

## Knowledge on prevention of mother to child transmission of HIV among women of reproductive age group

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### ABSTRACT

**Introduction:** Mother to child transmission (MTCT) of HIV continues to be a significant public health concern. MTCT has a deleterious effect on child survival, hence its knowledge is of utmost importance for prevention of transmission of HIV from mother to child.

**Materials and Methods:** A cross sectional descriptive study was conducted during October–December 2013 among women attending antiretroviral therapy (ART) clinic. A semi-structured questionnaire consisted of sociodemographic characteristics, clinical characteristics and knowledge about MTCT was administered to 80 women.

**Results:** The mean age of the respondents was 24.89 ± 3.62 years and 30% were illiterate. The majority (62.5%) of them were belonged to an upper lower class. A total 47.5% of the respondents were aware of

their HIV status since 1-5 years. The majority (82.5%) perceived that HIV can be transmitted from mother to child. Many of the respondents felt that MTCT of HIV may occur during breastfeeding 49 (74.24%), pregnancy 48 (72.72%) and labour 42 (63.63%). The majority 62 (93.93%) of the respondents were aware that MTCT of HIV can be prevented. Avoidance of breastfeeding was the most frequently mentioned strategy by 40 (64.51%) respondents, followed by maternal ARV prophylaxis by 35 (56.45%) and caesarean section by 25 (40.32%) of the respondents.

**Conclusion:** The study demonstrates a relatively good level of knowledge on MTCT of HIV, but some knowledge gaps on certain specific aspects still remained which needs to be addressed for effective prevention of mother to child transmission of HIV.

**Keywords:** Knowledge, Mother to child transmission of HIV, women

Please cite this article as: Bodhare TN, Vivekanand A, Gayatri D. Knowledge on prevention of mother to child transmission of HIV among women of reproductive age group. *Perspectives in medical research* 2014; 2:24-27

Source of Support: Nil, Conflict of Interest: None Declared.

### INTRODUCTION

Mother to child transmission (MTCT) of HIV continues to be a significant public health concern. HIV is the leading cause of mortality among women of reproductive age worldwide and is a major contributor to maternal, infant and child morbidity and mortality.<sup>1</sup> In untreated cases, about one third of children will die before attaining one year of age and above 50% will die by the end of second year.<sup>2</sup>

In India, 39% of adults living with HIV/AIDS are women. About 28 million deliveries occur annually, of which 84,000 deliveries would occur in HIV positive women considering a national average of 0.3% prevalence of HIV in pregnant women. Nearly 30-45% of these babies will develop HIV infection in failure of adopting these interventions. This risk can be

reduced to less than 5% by adopting appropriate intervention. The perinatal transmission accounts for around 3 % of the total HIV infections in the country and can be prevented through an effective, comprehensive approach of PPTCT (Prevention of Parent to Child Transmission).<sup>3</sup> MTCT of HIV has a dramatic deleterious impact on child survival and therefore prevention of transmission is of crucial importance. The MTCT has reduced to around 57 per cent in 2011 in low socioeconomic countries including India by provision of the ARV therapy regimen. MTCT mainly depends on obstetric practices, mode of delivery, breastfeeding, and the mother's level of the viral load.<sup>4</sup> Most of these factors are determined by mother's knowledge and health seeking behavior. Hence increasing awareness,

particularly on modern PPTCT strategies includes testing for HIV during pregnancy, modified obstetric practices, provision of ARV drugs, and modified feeding practices are crucial. The objective of the present study was to explore the level of knowledge regarding the MTCT and its prevention among women attending ART clinics.

## MATERIALS AND METHODS

### Study design

A cross sectional study was conducted during October–December 2013 among women attending the ART clinic. The study protocol was approved by the institutional ethics committee of the institute. The purpose of the study was explained and informed consent was obtained from the respondents.

### Data collection

A semistructured questionnaire consisting of sociodemographic characteristics, clinical characteristics and knowledge about MTCT was administered to 80 women attending ART clinic. Socio-demographic characteristics include information regarding the age of the respondents, occupation and educational status. Socioeconomic status was calculated using modified kuppuswamy's

classification. Specific information about HIV status includes duration of HIV and CD4 count. Knowledge about MTCT was assessed by asking the questions related to possibility of mother to child transmission, time of maximum risk of transmission and various interventions for prevention of MTCT. The responses were recorded as yes, no and don't know. The participants who answered no or don't know about the transmission of HIV from mother to child were excluded for the next questions.

### Statistical analysis

The data was analyzed using the excel. The statistical measures obtained were numbers and proportions.

