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Association between the anthropometry of mother and newborn from selected Medical Officers of Health divisions of Jaffna District

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Objective of this study was to estimate the influence of variation in anthropometric measurements of pregnant mothers on the birth weight (BW) and length of the newborns from selected Medical Officers of Health (MOH) Divisions of Jaffna District. In this study, 420 mothers were selected in six MOH divisions in Jaffna District. Weight and height of the pregnant mothers were taken in antenatal clinics at third trimester of gestation while that of the newborns was collected immediately after the birth. Ethical approval was obtained from ethics review committee, Faculty of Medicine, University of Jaffna, Sri Lanka. Data was analyzed using SPSS version 16 software. Among the 420 newborns, 212 were females (50.5%). Mean BW of the newborn was 3027.51(±431.61) g, ranging from 1500.0 to 4550.0 g and the mean length was 50.9 (±2.1) cm, ranging from 44.0 to 57.0 cm. Among the newborns, low, normal and high birth weights were 11.4 (n=48), 88.3 (n=371) and 0.3 % (n=1) respectively. Mean weight and heights of pregnant mothers were 63.02 (±11.56) kg and 154.39 (±6.00) cm respectively and the mean BMI was 26.42 (±4.42) kg/m^2. Among the pregnant mothers, the rate of under, normal and obese/overweight were 1.0 (n=4), 22.0 (n=93) and 77.0% (n=323) respectively. Neonatal length positively correlated with their BW (r=0.506, p=0.0001). Maternal BMI was positively correlated with neonatal BW (r=0.292, p= 0.001) and length (r=0.135, p= 0.006) of the newborn. Based on this study, variation in height of mother positively correlated with the BW (r=0.293, p=0.001) and length (r=0.12, p=0.02) of the newborns.

Key words: Anthropometry, Jaffna District, mother, MOH divisions, newborn

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