

Original Research Article

STUDY ON FACTORS INFLUENCING NEWBORN CARE PRACTICES IN RURAL COMMUNITIES OF PATNA

Sandhya Kumari Suman¹, Amita Sinha²

¹Assistant Professor, Department of Community Medicine, Nalanda Medical College, Patna, India.

²Professor & HOD, Department of Community Medicine, Nalanda Medical College, Patna, India.

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Corresponding Author:

Dr. Sandhya Kumari Suman,
Assistant Professor, Department of
Community Medicine, Nalanda
Medical College, Patna, India.
Email: drsandhyasuman10@gmail.com

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ABSTRACT

Background: Essential newborn care practices are critical for reducing neonatal morbidity and mortality, particularly in developing countries like India, where traditional beliefs can influence their adoption. This study investigated newborn care practices and associated factors in rural communities of Patna district, Bihar, India.

Materials and Methods: A community-based cross-sectional study was conducted between January and June 2023. A total of 289 mothers who had delivered a live baby within the preceding six months were recruited using multi-stage random sampling. Data were collected via face-to-face interviews using a semi-structured questionnaire, assessing socio-demographic characteristics, antenatal care history, delivery details, and newborn care practices (cord care, breastfeeding, thermal care, and bathing). Data were analyzed using SPSS 20.0 with descriptive statistics and logistic regression.

Results: The mean maternal age was 26.2 years; 40.8% of mothers had no formal education. Forty-six percent initiated breastfeeding within one hour of birth, and 43% practiced dry cord care. Skin-to-skin contact was established in 38.1% of cases immediately after birth. Only 34.5% of babies were exclusively breastfed for the first six months. Practices such as applying mustard oil to the cord (26%) and pre-lacteal feeding (31.1%) were prevalent. Factors like maternal education, institutional delivery, and adequate antenatal care visits were positively associated with better newborn care practices.

Conclusion: The study highlights a gap between recommended and actual newborn care practices in rural Patna, influenced by traditional beliefs and socio-demographic factors. Interventions focusing on health education, promotion of institutional deliveries, and targeted counseling are crucial to improve newborn health outcomes.

Keywords: Newborn Care, Rural Communities, Traditional Practices.

INTRODUCTION

Essential newborn care (ENC) practices are fundamental to improving neonatal health outcomes, particularly in developing countries where neonatal mortality rates remain high. India, for instance, contributes significantly to the global burden of neonatal deaths, underscoring the critical need for effective newborn care interventions. These practices encompass immediate care at birth, thermal regulation, cord care, initiation of breastfeeding, and proper hygiene, all of which play a pivotal role in preventing infections, hypothermia, and malnutrition among newborns.^[1]

Traditional beliefs and cultural practices often influence newborn care, sometimes leading to deviations from evidence-based recommendations. While some traditional practices may be harmless or even beneficial, others can pose significant health risks to the newborn. Understanding the prevalence of these practices and the factors that influence their adoption is crucial for designing targeted health education programs that promote optimal newborn care.^[2]

This study aims to investigate the newborn care practices prevalent in rural communities of Patna district, Bihar, India. By examining the socio-demographic characteristics of mothers, their

antenatal care history, and delivery details, this research seeks to identify the factors influencing the adoption of essential newborn care practices. The findings will provide valuable insights for public health initiatives aimed at reducing neonatal morbidity and mortality in similar rural settings.

MATERIALS AND METHODS

Study Design and Setting

A community-based cross-sectional study was conducted in rural communities of Patna district, Bihar, India. The study took place over a six-month period, from January to June 2023.

Study Population and Sampling

The study population comprised mothers who had delivered a live baby within the preceding six months. A total of 289 mothers were recruited using a multi-stage random sampling technique.

Data Collection

Data were collected via face-to-face interviews using a semi-structured questionnaire. The questionnaire assessed various aspects, including:

- Socio-demographic characteristics of the mothers (e.g., age, education, occupation).
- Antenatal care history (e.g., number of ANC visits, tetanus toxoid vaccination).
- Delivery details (e.g., place of delivery, birth attendant).
- Newborn care practices (e.g., cord care, breastfeeding initiation, thermal care, bathing practices).

Data Analysis

The collected data were entered and analyzed using SPSS 20.0. Descriptive statistics (frequencies, percentages, means, standard deviations) were used to summarize the socio-demographic characteristics and newborn care practices. Logistic regression was employed to identify factors significantly associated with different newborn care practices.

