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## **A Study to Assess Knowledge Regarding Routine New born Care among Mothers in Community Area of Jabalpur (MP).**

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### **ABSTRACT**

**Background:** Routine New born Care (RNC) is essential for ensuring the survival, growth, and development of new borns. Mothers play a crucial role in providing RNC at home, including breastfeeding, thermoregulation, cord care, and infection prevention. However, inadequate knowledge and prevailing misconceptions can adversely affect neonatal outcomes.

**Objectives:** To assess the knowledge regarding Routine New born Care (RNC) among mothers and to determine the association between knowledge scores and selected demographic variables.

**Methods:** A quantitative, descriptive research design was adopted. The study was conducted among 80 postnatal mothers in selected community areas of Jabalpur, Madhya Pradesh. Samples were selected using a non-probability purposive sampling technique. Data were collected using a self-structured questionnaire consisting of socio-demographic variables and knowledge-based questions on RNC. Data analysis was performed using descriptive and inferential statistics.

**Results:** The findings revealed that 86.3% of mothers had moderate knowledge, 10% had inadequate knowledge, and only 3.8% had adequate knowledge regarding RNC. The mean knowledge score was 27.55, with a median of 28 and a standard deviation (SD) of 6.72. The mean percentage score was 48.33%, indicating an overall moderate level of knowledge. No significant association was found between knowledge scores and most demographic variables; however, a significant association was observed with occupational status ( $\chi^2 = 18$ ,  $p < 0.05$ ).

**Conclusion:** The study concludes that although mothers possess a moderate level of knowledge regarding RNC, it is insufficient for optimal new born care. There is a strong need for community-based awareness programs and educational interventions to enhance maternal knowledge and improve neonatal health outcomes.

**KEYWORDS:** Routine New born Care (RNC), Knowledge, Mothers, Neonatal Period (NP), Postnatal Mothers (PNM), Infant Mortality Rate (IMR), Community Health.

### **INTRODUCTION:**

Routine new born care is part of the essential care given by mothers to their new born babies. Effective new born care helps to improve health status of new born & may reduce disease

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burden among new born. A descriptive study was conducted to assess knowledge regarding routine new born care among mothers in community area. A sample of 80 mothers were selected by non-probability purposive sampling technique & data was collected by using self-structured questionnaire to measure the knowledge score on routine new born care. Study findings reveal that 86.3% mother's exhibits moderate knowledge & only 3.8% mothers had adequate knowledge regarding routine new born care. Descriptive statistics reveals a mean value of 27.55 within median score 28 & standard deviation of 6.72. The calculated mean percentage was 48.33%. Findings of study suggest that there is strong need for community based awareness program to enhance the knowledge level of mothers or community people regarding routine new born care.

### **BACKGROUND:**

Children represent the future of any nation, and their health is largely influenced by child-rearing practices as well as the ethical and cultural values of families and society. Immediate care for the new born is provided in hospitals by trained health professionals, while ongoing routine care at home is typically carried out by the mother or primary caregiver. Routine new born care includes breastfeeding, maintaining body temperature, proper cord care, eye care, and the prevention of early infections.

The period from birth to 28 days of life is known as the neonatal period. During this time, the new born is exposed to various health problems such as physiological jaundice.

Feeding problems, hypothermia, and similar conditions are also common during this stage. Most problems in the early life of a neonate are preventable with proper care at home and guidance from healthcare experts. The mother's knowledge and family practices play a vital role in promoting the child's health. However, many myths and misconceptions regarding new born care and management still exist in society, which can negatively affect the health of the new born.

The current infant mortality rate in India (2024) is approximately 25.8 deaths per 1,000 live births. All neonates have specific needs that must be met to ensure their survival, growth, and healthy development within society.

### **NEED OF THE STUDY:**

During the human lifespan, the neonatal period is the most vulnerable phase, as the new born undergoes rapid physiological adaptation to extrauterine life. Proper care, early identification of problems, and appropriate management are essential to reduce morbidity and mortality during this critical period.

New born period, from birth to 28 days of life, is the most crucial phase in an individual's lifespan, carrying the highest risk of mortality. The health and survival of a new born largely depend on the mother's health status, awareness, education, and skills in new born care. Poor maternal nutrition during pregnancy and inadequate feeding practices after birth can lead to undernutrition in infants. A significant proportion of infant mortality remains preventable, highlighting the need to strengthen home-based preventive care. This includes empowering mothers to identify and respond promptly to danger signs.

