Section: Paediatrics

Original Research Article

# AWARENESS OF NEWBORN DANGER SIGNS AMONG POSTNATAL MOTHERS ATTENDING A TERTIARY CARE HOSPITAL: A CROSS-SECTIONAL STUDY

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ABSTRACT

**Background:** Neonatal mortality remains a major public health challenge in developing countries. Early recognition of newborn danger signs by mothers is essential for timely healthcare seeking and reduction of neonatal morbidity and mortality. Maternal awareness regarding these danger signs plays a critical role in improving neonatal outcomes. **Objectives:** To assess awareness regarding newborn danger signs among postnatal mothers attending a tertiary care hospital and to evaluate their overall knowledge levels.

**Materials and Methods:** A hospital-based cross-sectional study was conducted among 100 postnatal mothers. Data were collected using a structured questionnaire assessing awareness regarding common neonatal danger signs including fever, jaundice, poor feeding, convulsions, chest indrawing, hypothermia, bluish discoloration of the skin, and umbilical redness/discharge. Knowledge scores were calculated and categorized into good, moderate, and poor knowledge groups.

**Results:** Among the participants, fever was recognized as a danger sign by 85% of mothers, jaundice by 80%, poor feeding by 75%, bluish discoloration of the skin by 68%, and convulsions by 65%. Awareness regarding chest indrawing, hypothermia, and umbilical redness/discharge was comparatively lower at 45%, 35%, and 30%, respectively. Based on knowledge scores, 30% of mothers demonstrated good knowledge, 50% had moderate knowledge, and 20% had poor knowledge regarding newborn danger signs.

**Conclusion:** Although awareness regarding common neonatal danger signs such as fever, jaundice, and poor feeding was satisfactory, significant knowledge gaps existed regarding hypothermia, respiratory distress, and umbilical infections. Strengthening antenatal and postnatal counselling programs may improve maternal awareness and facilitate timely healthcare-seeking behavior.

**Keywords:** Neonatal danger signs, maternal awareness, newborn care, postnatal mothers, neonatal health.

## INTRODUCTION

The neonatal period is the most vulnerable phase of life and contributes substantially to under-five mortality worldwide.[1,2] Despite advances in neonatal care, neonatal mortality remains a significant public health concern, particularly in developing countries.[2,3] Early recognition of newborn danger signs by caregivers is crucial for prompt medical intervention and improved neonatal survival.[4,5]

The World Health Organization recommends educating mothers regarding newborn danger signs such as fever, poor feeding, convulsions, respiratory distress, hypothermia, jaundice, cyanosis, and umbilical infection. Maternal awareness of these signs can significantly influence healthcare-seeking behavior and neonatal outcomes.[5-8]

Assessment of maternal knowledge regarding neonatal danger signs helps identify gaps in awareness and guides educational interventions. Therefore, this study was undertaken to assess awareness regarding newborn danger signs among postnatal mothers attending a tertiary care hospital.

## MATERIALS AND METHODS

**Study Design**
Hospital-based cross-sectional study.
**Study Setting**
Department of Obstetrics and Gynecology and Department of Pediatrics of a tertiary care teaching hospital.
**Study Population**
One hundred postnatal mothers admitted during the study period.
**Inclusion Criteria**
- Mothers with live-born infants.
- Mothers willing to participate in the study.

**Exclusion Criteria**
- Mothers unwilling to provide consent.
- Mothers with severe illness preventing participation.

**Data Collection**
Data were collected using a structured questionnaire. Mothers were interviewed regarding awareness of the following newborn danger signs:
- Fever
- Jaundice
- Poor feeding
- Convulsions
- Chest indrawing
- Hypothermia
- Bluish discoloration of the skin
- Umbilical redness/discharge

Each correct response was awarded one point.
**Knowledge Scoring**
Knowledge was categorized as follows:
- Good knowledge: 7–8 correct responses
- Moderate knowledge: 4–6 correct responses
- Poor knowledge: 0–3 correct responses

**Statistical Analysis**
Data were entered into Microsoft Excel and analyzed using descriptive statistics. Results were expressed as frequencies and percentages.

## RESULTS

A total of 100 postnatal mothers participated in the study.
Awareness regarding neonatal danger signs varied among participants. Fever was recognized as a danger sign by 85 mothers (85%), while jaundice was identified by 80 mothers (80%). Poor feeding was recognized by 75 mothers (75%). Bluish discoloration of the skin was identified by 68 mothers (68%), and convulsions were recognized by 65 mothers (65%).
Awareness regarding respiratory distress and hypothermia was comparatively lower. Chest indrawing was recognized as a danger sign by only 45 mothers (45%), while hypothermia was identified by 35 mothers (35%). Umbilical redness and discharge were recognized by only 30 mothers (30%).