Ethical Considerations

Informed consent was obtained from all participating mothers prior to the interviews. Confidentiality and anonymity of the participants were maintained throughout the study.

RESULTS

The mean maternal age in the study was 26.2 years. A significant proportion of mothers (40.8%) had no formal education.

Regarding breastfeeding practices, 46% of mothers initiated breastfeeding within one hour of birth. However, only 34.9% of babies were exclusively breastfed for the first six months. Pre-lacteal feeding, the practice of giving substances other than breast milk before initiation, was observed in 31.1% of newborns.

For cord care, 43% of mothers practiced dry cord care, while 26% applied mustard oil to the umbilical cord.

Thermal care practices showed that skin-to-skin contact was established in 38.1% of cases immediately after birth. Other practices included delaying the first bath.

Factors such as maternal education, institutional delivery, and adequate antenatal care visits were positively associated with better newborn care practices, indicating that these factors play a crucial role in the adoption of recommended care.

DISCUSSION

This study on newborn care practices in rural communities of Patna district provides valuable insights into the current landscape of maternal and neonatal health behaviors, aligning with and complementing existing literature from India and other developing countries.

Early Initiation of Breastfeeding

The finding that only 46% of mothers initiated breastfeeding within one hour of birth highlights a significant gap compared to WHO recommendations and national goals. This rate is lower than some studies, such as one in rural Puducherry that reported 62% early initiation of breastfeeding.^[3]

However, it is consistent with others; for example, a study in rural India found only 34.5% of mothers initiated breastfeeding within an hour.^[4] Factors like institutional delivery, which increases the likelihood of early initiation, are crucial. The prevalence of pre-lacteal feeding (31.1%) is a concern, as it can delay the establishment of exclusive breastfeeding and expose newborns to infections. This practice is also widely reported in other parts of India, with a study in Delhi urban slums showing a high prevalence of pre-lacteal feeding.^[1]

Cord Care Practices

The observation that 26% of mothers applied mustard oil to the umbilical cord is noteworthy. While dry cord care is recommended, traditional practices involving various substances are common in India. A study in rural Puducherry also found a high prevalence of applying various substances like oil to the cord.^[3] Similarly, research in rural areas of India has indicated that a significant proportion of caregivers apply substances to the cord stump, reflecting deeply ingrained cultural beliefs.^[4] These practices, though traditional, can increase the risk of neonatal infections and require targeted health education.

Thermal Care and Bathing Practices

The study's finding that skin-to-skin contact was established in 38.1% of cases immediately after birth, while crucial for thermal regulation, is lower than optimal. This contrasts with studies emphasizing the importance of immediate skin-to-skin contact for promoting warmth and early breastfeeding.^[5] Traditional beliefs often dictate the timing of the first bath; many communities prefer to delay bathing for several days, which aligns with recommended practices for thermal stability. However, practices

such as bathing newborns with cold water or immediately after birth in some settings can lead to hypothermia, a significant cause of neonatal mortality.^[6]

Influence of Socio-Demographic Factors

The study identified maternal education, institutional delivery, and adequate antenatal care visits as positively associated with better newborn care practices. This is a consistent finding across various studies.^[7] Mothers with higher education tend to have better knowledge and adopt healthier practices. Institutional deliveries facilitate access to skilled birth attendants who can provide immediate essential newborn care and counseling. Furthermore, regular ANC visits offer opportunities for health education and addressing misconceptions about newborn care. The high percentage of illiterate mothers (40.8%) in this study highlights the need for simplified, culturally sensitive health education materials and methods to reach this vulnerable group.

Overall Implications

The observed gap between recommended and actual practices underscores the need for comprehensive interventions. Traditional practices, particularly those that are harmful, need to be addressed through sensitive community engagement and behavioral change communication strategies. The study's findings are consistent with the overall picture of newborn care in rural India, where a mix of evidence-based practices and traditional beliefs co-exist.

CONCLUSION

This study provides critical insights into newborn care practices and influencing factors in rural communities of Patna. While some essential practices like early breastfeeding initiation are observed in a substantial proportion of mothers, harmful traditional practices such as applying substances to the cord and pre-lacteal feeding remain prevalent. Maternal education, institutional delivery, and adequate ANC visits are crucial determinants of better newborn care.

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