knowledge of HIV/AIDS transmission through various ways.

**Table 4.7 Logistic Regression of chances of having knowledge of HIV transmission during pregnancy, delivery and breastfeeding among HIV positive women**

Factors	Knowledge on HIV transmission during pregnancy			Knowledge on HIV transmission during delivery			Knowledge on HIV transmission during breastfeeding		
	S.E.	Exp(B)		S.E.	Exp(B)		S.E.	Exp(B)	
<b>Place of residence</b>									
Rural <sup>(R)</sup>									
Urban	0.455	1.068	***	0.511	0.713	*	0.435	0.859	*
<b>Age of respondent</b>									
24 & below <sup>(R)</sup>									
25 to 35 years	0.543	1.816	*	0.617	1.901	***	0.514	1.637	***
<b>Age of husband</b>									
Below 30 <sup>(R)</sup>									
30 – 35	0.674	1.130		0.701	0.665		0.666	0.822	
> 35	0.890	0.750		1.069	2.044	**	0.878	1.768	**
<b>Social group</b>									
ST/SCs <sup>(R)</sup>									
OBCs	0.597	2.598	**	0.626	2.266	*	0.561	0.565	***
General	0.532	3.031	***	0.582	2.901	**	0.512	2.558	***
<b>Religion</b>									
Hindu <sup>(R)</sup>									
Others	0.758	1.073		0.934	0.146		0.856	0.144	
<b>Educational Status of respondent</b>									
Illiterate <sup>(R)</sup>									
Primary & UP	0.728	2.861	*	0.701	6.568	**	0.708	5.171	**
Secondary & above	0.806	6.666	***	0.915	7.164	***	0.793	8.901	***
<b>Educational status of husband</b>									
Illiterate <sup>(R)</sup>									
Primary & UP	0.649	1.956	*	0.688	0.404		0.613	0.391	
Secondary & above	0.636	6.031	**	0.655	0.475		0.582	1.276	**
<b>Occupation of respondent</b>									
Housewife <sup>(R)</sup>									
Wage labourer	0.814	4.571	*	0.812	1.927	*	0.815	6.713	**
Others	0.909	3.451	**	1.317	7.732	***	0.971	12.692	***
<b>Occupation of husband</b>									
Wage labourer <sup>(R)</sup>									
Employee	0.619	2.243	*	0.693	2.002	**	0.585	1.450	**
Others	0.556	0.407	*	0.590	0.448	*	0.550	0.442	*
<b>Family income</b>									
Below Rs. 2000 <sup>(R)</sup>									
Rs.2000 to 5000	0.489	1.041		0.567	1.291		0.484	1.349	
Above Rs. 5000	0.387	1.528	**	0.314	5.664	**	0.361	3.591	**
<b>Type of family</b>									
Nuclear <sup>(R)</sup>									
Joint	0.504	2.463		0.529	1.155		0.475	1.497	
<b>Constant</b>	1.309	0.024	0.005	1.290	0.336	0.398	1.185	0.225	0.208

**Note:** ® reference category; Significant at: \*p<0.10, \*\*p<0.05; \*\*\*p<0.001.

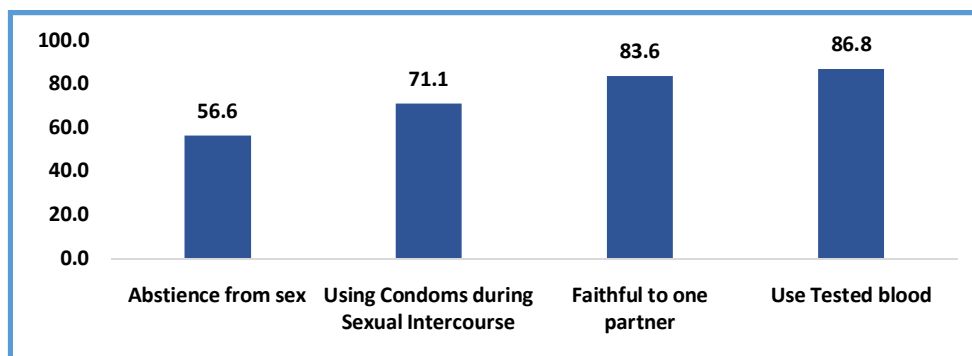
Source: Computed from the primary data.

The income of the family having positive association with knowledge of modes of transmission of HIV i.e. during pregnancy, labour and delivery and breast feeding among HIV positive women in the study setting. The HIV positive woman's family with higher income, the chances of knowledge about HIV transmission was higher at  $p < 0.05$  level of confidence interval with the odds ratio of 1.528, 5.664 and 3.591 for knowledge on transmission during pregnancy, delivery and breast feeding respectively. However, it explains that HIV positive women with a higher family income were more likely to have knowledge about transmission during these periods as income is positively associated with the knowledge of HIV infected women. Similarly, educational status of HIV positive women is positively associated with the knowledge of HIV/AIDS transmission where odds ratio for these three different types of knowledge via was high at significance  $p < 0.001$  level of confidence interval with the odds ratios of 6.66, 7.164 and 8.901 for those HIV infected women who had higher level of education intermediate and above. These HIV positive women had more than 50 per cent chance to have knowledge about HIV transmission as compared with other who had lower level of education. Apart from these factors, other background factors like place of residence, age and occupation of women also have positive significance.

