

Knowledge of Transmission of HIV/AIDS from Mother to Child Among Pregnant Women

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Abstract

Mother-to-child transmission (MTCT) of HIV is the spread of HIV infection from women with HIV to her child either during pregnancy, childbirth or breastfeeding. Pregnant women with HIV who have knowledge and awareness, receive anti-retroviral therapy (ART) during pregnancy and childbirth to prevent occurrence of MTCT of HIV during delivery, to reduce the risk of infection. The present study sought to assess the knowledge of transmission of HIV from mother to child among 200 selected mothers attending the Gynae OPD of RIMS Hospital, Imphal (Manipur). Data was collected from 24 May to 2 June 2018 (10 days). The study brought out that educational status of mother is associated with knowledge of MTCT of HIV/AIDS, so that nurses and other health care functionaries should be actively engaged in imparting relevant health education.

Mother to child transmission (MTCT) of HIV is the spread of HIV from women with HIV to her child during pregnancy, childbirth or breastfeeding. Pregnant women with HIV receive ART during pregnancy and childbirth to prevent MTCT of HIV during delivery. Babies born to women with HIV receive ART for 4 to 6 weeks after birth. ART reduces the risk of infection from any HIV from the mother that may have entered a baby's body during childbirth. ART works by preventing HIV from multiplying, which reduces the amount of HIV in the body. Having a less HIV on the body protects a woman's health and reduces her risk of passing HIV to her child during pregnancy and childbirth. Some of the ART drugs pass from the pregnant woman to her unborn child across the placenta. This transfer of ART drug protects the baby from HIV infection, especially during vaginal delivery when the baby passes through the birth canal and is exposed to any HIV in the mother's blood or other fluids.

The National AIDS Control Organisation (NACO) Technical Estimate Report (2015) estimated that out of 29 million annual pregnancies in India, 35,255 occur in HIV positive pregnant women.

In India mother-to-child transmission is by far the most significant route of transmission of HIV infection in children below 15 years. It is estimated that nearly 5 percent of HIV infections are attributed to parent-to-child transmission. Approximately 30 percent of HIV-infected pregnant women will transmit HIV to their babies and approximately 2.1 million children less than 15 years were living with HIV in 2007. As

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estimated 2,90,000 children less than 15 years died of AIDS-related causes in 2007. The epidemic is more pronounced in urban than in rural areas, decreases with increasing education levels and is found to be highest among women whose spouses, work in the transport industry.

Objectives

The objectives of the study were:

1. To assess the knowledge of transmission of HIV from mother to child among antenatal mothers attending Gynae OPD at RIMS Hospital.
2. To associate the knowledge with selected demographic variables like age, education, socioeconomic condition, occupation, marital status, previous experience etc.

Hypothesis

Antenatal mothers may have inadequate knowledge about mother to child transmission of HIV/AIDS.

Conceptual Framework

The Conceptual framework was based on Rosenstoch's Health Belief Model in 1975 (Fig 1).

Review of literature

Mustafa Adelaja Lamina (2012) conducted a survey of awareness and knowledge of MTCT of HIV in pregnant women attending Olabisi Onabanjo University Teaching Hospital, Nigeria. All respondents (100%) interviewed were aware of HIV/AIDS and 93 (57.8%) were aware of the disease. Majority of the respondents identified sexual intercourse as a route of transmission of HIV. Sharing of sharp objects and blood transfusion were identified as routes of transmission by 99 (61.5%) and 82 (50.9%)