**Table 1: Awareness of Newborn Danger Signs**

| Danger Sign | Mothers Aware n (%) |
|---|---|
| Fever | 85 (85%) |
| Jaundice | 80 (80%) |
| Poor feeding | 75 (75%) |
| Bluish discoloration of skin | 68 (68%) |
| Convulsions | 65 (65%) |
| Chest indrawing | 45 (45%) |
| Hypothermia | 35 (35%) |
| Umbilical redness/discharge | 30 (30%) |

Based on the scoring system, 30 mothers (30%) demonstrated good knowledge regarding newborn danger signs. Moderate knowledge was observed among 50 mothers (50%), while 20 mothers (20%) exhibited poor knowledge.

**Table 2: Knowledge Score Distribution**

| Knowledge Category | Number (%) |
|---|---|
| Good knowledge | 30 (30%) |
| Moderate knowledge | 50 (50%) |
| Poor knowledge | 20 (20%) |

## DISCUSSION

The present study assessed awareness regarding newborn danger signs among postnatal mothers. The findings demonstrated satisfactory awareness regarding common neonatal symptoms such as fever, jaundice, and poor feeding. However, awareness regarding hypothermia, respiratory distress, and umbilical infection remained inadequate.
Fever was the most commonly recognized danger sign, followed by jaundice and poor feeding. These findings suggest that mothers are generally aware of

visible and commonly discussed neonatal illnesses. In contrast, recognition of chest indrawing and hypothermia was considerably lower, indicating potential delays in seeking healthcare for serious neonatal conditions.[6-10]

Half of the study participants demonstrated moderate knowledge regarding newborn danger signs, while only 30% exhibited good knowledge. These findings highlight the importance of strengthening maternal education during antenatal and postnatal visits.[7,9]

Structured counselling sessions, visual educational materials, and reinforcement of newborn care messages by healthcare workers may improve maternal awareness and facilitate early recognition of neonatal illnesses.[6,8,10]

**Limitations**

- Single-center study.
- Small sample size.
- Questionnaire-based assessment.

Findings may not be generalizable to all populations.

## CONCLUSION

Awareness regarding common neonatal danger signs among postnatal mothers was satisfactory for fever, jaundice, and poor feeding. However, substantial knowledge gaps existed regarding hypothermia, chest indrawing, and umbilical infection. Strengthening antenatal and postnatal counselling programs is essential to improve maternal awareness and promote timely healthcare-seeking behavior, thereby reducing neonatal morbidity and mortality.

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## REFERENCES

1. United Nations Inter-Agency Group for Child Mortality Estimation. Levels & Trends in Child Mortality: Report 2023. New York: UNICEF; 2023.
2. World Health Organization. Newborns: improving survival and well-being. Geneva: World Health Organization; 2023.
3. United Nations Children's Fund. State of the World's Children 2023. New York: UNICEF; 2023.
4. World Health Organization. Integrated Management of Childhood Illness (IMCI): Chart Booklet. Geneva: WHO; 2014.
5. World Health Organization. WHO Recommendations on Postnatal Care of the mother and Newborn. Geneva: WHO; 2022.
6. Sandberg J, Pettersson KO, Asp G, et al. Inadequate knowledge of neonatal danger signs among recently delivered women in southwestern rural Uganda: a community survey. PLoS One. 2014;9(5): e97253.
7. Nigatu SG, Worku AG, Dadi AF. Level of mother's knowledge about neonatal danger signs and associated factors in Ethiopia: a systematic review and meta-analysis. Systematic Reviews. 2019; 8:218.
8. Ekwochi U, Osuorah CDI, Ndu IK, et al. Knowledge of danger signs in newborns among mothers in Enugu State, Nigeria. Italian Journal of Pediatrics. 2015; 41:18.
9. Mersha A, Assefa N, Teji K, et al. Mother's level of knowledge on neonatal danger signs and its predictors in Ethiopia. BMC Pediatrics. 2017; 17:1-8.
10. Ministry of Health and Family Welfare. Navjaat Shishu Suraksha Karyakram (NSSK): Operational Guidelines. New Delhi: Government of India; 2014.