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Essential care of a healthy new born can be effectively provided by the mother. Even in populations with low socioeconomic status, poor nutritional conditions, and low female literacy, infant mortality can be reduced by nearly half through proper new born care practices. Promoting health at home and within the community plays a vital role in reducing child morbidity and mortality rates.

Since mothers are the primary caregivers of new borns around the clock, it becomes essential to assess their knowledge and competency in providing routine new born care. Therefore, researchers identified the need to evaluate mothers' knowledge regarding routine new born care.

## **LITERATURE REVIEW**

Leta et al. (2022) conducted a cross-sectional study to assess mothers' knowledge regarding essential newborn care. A total of 266 women participated, and data were collected through face-to-face interviews. The findings revealed that 57.2% of mothers had good knowledge, whereas 42.8% had poor knowledge.<sup>1</sup>

Puhan et al. (2022) conducted a non-experimental descriptive study to assess knowledge and attitudes regarding home-based newborn care among postnatal mothers in selected hospitals. The sample included 169 postnatal mothers, and data were collected through face-to-face interviews and a self-structured questionnaire. The study showed that 17.56% of mothers had good knowledge, 42.04% had moderate knowledge, and 29.45% had poor knowledge.<sup>2</sup>

Another cross-sectional study assessed skin care practices among children aged 18–24 months. A sample of 671 mothers was selected using a purposive sampling technique. Data were collected using questionnaires and observational checklists. The findings indicated that 57.23% of mothers had poor knowledge regarding child skin care.<sup>3</sup>

A cross-sectional study was conducted to assess practices related to high-quality essential newborn care among low-income mothers. A total of 324 mothers were selected using a purposive sampling technique. Data were collected through a self-structured questionnaire on expressed practices. The findings revealed that 67% of mothers had inadequate practices, whereas only 33% demonstrated adequate practices.<sup>4</sup>

Another study was conducted to assess mothers' knowledge regarding newborn care. A sample of 150 mothers was selected using a multistage cluster sampling technique, and data were collected through face-to-face structured questionnaires. The findings showed that 45% of mothers had inadequate knowledge, 25.4% had an average level of knowledge, and only 38.7% had good knowledge regarding newborn care.<sup>5</sup>

Joseph et al. (2017) conducted a descriptive study to assess knowledge and attitudes regarding breastfeeding among postnatal mothers. The sample consisted of 30 mothers selected through a convenient sampling technique. Data were collected using a self-structured questionnaire and interview method. The results indicated that only 16% of mothers had adequate knowledge, 47% had moderate knowledge, and 37% had inadequate knowledge.<sup>3</sup>

Dr. Gopalakrishnan S. et al. (2014) conducted a cross-sectional study to assess knowledge regarding newborn care among 100 mothers. The findings highlighted varying levels of knowledge across different components of newborn care. Only 15% of mothers had adequate

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overall knowledge. Specifically, 39% had knowledge regarding feeding practices, 8% were aware of immunization, 42% had knowledge related to growth and development, and 33% were knowledgeable about newborn illnesses. The study emphasized the need for community-based awareness programs on newborn care.<sup>6</sup>

### **PROBLEM STATEMENT**

A study to assess the knowledge regarding routine newborn care among mothers in selected community areas of District Jabalpur, Madhya Pradesh.

### **OBJECTIVES OF THE STUDY**

- To assess the knowledge score regarding routine newborn care among mothers in the community area.
- To find the association between knowledge scores on routine newborn care and selected demographic variables.

### **Assumptions**

The present study assumes that:

- Mothers may have some existing knowledge regarding newborn care.
- Providing information through a booklet on routine newborn care may improve newborn-rearing practices among mothers.

### **Variables of the Study**

#### **Demographic Variables:**

Age, education, occupation, residential status, monthly income of mothers, age of the newborn, and mode of delivery.

#### **Research Variable:**

Knowledge regarding routine newborn care among mothers.

### **Research Approach and Design**

This study adopts a quantitative research approach to systematically measure and analyze variables related to knowledge regarding routine newborn care among mothers. A descriptive research design is used to assess knowledge at a single point in time among the target population.

### **Setting of the Study**

The study will be conducted in selected community areas of District Jabalpur, Madhya Pradesh.

### **Population**

The population consists of postnatal mothers having newborns in selected community areas of District Jabalpur Madhya Pradesh.

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### **Sample Size and Sampling Technique**

A total of 80 postnatal mothers will be selected using a purposive sampling technique for data collection.

