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A STUDY TO ASEESS THE KNOWLEDGE OF ANTENATAL MOTHER REGARDING PREVENTION OF MOTHER TO CHILD TRANSMISSION OF HIV IN A SELECTED ANTENATAL CLINIC BANGALORE, WITH A VIEW TO DEVELOP AN INFORMATION GUIDESHEET

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A B S T R A C T :

Maternal health is a fundamental component of child health, growth, and survival. Nevertheless, certain infections, including Human Immunodeficiency Virus (HIV), may be passed from an infected mother to her baby during pregnancy, labour and delivery, or through breastfeeding. This process is known as mother-to-child transmission (MTCT) of HIV and continues to be a significant public health issue, particularly in developing countries such as India. Although advances in medical care, early diagnosis, and antiretroviral therapy have improved the prevention of paediatric HIV infection, challenges remain in eliminating new infections among children. Adequate knowledge among pregnant women about the possible routes of HIV transmission and the available preventive strategies is essential for promoting healthy pregnancy outcomes and reducing the risk of infection in newborns. Antenatal care services provide an important opportunity to educate expectant mothers about HIV prevention, early testing, timely treatment, and other recommended interventions. In this context, a study was conducted to assess the knowledge of antenatal mothers regarding the prevention of mother-to-child transmission of HIV in a selected antenatal clinic in Bengaluru, with the objective of developing an information guide sheet to improve their understanding of the preventive measures.

Keywords: HIV, Mother-to-Child Transmission, Antenatal Mothers, Knowledge, Prevention, Vertical Transmission.

Introduction

The progress and development of a country are closely associated with the health and quality of life of its population. According to the World Health Organization (WHO), health encompasses physical, psychological and social well-being and is not limited to the absence of illness or disability.[1] Despite improvements in healthcare and medical technology, Human Immunodeficiency Virus (HIV) infection continues to be a major challenge to public health worldwide. The impact of HIV and Acquired Immunodeficiency Syndrome (AIDS) extends beyond the affected individuals, influencing family life, social relationships, community development and the economic progress of nations.[2] Effective control of the HIV epidemic requires comprehensive prevention programmes, accessible diagnostic services, appropriate treatment and continuous support for affected individuals. Women affected by HIV may encounter additional difficulties in obtaining healthcare because of gender discrimination, financial limitations, social inequalities and inadequate access to health services. Such barriers can delay HIV testing and restrict access to essential preventive and therapeutic interventions.[3] HIV infection during pregnancy is particularly important because the virus can be transmitted from an infected mother to her child. This form of transmission, commonly called mother-to-child transmission (MTCT) or vertical transmission, can take place during pregnancy, labour and delivery, or breastfeeding. However, the risk of transmission can be substantially reduced through early HIV screening, timely initiation of antiretroviral therapy, appropriate clinical management and recommended infant-feeding practices.

The prevention of mother-to-child transmission of HIV is an essential element of reproductive, maternal and child healthcare. Antenatal services offer an important opportunity to provide pregnant women with accurate information about HIV infection, its routes of transmission, preventive interventions and the significance of early diagnosis. Improving the knowledge of antenatal mothers can encourage informed healthcare decisions, promote the timely utilisation of available services and support efforts to prevent HIV infection among infants. Therefore, educating pregnant women about the prevention of mother-to-child transmission of HIV is an important strategy for improving maternal and child health outcomes.

OBJECTIVES

1. To evaluate the knowledge of antenatal mothers regarding the transmission of HIV from mother to child and the measures available for its prevention.
2. To identify the association between the knowledge level of antenatal mothers regarding the prevention of mother-to-child transmission of HIV and their selected demographic characteristics.
3. To prepare an informational guide sheet to enhance antenatal mothers' knowledge regarding the prevention of mother-to-child transmission of HIV.

HYPOTHESES

- **H_1 (Research Hypothesis):** There will be a statistically significant association between the level of knowledge of antenatal mothers regarding the prevention of mother-to-child transmission of HIV and their selected demographic variables.
- **H_0 (Null Hypothesis):** There will be no statistically significant association between the level of knowledge of antenatal mothers regarding the prevention of mother-to-child transmission of HIV and their selected demographic variables.

METHODS

A descriptive research design was adopted to assess the knowledge of antenatal mothers regarding the prevention of mother-to-child transmission (MTCT) of HIV. A total of 100 antenatal mothers were selected for the study using the purposive sampling technique. Data were collected through a structured interview schedule, which included questions related to the participants' demographic characteristics and their knowledge of HIV transmission and preventive measures. A pilot study was conducted to assess the feasibility of the research process and to identify any difficulties in the data collection procedure. The collected data were analysed using appropriate descriptive and inferential statistical methods. Frequency and percentage distributions were used to describe the demographic characteristics and knowledge levels of the participants, and the findings were presented using suitable tables and graphical representations. The association between the knowledge level of antenatal mothers and their selected demographic variables was assessed using the Chi-square test.

MAJOR FINDINGS OF THE STUDY

The major findings of the study conducted to assess the knowledge of antenatal mothers regarding the prevention of mother-to-child transmission (MTCT) of HIV are summarised below.