## RESULTS

The sociodemographic characteristics of the respondents are depicted in table 1. The mean age of the respondents was  $24.89 \pm 3.62$  years and majority 49 (61.25%) were below the age group of <25 years. Most of them 24 (30%) were illiterate while 10 (12.5%) had primary education. As per modified kuppuswamy's socioeconomic status scale, the majority 50 (62.5%) were belonging to an upper lower class. None of the respondent in the sample was categorized as having an upper socioeconomic class. Many of the respondents 38 (47.5%) were aware of their HIV status since 1-5 years.

**Table 1: Socio-demographic characteristics of the respondents**

Variables		Number	Percentage
Age	<25Yrs	49	61.25
	25-30Yrs	25	31.25
	>30Yrs	6	7.50
Educational status	Illiterate	24	30.0
	Primary school	10	12.5
	Middle school	10	12.5
	High school	20	25.0
	Intermediate	8	10.0
	Graduate	8	10.0
Socioeconomic status	Lower	12	15.0
	Upper lower	50	62.5
	Lower middle	12	15.0
	Upper middle	6	7.5
Duration of HIV	<1 Year	29	36.25
	1-5Year	38	47.50
	>5Year	13	16.25
	Total	80	100

Table 2 presents the knowledge of respondents regarding MTCT. The majority of respondents, 66 (82.5%) perceived that HIV can be transmitted from mother to child; whereas only 2 (2.5 %) didn't consider that as a possibility of transmission of HIV. Many of the respondents felt MTCT of HIV may occur during breast feeding 49 (74.24%), during pregnancy 48 (72.72%) and during labour 42

(63.63%). Majority 62 (93.93%) were aware that MTCT can be prevented, while only 1 (1.5%) respondent told it's not preventable. Regarding intervention for prevention of MTCT, avoidance of breastfeeding was the most frequently mentioned strategy by 40 (64.51%) respondents, followed by maternal ARV prophylaxis by 35 (56.45%) and caesarean section by 25 (40.32%) of the respondents.

**Table 2: Knowledge of respondents about mother to child transmission**

Variable		Number	Percentage
Can HIV transmitted from mother to child	Yes	66	82.5
	No	2	2.5
	Don't know	12	15.0
Total		80	100
Maximum risk of HIV transmission from mother to child is before birth	Yes	48	72.72
	No	6	9.09
	Don't know	12	18.19
	Total	66	100
Maximum risk of HIV transmission from mother to child is During Labor	Yes	42	63.63
	No	10	15.16
	Don't know	14	21.21
	Total	66	100
Maximum risk of HIV transmission of mother to child is Breast feeding	Yes	49	74.24
	No	07	10.61
	Don't know	10	15.15
	Total	66	100
Can HIV transmitted from mother to child is preventable	Yes	62	93.93
	No	01	1.52
	Don't know	03	4.55
	Total	66	100
HIV can be prevented by use of ARV	Yes	35	56.45
	No	07	11.29
	Don't know	20	32.26
	Total	62	100
HIV can be prevented by Caesarean section	Yes	25	40.32
	No	07	11.29
	Don't know	30	48.39
	Total	62	100
HIV can be prevented by avoiding breast feeding	Yes	40	64.51
	No	08	12.91
	Don't know	14	22.58
	Total	62	100

## DISCUSSION

The present study tried to evaluate the knowledge of MTCT among women of reproductive age group attending ARV clinic. A relatively good knowledge on MTCT was observed among the respondents. The respondents in our study were women of younger age (mean age,  $24.89 \pm 3.62$  years), about 30% were illiterate, while 62.5% of them were belonged to an upper lower socioeconomic class, still we obtained a high level of knowledge among respondents which may be attributed to frequent visits to ARV clinic and effect of counseling by the health providers. Similar types of results were obtained by a study conducted by Lamina et al in Nigeria.<sup>5</sup>

It was encouraging to find out that 82.5% of the respondents were aware of MTCT. The majority of them demonstrated good knowledge on the mode of transmission of HIV virus from the mother to child during specific time. This finding was consistent with the findings of the study conducted by Moses et al.<sup>6</sup>

Many of the respondents in our study perceived that MTCT of HIV may occur during breastfeeding (74.24%), during pregnancy (72.72%) and during labour (63.63%). Similar types of findings were observed by Olugbenga-Bello et al.<sup>7</sup>

Participants were aware of the various methods of prevention of mother to child transmission of HIV. They were aware of the antiretroviral prophylaxis, avoiding breast feeding and using infant formula and elective caesarean-sections are the methods for prevention of HIV transmission. Similar types of results were obtained by Boateng et al, in a cross sectional study in Ghana.<sup>8</sup>

## CONCLUSION

The present study revealed a relatively good knowledge among mothers regarding the various aspects and dimensions of MTCT. However the knowledge gap on the certain specific aspects of MTCT and its prevention still exists. Increasing awareness about MTCT and its prevention among women is cornerstone for promoting good practices and achieving reduction in MTCT and can be accomplished by adequate health education and counseling.

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