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### A Descriptive Study to Assess the Knowledge of Antenatal Mothers Regarding Mother-to-Child Transmission of HIV in Kamala Nehru State Hospital Mother & Child Shimla, Himachal Pradesh

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ABSTRACT: Acquired Immuno Deficiency Syndrome (AIDS) is now a worldwide problem. As it dangerously sweeps the world, it cuts across the boundaries of nationality, age, sex and education and spares no one. India's first known HIV infection was diagnosed in a female sex worker in Chennai in February 1986. It is highly probable that HIV had been circulating for some years before that, since screening during 1986-1987 found as many as 3%-4% of sex workers infected in Vellore and Madurai. According to estimates from the UNAIDS Global Report 2010 around 30.8 million adults and 2.5 million children were living with HIV at the end of 2009. India has the world's third-largest population suffering from HIV/AIDS. National AIDS Control Organization (NACO) added an extension component to the intervention to reduce vertical transmission of the disease from mother-to-child by actively motivating the antenatal mother's group for HIV-testing and institutional deliveries. The transmission of HIV from an infected mother to her child can be reduced to less than two percent by intensive interventions in the antenatal, intra-natal and postnatal periods. To achieve this low rate, primary prevention of HIV infection in parents-to-be, early identification of seropositivity in pregnant women, prevention of unwanted pregnancies, prevention of mother-to-child transmission of HIV by appropriate antiretroviral therapy, special interventions in maternal management during labour, appropriate care and follow up of the newborn, all play an important role. Latex condoms, when used consistently and correctly, are highly effective in preventing the transmission of HIV, the virus that causes AIDS. AIDS leads infant death within two years of acquisition of the infection.

**KEYWORDS:** Antenatal mother, HIV-testing, child,

#### I. INTRODUCTION

There are about 33.2 million Human Immunodeficiency Virus (HIV) - infected people in the world of which about 22.5 million are in Sub-Saharan Africa. Of adult infections, 40% are in women and 15% in individuals of 15 to 25 years of age. Prenatal infection has resulted in large number of children being born with HIV.

In 2006, the National AIDS Control Organization (NACO) of India reported an estimate of 4.58 million people living with HIV/AIDS in the country

The HIV sero-prevalence among pregnant women has been reported to be between 0.5 and 3.3% in various parts of the country. However, recent trends suggest that the incidence of HIV infection in women seeking antenatal care may be as high as 6% and India can expect 75,000 HIV infected neonates to be born every year<sup>10</sup>.

India has the second highest number of HIV infected individuals. Of these, approximately 2, 02,000 are children. These children face some of the most tragic consequences of HIV infection: being orphaned, replacing a bread winner, nursing sick and dying parents, and struggling for survival in the streets. Mother-to-child transmission is the largest source of HIV infection in children below 15 years of age. The transmission of HIV from mother to child can take place within the uterus, during birth or through breast feeding. This vertical transmission can be drastically reduced by following Prevention of Parent to Child Transmission (PPTCT) guidelines. The measures taken for prevention of parent to child transmission of HIV comprise of: primary prevention among prospective parents through education and counselling, prevention of pregnancy among HIV positive women, testing of HIV status of all pregnant women, provision of anti-retroviral drugs to HIV positive mothers, and replacement feeding for infants

Mother-to-child transmission (MTCT) of human immune deficiency virus (HIV) infection is the transmission of the virus from an HIV-infected mother to her child during pregnancy, labour, delivery or breastfeeding<sup>1</sup>





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#### II. NEED FOR THE STUDY

There are about 33.2 million Human Immunodeficiency Virus (HIV) - infected people in the world of which about 22.5 million are in Sub-Saharan Africa. Of adult infections, 40% are in women and 15% in individuals of 15 to 25 years of age. Prenatal infection has resulted in large number of children being born with HIV.

In 2006, the National AIDS Control Organization (NACO) of India reported an estimate of 4.58 million people living with HIV/AIDS in the country<sup>9</sup>.

Himachal Pradesh, still being a developing state, with vast population, diverse social and cultural groups, and limited health facilities and with an illiterate population of around 30%, is vulnerable for many health related problems especially HIV and AIDS. Prevention is the only solution to remain away from HIV and it can be achieved through knowledge about its transmission and prevention aspects, therefore the researcher felt the need to assess the knowledge of mothers regarding the antenatal mother-to-child transmission of HIV at selected hospitals of KNH, shimla.