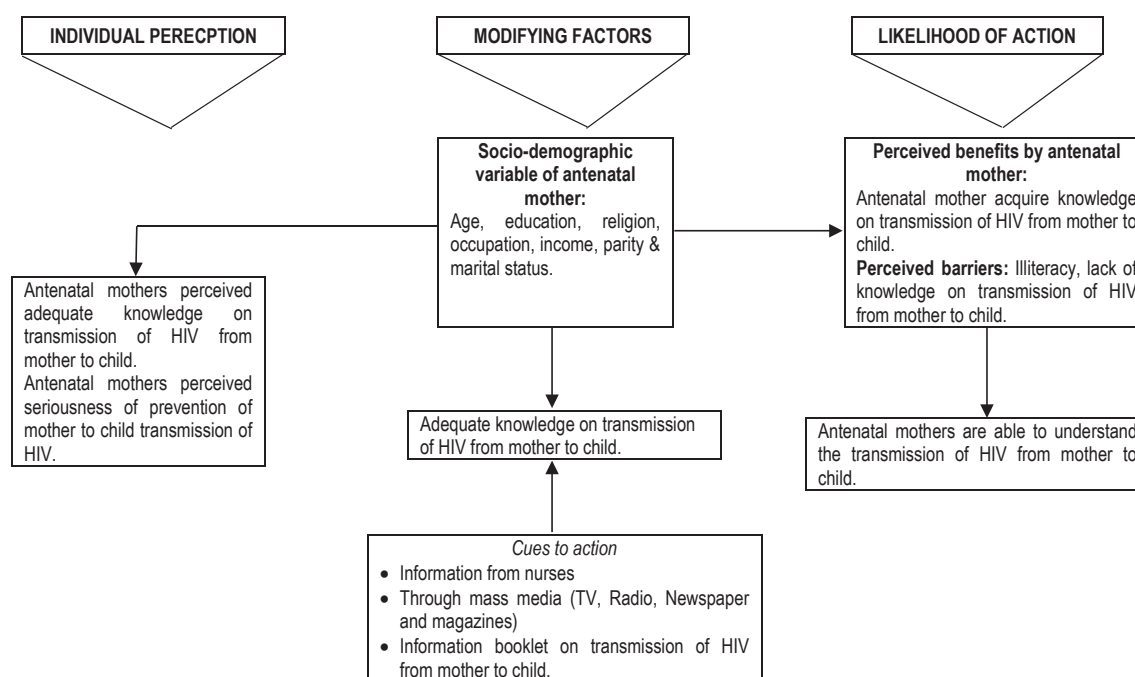


Fig 1: Conceptual framework, based on Rosenstock's belief model (1975)

respectively; 125 (77.6%) were aware that HIV can co-exist with pregnancy and 120 (74.5%) were aware of MTCT of HIV. Vaginal delivery and breastfeeding were identified as routes of HIV transmission by 44 (27.3%) and 53 (32.9%) of respondents respectively.

Anteneh Asefa and Habtamu Beyene (2013) conducted a study on awareness and knowledge on timing of MCTC of HIV among antenatal care attending women in Southern Ethiopia. All interviewed pregnant women were aware of HIV/AIDS transmission, but only 60.7 percent were aware of the risk of MTCT. The possibility of MTCT during pregnancy, delivery and breastfeeding was known by 48.4 percent, 58.6 percent and 40.7 percent of the respondents, respectively.

Ojong, Idang Neji, Unachukwu, Stella Uche, Ita, Ruth Ebong (2016) in a study on Knowledge of Prevention of MCTC of HIV/AIDS found that in Nigeria, knowledge of the women of childbearing age was 92.5 percent. Knowledge of women on elective caesarean section as a measure for preventing MTCT of HIV was 42.2 percent. Knowledge of women on the use ART drugs as a measure for preventing MTCT was 100 percent. There was a significant relationship between educational level and women's level of knowledge on prevention of mother-to-child transmission of HIV.

Harshadayani, Jagadevi and Padmashri (2017) in their study in a tertiary medical hospital, Bangalore showed that majority of antenatal women had good knowledge about MTCT of HIV / AIDS and awareness about the disease and its occurrence in pregnancy.

Most were aware of sexual transmission as main route of transmission in adults with media playing major role as source of knowledge. Awareness about mother to child transmission of HIV and their prevention was low.

Sanayaima H Devi, Vikram L Singh, Ranjan RK Singh, Sh Praveen Th. Netajini Devi (2013) conducted a study on Knowledge on PPTCT programme among married women in an urban community of Imphal (West Manipur). Only one-third of the study population had adequate knowledge on PPTCT programme. All of them had heard of HIV/AIDS; however, only 58 percent knew about PPTCT programme. Knowledge of the respondents was significantly associated with age and parity.

Methodology

The research design adopted in the study was non-experimental research type. Descriptive research approach was adopted for the study to assess the knowledge of transmission of HIV from mother to child among antenatal mothers attending Gynae OPD at RIMS Hospital, Imphal. The sample size comprised of 200 antenatal mothers. Only those fulfilling the inclusive criteria in Gynae OPD, RIMS Hospital were included.

