ABSTRACT SUBMISSION FORM

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SEX + GENDER

Exploring the role of sex and gender on health research

CHILD HEALTH RESEARCH DAYS

CHRD 2020: Abstract Submission Form

Submitter Name
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Title
Infant feeding, human milk components and child behaviour at age 5 years: Preliminary results from the longitudinal CHILD Cohort Study

Background
Breastfeeding is associated with less behaviour problems later in childhood, possibly because breastmilk components, including polyunsaturated fatty acids (PUFAs) and human milk oligosaccharides (HMOs), are critical for development.

Objective
The objective of this research is to examine the relationships between breastfeeding, breastmilk components and child behaviour at age 5 years.

Methods
This study uses data from the CHILD Cohort Study. Standardized questionnaires from 2,310 children and milk samples from 981 mothers were used to classify breastfeeding status at 6 months and determine milk composition. At age 5 years, caregivers completed the Child Behaviour Checklist (CBCL), measuring internalizing and externalizing behaviour. Lower CBCL scores indicate fewer behaviour problems. Associations between breastfeeding status, PUFAs, HMOs and CBCL scores were tested, adjusting for potential confounders including sex, birthweight, maternal education, race, marital status, parity, smoking during pregnancy, birth mode and screen time at 3 years.

Results
After confounder adjustment, breastfeeding was associated with lower (better) total CBCL scores (exclusive breastfeeding: -1.58; 95% CI -2.87, -0.29; partial breastfeeding: -1.03; 95%CI -2.05, -0.01, compared to no breastfeeding). A similar dose-dependent pattern was observed for internalizing and externalizing CBCL scores. Individual PUFA concentrations were not independently associated with behaviour problems. However, increased concentrations of the HMO disialyllactoN-hexaose (DSLNH) were associated with higher externalizing CBCL scores (+0.62, 95% CI: 0.0- 1.2 per SD increase in

DSLNH) after confounder adjustment.

Conclusion
Breastfeeding was associated with having fewer behaviour problems at age 5 years, with stronger associations for exclusive breastfeeding. One individual HMO was weakly associated with behaviour. Work is ongoing to investigate combinations of milk components and social-emotional pathways including maternal-child bonding.

Theme:
Community Health / Policy

Do you have a table/figure to upload?
Yes

Untitled
Figure_CHRD 2020.pdf

Are you willing to participate in Goodbear's Den?
Yes

Presenter Status:
PhD Student

What was your role in the project?
Write Abstract

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Figure 1: Adjusted Associations between Polyunsaturated Fatty Acids and Behaviour (CBCL T-Scores) at 5 years (n=942)

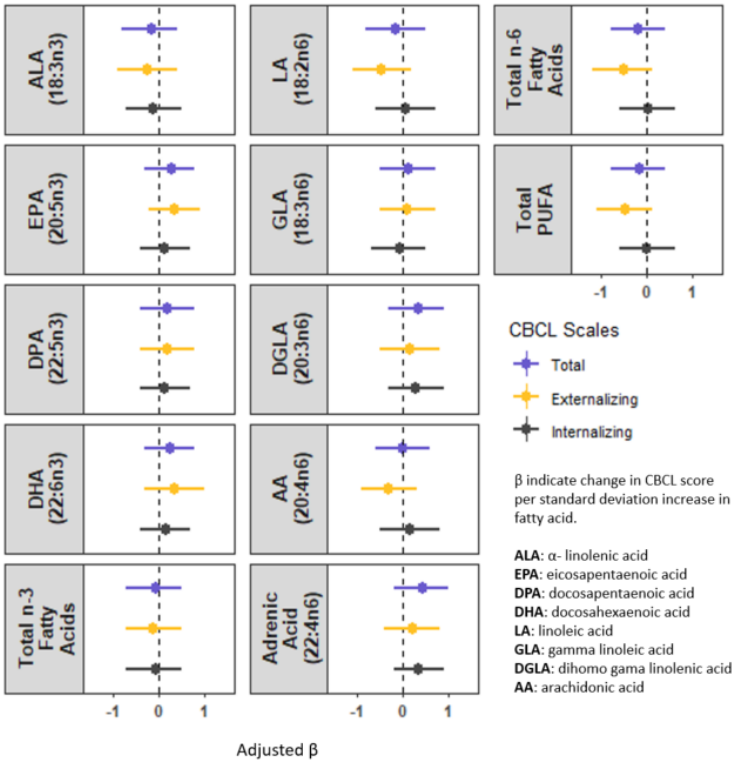
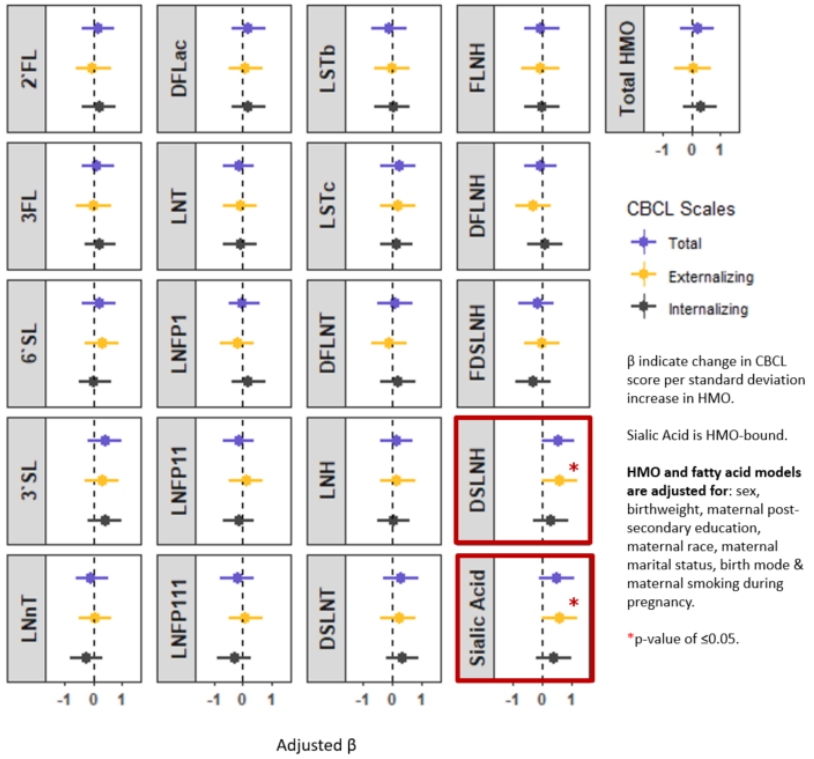
Figure 2: Adjusted Associations between HMOs and Behaviour (CBCL T-Scores) at 5 years (n=937)