#### III. REVIEW OF LITERATURE

A review of literature is to ascertain what is already known in relation to a problem of interest, to develop a broad conceptual context in to which a problem will fit. It creates accurate picture of the information found on the subject. It provides basis to locate pertinent data and new ideas that need to be included in the present study. It helps the investigator to find the comparative data that could be used for supporting present findings and drawing conclusions **Santmyire**, et. al. Conducted a study on educating African pastors on mother to child transmission of HIV/AIDS. A pre-test and post test design was used with a convenience sample of 102 pastors attending the educational program on HIV/AIDS and MTCT in January, February of 2005. Participants attended an 18-hour program on HIV/AIDS and MTCT. A picture booklet was designed and used to help post test examination and follow-up evaluations were designed for this project. Results of the pre test showed minimal knowledge of pastors regarding HIV/AIDS. The median composite scores on the knowledge questions increased from 16% on the pre-test to 92% on post-test within the 3 months follow-up period, 34 follow up evaluation were received. The educational program was effective in increasing the post test knowledge of HIV/AIDS and MTCT.

#### IV. METHODOLOGY

#### Research Approach and design

Quantitative Approach and non-experimental Descriptive research design will be used to conduct the study.

#### Research setting

Research study will be conducted in selected KNH hospital, Himachal pardesh

#### Target population

The population comprises of antenatal mothers of selected KNH hospital, Himachal pardesh.

#### Sampling technique and sample size

The sample size for the study will consist of 30 antenatal mothers. Purposive sampling technique will be used to select the Hospital and convenient sampling technique will be used to select population in this study.

#### **Inclusion criteria**

The study includes the mothers who are;

- Between 20 years to 40 years.
- Available at the time of data collection.
- Able to understand Punjabi, Hindi or English

#### **Exclusion criteria**

The study excludes the mothers who are;

- Below 20 years and older than 40 years.
- Not willing to participate in the study.





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#### Selection and Description of tool (s)

Tool (s) will be prepared after extensive review of literature, consultation and discussion with experts of nursing and medical field. Appropriate Tool (s) will be to used to assess - i) Demographic variables ii) Questionnaire

#### Pilot study

It will be conducted to find out the feasibility and reliability of the study

#### **Data collection procedure**

Prior to data collection Permission will be obtained from college, hospitals authorities, research and ethical committee of college and KNH, Hospital Shimla followed by informed consent of 30 antenatal mothers, the investigator will assess the knowledge of mothers regarding Mother-to-child transmission of HIV by using structured interview schedule. Structured interview schedule will be used to assess the knowledge of mothers regarding Mother-to-child transmission of HIV. It consists of two parts, namely part-1 and part-2. Part-1 deals with demographic data part-2 deals with knowledge regarding HIV, its transmission, Mother-to-child transmission.

#### Data analysis plan

Analysis and interpretation of data will be based on objectives and will be done by using descriptive and inferential statistics as study required. Inferential statistics like chi-square test will be used to identify the association between the knowledge of mothers regarding mother to child transmission of HIV with selected socio-demographic variables

#### Discussion

Discussion will be based on statistical analysis, current trends and previously related research studies.

#### V. DATA ANALYSIS AND INTERPRETATION

This chapter deals with analysis and interpretation of data obtained from 30 study subject that are mothers in antenatal ward of Kamala Nehru State Hospital Mother & Child Shimla, Himachal Pradesh .Data was obtained with the help of multiple choice questions. Analysis of data is based on objective of the study "A descriptive study to assess the knowledge of antenatal mothers regarding mother-to-child transmission of HIV in Kamala Nehru State Hospital Mother & Child Shimla, Himachal Pradesh.

#### **OBJECTIVE**

The analysis is based on the following on the objectives of the study:

- 1. To assess the knowledge of women antenatal mothers regarding mother-to-child transmission of HIV
- 2. To find out the association of knowledge of antennal mother regarding mother-to-child transmission of HIV with selected demographic variables i.e. age, number of living children, residential area, types of family, educational status, occupation, eating habits.

