

## Knowledge Regarding Prevention of Mother to Child Transmission of HIV/AIDS among Antenatal Mothers in Nepal

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### ABSTRACT

**Background & Objectives:** Prevention of Mother to child Transmission (PMTCT) is a global intervention which aims at preventing mother to child transmission of Human Immunodeficiency Virus (HIV). The study aims to find out knowledge of pregnant women on Mother to child Transmission (MTCT) of HIV/AIDS (Acquired Immune Deficiency Syndrome). **Materials & Methods:** A cross-sectional study was carried out at Paropakar Maternity and Women's Hospital, Kathmandu, Nepal among the pregnant women who came to visit Antenatal Clinic. Data was collected using non-probability purposive sampling technique. Face to face interview was done and a structured questionnaire was developed for data collection. Data analysis and interpretation were done in SPSS and MS Excel. **Results:** The total number of respondents was 80 with a mean age of 27.4 years. 90% (n=72) respondents were found to be literate. 86.3% (n=69) were well aware of the knowledge on PMTCT. Majority of the respondents (40%) mentioned that radio, TV/Media were the main sources of information about HIV/AIDS. Out of 32.5% (26) who had heard about the window period, only 26.9% (n=7) gave the correct answer. 93.8% (n=75) were well known about the routes of transmission of HIV but only 10.1% (n=7) gave the correct answer about it. Further, 54% (n=43) respondents knew about the availability of drugs to reduce MTCT of HIV/AIDS. **Conclusion:** The level of awareness about PMTCT among antenatal mothers was satisfactory. However, knowledge was inadequate which imparts for the need of health education about MTCT of HIV/AIDS in every health facilities of Nepal.

**Key words:** Antenatal mothers; HIV/AIDS; Knowledge

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### INTRODUCTION

Prevention of Mother to child Transmission (PMTCT) is a global intervention aimed at preventing mother to child transmission of HIV.<sup>1</sup> Around 15 to 30% of babies born to HIV (Human Immunodeficiency virus) infected women are prone to HIV infection during pregnancy and delivery in case of lack of treatment and five to 20% can also become infected through breastfeeding.<sup>2</sup> Without treatment, one third of children living with HIV die before the age of one year and almost half by the

second year.<sup>3</sup>

The risk of Mother to child Transmission (MTCT) can be reduced to below two percent by interventions that include antiretroviral prophylaxis given to women during pregnancy starting from 14 weeks of pregnancy, delivery and post-partum period and lifelong Anti-Retroviral Therapy (ARV). Likewise it also includes prophylaxis for baby started immediately after birth and continued for the first 6 weeks of life, safer delivery practice and safer infant feeding practices.<sup>1</sup>

At present MTCT of HIV has become a major area of concern in developing countries because it is the most common source of HIV infection in children. The HIV prevalence rate among pregnant women is estimated to be 0.2% in Nepal and among them, 90% of the reported cases are of child bearing age (15 to 49 years).<sup>1</sup> So, it is important that the pregnant mothers should be quite aware of this situation and should have sufficient knowledge and awareness regarding this. The study purposes to find out the knowledge of pregnant women about MTCT of HIV/AIDS.

## MATERIALS AND METHODS

This was a cross-sectional study undertaken at Paropakar Maternity and Women's Hospital, Thapathali, Kathmandu, Nepal. Pregnant women who came to visit Antenatal Clinic in Out Patient Department (OPD) were included in the study. Of those, only newly diagnosed pregnant women were included in the study. The sample size was 80.

Data was collected using non-probability purposive sampling technique. A structured questionnaire was developed to assess the knowledge of antenatal mothers by doing face to face interview. Pre-testing of the questionnaire was carried out and content validity was done with expert consultation and literature review. Data analysis and interpretation were done in SPSS and MS Excel.

### Ethical consideration

Ethical approval was granted by the Institutional Review Committee of Paropakar Maternity and Women's Hospital to conduct the study. Informed written as well as verbal consent was taken from the respondents before asking the questions.

## RESULTS

### Socio-demographic information

**Table 1: Socio-demographic details**

Variable	Number (%)	
Age (years)	15-19	5(6.3%)
	20-24	47(58.8%)
	25-29	20(25%)
	30-34	8(10%)
Education	Illiterate	8(10%)
	Primary level	9(12.5%)
	Secondary level	20(27.8%)
	Higher Education	43(59.7%)
	Occupation	Housewife
Service		14(18%)
Student		10(12%)
Others		8(10%)

In the study, the total number of respondents was 80. Among them, 47 (58.8%) were in the age group 20-24 years with mean age of 27.4 years. Only few (n=5, 6.3%) antenatal mothers were adolescents (15-19 years). It was found that 90% (n=72) of the respondents were literate. Among those 72 cases, 43 (59.7%) had received higher education, 20 (27.8%) had received secondary level and 9 (12.5%) had received primary education level. Out of total cases, majority of the respondents were housewives (n=48, 60%) followed by 14 (18%) service holder, 10 (12%) students and 8 (10%) from other occupation (Table 1).

### Knowledge of PMTCT among respondents

Regarding knowledge on PMTCT, 69 (86.3%) respondents were well aware about it. Among those 69 respondents, 58 (84.4%) had knowledge of transmission of HIV during pregnancy, delivery, and breast feeding, 52 (75.4%) knew about the chances of transmission of HIV from infected mother to child; among them only 7(13.5%) gave the correct answer. Interestingly, it was found that, 100% (n=80) of the respondents agreed that every pregnant woman should go through the volunteering testing of HIV/AIDS.

