

# Depression, Anxiety, And Stress Among The Postnatal Mothers of Low Birth Weight Babies Delivered At Tertiary Care Hospital of Belagavi, North Karnataka – A Hospital-Based Cross-Sectional Study

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**Abstract** - The WHO estimates that, globally, the incidence of LBW is 15.5%, which means that about 20.6 million such infants are born each year, 96.5% of them in developing countries. Many studies reported about depression but very little is known about stress and anxiety which the postnatal mother go through when her new-born is born low birth and admitted in

NICU. **Objectives:** To assess the level of Depression, Anxiety, and Stress among the postnatal mothers of low birth weight babies. **Materials and methods:** A descriptive research design was used for this study. Postnatal mothers with low birth weight babies were the samples. The sample size was limited to 200 postnatal women. The setting for the data collection was maternity wards of tertiary care hospitals. Data were collected by using the DASS scale. **Results:** Results revealed that a maximum (51%) had moderate depression, 48% had severe anxiety, and 29% had mild stress levels. A positive correlation was found between Depression and Anxiety (0.61). Education level, occupation, and gestational age at delivery are associated with depression, age, education level, income, gestational age, and weight of the baby are associated with anxiety, and age, education level, gestational age, and weight of the baby are associated with stress. **Conclusion:** The study concluded that apart from depression, stress and anxiety are also a point of concern among the mothers who delivered low birth weight babies. There is a need to find the measures to answer these problems.

**Keywords** – Stress, Anxiety, depression, low birth weight, NICU

## I. INTRODUCTION

The postnatal period is a time immediately after the birth of the child till 42 days or six weeks. In this phase, the reproductive organs and other hormonal changes which happened during pregnancy will revert back to the pre-pregnant stage. Childbirth is a pleasurable experience for the parents. A mother undergoes a new experience of childbirth to see her offspring fit and healthy.

Low birth weight (LBW) is one of the major problems in the developing world, including India. The WHO defines LBW as birth weight less than 2,500 gms irrespective of the gestational age. There is a significant variation in the incidence of LBW across the regions. The WHO estimates that, globally, the incidence of LBW is 15.5%, which means that about 20.6 million such infants are born each year, 96.5% of them in developing countries.<sup>1</sup> The level of LBW in developing countries (16.5%) is more than double the level in developed regions (7%).<sup>2</sup>

Parents of the low birth weight child will face various difficulties and sudden changes in the process of bonding with the child as bonding with the baby starts before birth. Separation from baby, long stay in the hospital as well as admission to NICU will have a negative effect on the process of bonding. However, the major stress that has been experienced by the parents is related to the separation from their baby and to the loss of their parental role. The feeling of separation and exclusion could be related to the lack of physical and emotional closeness, which are important factors in the early relationship between the parents and the newborn. These emotional factors might negatively affect the mother's thoughts, ideas, and representation of the child's appearance and behavior.<sup>3</sup>

### A. The objectives of the study were:

- 1) To assess the level of Depression, Anxiety, and Stress among the postnatal mothers of low birth weight babies delivered at tertiary care hospital of Belagavi, North Karnataka
- 2) To correlate Anxiety with Stress among the postnatal mothers of low birth weight babies delivered at tertiary care hospital of Belagavi, North Karnataka



- 3) To find out the association between Depression, Anxiety, and Stress scores with selected demographic variables.

## II. METHODOLOGY

A descriptive research design was used for this study. Postnatal mothers with low birth weight babies were the samples. The sample size was limited to 200 postnatal women. The setting for the data collection was maternity wards of tertiary care hospitals. Data were collected by using the DASS scale.

## III. RESULTS

Results revealed that maximum women were from the age group of 27-29 yrs. And 27 and above (29.5% ) each group, regarding the age of the father maximum were above 30 years (48%). With regard to the education status of the mother, 26% were educated till SSLC, and 22% of the father's education was other professional courses. With regard to the occupation maximum (74%) of the mothers were housewives, and 30.5% of the fathers were doing a private job. About the residence maximum (54%) were staying in rural areas, with regard to their monthly income maximum were (46%) having more than 1500Rs per month.

About the obstetrical information of mothers regarding gravidity, 20.5% were of Gravida 2, 51% were Para one, 50.5% had one live child, 11.5 % have had the history of abortion, one woman gave a history of the previous preterm, 10% had previous LBW. With regard to the mode of delivery, 53% were delivered by LSCS, and 56.5% of women's gestational age at delivery was 33 to 35 weeks. With regard to the distribution of low birth weight babies, the gender of newborn maximum (60.5 %) was male; regarding the weight of the newborn, 72% were in the group of 2.1 to 2.5 kg. About NICU admission rate was 31.5%. The reason for NICU admission was among 93.6 % of newborns was low birth weight.

The depression result revealed that 30.5% of the mothers had mild depression, 51% moderate depression, and 14% had severe depressive symptoms. Regarding Anxiety revealed that 5% of the mothers had mild anxiety, 34.5% had moderate anxiety, 48 % had severe anxiety, and 10.5% had extremely severe anxiety levels. About stress revealed that 29% of the mothers had mild stress, 11.5% moderate stress, and 0.5 % had severe stress levels.

There was a positive correlation found within Depression and Anxiety (0.61), a Near to positive correlation within Anxiety & Stress (0.38), positive correlation within Stress & Depression (0.49).

Association was found with education level, occupation, and gestational age at delivery are associated with depression. Age, education level, income, gestational age, and weight of the baby are associated with Anxiety. Age, education level, gestational age, and weight of the baby are associated with stress.

## IV. DISCUSSION

The present study revealed that 51% were first-time mothers, which is similar to the study conducted by

Crist et al. <sup>4</sup>. With regard to the mode of the present delivery, the study reveals that 43.5% were delivered vaginally, which is in contract with the study conducted by Crist et al. <sup>4</sup> In the present study, 60.5 % of the newborns were male, which is similar to the results of the study conducted by Rollè L. et al. from Italy <sup>5</sup>

The present study revealed that 30.5% of the mothers had mild depression, 51% moderate depression, and 14% had severe depressive symptoms. A community-based cross-sectional study conducted in Nigeria revealed that 34.6% of women had postnatal depression. <sup>6</sup> A study conducted in Finland <sup>7</sup> revealed that 84% of mothers suffered from postnatal depression. Lack of social support and postnatal practices, and lifestyle must have caused this difference in the result

The present study revealed that 5% of the mothers had mild anxiety, 34.5% moderate anxiety, 48 % had severe anxiety, and 10.5% had extremely severe anxiety levels. A study conducted in Norway <sup>8</sup> reported that 10% of the mothers reported anxiety disorder in the postnatal period. Another study conducted <sup>9</sup> revealed that anxiety was minimal in 42.1% of participants, mild in 30.3%, moderate in 17.4%, and severe in 10.3%.

## V. CONCLUSION

Mother and newborn interaction in the postnatal period plays an important role, which creates a social learning environment for the newborn. Because of the low birth weight, the bond between the mother and newborn will get disturbed. Thus the mother has the chance to develop psychological problems like anxiety, stress, and depression. We recruited 200 postnatal with low birth weight babies to understand the depression, anxiety, and stress level. Results revealed that depression, anxiety, and stress are quite common among mothers with low birth weight babies.

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