

# Knowledge on prevention of parent to child transmission of HIV (PPTCT) & early infant diagnosis (EID) among the antenatal mothers in a selected hospital, West Bengal

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## Abstract

*Introduction: Prevention of Parent To Child Transmission (PPTCT) of HIV/AIDS is an integral component of the AIDS control program. PPTCT is an ongoing program for the last 15 years. Early diagnosis of HIV infection in exposed infants and children is an essential component to child survival. EID, a virological DNA PCR test on dried blood spots, aims at early diagnosis and ART initiation, breastfeeding choices, and linkage to care.*

*Objectives: - To assess the level of knowledge regarding prevention of parent-to-child transmission of HIV (PPTCT) and Early Infant Diagnosis (EID) among antenatal mothers.*

*Materials and Methods: Present study conducted in Sagar rural hospital, Sagar, south 24 Parganas, West Bengal. The study includes 30 Antenatal mothers having gestational age from 13-35 weeks. In this study, samples were drawn using a purposive sampling method. Data was collected by using a structured knowledge questionnaire.*

*Results: After the completion of the study, found that 20 antenatal mothers are between the age group of 31-40 years (67%). Out of the total sample 10% of mothers having good knowledge, 57% of mothers having average knowledge & 33% of mothers having below-average knowledge regarding PPTCT & EID. And 50% of the sample mothers think that PPTCT & EID program comes under the Government Scheme.*

*Conclusion: EID is a vital component of the PPTCT program. It confirms the diagnosis as early as 6 weeks and confers an accurate and consistent result throughout the testing protocol, thus establishing the integrity of EID. It assists in decision-making on infant feeding practices.*

**Keywords:** Knowledge, Early Infant Diagnosis, Human Immunodeficiency Virus, Prevention Of Parent To Child Transmission.

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## I. Introduction

PPTCT of HIV/AIDS is an integral component of AIDS control programs since Mother To Child Transmission (MTCT) of HIV/ AIDS accounts for over 90% of new infections in children. Globally, mother-to-child transmission of HIV results in approximately 370000 infant infections each year. HIV Early infant diagnosis(EID) programs aim to detect HIV infection as early as possible in HIV exposed infants and to link them to care and treatment. Pediatric HIV/AIDS is a significant cause of childhood morbidity and mortality. More than 90% of HIV infections in children are the result of maternal-to-child transmission (MTCT).

A thorough literature review has been done by retrieving related studies (published from the year 2000 onward) using a Medline search and extracting recent findings from the official websites of the National AIDS Control Organization, UNAIDS, UNICEF, and World Health Organization. The efforts that are made to control pediatric HIV are challenged by a large range of factors such as low health service utilization, poor drug adherence, delayed infant diagnosis, a discriminatory attitude of health providers, loss to follow-up, and poor coordination in managing the continuum of care. These challenges may be addressed by adopting innovative and effective strategies and strengthening the existing health system. This would bring about a significant reduction in pediatric HIV incidence and improve the outcomes in children who are HIV infected.

## II. Significance Of The Study

Prevention of HIV transmission is a necessary part that is to be undertaken before, during, and after pregnancy and after delivery of the baby. It is important throughout pregnancy to prevent transmission of HIV

from mother to child. Several studies have shown that infants acquired HIV infection from an infected mother during pregnancy and delivery.

HIV-infected children are the most vulnerable of all patients. In infants who acquired HIV at the time of delivery, the disease progresses rapidly in the first few months of life, often leading to death. Transmission of HIV in a fetus begins at conception, for this reason, assessment of knowledge and tests to diagnose HIV in parents is necessary for PPTCT.

A child can also get affected by HIV infection through breastfeeding. The study has shown that HIV antibody test can be done at 9-12 months of age, then 74% and 96% of HIV uninfected children respectively will have a negative antibody test. So, to increase the knowledge of PPTCT of HIV among parents is utmost.