### **Inclusion Criteria**

Mothers who are:

- Residing in urban or rural areas of District Jabalpur, Madhya Pradesh.
- Willing to participate and available at the time of data collection.
- Postnatal mothers who have recently delivered a full-term baby and have a newborn aged less than 45 days.

### **Exclusion Criteria**

Mothers who are:

- Not willing to participate.
- Having a baby older than 45 days.
- Those who had a complicated or preterm delivery.

## **DATA COLLECTION AND ITS TECHNIQUE**

### **Description of the Tool**

The tool used in the present study consists of two sections:

#### **Section I: Socio-Demographic Data**

This section includes variables such as age, educational qualification, occupation, family income, residential area, age of the newborn, and mode and type of delivery.

#### **Section II: Self-Structured Questionnaire**

This section comprises multiple-choice questions designed to assess mothers' knowledge regarding routine newborn care. The questionnaire covers five major components: breastfeeding, thermoregulation, neonatal jaundice, immunization, and skin care.

A total of 57 questions were initially developed in the English language. After validation, the tool was translated into Hindi under the guidance of a language expert to ensure clarity and understanding among participants.

Each question was assigned a score of 1 for a correct response and 0 for an incorrect response. The total possible score was 57. Based on the obtained scores, knowledge levels were categorized into three groups:

- Adequate knowledge
- Moderate knowledge
- Inadequate knowledge (as shown in Table 1)

Additionally, an informational booklet on routine newborn care was developed. The booklet included all essential components of newborn care and was prepared in both Hindi and

English. It also contained pictorial representations to enhance understanding and facilitate better learning among mothers.

### **Ethical Clearance**

The study obtained approval from the Institutional Ethics Committee. Informed consent was obtained from all participating mothers prior to data collection. Anonymity and confidentiality of the participants were strictly maintained throughout the study. Permission to conduct the study was also obtained from the Panchayat Pradhan of the respective community areas. No ethical issues were encountered during the course of the study.

### **Statistical Analysis**

Frequency and percentage distribution were used to describe the selected demographic variables. The level of knowledge regarding routine newborn care among mothers was assessed using frequency, percentage, mean, median, standard deviation, maximum, range, and mean percentage.

The association between knowledge levels and selected demographic variables was analyzed using the chi-square test at a 5% level of significance.

### **Section A: Demographic Characteristics of Study Participants**

The demographic variables were coded to assess the background characteristics of the study subjects.

- **Age Distribution:**  
The majority of participants (51.25%) were in the 23–27 years age group. About 25% were aged 28–32 years, 17.5% were above 32 years, and only 6% were in the 18–22 years age group.
- **Educational Status:**  
Most participants (43%) were graduates, 35% had secondary education, 20% had primary education, and only 1% were illiterate.
- **Occupation:**  
The majority of mothers were housewives. About 26% were employed in the private sector, and only 3% were working as government employees.
- **Residential Area:**  
A large proportion of mothers (76.25%) resided in rural areas, while 23.75% lived in urban areas.
- **Monthly Income:**  
Around 43.75% of participants had a monthly income up to ₹10,000. About 27.5% earned between ₹10,000–₹20,000, 18.75% earned between ₹20,000–₹30,000, and only 10% had an income above ₹30,000.
- **Age of Newborn:**  
Approximately 41.25% of mothers had newborns aged 0–10 days. About 20% had newborns aged 10–20 days, another 20% had newborns aged 30–45 days, and 18.75% had newborns aged 20–30 days.

- **Mode of Delivery:**

The majority of mothers (68.75%) had normal vaginal delivery, while 31.25% underwent cesarean section. All deliveries were term deliveries.

### **Section B: Knowledge Regarding Routine Newborn Care Among Mothers**

The distribution of knowledge regarding routine newborn care among mothers revealed that the majority of participants (86.3%) had a **moderate level of knowledge**. About 10% of mothers demonstrated **inadequate knowledge**, while only 3.8% had an **adequate level of knowledge**.

#### **Descriptive Statistics of Knowledge Scores**

The analysis of knowledge scores showed a **mean value of 27.55** and a **median score of 28**, with a **standard deviation of 6.72**. The **maximum score** recorded was 44, while the **minimum score** was 11, resulting in a **range of 33**. The overall **mean percentage score was 48.33%**, indicating a moderate level of knowledge among the participants.

#### **Association Between Knowledge and Demographic Variables**

The study findings indicated that there was **no significant association** between knowledge regarding routine newborn care and the following variables:

- Age of the mother
- Educational status
- Residential area
- Monthly income
- Age of the newborn
- Mode of delivery

However, a **statistically significant association** was found between the **occupational status of mothers** and their knowledge regarding routine newborn care. The calculated chi-square value ( $\chi^2 = 18$ ,  $df = 4$ ) was higher than the table value at the 0.05 level of significance, indicating a meaningful relationship between occupation and knowledge level.