Data collection procedure: Written permission was obtained from Department of Obstetrics and Gynaecology, RIMS Hospital, Imphal. After ensuring confidentiality of the respondent, the data was collected with the help of structured questionnaire. The purpose of the study was explained and consent was taken from

Table 1: Mothers knowledge score on MTCT of HIV

Content	Inadequate (50%)		Moderately adequate (51%-75%)		Adequate (>75%)	
	No.	%	No.	%	No.	%
Knowledge score of antenatal mothers	68	34	108	54	24	12

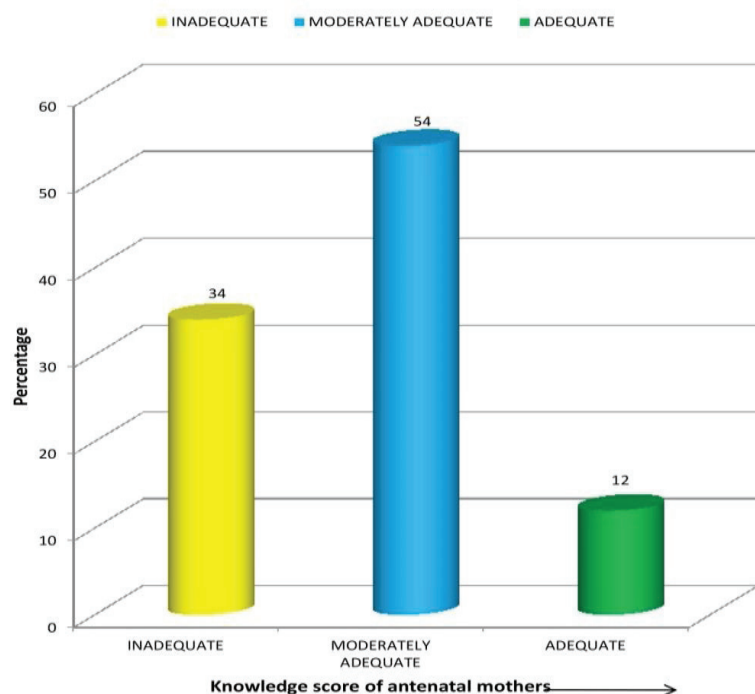


Fig 2: Percentage distribution of overall knowledge score of antenatal mothers

them. Each antenatal mother took around 20 minutes to respond. The data was collected from 24 May 2018 to 2 June 2018 i.e. for a period of 10 days.

Results and Discussion

Majority of antenatal mothers (n=108, 54%) were having moderately adequate knowledge, 68 (34%) had inadequate knowledge and 24 (12%) of them had adequate knowledge regarding transmission of HIV from mother to child (Table 1, Fig 2).

Table 2 reveals that the mothers scored mean value of 17.31, with mean percentage of 34.62 and the standard deviation of 3.91.

The calculated (χ^2) values are more than tabulated value at level $p>0.05$ in case of age, parity, occupation

Table 2: Mean, mean percentage and standard deviation of knowledge score of antenatal mothers

S.No.	Content	Maximum score	Mean	Mean %	Standard Deviation
1	Knowledge score of antenatal mothers	27	17.31	34.62	3.91

of the mother, income per month and religion is shown in Table 3. Hence there is no significant association between the age, parity, occupation, income per month and religion of the mother with the knowledge score of antenatal mothers regarding transmission of HIV from mother to child.

However, the calculated (χ^2) values are less than tabulated value at level $p>0.05$ in case of education of the mother. Hence there is significant association between the education of the mother with the knowledge score of antenatal mothers regarding transmission of HIV from mother to child.

Discussion

Data has shown that there was a 66 percent decline in new infections from 2000 to 2015. However, this trend has largely flat-lined between 2010 and 2015. While there has been a fall in the estimated number of AIDS-related deaths by 54 percent, the bad news is that with slowing declines in new infections, we might see an increase in the number of people living with HIV. In September 2015, the WHO released new guidelines recommending that "All pregnant women living with HIV be immediately provided with lifelong treatment, regardless of CD4 count (which indicates the level of HIV in the body)". The preventive strategies under the National AIDS Control Programme (NACP) include targeted interventions for high-risk groups and bridge population. Increasing awareness among women and youth is an important component of the NACP. Hence it is important to assess the awareness on HIV. Awareness of HIV is important in antenatal mothers as they are the sexually active age-group and encouraging early HIV testing will augment the PPTCT services.

Interpretation

Our study showed that only 12 (6%) of the antenatal mothers belonged to age group less than 20 years, 68 (34%) of the antenatal mothers belonged to age group 20-25 years, 52 (26%) of the antenatal belonged to age group 26-30 years and 68 (34%) belonged to 30 years and above. It found that 100 (50%) of the antenatal mothers belonged to the primigravida and 100 (50%) belonged to the multigravida.

