

Emotional Distress Among Mothers of Hospitalized Neonates in a Neonatal Intensive Care Unit: A Case-Control Study in a Tertiary Care Center

Dr. Rabadiya Rutu Dilsukhbhai

Ananta Institute of Medical Science and Research Centre

Abstract: Background: Admission of neonates to the NICU is a stressful event for mothers, often triggering anxiety and depressive symptoms due to separation and clinical uncertainty. Objective: To evaluate psychological distress—particularly depression, anxiety, and stress—in mothers whose newborns were admitted to the Neonatal Intensive Care Unit. Methods: This case-control study was conducted at Geetanjali Medical College, Rajasthan, India, over 12 months (May 2024 to April 2025). Psychological evaluation tools included the EPDS, STAI, and PSS: NICU scales. Results: Among 100 mothers studied, 85% exhibited high stress levels, 46% experienced depression, and 23% showed symptoms of anxiety. Maternal stress significantly correlated with neonatal birth weight, gestational age, and duration of NICU stay. Conclusion: NICU admission is a major contributor to maternal psychological morbidity. Enhanced parental engagement and support systems in NICUs are crucial to mitigate this burden.

Keywords: NICU, maternal stress, postpartum depression, neonatal care, psychological distress, preterm birth

1. Introduction

The NICU represents an emotionally challenging environment for mothers, especially those with premature or critically ill infants. The sudden separation, unfamiliar equipment, and uncertainty can cause profound psychological disturbances. Understanding the extent and nature of maternal stress is essential for developing supportive interventions. This study investigates the psychological outcomes of NICU admission on mothers, with an emphasis on identifying related neonatal and sociodemographic risk factors.

2. Materials and Methods

Study Design & Setting:

A case-control study conducted from May 2024 to April 2025 at the Neonatal Intensive Care Unit of Geetanjali Medical College, Rajasthan, India.

Sample Size:

100 mothers of NICU-admitted neonates, with matched controls of mothers with healthy term neonates.

Instruments Used:

Edinburgh Postnatal Depression Scale (EPDS)
State-Trait Anxiety Inventory (STAI)
Parental Stressor Scale – NICU (PSS: NICU)

Inclusion Criteria:

- Mothers of both preterm and term neonates admitted to NICU

Exclusion Criteria:

- Mothers with major physical/psychiatric illness
- Mothers not consenting to participate

Statistical Analysis:

SPSS v23 was used for statistical analysis with significance at $p < 0.05$.

3. Results

Table 1: Maternal Demographic Profile

Variable	Frequency (n=100)	Percentage
Age Group		
≤21 years	7	7.0%
22–25 years	43	43.0%
26–30 years	33	33.0%
>30 years	17	17.0%
Education Level		
Primary	44	44.0%
Secondary	38	38.0%
College	18	18.0%
Residence		
Rural	50	50.0%
Semi-Urban	34	34.0%
Urban	16	16.0%
Family Type		
Nuclear	37	37.0%
Joint	63	63.0%

Table 2: Neonatal Profile

Neonatal Parameter	Frequency	Percentage
Gestational Age		
<37 weeks (preterm)	76	76.0%
≥37 weeks	24	24.0%
Birth Weight		
Normal (≥2.5 kg)	14	14.0%
Low (1.5–2.4 kg)	69	69.0%
Very Low (<1.5 kg)	17	17.0%
Feeding Type		
Breastfed	86	86.0%
Tube-fed	14	14.0%
Delivery Mode		
Cesarean	37	37.0%
Vaginal	63	63.0%
Length of NICU Stay		
7–15 Days	52	52.0%
16–30 Days	37	37.0%
>30 Days	11	11.0%

Table 3: Psychological Findings in Mothers

Psychological Measure	Affected Mothers (%)
Depression (EPDS >13)	46.0%
Anxiety (STAI >40)	23.0%
High NICU Stress (PSS NICU)	85.0%

4. Discussion

The study identified NICU admission as a major emotional stressor for mothers. Elevated depression and stress levels were particularly linked with premature birth, low birth weight, and prolonged hospitalization. These findings align with previous studies emphasizing the psychological toll on mothers of NICU infants. Despite the high emotional burden, anxiety symptoms were not strongly correlated with specific neonatal parameters, indicating the subjective nature of maternal perception.

5. Conclusion

NICU hospitalization is associated with substantial emotional distress among mothers, particularly when coupled with preterm birth and low birth weight. Psychological screening and early intervention programs in NICUs can greatly enhance maternal mental health and support parent-infant bonding.

References

- [1] Shivhare A, Singh R, Choudhary PP, Alok R. Stressful Experiences of Mothers of Neonates or Premature Infants in a Neonatal Intensive Care Unit. *Int J Pharm Clin Res.*2022; 14 (7): 117-126.
- [2] Carter JD, Mulder RT, Frampton CM, Darlow BA. Infants in a neonatal intensive care unit: Parental response. *Arch Dis Child Fetal Neonatal Ed.*2005; 90 (2): F109-F113.
- [3] Yurdakul Z, Akman I, Kuscu MK, et al. Maternal Psychological Problems Associated with Neonatal Intensive Care Admission. *Int J Pediatr.*2009; 2009: 591359.