Research Article

A Study to Assess the Knowledge of Primigravida Mothers regarding Prevention of Neonatal Infections in selected Hospitals of Hoshangabad

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I N F O

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A B S T R A C T

Introduction: Healthy population is a key to a nation's prosperity. Healthy children today, make a healthier nation tomorrow. The role of the mother in creating a healthy population is beyond explanation. The mother plays a key role in the prevention of infection in the neonatal period. Neonatal period is the most vulnerable period in an infant's life. Among all the age groups, neonates are the most susceptible to morbidity and mortality. It is important to support the mother by providing adequate knowledge regarding the prevention and early identification of neonatal infections.

Objectives: 1.) To assess the knowledge of primigravida mothers regarding the prevention of neonatal infections. 2.) To determine the association of the level of knowledge of primigravida mothers regarding the prevention of neonatal infections with their selected demographic variables.

Material & Methods: An exploratory survey approach was selected for the study. Non-probability convenience sampling was used in the present study, and the knowledge of primigravida mothers regarding the prevention of neonatal infections was assessed by a structured knowledge questionnaire.

Results: The mean knowledge score of primigravida mothers was 16.5 and standard deviation was 3.713. The knowledge scores of primigravida mothers regarding the prevention of neonatal infections showed that only 2 (05.00%) primigravida mothers had good knowledge. Majority of the primigravida mothers (28 (70.00%)) had average knowledge, and 10 (25.00%) had poor knowledge.

Conclusion: The finding of the study revealed that the knowledge of primigravida mothers regarding the prevention of neonatal infections was inadequate.

Keywords: Knowledge, Primigravida Mothers, Prevention of Neonatal Infection

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Introduction

A neonatal infection refers to an infection of the neonates during the first month of life (28 days). It is one of the leading causes of neonatal deaths in developing countries, and thus its prevention will lead to a healthy population in future, thereby helping in the growth of a nation.[1] It is very important to make the mothers aware of the ways of early identification of neonatal infections.[2] Neonates are more susceptible to infections because they lack natural immunity and take some time for the acquired immunity to develop.[3] The most common and preventable infections during the neonatal period are skin, umbilical cord, and gastrointestinal tract infections. Every year, nearly 41% of all under-five child deaths are among newborn infants in their first 28 days of life or the neonatal period. Three-quarters of all newborn deaths occur in the first week of life. In developing countries, nearly half of all mothers and newborns do not receive skilled care during and immediately after birth. Up to two-thirds of newborn deaths can be prevented if known effective health measures are provided at birth and during the first week of life.[4] The infant mortality rate for India in 2020 was 29.848 deaths per 1000 live births.[5] Although the global number of newborn deaths declined from 5 million in 1990 to 2.4 million in 2019, children still face the greatest risk of death in their first 28 days.[6] More than 30% of neonatal deaths happen because of neonatal infections.[7] Madhya Pradesh, where the educational status of mothers is very low, has recorded the highest infant mortality rate of 48 for every 1,000 live births.[8] Educating mothers in the management of newborns can reduce neonatal infections, thereby reducing neonatal deaths.

Need of the Study

The first week of life is the most crucial period in the life of an infant. In India, 50-60% of all infant deaths occur within the first month of life. The risk of death is greatest during the first 24-48 hours after birth. Neonatal infection, the leading cause for neonatal mortality, now accounts for two-thirds of all infant deaths and half of under-five child mortality in developing countries. Pre-maturity (35 per cent) is the major cause of newborn deaths in India, followed by neonatal infections (33 percent), birth asphyxia (20 percent), and congenital malformations (9 percent).[9] The vast majority of newborn deaths takes place in low and middle-income countries. It is possible to improve the survival and health of newborns and end preventable stillbirths by providing high coverage of quality antenatal care, skilled care at birth, postnatal care for mother and baby, and care of small and sick newborns.[5] Treating maternal infections during pregnancy, ensuring a clean birth, and taking care of the umbilical cord can help in reducing infection-related deaths. Immediate and exclusive breastfeeding has also proven to be helpful in avoiding neonatal infections. As is well known,

antibiotics are life-saving in case of infections and hence their easy availability is of high importance. Skin-to-skin contact with the mother is also essential for babies with low birth weight to maintain body temperature.[4]

Statement of the Problem

A study to assess the knowledge of primigravida mothers regarding prevention of neonatal infections in selected hospitals of Hoshangabad.

Objectives

- To assess the knowledge of primigravida mothers regarding the prevention of neonatal infections
- To determine the association of the level of knowledge of primigravida mothers regarding the prevention of neonatal infections with their selected demographic variables

Operational Definitions

Primigravida: In this study, primigravida women refers to the women who are confirmed as pregnant for the first time and who have completed the 12th week of gestation.

Prevention of Neonatal Infections: Knowledge regarding measures to be taken for the prevention of skin, cord, and GIT infections that occur in babies within 28 days of birth.

Knowledge: Knowledge refers to the correct response of primigravida mothers to the questions included in the structured knowledge questionnaire regarding the prevention of neonatal infections.

Assumption

Primigravida mothers have some knowledge regarding the prevention of neonatal infections.

Hypothesis

There will be a significant association between levels of knowledge of primigravida mothers regarding the prevention of neonatal infection with their selected demographic variables.

Research Methodology

Inclusion Criteria

- Primigravida mothers who had completed 12 weeks of gestation
- Primigravida mothers who could read Hindi and English
- Primigravida mothers who were available at the time of sample collection

Exclusion Criteria

- Primigravida mothers whose gestation period was less than 12 weeks
- Primigravida mothers who were not willing to participate in the study

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Variables of Study

The variables of the study include knowledge of primigravida mothers regarding the prevention of neonatal infections, along with extraneous variables like age, qualification, religion, type of family, income of family, and place of living.

