

## Nutritional Sequelae and Associated Factors in Children Who were the Low Birth Weight Infants in Jaffna District

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Low birth weight (LBW), <2500g, remains a significant public health problem and is associated with a range of both short and long term adverse consequences in children. The objective of this study was to determine the effect of LBW on nutritional status of children aged 1 to 5 years in Jaffna district. A Multistage cluster sampling method was used and a total of 846 children were selected. Child Health Development Records (CHDR) book was used to derive birth weight in grams. Birth weight (BW) was categorized into 5 groups as Extreme LBW (ELBW) (<1000g), Very LBW (VLBW) (<1500g), LBW (<2500g), Normal Birth Weight (NBW) (2500-4500g) and High Birth Weight (HBW) (>4500g). Interviewer administered questionnaire was used to derive the socio-economical status, data on Exclusive Breastfeeding (EBF) and disease pattern. Weight and height were used to derive the malnutrition based on age and sex specific WHO standards. Blood was used to derive the haemoglobin concentration. Data were analyzed in SPSS version 16.0. The association between LBW and its association were tested using the Pearson's Chi-squared test, and a measure of the strength. Among 846 children, 414 (48.9%) were males and the mean age was 34.73 months [95 % CI (33.84, 35.62)]. The mean birth weight was 2942.9g [95% CI (2476.2, 3414.6)]. Prevalence of LBW, VLBW, NBW and HBW were 14.3 (n121), 0.1 (n1) 85.5 (n723) and 0.1% (n1) respectively. Prevalence of LBW was significantly high in rural children [16%, (n103)] (OR=2.001; 95% CI= 1.18-3.39) than urban children [8.8%, (n18)] (P=0.018). Among the LBW group 49.6% (n60) of children were affected by anemia whereas, 34.2% (n247) were affected by anemia among NBW and it was significant (p=0.005). Prevalence of wasting (OR=5.04; 95% CI= 3.36-7.55), underweight (OR=4.51; 95% CI= 3.01-6.75) and stunting (OR=1.95; 95% CI= 1.3-2.9) were significantly high in LBW children [50.4 (n61), 63.6 (n77) and 38.0% (n46) respectively] than those were in NBW children [17 (n123), 28.2 (n204) and 24.3 (n176) respectively] (P<0.001). Sector, type of house, household income, EBF, disease and toilet facility were significant association with LBW (p<0.05). In the present study, LBW children had high prevalence of under nutrition and it was a contributing factor to nutritional risk. Poor socio-economic status influences the LBW children to remain below the children with normal birth weight throughout their early life. Good sanitary practices with proper breastfeeding practices may result in catch up growth to normal growth standards.

**Keywords:** Low birth weight, Socio-economical status, Wasting, Stunting, Underweight