

# Postpartum depression in Irish mothers and associations with infant feeding practices

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Postpartum depression (PPD) is a significant societal challenge, affecting up to 10,000 women annually in Ireland<sup>(1)</sup>. While PPD may negatively affect breastfeeding duration and exclusivity, successful breastfeeding may play a protective role in PPD<sup>(2)</sup>; however, the nature and directionality of this relationship remains unclear.

The aim of this study was to evaluate the relationship between PPD and infant feeding practices in the Cork Nutrition and Development Maternal-Infant Cohort (COMBINE). Participants (n = 456) were mother-infant dyads recruited from the IMPROVED study (<http://www.clinicaltrials.gov>; ID: NCT01891240). Written informed consent was obtained and participants completed a series of clinical- and questionnaire-based assessments at day 2, 1 month, 2, 4, 6, 9, 12, 18 and 24-months. Detailed infant feeding data including the method of feeding (i.e. breastfeeding, infant formula or combination feeding), use of formula top-ups, volume, breastfeeding duration, and reasons for cessation, were collected at each assessment. Maternal PPD symptoms were assessed at 2-months using the 10-item Edinburgh Postnatal Depression Scale (EPDS) questionnaire<sup>(3)</sup>. Thresholds of  $\geq 10$  and  $\geq 13$  indicated elevated and high risk of PPD, respectively. Anxiety subscale scores of  $\geq 6$  indicated high risk of anxiety. Data were analysed using IBM SPSS (Version 27, IBM Corp, Armonk NY).

Mean (SD) maternal age at delivery was 31.5 (4.3) years, 76% of women completed third-level education and 95% were married/in a relationship. Smoking during pregnancy was reported by 7% of women and 11% reported a history of depression or anxiety. Half of infants were male (57%), 97% were born at term, 28% by C-section and the mean (SD) birthweight was 3.5 (0.5) kg. Breastfeeding (including exclusive and in combination with infant formula) was initiated by 75% of women, and dropped to 52% at 2 months, 44% at 4-months and 28% at 6-months.

Elevated and high risk of PPD at 2-months was reported in 11% and 9%, respectively. Mean (SD) EPDS scores were not significantly different between women who breastfed vs those who did not at 1-month [6.0 (4.4) vs 6.3 (4.2),  $P = 0.619$ ] or at 2-months [5.9 (4.3) vs 6.4 (4.5),  $P = 0.357$ ]. However, at 4-months breastfeeding rates were lower in women who had a high risk of PPD (27% vs 47%,  $P = 0.050$ ) and in women with elevated anxiety scores (32% vs 48%,  $P = 0.045$ ). This tendency towards lower breastfeeding rates in women with high PPD and anxiety scores was also observed at 6-months, but not thereafter, as breastfeeding rates reduced to 26% and 20% by 9- and 12-months, respectively.

Our findings indicate a potential adverse effect of PPD on breastfeeding rates; however, the power of this analysis is limited by sample size. This research does highlight the importance of screening, early detection of PPD and intervention.

## Acknowledgments

This work was supported by a Science Foundation Ireland Starting Investigator award to ÁH [Functional indicators of iodine status in pregnancy – an outcome-driven, personalised nutrition approach (18/SIRG/5575)]

## References

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