Looking at the knowledge regarding availability of drugs to reduce MTCT, 43 (54%) respondents knew about the availability of drugs. Out of those 43 respondents, only 10 (23.3%) said that drugs can be used during pregnancy, labour and post-partum, 6 (13.9%) said that drugs can be used before pregnancy whereas 27 (62.7%) were unknown about it.

Regarding knowledge about the place of delivery for HIV infected mothers, maximum respondents (n=72, 90%) said that HIV infected mother should go to hospital for delivery and 8 (10%) answered about home delivery.

With respect to knowledge about breast feeding the baby from HIV positive mother, 48 (60%) respondents were against breast feeding. Of the remaining 32 (40%) who replied there can be breastfeeding, 7 (21.8%) replied that HIV infected mother can do exclusive breast feeding to their babies, 3 (9.4%) of them said that mixed feeding is better and 22 (70.4%) were unknown about the type of breast feeding. The knowledge of PMTCT among respondents is summarized in Table 3.

## DISCUSSION

The study found that all of the respondents had

Table 2: Knowledge of HIV/AIDS among the respondents

Knowledge	Response				
Have you heard about HIV/AIDS?	No (n=0)	Yes (n=80, 100%) I knew it through.....			
		<b>Radio/TV/Media</b> 32(40%)	<b>Friends</b> 18(22%)	<b>Newspaper/Books</b> 30(38%)	<b>Family/Relatives</b> 0
Have you heard about diagnostic test of HIV/AIDS?	No (n=13, 16%)	Yes (n=67, 84%) It is confirmed through.....			
		<b>Blood test</b> 63(94.1%)	<b>Looking face</b> 2(2.4%)	<b>Urine test</b> 2(2.4%)	<b>Don't know</b> 0
Have you heard about window period?	No (n=54, 67.5%)	Yes (n=26, 32.5%) It is.....			
		<b>HIV present in blood but test is negative</b> 7(26.9%)	<b>HIV test is positive</b> 2(7.7%)	<b>Present sign and symptoms of AIDS</b> 5(19.2%)	<b>Don't know</b> 12(46.2%)
Have you heard about routes of HIV transmission?	No (n=5, 6.3%)	Yes (n=75, 93.8%) It is through.....			
		<b>Unprotected sexual intercourse, sharing needles</b> 75(100%)	<b>Shaking hands</b> 0	<b>Kissing</b> 0	<b>Don't know</b> 0

knowledge about HIV/AIDS. This can be due to good education level among the respondents. The level of awareness of HIV/AIDS among antenatal mothers was found to be very high in similar other studies.<sup>4-7</sup> Majority of the respondents mentioned that radio, TV/Media were the main source of information about HIV/AIDS which is similar to another study.<sup>4</sup> These instruments of mass communication have been shown to be effective among literate people.<sup>4</sup>

In the study, majority were well aware about the knowledge on MTCT of HIV/AIDS. Almost all the respondents were familiar with mode of transmission of HIV/AIDS. And all of them knew that unprotected sexual intercourse and sharing needles were the commonest mode of transmission which is similar to other many studies.<sup>4, 5, 7-9</sup> Low level of knowledge of MTCT was recorded in a study conducted in Uganda and Tanzania.<sup>10</sup> Similarly, only four respondents gave correct answers regarding chances of transmission. According to another study also, specific knowledge of the respondents about routes or modes of transmission to a child is low.<sup>4</sup>

The study further showed that, only 54%

respondents were aware about the availability of drugs for infected mother to reduce MTCT. However, among them 76.7% were unaware about the time when the drugs are usually given to the mother. Most of the respondents were against breast feeding during HIV infection. As UN joint commission on AIDS has recommended that the primary cause of infant death is infection and malnutrition, breast feeding should be universal. Some of the respondents had similar view suggesting that HIV woman can breast feed their child.<sup>11</sup>

## CONCLUSION

The level of awareness about PMTCT among antenatal mothers was good. However, knowledge was seen to be inadequate and thus there is need of health education about MTCT of HIV/AIDS in every health facilities of Nepal.

## Limitation of the study

The study was based on a small sample size of women from a single hospital so the findings might not be generalized to the national level.

Table 3: Knowledge of PMTCT among the respondents

Knowledge	Response			
Have you heard about PMTCT?	Yes (n=69, 86.3%) The route is through...			
	No (n=11, 13.8%)	<b>During pregnancy, delivery, breast feeding</b>	<b>During care of the baby</b>	<b>Don't know</b>
		58(84.4%)	0	11(15.94%)
Have you heard about the chances of transmission of HIV/AIDS from infected mother to child?	Yes (n=52, 75.4%) The percentage of transmission is...			
	No (n=28, 35%)	<b>Less than 20%</b>	<b>20%-45%</b>	<b>75%-85%</b>
		1(3.8%)	7(13.5%)	15(28.8%)
				29(55.8%)
Is it necessary that every pregnant woman should go for voluntary testing for HIV/AIDS?	No (n=0)	Yes (n=80, 100%)		
Have you heard that about the availability of drugs used to reduce MTCT?	Yes (n=43, 54%) They are given...			
	No (n=37, 46.3%)	<b>During labor, pregnancy and post-partum</b>	<b>Before pregnancy</b>	<b>Don't know</b>
		10(23.3%)	6(13.9%)	27(62.7%)
Which place is favorable for the delivery of HIV infected mothers?	<b>Home</b>		<b>Hospital</b>	
		8(10%)		72(90%)
Do you think HIV positive mothers should breastfeed their babies?	Yes (n=32, 40%) There can be...			
	No (n=48, 60%)	<b>Exclusive breastfeeding</b>	<b>Mixed feeding</b>	<b>Don't know</b>
		7(21.8%)	3(9.4%)	22(70.4%)

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External funding was not received for this study.

### Conflict of Interest Statement:

The research was conducted in the absence of any conflicting interests.

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