### III. Statement Of Problem

“Knowledge regarding prevention of parent to child transmission of HIV(PPTCT) & Early infant diagnosis(EID) among antenatal mothers at a selected hospital, West Bengal”

### IV. Objectives

1. To assess the level of knowledge regarding prevention of parent-to-child transmission of HIV(PPTCT) among antenatal mothers.
2. To identify the level of knowledge on early infant diagnosis(EID) among antenatal mothers

### V. Methodology

RESEARCH DESIGN- Descriptive is the research design. Descriptive surveys and data that investigate characteristics. Descriptive research is mostly concerned with characterizing the current condition. To assess the mother’s knowledge on PPTCT, the researcher has to use data and information currently accessible and evaluate these facts.

SETTING–Sagar Rural Hospital, West Bengal

SAMPLE- 30 Antenatal Mothers

SAMPLING TECHNIQUES- Purposive Sampling Technique.

VARIABLES- Demographic variables: Age of Mothers, Religion, Family Income, Education, Occupation, Marital status, No. of Children, Source of Knowledge

SAMPLING CRITERIA:

INCLUSION CRITERIA:-The study will include the mothers who are:

- ü Antenatal mothers having gestational age from 13-35 weeks
- ü Antenatal mothers who attend the antenatal check-ups during the data collection period
- ü Mothers who can speak and understand Bengali, English.

EXCLUSION CRITERIA:-This study will not include the mothers who are not willing to participate in the study.

DESCRIPTION OF TOOL: -

The structured questionnaire method is comprised of two parts:

- **SECTION A:** it consists of socio-demographic characteristics of respondents seeking information like age, education, type of family, etc.
- **SECTION B:** it consists of a total of 20 questions, which were prepared to assess the knowledge of mothers regarding PPTCT and EID.

### VI. Analysis And Interpretation Of Data

The data on the knowledge of antenatal mothers on PPTCT & EID were collected through a structured questionnaire

SECTION-A- Description of Demographic variables.

SECTION-B- Assessment of knowledge regarding PPTCT & EID.

#### SECTION A

#### Description of Demographic Variables

N=30

<u>Demographic Characteristics</u>	<u>Frequency</u>	<u>Percentage (%)</u>
<u>Age in Years</u>		
20-30	9	30%
31-40	20	67%
41-50	1	3%
>50	0	0%
<u>Religion</u>		
Hindu	26	87%

Muslim	4	13%
Christian	0	0%
Others	0	0%
<b>Income per Month</b>		
>2000	2	7%
1000-1999	1	3%
750-999	10	33%
500-749	8	27%
300-499	4	13%
100-299	2	7%
<100	3	10%
<b>Education</b>		
No Formal Education	1	3%
Primary Education	11	37%
Secondary Education	12	40%
Graduate or Above	6	20%
<b>Occupation</b>		
Government Employee	5	17%
Self Employed	15	50%
Unemployed	7	23%
Daily Labour	3	10%
<b>Marital Status</b>		
Married	25	83%
Unmarried	5	17%
Widow	0	0%
Divorce/Separated	0	0%
<b>Government Scheme</b>		
Yes	15	50%
No	15	50%

#### SECTION-B

The 1st objective of the study was to assess the level of knowledge regarding the prevention of parent-to-child transmission of HIV(PPTCT) among antenatal mothers.

The mean knowledge score of mothers on PPTCT is 10.9, the Median is 11 and the Standard Deviation is 4.11.

From the collected data by questionnaire, no one answered correctly all 24 questions. Among 30 mothers maximum of 57% have average knowledge, 33% have below-average knowledge & 10% of mothers have good knowledge regarding PPTCT.

The 2nd objective of the study was to identify the level of knowledge on early infant diagnosis(EID) among antenatal mothers.

The mean knowledge score of mothers on EID is 10.9, the Median is 11 and the Standard Deviation is 4.11. Out of 30 mothers, 57% have average knowledge, 33% have below-average knowledge & 10% of mothers have good knowledge regarding EID.