### **DISCUSSION**

The present investigation on the overall knowledge regarding routine newborn care revealed several important findings. The mean knowledge score of the participants was 27.55, with a median score of 28 and a standard deviation of 6.72. The maximum score obtained was 44, while the minimum score was 11, resulting in a score range of 33. The overall mean percentage score was 48.33%, indicating a moderate level of knowledge among mothers.

The demographic profile of the participants provided meaningful insights. The majority of mothers (51.25%) were in the age group of 23–27 years, followed by 25% in the 28–32 years age group. Most participants were graduates (43%), while 35% had secondary education and 20% had primary education. Only a small proportion (1%) were illiterate. In terms of occupation, most mothers were housewives, with 26% working in the private sector and only 3% employed in government jobs. A large majority (76.25%) resided in rural areas, while

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23.75% were from urban areas. Regarding income, most participants (43.75%) had a monthly income up to ₹10,000.

With respect to newborn characteristics, 41.25% of mothers had newborns aged 0–10 days, and most deliveries (68.75%) were normal vaginal deliveries, while 31.25% were cesarean sections.

The study findings further revealed that the majority of mothers (86.3%) had a moderate level of knowledge regarding routine newborn care, while 10% had inadequate knowledge and only 3.8% demonstrated adequate knowledge. These findings are consistent with the study conducted by Puhan et al. (2022), which also reported a predominance of moderate knowledge among mothers.

Based on these findings, it can be concluded that although mothers possess some level of knowledge regarding newborn care, it is not sufficient for ensuring optimal newborn health. Therefore, there is a strong need to implement awareness programs and community-based educational interventions to enhance the knowledge and practices of mothers. Improving maternal knowledge can significantly contribute to better care and improved health outcomes among newborns.

#### **LIMITATIONS OF THE STUDY**

- The study was limited by a small sample size, as only 80 postnatal mothers from District Jabalpur, Madhya Pradesh were included.
- The effectiveness of the informational booklet on routine newborn care was not assessed in this study.

#### **CONCLUSION**

The findings of the study revealed that only a small proportion of mothers (3.8%) had adequate knowledge regarding routine newborn care, while the majority demonstrated a moderate level of knowledge. This indicates that although some awareness exists, it is not sufficient to ensure optimal newborn care practices.

Therefore, there is a strong need to implement community-based awareness programs and educational interventions to enhance the knowledge of mothers and the wider community regarding routine newborn care. Improving maternal knowledge can contribute significantly to better newborn care practices and improved health outcomes.

#### **RECOMMENDATIONS**

- Similar studies can be conducted with a larger sample size across different settings to enhance the generalizability of the findings.
- An interventional study can be carried out to assess the effectiveness of an informational booklet on routine newborn care among mothers.
- A comparative study can be conducted between rural and urban populations to identify differences in knowledge levels regarding newborn care.

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## **Nursing Implications**

### **Nursing Education:**

An effective healthcare system emphasizes prevention over cure. Nurses must possess adequate knowledge regarding routine newborn care so that they can educate mothers and community members about proper newborn care practices at home. This includes guidance on feeding, thermoregulation, hygiene, and early identification of danger signs. Strengthening nursing education helps in promoting safe newborn practices and reducing neonatal morbidity and mortality.

### **Nursing Practice:**

Nurses play a vital role in the delivery of healthcare services. They should be skilled in providing essential newborn care and supporting mothers in adopting appropriate care practices. Nurses are responsible for early identification of potential health problems in newborns and ensuring timely intervention to prevent complications. Their role also includes counseling mothers and reinforcing healthy behaviors related to newborn care.

### **Nursing Administration:**

Quality healthcare requires effective nursing administration that understands patient needs. Administrators should organize structured antenatal and postnatal educational programs for mothers, focusing on routine newborn care. They should also ensure continuous training and capacity building of nursing staff. Supporting educational workshops, awareness campaigns, and counseling services can significantly enhance the quality of newborn care services.

### **Nursing Research:**

Nursing research should focus on improving the health and well-being of newborns. More studies are needed to explore various aspects of newborn care, including the current health status of newborns, and the knowledge and practices of mothers. Research should also aim to identify effective strategies to improve maternal knowledge and practices related to newborn care, thereby contributing to better neonatal outcomes.

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