

Methods We did a causal mediation analysis using data from the UK CF registry, which captures 99% of all people with CF in the UK and records clinical information including weight and infection status at annual review visits. The exposure of interest was SEC in the first year of life measured by the index of multiple deprivation; the outcome was first lung function measure between ages 6 and 9. We were interested in mediation by weight trajectory during the first six years of life. Potential confounders were sex, year of birth, genotype and infection.

All children born between 2000 and 2010 and diagnosed by newborn screening were included in the analysis if they had at least one lung function measure between ages 6 and 9, at least one weight and infection measure between birth and age 6, and complete data on SECs and baseline confounders. We imputed missing data using multiple imputation by chained equations.

We used the parametric mediational *g*-formula to estimate the total effect of SECs on lung function, and the indirect effect mediated by weight trajectories in the first six years of life, accounting for potential time-varying confounding by infection. Confidence intervals were estimated using non-parametric bootstrap.

Results Using data from 853 children, we found a total effect of deprivation on lung function, measured by percent of predicted FEV1, of 4.53 percentage points (95% CI 3.44 to 5.77). Our results showed that if we could improve the weight of the most disadvantaged children to have the same distribution as that of the least disadvantaged children, their lung function would improve on average by 0.74 percentage points (95% CI 0.36 – 1.1).

Conclusion Only 16% (95% CI 8%–25%) of the inequalities in early lung function for people with CF were explained by weight trajectories in the first 6 years of life, suggesting that other important pathways to inequalities need exploration.

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Life Course: Childhood

OP23 THE LESSER-KNOWN BREASTFEEDING PROBLEM: PREVALENCE AND DETERMINANTS OF PRELACTEAL FEEDING PRACTICE IN INDONESIA

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Background Prolacteal feeding (PLF) is anything other than breastmilk given to neonates before breastfeeding is established. There are numerous types of PLF and they are given for various reasons. Except when medically indicated, PLF is considered as one of the many potential barriers to optimal breastfeeding. However, PLF is practiced widely across the world. Meanwhile, it is still understudied and epidemiological research on the different types of PLF is limited in many settings, including in Indonesia. This study looks at the prevalence and determinants PLF in Indonesia, focusing on overall PLF and three common types (formula, other milk, and honey).

Methods A cross-sectional, secondary data analysis of the 2017 Indonesia Demographic and Health Survey was undertaken. The study population was 6168 ever-breastfeeding mothers

whose last child was ≤ 23 month-old. Because PLF was a common outcome, modified Poisson regression was used to estimate the adjusted prevalence ratio (PR) for potential determinants and PLF.

Results By 2017, nearly half (45%) of mothers in Indonesia gave PLF. The most common feeds were infant formula (25%), any other milk (14%), plain water (5%), and honey (3%). Factors associated with higher prevalence of overall PLF were upper-middle (Q3–Q4) wealth quintiles (PR 1.17, 95% Confidence Interval (CI) 1.03–1.32 for Q3 and PR 1.18, 95% CI 1.04–1.33 for Q4), rural residence (PR 1.17, 95%CI 1.07–1.27), baby perceived to be small at birth (PR 1.26, 95%CI 1.14–1.38), and caesarean deliveries at either public (PR 1.34, 95%CI 1.19–1.51) or private facilities (PR 1.17, 95%CI 1.03–1.33). Conversely, mothers who gave birth to the second/subsequent child (PR 0.81, 95%CI 0.75–0.87) and mothers who possessed an antenatal card (PR 0.86, 95%CI 0.77–0.96) were less likely to give PLF. When analysed separately, formula displayed relatively similar risk factors to those of overall PLF, yet several associations varied among these three types of PLF. For instance, higher wealth quintiles and rural residence were risk factors for formula but not for other milk and honey. Furthermore, honey was more prevalent in home births than in deliveries at health facilities (PR 6.05, 95% CI 4.02–9.10), but formula and other milk were more frequent among caesarean deliveries. First-time birth was the only factor that showed a consistent association with overall PLF, formula, other milk, and honey.

Conclusion PLF is common in Indonesia but the prevalence and determinants vary by PLF type. Identifying high-risk groups, particularly by PLF type, is useful to plan more targeted interventions to improve breastfeeding practices.

OP24 THE MEDIATING PATHWAYS OF THE ASSOCIATION BETWEEN ADVERSE CHILDHOOD EXPERIENCES AND COGNITIVE HEALTH IN LATER LIFE

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Background Previous research has often shown that morbidity and disability are hinged to negative events and exposures that can accumulate over the life course, but less clear is their impact on late-life cognitive health. We assessed the biopsychosocial mechanisms influencing the associations between adverse childhood experiences and cognitive impairment at advanced ages.

Methods Data were from 3,130 dementia-free adults aged 50 + from the English Longitudinal Study of Ageing (ELSA) with data available from wave 3 (2006/07) to wave 8 (2016/17). ELSA provides a wide variety of psychosocial data collected via face-to-face computer-assisted personal interviews (CAPI) and self-completion questionnaires. All participants provided informed consent prior to their participation in the study. We used structural equation modelling to estimate direct and indirect associations between adverse childhood experiences (ACEs) and cognitive impairment (measured with 1.5 SD below the mean on the modified Telephone Cognitive Screening Interview scale range 0 to 35) via markers of SES (education and wealth), inflammation (serum fibrinogen and C-