

Correlations between mother's pre-pregnancy BMI and anthropometric measurements in exclusively breast-fed infants

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Background: It is possible that the development of obesity in childhood years could be a result of interplay between maternal body mass index (BMI), gestational weight, and its impact on the fetus.

Objective: To analyze the relationship between mothers' pre-pregnancy BMI and anthropometric measurements in exclusively breast-fed infants.

Methods and Results: Breast-feeding mothers ($n=32$) were assigned to either normal weight (group 1: $n=21$, BMI between 18.5 and 24.9 kg/m²) or overweight/obese (group 2: $n=11$, BMI ≥ 25 kg/m²) based on their pre-pregnancy BMI. Anthropometric measurements were derived from exclusively breast-fed infants at birth and at six weeks postpartum. Infant cranial (head) circumference was measured at birth and six weeks of age. Mean differences in head circumference at birth and at six weeks of age for the two groups of infants were significantly different, $t(30) = 2.27$, $p = 0.03$ and $t(30) = 3.95$, $p = 0.000$. Infant mid-arm-circumference (MAC) was measured at six weeks of age. Mean differences between the MAC at six weeks of age of the two groups of infants were statistically significant, $t(30) = 2.83$, $p = 0.008$. Infant triceps skin-fold thickness (TSF) was measured at six weeks of age. Mean differences between the TSF of the two groups of infants were statistically significant, $t(30) = 3.925$, $p = .000$.

Conclusion: Infants born to overweight/obese mothers were significantly different with respect to anthropometric measurements as compared to those infants born to normal weight mothers

Biography

Suman Ahuja has completed a Ph.D. in Clinical Nutrition with an emphasis on obesity treatment and prevention. Presently, she is designing an obesity and cardiovascular treatment and prevention laboratory in Jefferson City, MO. She has published several peer reviewed articles in scientific journals in addition to popular global websites like yahoo health.

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