

**Effect of Gestational Age and Educational Levels of Pregnant Mothers on Anthropometry of Newborn from Selected Medical Officers of Health Divisions of Jaffna District**

Yoganathan<sup>1</sup>, T. and Arasaratnam<sup>2</sup>, V.

<sup>1</sup>*Nuclear Medicine Unit, Faculty of Medicine, University of Jaffna*

<sup>2</sup>*Department of Biochemistry, Faculty of Medicine, University of Jaffna*

Gestational age and educational status of the pregnant mothers may influence the fetal growth. Objective of this study was to determine the influence of gestational age and educational status of the mothers on the birth weight (BW) and length of the newborns. In this study, systematic sampling technique was used and 477 pregnant mothers and their newborns were selected from Medical Officers of Health (MOH) divisions in Jaffna District. Among the 477 newborns 239 were males (50.5%). The mean BW of all the newborns was 3031.5(±432.6) g, while the mean length was 51.1 (±2.1) cm. The mean BWs of the newborns were 2500.0, 2950.7(±431.01), 3014.0(±428.81), 3073.2(±423.01) and 3155.9(±472.81) g of the mothers who had the educational levels of non formal education, grade 1-5, grades 6-11, Grade 12-13 and degree and above respectively. Of the low birth weight (LBW) newborns 66.7% (n36) were born to the mothers with the educational level up to grade 11, and 7.3 % (n35) of the newborns were born to the mothers who had studied degree and above. The result shows that there is a significant relationship between poor educational status and LBW. The mean gestational age was 39.33(±1.37) weeks. The mean BW of the newborns was 2784.20(±515.86), 3038.20(±430.39) and 3049.20(±400.69) g in preterm, term and post term deliveries respectively. In this present study, 95.0 % (n453) of pregnant mothers and 92.6% (n50) of LBW newborns were in period of gestation (POG) range from 37 to 42 weeks. Educational levels of mothers statistically correlated with the BW of the newborn ( $r=0.119$ ,  $p=0.009$ ). Variation in POG of mothers was significantly correlated with BW ( $r=0.196$ ,  $p=0.0001$ ) and length ( $r=0.128$ ,  $p=0.005$ ) of the newborns. Based on this study, gestational age and educational levels are the important parameters which determine the anthropometry of the newborn.

**Keywords:** Gestational age, educational levels, pregnant mothers, birth weight and newborn