Published in final edited form as:

Evid Based Nurs. 2014 January ; 17(1): 11–12. doi:10.1136/eb-2012-101164.

Pregnant women screening positive for depressive symptoms at 24–28 weeks may have increased risk of preterm birth but more precise research is needed

Eynav Elgavish Accortt and Christine Dunkel Schetter

Department of Psychology, University of California, Los Angeles (UCLA), Los Angeles, California, USA

Abstract

Context—The prevalence of prenatal depression and anxiety ranges between 5% and 16% and the consequences are extensive.¹ In addition to negative maternal effects, research points to detrimental fetal effects, and higher rates of PTB and LBW. Postpartum symptoms of depression and anxiety are often experienced by women prenatally and may lead to maternal suffering and parenting ineffectiveness. Thus, research attention to prenatal and postpartum affective symptoms and their causes is warranted.

Methods—Straub *et al* screened a sample of 14 175 pregnant women between 24 and 28 weeks gestation for depressive symptoms using the Edinburgh Postnatal Depression Scale (EPDS). Scores of 12 or endorsement of the self-harm item identified those at risk.

Findings—Comparable to past studies, the screen positive rate was 9.1% (N=1298). Multivariate analysis revealed an association between prenatal depression symptoms and PTB adjusting for maternal age, race, history of PTB and insurance status (adjusted OR=1.3). Separate analyses indicated significant effects of depressive symptoms on LBW and small for gestational age (SGA).

Commentary—Strengths of this study include the large cohort of women screened with immediate follow-up and triage for positive screens.

Limitations include lack of control for antidepressant use, pre-pregnancy BMI, or high-risk behaviours (eg, smoking and substance use are often associated with depression and PTB²). At least one study suggests that prenatal antidepressant use, not depression symptoms, predicts PTB.³ Most existing studies also control for a larger number of medical risk conditions associated with PTB. Thus, control of a wider range of confounding factors was needed.

Copyright Article author (or their employer) 2013. Produced by BMJ Publishing Group Ltd (& BCS) under licence.

Correspondence to: **Christine Dunkel Schetter**, Department of Psychology, University of California, Los Angeles (UCLA), 1285A Franz Hall, Los Angeles, CA 90095-1563, USA; dunkel@psych.ucla.edu.

Commentary on: **Straub H**, Adams M, Kim JJ, et al. Antenatal depressive symptoms increase the likelihood of preterm birth. *Am J Obstet Gynecol* 2012;**207**:329.e1–4.

Competing interests None.

Second, the authors state that the distribution of spontaneous versus medically indicated PTBs did not significantly differ between the at-risk versus the not at-risk cohort. However, analyses should have been conducted for only spontaneous PTBs. In order to understand how psychosocial factors influence the complex phenomenon of PTB, research must distinguish different aetiologies.

Third, recent research has shown that the EPDS is multifactorial and measures prenatal anxiety symptoms as well as depression.⁴ Alternative depression screening instruments commonly used in pregnancy (eg, Beck Depression Inventory, Center for Epidemiologic Studies Depression Scale) do not include symptoms of anxiety. Therefore, we would recommend screening for prenatal anxiety separately from depression in future studies. Furthermore, an EPDS score of 13 or more in pregnancy indicates ‘probable minor depression’ and a higher score (≥ 15) indicates ‘probable major depression’.⁵ Therefore, some of the women in the at-risk group in this study may be at low risk for depression and would not merit follow-up. This should not bias the results, but it has implications for evaluation and treatment.

Finally, the authors emphasise findings regarding PTB and de-emphasise results concerning LBW and SGA. These results should be compared in terms of effect size. The authors cite six studies including a recent meta-analysis² supporting their findings; however, they do not mention the small effect sizes found in that meta-analysis. Analyses should also control for gestational age in testing LBW to clarify mechanisms. Depressive symptoms in pregnancy have been associated with fetal growth in several robust studies, but much less often with spontaneous PTB. In contrast, prenatal anxiety has most often been associated with PTB, especially anxiety concerning one’s pregnancy.⁶ Thus, the findings of this study are ambiguous as to whether the EPDS would have predicted LBW better than PTB, and whether anxiety may be responsible for the results.

References

1. Schetter, C Dunkel; Tanner, L. Anxiety, depression and stress in pregnancy: implications for mothers, children, research, and practice. *Curr Opin Psychiatry*. 2012; 25.2:141–148. [PubMed: 22262028]
2. Grote NK, Bridge JA, Gavin AR, et al. A meta-analysis of depression during pregnancy and the risk of preterm birth, low birth weight, and intrauterine growth restriction. *Arch Gen Psychiatry*. 2010; 67:1012–1024. [PubMed: 20921117]
3. Yonkers KA, Norwitz ER, Smith MV, et al. Depression and serotonin reuptake inhibitor treatment as risk factors for preterm birth. *Epidemiology*. 2012; 23:677–685. [PubMed: 22627901]
4. Swalm D, Brooks J, Doherty D, et al. Using the Edinburgh postnatal depression scale to screen for perinatal anxiety. *Arch Womens Ment Health*. 2010; 13:515–522. [PubMed: 20574749]
5. Matthey S, Henshaw C, Elliott S, et al. Variability in use of cut-off scores and formats on the Edinburgh Postnatal Depression Scale—implications for clinical and research practice. *Arch Womens Ment Health*. 2006; 9:309–315. [PubMed: 17013761]
6. Schetter, C Dunkel. Psychological science on pregnancy: stress processes, biopsychosocial models, and emerging research issues. *Ann Rev Psychol*. 2011; 62:531–558. [PubMed: 21126184]

Implications for practice and research

- Screening for prenatal depressive symptoms and pregnancy anxiety is recommended.
- In predicting birth outcomes, essential controls include antidepressant use, medical risk conditions, body mass index and smoking.
- Analyses should consider low birth weight (LBW) and preterm birth (PTB) together to determine any distinct psychosocial risk factors and establish precise pathways.