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Infant feeding practices: an analysis of sociodemographic characteristics and dietary patterns in early life

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The significant rise in childhood obesity is a public health challenge, and it is estimated that nearly 25% of children in England start school with overweight or obesity¹; those from ethnic minorities and more disadvantaged areas are disproportionately affected². The transition from exclusive milk feeding to the introduction of solid foods is an important stage in a child's growth and development as eating habits and behaviours established in early life have been shown to continue into late childhood³. Given the increase in prevalence of childhood obesity, the aim of this study was to describe the weaning diet of infants and explore associations between sociodemographic characteristics.

The analysis included mother-infant pairs from the UK Pregnancies Better Eating and Activity Trial (UPBEAT), an antenatal diet and physical activity intervention which recruited women with obesity from ethnically diverse inner-city settings⁴. Maternal sociodemographic characteristics were recorded at baseline (15–18 weeks' gestation). Infant dietary patterns were derived using factor analysis of a parent reported interviewer-administered food-frequency questionnaire at 6-months of age. To explore relationships between infant dietary patterns and sociodemographic characteristics, a multiple linear regression model was developed and included the following maternal exposures; age, body mass index (BMI), time spent in education, ethnicity, parity, smoking and breastfeeding prevalence at the 6-month follow-up. The model was also adjusted for age of introduction of solids and the UPBEAT intervention arm.

720 mother-infant pairs were recruited at 6-months postpartum, and 542 were included in this analysis as weaning had started. There was no effect of the UPBEAT intervention on infant dietary patterns. The average age of introduction of solid foods was 5 ± 0.87 months. Two dietary patterns were identified in the infants. The first pattern defined as 'Processed' was high in rusks, baby pouches, porridge, fruit puree, yoghurt, juice, desserts, snacks and meat, fish or savoury-based meals. The second pattern, defined as 'Healthy' was high in breakfast cereals, potatoes, yoghurt, biscuits, fruit, vegetables, bread, meat and fish-based meals and pasta. The Processed pattern in the infant was associated with lower maternal age (beta-coefficient -0.01 ; 95% confidence interval -0.03 , -0.003), higher maternal BMI (0.02 ; 0.003 , 0.04), less time spent in education (-0.06 ; -0.09 , -0.02), lower breastfeeding prevalence (-0.28 ; -0.51 , -0.05) and a lower infant age of introduction of solid foods (-0.20 , -0.30 , -0.10). Women of Black ethnicity were less likely to adhere to a Healthy pattern (-0.40 , -0.63 , -0.15).

A processed dietary pattern at 6-months of age is associated with several maternal sociodemographic factors, including lower educational attainment, lower age at birth and higher BMI. These results support the need to for targeted public health programmes which promote healthier weaning practices.

References

1. NHS Digital (2023). National Child Measurement Programme. [Availableat: <https://digital.nhs.uk/data-and-information/publications/statistical/national-childmeasurement-programme/2022-23-school-year>].
2. Strugnell C, Mathrani S, Sollars L *et al.* (2020) *Obesity* **28**, 1951–1963.
3. Dalrymple K, Vogel C, Godfrey K *et al.* (2022) *IJO* **46**(4), 758–766.
4. Poston L, Bell R, Croker H *et al.* (2015) *Lancet Diabetes Endocrinol* **3**(1), 767–777.