The data is organized and presented under following headings

#### Characteristics of sample subjects

Table -1

Distribution of women according to selected demographic variables N=30

S. no	Sample	Frequency	Percentage (%)
1.	AGE IN YEARS		
	20-25	3	10%
	26-30	16	53.33%
	31-35	9	30%
	35-40	2	6.67%
2.	NUMBER OF LIVING CHILDREN		
	Nil	6	20%
	One	17	56.67%





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	Two	7	23.33%			
	More than two	0	0%			
3.	RESIDENTIAL AREA					
	Rural	16	53.33%			
	Urban	14	46.67%			
4.	EDUCATIONAL STATUS					
	Illiterate	9	30%			
	Matric	16	53.33%			
	Graduate	3	10%			
	Post-Graduate	2	6.67%			
5.	TYPES OF FAMILY					
	Joint	19	63.33%			
	Nuclear	11	36.67%			
6.	OCCUPATION					
	Housewife	30	100%			
	Self business	0	0%			
	Government job	0	0%			
	Private job	0	0%			
7.	EATING HABITS					
	Vegetarian	19	63.33%			
	Non-vegetarian	11	36.67%			

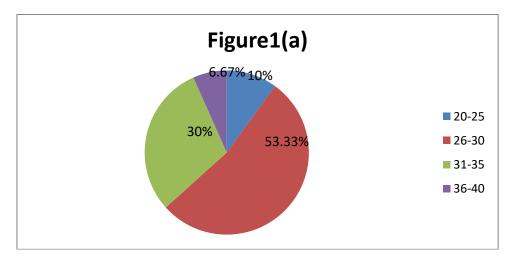


Figure 1 (a) Percentage distribution of women according to age group

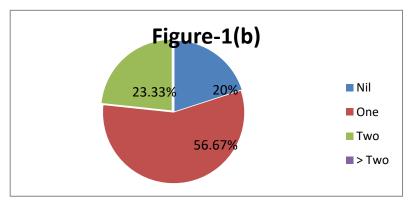


Figure-1 (b): Percentage distribution of women according to no. of living children





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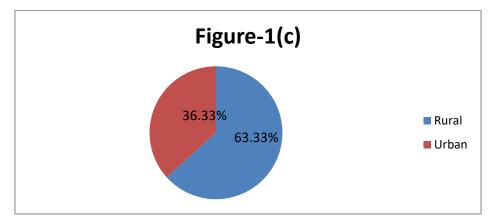


Figure-1(c): Per Percentage distribution of women according to residential area.

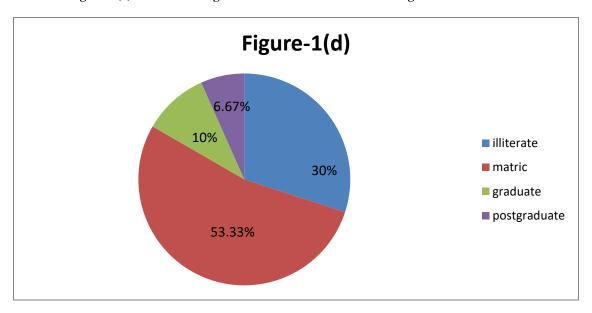


Figure-1(d): Per Percentage distribution of women according to educational status

Figure-1(e)

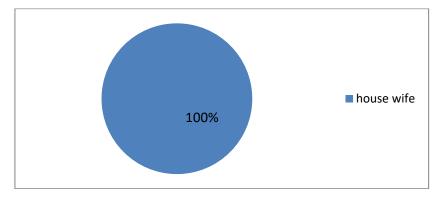


Figure-1(e): Per Percentage distribution of women according to types of occupations.





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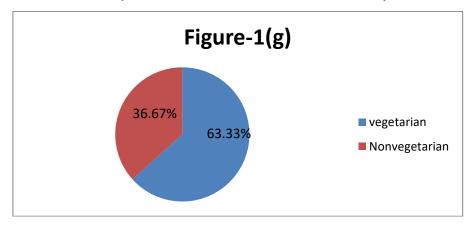


Figure-1(f): Per Percentage distribution of women according to dietary habits.

