

# Review: depression and anxiety during pregnancy are strong indicators of postpartum depression

Robertson E, Grace S, Wallington T, *et al.* Antenatal risk factors for postpartum depression: a synthesis of recent literature. *Gen Hosp Psychiatry* 2004;**26**:289–95.

## Q What are the risk factors for postpartum depression?

### METHODS



**Design:** Systematic review with meta-analyses.

**Data sources:** Nineteen databases of medical, psychological, and social studies, searched to 2002.

**Study selection and analysis:** Prospective studies (with diagnoses made 2 weeks postpartum or later, to avoid including women with postpartum blues) on non-psychotic depression starting within a year of giving birth were eligible. For inclusion, the following factors had to be clearly defined: diagnostic criteria, assessment methods, and risk factors. Also, the statistical relation between postpartum depression and any variables had to be clearly stated. Recent studies were analysed with respect to two previous meta-analyses to ensure agreement with findings. Effect sizes were calculated and reported as defined by Cohen, where an effect size of 0.2 indicates a small relation, 0.4 indicates a moderate relation, and 0.8 a strong relation.

**Outcomes:** Postpartum depression (according to DSM-IV).

### MAIN RESULTS

The search identified two previous meta-analyses (n>14 000) plus additional studies including a further 10 000 women. Major predictors of postpartum depression were depression and anxiety during pregnancy, stressful life events, low social support, and a previous history of depression (effect sizes: depression: 0.75; anxiety: 0.68; life events: 0.61; social support: -0.64; previous history: 0.58). Neuroticism and the state of the marital relationship were moderate indicators (effect size of both: 0.39) and socioeconomic status or pregnancy related obstetric complications were low risk factors (effects sizes: -0.14 and 0.26). Maternal age (in women over 18 years), educational attainment, parity, and relationship length had no significant association with postpartum depression.

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### CONCLUSIONS

Depression and anxiety during pregnancy are the strongest indicators of postpartum depression.

### Commentary

Postpartum depression is the most common complication of child-bearing occurring in 10–15% of recently delivered mothers, with well documented negative health implications for the mother, child, and family.<sup>1</sup> The literature investigating possible risks for postpartum depression is vast and of variable quality.

This article is a synthesis of the recent literature from 1990–2002. It includes the results from two meta-analyses by O'Hara and Swain<sup>2</sup> and Beck<sup>3</sup> involving 12 000 subjects. It adds results from more recent studies involving a further 10 000 subjects.

The findings of this review have important implications for all health professionals involved in the care of recently delivered mothers.

Based on the research included in the synthesis, risk factors which are the strongest predictors of postpartum depression have been shown to be (in decreasing order of effect reported in terms of Cohen's *d*) depression during pregnancy, anxiety during pregnancy, experience of stressful life events during pregnancy or early puerperium, low levels of social support, and previous history of depression.

The findings of this review reinforce the importance of exploring postpartum depression risk factor status when taking the mother's history. Consideration could be given to the use of the Edinburgh Postnatal Depression scale (EPDS) for screening all new mothers in the immediate postpartum period. The efficacy of the EPDS is documented, such as the recent study by Dennis.<sup>4</sup> Successful identification of risk factors allows timely implementation of appropriate preventive and treatment interventions.

The paper highlights the possible increased risk for postpartum depression in a specific group of mothers. Recent immigrants, who may be physically and culturally separated from their support systems, may be at risk due to the documented lack of social support.

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- 1 Kendall RE, Chalmers JC, Platz C. Epidemiology of puerperal psychoses. *Br J Psychiatry* 1987;**150**:662–73.
- 2 O'Hara MW, Swain AM. Rates and risk of postpartum depression—a meta-analysis. *Int Rev Psychiatry* 1996;**8**:37–54.
- 3 Beck CT. Predictors of post partum depression: an update. *Nurs Res* 2001;**50**:275–85.
- 4 Dennis CL. Can we identify mothers at risk for postpartum depression in the immediate postpartum period using the Edinburgh Postnatal Depression Scale? *J Affect Disord* 2004;**78**:163–9.

Please see <http://www.ebmentalhealth.com/supplemental> for additional commentary by Professor Meir Steiner.