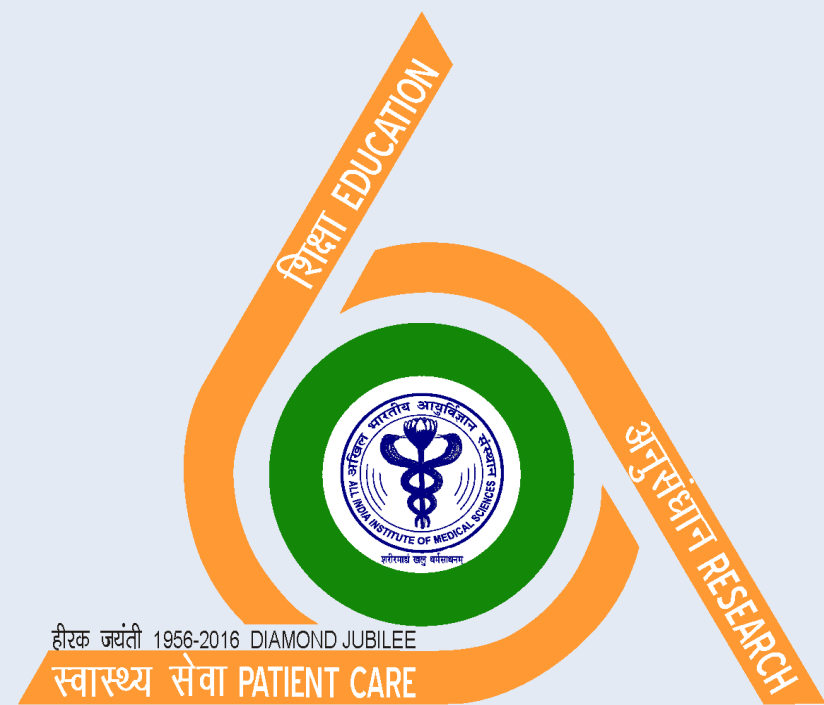




Prevalence of Mental Health Problems in Mothers of Preterm Infants admitted to NICU



Akanksha Deshwali, Vatsla Dadhwal, P Vanamail, Rajesh Sagar, K Aparna Sharma, Juhi Bharti, Ramesh Agarwal, Neena Malhotra

Background

- Premature birth is a distressing event and many parents may experience post-traumatic stress for several years after birth.
- The unanticipated premature delivery and subsequent NICU admission negatively affects maternal coping and parental style.
- Since survival of preterm neonates has drastically improved over the last decade due to advancements in medical care, high rates of mental stress has been observed in their parents.
- Maternal psychological distress in preterm birth is a neglected area, especially in India.

Objectives

Primary objective :

- To study the prevalence of various mental health problems (Anxiety, Depression, and Acute stress disorder) in women delivering preterm with babies in the NICU.

Secondary objectives :

- To compare various mental health problems of mothers of preterm infants in NICU with mothers of healthy term infants.
- To study various psychosocial correlates of mental health among the mothers in the preterm and the term group.
- To study and compare the difference in coping styles among the mothers of preterm infants and mothers of healthy full-term infants.

Materials and Methods

Design: Cross-sectional Observational two-arm study

Study period: March 2019 - November 2020

Inclusion criteria:

- All women delivering at less than 34 weeks of pregnancy with babies who require admission to NICU
- All women delivering at term with infants by mother's side as the comparator group
- Giving consent to participate in the study

Exclusion criteria:

- Women less than 18 years and more than 40 years of age
- Women giving birth to stillborn babies or babies with life-threatening congenital malformations
- Women who are known case of psychiatric illness

Materials and Methods (Contd.)

Study population: 130 mothers each, in term and preterm birth group were recruited. Patients were enrolled 3-5 days following birth in the preterm birth group and at the time of discharge for those delivering at term.

Measures used :

1. Kansas Marital Satisfaction Scale (KMSS)
2. HITS (Hurt, Insult, Threaten, and Scream) tool for intimate partner violence screening
3. Stanford Acute Stress Reaction Questionnaire (SASRQ)
4. Generalized Anxiety disorder scale (GAD-7)
5. Centre for Epidemiological Studies Depression Scale(CES-D)
6. Modified parental stress scale: Neonatal Intensive Care Unit (Modified PSS: NICU)
7. Coping Checklist (CCL)
8. WHO Quality of life-Brief (WHOQOL-BREF)

Analysis:

- Statistical analysis: Data analysis was carried out using SPSS IBM version 22.0.
- Continuous normally distributed data presented as mean $\pm$ SD and range values.
- Non-normal data presented as median and interquartile range.
- Statistical significance set at $p < 0.05$.

Results

Out of total 260 mothers enrolled in the study, 17 delivered twins. A significantly higher number of women delivering at term had higher education and belonged to higher socioeconomic status. The prevalence of pregnancy complicated by any medical or obstetrical disorder was higher in the preterm group.

Primary Outcome

- Prevalence of anxiety (66.2% vs 46.9%, $p = 0.002$) and depression (54.6% vs 23.1%, $p < 0.001$) was significantly higher in mothers of preterm infants in NICU compared to mothers of healthy term infants. (Figure 1)
- Prevalence of acute stress disorder was comparable between the two groups (5.4% vs 6.2%, $p = 0.790$). (Figure 1)
- However, the scores were significantly higher among mothers delivering preterm in subdomains of acute stress reaction namely, re-experiencing, marked anxiety and functional impairment ($p < 0.001$).

Results (Contd)



Secondary outcomes

- For mothers with infants in NICU, Sights and Sounds and Alteration of the parental role were the most stressful domains on PSS:NICU.
- In the term group depression levels were negatively associated with socioeconomic class, marital distress led to higher symptoms in four domains of SASRQ, namely Dissociation, Avoidance, Re-experiencing, and Marked anxiety.
- In the preterm group, anxiety levels had negative association with gestational age, and marital distress led to higher levels of depression.
- Size of coping repertoire was higher for the preterm group (8.6 ± 1.2) compared to the term group (3.4 ± 1.4) which meant that they are more flexible emotionally and were able to adjust to various kinds of stress by different coping mechanisms.
- Mothers in the preterm group exhibited problem-solving, emotion-focussed (acceptance/redefinition, denial/blame and, religion/faith) and, both problem and emotion-focussed coping. While, mothers in the term group exhibited a higher percentage of emotion-focussed (distraction positive) coping style.
- The quality of life in terms of physical health, psychological health, and social relationships was significantly better for term mothers compared to preterm mothers ($p < 0.001$).
- Most mothers (>92%) in both the groups reported good social support from their spouses and families.

Conclusion

- Anxiety and depression are more prevalent in mothers in the immediate postpartum period, more so in mothers with preterm babies admitted to the NICU.
- The entry of baby to NICU is itself a major stressor. It negatively affects their mental health, quality of life and parent-child interactions.
- This highlights the importance of screening postpartum mothers.
- Healthcare providers should be aware of this and address the issue of maternal mental health for optimal neonatal outcome.