Regarding education, 72 (36%) mothers studied up to high school, 64 (32%) studied up to higher secondary and 64 (32%) were graduates. Majority of the antenatal mothers were homemakers i.e. 104 (52%), 96 (48%) were private company employees, 72 (36%) were self-employed and 8 (4%) were

Table 3: Association Between Demographic variables and knowledge score of antenatal mothers regarding transmission of HIV from mother to child using chi square (N=200)

Demographic variables	Category	Respondent's knowledge				Total	Chi square
		Inadequate (<50%)		Adequate (>50%)			
		n	%	N	%		
Age group	25 years	36	18	144	22	80	X²cal=1.79, X²tab=3.84, df=1. NS
	Above 26 years	32	16	88	44	120	
Parity	Primi gravid	28	14	72	36	100	X²cal=0.8, X²tab=3.84 df=1. NS
	Multi gravid	40	20	60	30	100	
Marital status	Married	68	34	132	66	200	Not applicable
	Separated/ Divorced	0	0	0	0	0	
Type of marriage	Polygamy	0	0	0	0	0	Not applicable
	Monogamy	68	34	132	66	200	
Education of the mother	High School	48	24	24	12	72	X²cal=13.3, X²tab=3.84, df=1. S
	Higher Secondary and above	20	10	94	54	128	
Occupation of the mother	Employed	36	18	60	30	96	X²cal=0.25 X²tab=3.84 df=1 NS
	Unemployed	32	16	72	36	104	
Income per month	<5000	36	18	52	26	88	X²cal=0.83 X²tab=3.84 df=1 NS
	20000 & above						
	10000 to 20000	32	16	80	40	112	
Religion	Hindu	36	18	76	38	112	X²cal=0.09 X²tab=3.84 df=1 NS
	Others	32	16	56	28	88	

NS – Non-significant, S - Significant, df - Degree of freedom

Government employees. Most of the antenatal mothers i.e. 112 (56%) were Hindu, 56 (28%) were Christian, 8 (4%) were Muslim and 24 (12%) belongs to other religions. Most of the antenatal mothers i.e. 84 (42%) had the knowledge about HIV and its status i.e. not curable. About 116 (58%) lack the knowledge of HIV and its status.

Majority of the antenatal mothers i.e. 108 (54%) had the knowledge about AIDS and about 92 (46%) lacked the knowledge of AIDS. Majority of the antenatal mothers i.e. 188 (94%) had the adequate knowledge of HIV status determination by blood test.

Majority of the antenatal mothers i.e. 132 (66%) knew that HIV could not be transmitted by mosquito and housefly and 68 (34%) answered that HIV could be transmitted through mosquito and housefly. And 104 (52%) mothers lack the knowledge regarding the three stages of MTCT of HIV and 96 (48%) mothers had the knowledge about the three stages of MTCT of HIV.

Majority of the antenatal mothers i.e. 124 (62%) had knowledge about ART and 76 (38%) had no knowledge of it. Most of the antenatal mothers i.e. 112 (56%) answered that ART was contraindicated during pregnancy and 88 (44%) answered that ART was not contraindicated during pregnancy.

Majority of the antenatal mothers i.e. 108 (54%) had the knowledge about the prevention of mother to

child transmission of HIV and 92 (46%) had no knowledge about it.

Implications

Nursing service: Professional nurse should educate antenatal mothers about the mother to child transmission of HIV. Nurses should be equipped with updated knowledge to teach the students on transmission of HIV from mother to child so that students would be able to impart appropriate knowledge antenatal mothers.

Nursing administration: The nurse administrator should plan and organise continuing education programme for nurses to motivate in teaching programme on mother to child transmission of HIV.

Nursing educators: Nursing students should be encouraged to involve in various health educational programmes regarding mother to child transmission of HIV.

Recommendations

A comparative study can be conducted in rural and urban areas and regular awareness programme should be conducted for the rural areas regarding the mother to child transmission of HIV.

Conclusion

The findings of the study clearly highlighted that the educational level of the mother has great significance on the knowledge of MTCT of HIV by the antenatal mothers. Health education is an important tool for bringing about the awareness of MTCT among the antenatal mothers. Hence, promotion of health education about mother-to-child transmission of HIV/AIDS should be our priority.

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