

Risks of Cesarean Birth on Childhood Asthma, Allergic Symptoms and Obesity in a Chinese City and Its Effect Modification on Breastfeeding

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Abstract

Objectives: The caesarean section (C-section) rate in large Chinese cities has increased dramatically over the past few decades, yet there is insufficient attention on the possible health consequences of elevated C-section rate. This study investigates the association between C-section and adverse health outcomes in middle school aged children.

Design: This work was conducted from November 2014 to January 2015 in Suzhou, China as a cross-sectional study.

Setting: Families were recruited from 12 middle schools in different parts of the city.

Participants: A total of 5891 families (response rate 82.9%) completed and returned the questionnaire.

Outcome measures: The adverse health outcomes studied include asthma, pneumonia, rhinitis, eczema, overweight and obesity,

Results: Multivariate logistic regression results showed C-section delivery to be a risk factor for most health outcomes studied, with the odds ratios being 1.24 (95% CI: 1.00, 1.52) , 1.28 (95% CI: 1.10, 1.49), 1.16 (95% CI: 0.99, 1.36) and 1.13 (95% CI: 0.96, 1.33) for doctor-diagnosed asthma, pneumonia, rhinitis, eczema, respectively, and 1.29 (95% CI:1.10, 1.51) and 1.44 (95% CI: 1.05, 1.99) for overweight and obesity, respectively. For effect modification test, the interaction term between breastfeeding and eczema has a statistically significant coefficient (p=0.04).

Conclusions: C-section is a strong and consistent risk factor for developing asthma and allergic symptoms, as well as being overweight and obese. It also alters the effect of breastfeeding on eczema.