Regarding demographic characteristics, the majority of antenatal mothers (59%) were aged 18–27 years, while 25% belonged to the 28–37 years age group and 16% were aged 38–45 years. In terms of religion, 52% were Hindus, 35% were Muslims and 13% were Christians. Regarding educational status, 42% had completed primary education, 40% had no formal education, 13% had secondary education and 5% had tertiary education. With respect to their husbands' educational qualifications, 42% had primary education, 25% had no formal education, 23% had secondary education and 10% had tertiary education. In relation to occupation, 43% of the antenatal mothers were homemakers, 34% were daily wage workers, 19% worked in the private sector, 2% were government employees and 2% were self-employed. Regarding their husbands' occupations, 46% worked in the private sector, 27% were daily wage workers, 17% were government employees and 10% were self-employed. Concerning monthly family income, 57% belonged to the ₹3,001–₹6,000 income group, 30% had an income of ₹6,001–₹10,000, 7% had an income below ₹3,000 and 6% had an income of ₹10,000 or above. Regarding sources of information about HIV and its prevention, 37% of the antenatal mothers received information through mass media, an equal proportion (37%) obtained information from family members and relatives, 14% received information from health personnel and 12% obtained information from neighbours and friends. The assessment of overall knowledge revealed that 68% of the antenatal mothers had moderate knowledge, 27% had poor knowledge and only 5% demonstrated adequate knowledge regarding the prevention of mother-to-child transmission of HIV. These findings indicate that most participants had an intermediate level of knowledge, while only a small proportion possessed adequate knowledge. The area-wise analysis showed that the mean knowledge score regarding HIV and its prevention was 6.68, with a standard deviation of 2.22 and a mean percentage of 60.72%. For knowledge related to mother-to-child transmission of HIV and its preventive measures, the mean score was 9.91, with a standard deviation of 2.50 and a mean percentage of 43.08%. The overall mean knowledge score was 16.49, with a standard deviation of 3.24 and a mean percentage of 48.05%. These results highlight the need to strengthen awareness among antenatal mothers, particularly regarding the transmission of HIV from mother to child and the measures available to prevent it. The analysis of the association between selected demographic variables and knowledge scores revealed that there was no statistically significant association between the age of antenatal mothers and their knowledge level at the 0.05 level of significance. Similarly, no statistically significant association was identified between religion and knowledge scores. However, statistically significant associations were reported between the knowledge level of antenatal mothers and their educational qualification, their husbands' educational qualification, their own occupation and monthly family income. In contrast, the association between the occupation of husbands and the knowledge level of antenatal mothers was not statistically significant. Overall, the findings suggest that the majority of antenatal mothers had moderate knowledge regarding the prevention of mother-to-child transmission of HIV, with specific gaps in their understanding of transmission and preventive measures. The significant associations identified with selected educational, occupational and economic variables emphasise the importance of providing accessible, structured and targeted health education. Therefore, the development and distribution of an information guide sheet may help improve awareness and promote informed maternal healthcare practices.

INTERPRETATIONANDCONCLUSION

The present study assessed the knowledge of antenatal mothers regarding the prevention of mother-to-child transmission (MTCT) of HIV in a selected antenatal clinic in Bengaluru. The demographic findings indicated that 59% of the participants were aged 18–27 years, 52% belonged to the Hindu religion, 42% had primary education and 40% had no formal education. Regarding occupation, 43% were homemakers, while 57% belonged to the monthly family income group of ₹3,001–₹6,000. With respect to sources of information, mass media and family members or relatives were the most frequently reported sources, accounting for 37% each. Health personnel were the source of information for 14% of the participants, whereas 12% obtained information from neighbours and friends. These findings indicate that healthcare professionals and antenatal services could play a greater role in providing accurate and comprehensive information about HIV prevention. The assessment of knowledge revealed that 68% of the antenatal mothers had moderate knowledge, 27% had poor knowledge and only 5% had adequate knowledge regarding the prevention of mother-to-child transmission of HIV. The overall mean knowledge score was 16.49, with a standard deviation of 3.24 and a mean percentage of 48.05%. The mean percentage was comparatively higher in the area of HIV and its prevention (60.72%) than in the area of mother-to-child transmission of HIV and its preventive measures (43.08%). This difference indicates a need to improve participants' understanding of the specific ways HIV can be transmitted from mother to child and the interventions available to reduce transmission. The analysis of the association between knowledge scores and selected demographic variables showed that age and religion were not significantly associated with the knowledge level of antenatal mothers. In contrast, statistically significant associations were reported between knowledge and the educational qualifications of antenatal mothers, the educational qualifications of their husbands, the occupation of antenatal mothers and monthly family income. No statistically significant association was identified between the occupation of husbands and the knowledge level of antenatal mothers. Based on the findings, it was concluded that the majority of antenatal mothers possessed moderate knowledge regarding the prevention of mother-to-child transmission of HIV, while more than one-fourth had poor knowledge. Only a small proportion demonstrated adequate knowledge. These findings highlight the need for planned and accessible health education interventions to address gaps in knowledge about HIV transmission, early testing, antiretroviral treatment and recommended preventive measures. The development and distribution of an information guide sheet may serve as a useful educational resource for antenatal mothers. Individual counselling, structured health education sessions and regular information-sharing activities through antenatal clinics can further support maternal awareness and informed healthcare decisions. Strengthening the educational role of nurses and other healthcare professionals is therefore important in improving knowledge of HIV prevention and reducing the risk of mother-to-child transmission. The findings may help guide the planning of appropriate educational strategies to promote maternal and child health.

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