

The Influence of Ethnicity on Exclusively Breast-Fed Infants' Anthropometry in a Multiethnic Asian Population

James G Huang,¹ *MBBS(Hons)(S'pore), MRCPCH (Paeds)(UK)*, Shi Hua Chan,² *MBBS*, Le Ye Lee,^{3,4} *MMed(Paeds), MRCPCH(UK)*

Abstract

Introduction: We studied the effects of ethnicity on early infant growth patterns in exclusively breast-fed (EBF) infants from a Singaporean multiethnic population. This was a prospective cohort study conducted in National University Hospital, Singapore. **Materials and Methods:** Healthy, EBF infants born at-term completing 37 weeks and above, and whose birthweight was appropriate for gestational age (>10th centile, <90th centile) were recruited. Infants were required to be EBF at least until the minimum age of weaning. All infants who were preterm and premature, formula-fed, required Intensive/High Dependency care, or born with major congenital anomalies were excluded. A multivariable linear regression analysis was conducted at 5 predetermined time-points (birth; 4-8 weeks; 3-4, 5-8, 12 months) to study the effects of antenatal/parental factors on infant growth. **Results:** A total of 213 infants were recruited. Maternal age, height and body mass index positively influenced birthweights while maternal hypertension and paternal smoking negatively influenced birthweights. Mean duration of breastfeeding was 8.9 months. Chinese ethnicity did not influence birth anthropometry, but was the single consistent factor that significantly increased weight and length Z-scores from 4-8 weeks until 8 months of life. Chinese ethnicity did not influence head growth throughout the first year of life. **Conclusion:** EBF Chinese infants have increased weights and lengths compared to non-Chinese infants until 8 months' age, despite similar birth anthropometry. This period of discrepant growth coincides with the average duration of breastfeeding. We hypothesise that ethnic variations in breast milk macronutrient composition influence early somatic growth in infants.

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¹Khoo Teck Puat-National University Children's Medical Institute, National University Health System, Singapore

²Yong Loo Lin School of Medicine, National University of Singapore, Singapore

³Department of Paediatrics, Yong Loo Lin School of Medicine, National University of Singapore, Singapore

⁴Department of Neonatology, National University Hospital, Singapore

Address for Correspondence: Dr James Huang Guoxian, Khoo Teck Puat-National University Children's Medical Institute, National University Health System Tower Block, Level 12, 1E Kent Ridge Road, Singapore 119228.

Email: james_huang@nuhs.edu.sg