CHRD 2022: Abstract & Poster Submission Form

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Presenter Status
○ Undergraduate Students

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Research Category
○ Basic Science

○ Clinical

⊙ Community Health / Policy

Role in the project
☑ Design

☐ Perform Experiments

☑ Analyze Data

☑ Write Abstract

☐

Title

Maternal depression and parent-child relationship mediate the association between breastfeeding and child behaviour

Background

Breastfeeding is an early life exposure associated with fewer behavioural disorders in childhood. Breastfeeding is also associated with reduced postpartum depression and a stronger parent-child relationship, both of which could potentially enhance child behavioral regulation. Exploring these potential mechanisms can help increase our understanding of how breastfeeding is associated with child behaviour.

Objective

Using a pan-Canadian, longitudinal cohort, we tested the mediating roles of maternal depression and parent-child relationship in the association between breastfeeding and child behaviour.

Methods

We used standardized questionnaire data from a subset of the CHILD Cohort Study (n=1,573) to measure maternal depression at 6 months, parent-child relationship at 2 years, and child behaviour at 5 years. Higher scores indicate higher quality relationships, more behaviour problems and more maternal depression. Breastfeeding status and duration were measured at regular intervals between three months two years. Covariates included birth factors, maternal characteristics, and socioeconomic status. Mediation models tested the roles of maternal depression and parent-child relationship in the association between breastfeeding and child behaviour.

Results

In adjusted models, breastfeeding directly at the breast only, compared to formula feeding at 3 months, was related to a 1.42-point (0.19 standard deviation) decrease on the maternal depression scale (95% CI: -2.54, -0.29 points). Twenty-four months of breastfeeding was related to a 0.96-point (0.23 standard deviation) increase on the parent-child relationship scale (95% CI: 1.68, 0.24 points). In two separate adjusted mediation models, maternal depression mediated 14.9% of the total effect, and parent-child relationship mediated 37.8% of the total effect of breastfeeding on child behaviour.

Conclusion

Maternal depression and parent-child relationship significantly mediate the relationship between breastfeeding and child behaviour. Breastfeeding, as well as efforts to prevent maternal depression and improve parent-child relationships, may help to improve child behaviour.

Do you have a table/figure to upload?
⊙ Yes ○ No

Figure.pdf

Authors

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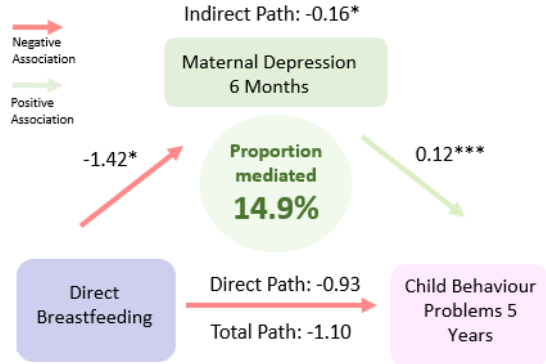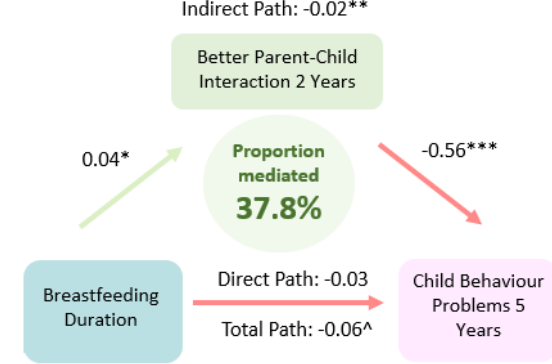**Figure 1: Mediation of Maternal Depression at 6 Months**
(n=1,573)

Negative Association

Positive Association

Indirect Path: -0.16*

Maternal Depression
6 Months

-1.42*

Proportion mediated
14.9%

0.12***

Direct
Breastfeeding

Direct Path: -0.93

Total Path: -1.10

Child Behaviour
Problems 5
Years

Figure 2: Mediation of Parent-Child Interaction at 2 Years
(n=1,369)

Indirect Path: -0.02**

Better Parent-Child
Interaction 2 Years

0.04*

Proportion mediated
37.8%

-0.56***

Breastfeeding
Duration

Direct Path: -0.03

Total Path: -0.06^

Child Behaviour
Problems 5
Years

Mediation models adjusted for: child sex, prenatal maternal stress, prenatal maternal depression, study site, birth mode, birthweight, gestational age, household income, maternal education, maternal race, marital status, number of older siblings, prenatal maternal smoking, attention deficit hyperactivity disorder genetic risk score.
^ $p <= 0.1$, *$p <= 0.05$, **$p <= 0.01$, ***$p = 0.001$