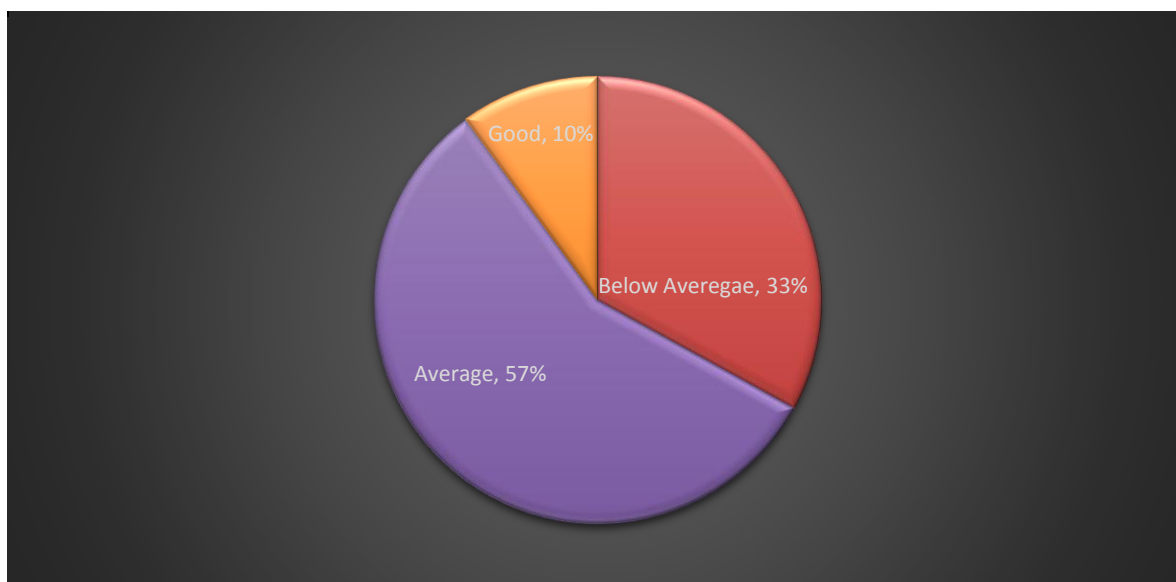


FIGURE: 1 Percentage of knowledge of Mothers

## VII. Findings

It is found that among 30 antenatal mothers 20 of them are between the age group of 31-40 years (67%), 9 mothers are between the age group of 20-30 years (30%). Only 1 mother are from the age group of 41-50 years (3%). No mother's age is >50 years. It also depicted that 83 % of the mothers are of the Hindu religion, 17% of them are of the Muslim religious community. Data revealed that out of 30 mothers, 10 mothers income in the range of Rupees 750-999/month (33%), 8 mothers income ranges from Rupees 500-749/month(27%), 4 of them earn Rupees 300-499/month(13%), in the range of Rupees 100-299 only 2 mother's monthly income(7%), 3 among 30 mother's monthly income is less than Rupees 100(10%).

Among 30 antenatal mothers, 6 of them are graduates, 12 have got secondary education, 11 have primary education & only 1 of them have no formal education. Among the 30 mothers, 3 are daily labor, 7 are unemployed, 15 are self-employed & 5 are having Government jobs. In the sample group, 83% of mothers are married, 17% are unmarried. No one is a widow or divorced. 50% of the mothers think that PPTCT & EID program comes under the Government Scheme.

## VIII. Conclusion

The study wants to highlight the potential need to improve the level of knowledge of the antenatal mothers regarding PPTCT & EID as they play a vital role in childbirth & child care. Mothers should get knowledge on PPTCT, its schemes, treatment, also EID & its necessity to lead a healthy living. It is highly recommended to provide teaching about PPTCT & EID from health experts to mothers in PPTCT centers or hospitals.

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