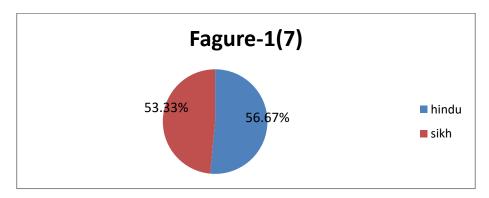


Figure-1(g): Per Percentage distribution of women according to religions

Table-2 To assess the knowledge of antenatal mothers regarding mother-to-child transmission of of HIV. N=25

LEVEL OF KNOWLEDGE	SCORE LEVEL	N	PERCENTAGE
Excellent knowledge	16-20	0	0%
Good knowledge	11-15	2	6.66%
Average knowledge	6-10	20	66.67%
Poor knowledge	0-5	8	26.67%

Table no. 2 as per figure depicts that 2 samples were having good knowledge, 20 samples were having average knowledge, 0 samples were having excellent knowledge and 8 samples were having poor knowledge antenatal mothers regarding mother-to child transmitted the HIV.

Hence it indicates that women are having adequate knowledge regarding HIV antenatal mothers.





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#### FIGURE-2

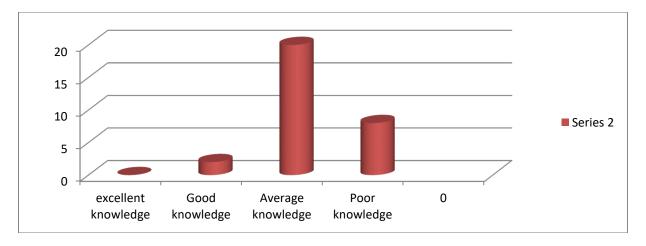


Figure (2): Percentage distribution of knowledge score of antenatal women regarding HIV

Sr.no.	Selected variables	Excellent knowledge	Good knowledge	Average knowledge	Poor knowledge	Df	Chi-square value
1.	Age in years						
	20-25	0	1	2	0		
	26-30	0	0	13	6	9	6.642 <sup>s</sup>
	31-35	0	1	4	2		
	36-40	0	0	1	0		
2.	Number of living children						
	Nil	0	1	5	0		
	One	0	1	11	5	9	3.64 <sup>S</sup>
	Two	0		4	3		
	More than two	0	0	0	0		
3.	Residential area						
	Rural	0	2	10	4	3	7.82 <sup>s</sup>
	Urban	0	0	11	3		
4.	Educational status						
	Illiterate	0	0	7	5		
	Matric	0	1	10	3		
	Graduate	0	0	0	0	9	23.71 <sup>NS</sup>
	Post- graduate	0	0	0	0		
5.	Family status						_
	Joint	0	2	12	5	3	1.52 <sup>s</sup>
	Nuclear	0	0	8	3		
6.	Occupation						
	Housewife	0	2	20	8		
	Self-business	0	0	0	0	9	$0_{\rm S}$
	Government job	0	0	0	0		

Table no. 2 chi square value showing the association between the knowledge of antenatal mothers with selected demographic variables.





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#### Major findings of the study:

- 1. Most of the women belong to age group 26-30 (53.33) and least number of women belongs to more then 35-40 (6.67%).
- 2. Out of 30 women,6(20%) were having no child, 17(57.67%) were having 1 child, 7 (23.33%) were having 2 children and 0(0%) were having more than two children.
- 3. Out of 30 women16 (53.33%) were having in rural area and 14(46.66%) were living in urban area.
- 4. Out of 30 women 9(30%) were illiterate, 16(53.33%) were matric,3 (10%) were graduate and post-graduate 2(6.66%).
- 5. Out of 30 women19 (63.33 %) were living in joint family and 11 (36.67%) were living in nuclear family.
- 6. Out of 30 women 30(100%) were housewives, no private, government, or business.
- 7. Out of 30 women19 (63.33 %) were vegetarian and 11 (36.67%) were non-vegetarian
- 8. The mean knowledge score of women calculated according to variables and found statistical non-significant according to age, number of living children, area of residence, type of family, educational status, occupations, eating habits, religions.
- 9. So this study reported that maximum number of women (20%) had adequate knowledge.

#### **DELIMITATION:**

The study is delimited to:

- 1. Antenatal mothers coming to hospital in KNH, Himachal Pradesh.
- 2. Sample size 30 only.

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