

Impact of postnatal depression on offspring

Take-home message

Children of women with persistent and moderate or severe postpartum depression suffered adverse outcomes compared to children of mothers with postpartum depression that was neither severe nor persistent. Women meeting criteria for moderate and severe postpartum depression at both 2 and 8 months after delivery were also the most vulnerable to further depression, with an increased risk even 11 years later. Maternal depression should be tackled using evidence-based high-input early intervention methods, and prioritised in women meeting criteria for persistent and moderate to severe symptoms.

Postpartum Depression and its Long-Term Impact on Children: Many New Questions

Postpartum depression affects 10% of women in high-income countries (1), with even higher prevalence estimated in low- and middle-income countries.

There is limited previous evidence to the effect of postpartum depression and its impact on children. Additionally, children raised by parents with depression have been shown to have a higher long-term risk of depression and other health effects (2) (3). A cohort study of over 1 million Swedish children born to depressed parents showed a higher prevalence of depression leading to poor school performance at 16; this effect was amplified in maternal depression, especially in female offspring (4).

Previous studies have shown an association between maternal postnatal depression and poor academic performance (5) and psychological health (6) in offspring. However, most of the existing literature is flawed, describing small sample sizes with low analytical power.

Parental depression can be treated, which has been proven to reduce adverse effects on children (7).

Netsi et al. used ALSPAC, a longitudinal ongoing population-based study examining the overall health of children, to examine the impact of maternal postnatal depression on the subsequent mental health of both mothers and their offspring (8). 9498 pregnant women in southwest England were enrolled between April 1991 and December 1992, with depressive symptoms monitored at 2 months, 8 months and 11 years to assess persistence of symptoms. Severity of depressive symptoms were assessed using the Edinburgh Postnatal Depression Scale. Child behavioural symptoms were assessed using the Rutter total problems scale, and school performance was extracted from GCSE results. Offspring depression was assessed using the Clinical Interview Schedule-Revised.

Important findings

1. Children of women with persistent and moderate to severe persistent postpartum depression were at a sevenfold increased risk of depression aged 18 years (OR=7.44, 95% CI, 2.89-19.11).

2. Women suffering persistent depression at 2 and 8 months postpartum are at increased risk of depression 11 years later, at any severity level.
3. Children of women with persistent and moderate to severe (compared to mild or remitting) postpartum depression are twice as likely to perform poorly in maths at age 16.
4. Behavioural problems aged 3-4 are 4 times more common in children whose mothers suffered moderate to severe persistent postnatal depression.

Summary

Women with severe and persistent postnatal depression are more likely to stay depressed, and their children are more likely to suffer behaviourally, psychologically and academically.

Comments

1. An implication of this study is that mothers with moderate to severe or persistent depressive symptoms postnatally should be prioritised for early treatment to ameliorate the long-term effects of depression. However, further data is required to demonstrate that such interventions do indeed have a long term impact on maternal and offspring outcomes.
2. There is little literature on effective maternal depression management options. Weissman (8) outlines two main routes for therapy: targeting maternal mental health aggressively and early in order to promote adequate baby care; or to use baby care as a method of therapy for maternal mental health. This second route suggests that the routine of childcare can aid the anhedonia and low mood experienced in postnatal depression. Further research is necessary to evaluate both of these options.
3. The number of mothers in the sample with persistent and marked (n=75) or severe (n=83) postnatal depression was relatively small, meaning that only maternal education was controlled. This could mean that residual confounding factors may be affecting reported outcomes.
4. Due to self-selection, women with severe or persistent depression may be less likely to take part in the study, resulting in their underrepresentation. They may also be less likely to report child behavioural problems, resulting in an underestimation of the association between the two.

Bibliography

1. Non-psychotic mental disorders in the perinatal period. Howard, Molyneaux, Dennis, Rochat, Stein, Milgrom. 384, s.l. : *Lancet*, 2014, Vol. 15.
2. Effects of poverty and maternal depression on early child development. Patterson SM, Albers AB. 6, s.l. : *Child Development*, 2001, Vol. 72.

3. Chronicity, severity, and timing of maternal depressive symptoms: relationships with child outcomes at age 5. Brennan PA, Hammen C, Anderson MJ, Bor W, Najman JM, Williams GM. 6, s.l. : *Developmental Psychology*, 2000, Vol. 36.
4. Associations of Parental Depression With Child School Performance at Age 16 Years in Sweden. Shen H, Magnusson C, Rai D, et al. 3, s.l. : *JAMA Psychiatry*, 2016, Vol. 73.
5. The effects of maternal postnatal depression and child sex on academic performance at age 16 years: a developmental approach. Murray, L, Arteche, A, Fearon, P, Halligan, S, Croudace, T, Cooper, P. 10, s.l. : *Journal of Child Psychological Psychiatry*, 2010, Vol. 51.
6. Associations between postnatal maternal depression and psychological outcomes in adolescent offspring: a systematic review. Sanger, C, Iles, JE, Andrew, CS, Ramchandani, PG. 2, s.l. : *Archive of Womens Mental Health*, 2015, Vol. 18.
7. Effect of an early perinatal depression intervention on long-term child development outcomes: follow-up of the Thinking Healthy Programme randomised controlled trial. Maselko J, Sikander S, Bhalotra S, Bangash O, Ganga N, Mukherjee S, Egger H, Franz L, Bibi A, Liaqat R, Kanwal M, Abbasi T, Noor M, Ameen N, Rahman A. 7, s.l. : *The Lancet Psychiatry*, 2015, Vol. 2.
8. Postpartum Depression and Its Long-term Impact on Children. Weissman, MM. s.l. : *JAMA Psychiatry*, 2018.

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