Setting of the Study: Selected hospitals in Hoshangabad.

Population: Population comprises primigravida mothers in selected hospitals.

Sample and Sampling: Primigravida mothers who had completed 12 weeks of gestation in selected hospitals of Hoshangabad.

Sampling Technique: Non-probability convenience sampling

Sample Size: 40 primigravida mothers from selected hospitals of Hoshangabad

Data Collection

Data were collected for a period of one week after obtaining ethical approval from hospital authorities and informed consent from the participants.

Description of the Tool

A structured knowledge questionnaire was used in this study which was divided into two sections:

Section A: It included personal variables namely, age, religion, educational qualification, type of family, income of family, and place of living.

Section B: A structured knowledge questionnaire was prepared for the present study which consisted of 26 questions on neonatal infections as well as on specific topics like neonatal infection of the skin, umbilical cord, and gastrointestinal tract. The total knowledge score ranged from 0 to 26. The score was further divided as follows: poor knowledge (0-13), average knowledge (13-21), and good knowledge (21-26).

Result

Description of selected Demographic Variables of Primigravida Mothers

Table 1.Frequency and Percentage Distribution of Primigravida Mothers according to the selected Demographic Variables

S. No.	Selected Demographic Variables	Frequency	Percentage
1.	Age (in years)		
	18-20	11	27.50
	20-22	17	42.20
	22-25	12	30.00
2.	Educational Qualification		
	Primary	04	10.00
	High school	21	52.50
	Secondary	04	10.00
	Graduate	11	27.50
3.	Religion		
	Christian	01	02.50
	Hindu	37	92.50
	Muslim	01	02.50
	Others	01	02.50
4.	Type of family		
	Nuclear	31	77.50
	Joint	09	22.50
5.	Income of family (INR)		
	Below 1000	09	22.50
	1000-5000	09	22.50
	5001-10000	19	47.50
	Above 10000	03	07.50
6.	Place of living		
	Village	27	67.50
	City	13	32.50

As shown in Table 1, majority (42.20%) of the study participants were in the age group of 20-22 years. 21 (52.50%) primigravida mothers had High School level of educational qualification. It was found that 37 (92.5%) participants belonged to the Hindu religion and 31 (77.5%) subjects were from nuclear families. The findings in the present study showed that 19 (47.5%) participants had family income between INR 5001 and INR 10000 and 27 (67.55) study subjects were from villages.

Description of Knowledge Score of Primigravida Mothers regarding Prevention of Neonatal Infections

The knowledge of primigravida mothers regarding the prevention of neonatal infections was assessed using a structured knowledge questionnaire. Mean, median, range, and standard deviation of the knowledge scores of primigravida mothers were calculated.

Table 2.Mean, Median, Range, and Standard Deviation of Knowledge Scores of Primigravida Mothers regarding Prevention of Neonatal Infections

n = 40

Mean	Median	Range	SD
16.5	17	8-24	3.713

It is evident from Table 2, that the knowledge score of primigravida mothers ranged between 8 and 24 with a mean of 16.5 and a standard deviation of 3.713 indicating

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that the majority of primigravida mothers had average knowledge regarding the prevention of neonatal infection.

Frequency and Percentage Distribution of Levels of Knowledge of Primigravida Mothers regarding Prevention of Neonatal Infections

The structured knowledge questionnaires used to assess the knowledge of primigravida mothers regarding neonatal infections consisted of 26 items with a maximum possible score of 26. Based on the score, the knowledge of mothers was classified as good knowledge (21-26), average knowledge (13-21), and poor knowledge (0-13).

Table 3.Frequency and Percentage Distribution of Primigravida Mothers according to their Levels of Knowledge regarding Prevention of Neonatal Infections

n = 40

Variables	Levels	Frequency	Percentage
Knowledge	Good	02	05.00
	Average	28	70.00
	Poor	10	25.00

Data presented in Table 3 show that 5% of primigravida mothers had good knowledge, 70% had average knowledge, and 25% had poor knowledge. This indicates that majority of the primigravida mothers had average knowledge regarding the prevention of neonatal infections.

Discussion

Findings related to the Knowledge Score of Primigravida Mothers regarding Prevention of Neonatal Infections

The mean score of primigravida mothers was 16.5 and standard deviation was 3.713. The study showed that only 2 (05.00%) primigravida mothers had good knowledge. Majority of the primigravida mothers (28 (70.00%)) had average knowledge and 10 (25.00%) had poor knowledge. A similar study conducted by Mangala Shrestha in 2005 showed that 72% of the mothers had poor knowledge. This study also reported that the knowledge of primigravida mothers regarding the prevention of neonatal infections was inadequate.[10]

Association of Level of Knowledge of Primigravida Mothers with the selected Demographic Variables

The computed Chi-square value of the association between levels of knowledge of primigravida mothers was not found to be statistically significant (at 0.05 level) for age, educational qualification, religion, type of family, income of family, and place of living. Hence it was inferred that the knowledge of primigravida mothers regarding the prevention of neonatal infections is not influenced by their selected demographic variables. Thus our hypothesis was rejected.

Limitations

- This study adopted non-probability purposive sampling, hence the generalisation of the findings is limited
- The sample size was only 40 primigravida mothers. This limits the generalisation of findings

Conclusion

The study has shown that the knowledge of primigravida mothers regarding the prevention of neonatal infections is inadequate. It has also revealed that levels of knowledge of primigravida mothers regarding the prevention of neonatal infections had no significant association with their selected demographic variables. Since children are the foundation of the future of a nation, it is highly recommended that adequate steps should be taken to enhance the knowledge of future mothers regarding the infections that are common among neonates.

Conflict of Interest: None

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