#### 4.9. Preventive methods

The National AIDS Control Programme in India focuses on promoting three preventive behaviours: delaying sexual debut among young persons (abstinence), limiting the number of sex partners/staying faithful to one partner (being faithful) and use of condoms (the ABC message). During this study HIV positive women were specifically asked questions relating to reducing the chance of getting HIV/AIDS. The proportion of women who were aware of HIV/AIDS prevention methods is shown in Figure 4.3.

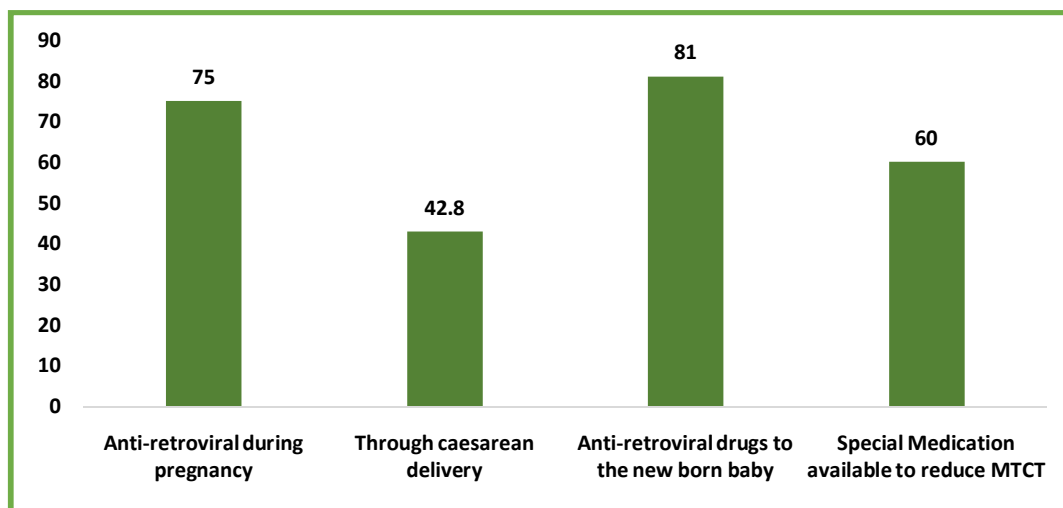
**Figure 4.3 Reduction of chance of getting HIV (per cent)**



Source: Computed from the primary data.

HIV positive women believed that the abstinence from sex led to less chance of getting HIV. Besides, 87 per cent of such women were aware that the use of tested blood prevented HIV/AIDS. Around 84 per cent of HIV infected women believed that being faithful to one partner reduced the chance of getting HIV. On the other hand, using condom during sexual intercourse was also considered an important factor by 71 per cent of surveyed mothers to reduce the chance of getting HIV/AIDS.

**Figure 4.4 Percentage of HIV positive women who reported for prevention of mother to child transmission**



Source: Computed from the primary data.

Concurrently, in this study HIV positive women were specifically asked questions relating to reducing the chance of getting the transmission of HIV from parent to child transmission of HIV. The proportion of HIV infected women who were aware of prevention of MTCT shown in Figure 4.4. About 81 per cent of HIV infected women reported that MTCT can be prevented by providing anti-retroviral drugs to the new born baby followed by anti-retroviral drugs during pregnancy. Nearly 60 per cent of HIV positive women stated that special medication is available to reduce the mother to child transmission of HIV. Knowledge of prevention of transmission through caesarean delivery was low among the HIV positive women (43 per cent).

#### **4.10. Conclusion**

The study reveals the characteristics and knowledge about HIV/AIDS and PPTCT among HIV positive women in the studied area. Knowledge of HIV/AIDS and PPTCT varies with background characteristics of HIV positive women. A higher portion of HIV positive women residing in urban areas had more knowledge of AIDS and PPTCT as against women from rural areas. Knowledge of HIV/AIDS and PPTCT increased steadily with increasing educational status. The level of education of the mother was strongly associated with the knowledge of different modes of transmission of HIV from parent to child. Income of the family also shows positive association with the mode of transmission of HIV. Around 84 per cent of HIV positive women opined that HIV could be transmitted from parent to child. Of those, 68 per cent stated that virus could be transmitted during delivery, followed by breast feeding (50 per cent) and during pregnancy (47 per cent). The knowledge of MTCT was poor among the HIV positive women who had no education. Income of the family also showed positive association with background characteristics. With regard to preventive methods, more than eight out of every ten HIV positive women believed that using tested blood helped to prevent HIV/AIDS. On the other hand, using condom during sexual intercourse was considered as an important factor by 71 per cent of HIV positive women. With regard to prevention of parent to child transmission, “Anti-retroviral drugs to the new born baby” was the most chosen method by women (81 per cent) to prevent HIV transmission.

Our finding suggests that a majority of the participants did not receive proper counselling on HIV/AIDS and PPTCT. Lack of knowledge about HIV/AIDS and PPTCT is a major weak point among the HIV positive women. Therefore, a strong attention needs to be focused on awareness of HIV/AIDS and PPTCT.