Antenatal screening for postnatal depression: a systematic review

Austin M P, Lumley J

CRD summary
This review concluded that none of the available screening instruments for postnatal depression were suitable for routine application in the antenatal period. The authors’ conclusions reflected the limitations of the evidence presented but should be treated with caution in view of the methodological weaknesses of the review.

Authors' objectives
To appraise the evidence on the availability of a precise and validated screening test by identifying and summarising the screening properties of tools applied during pregnancy to predict a woman’s risk of developing postnatal depression.

Searching
The authors searched MEDLINE, EMBASE, PsycLIT, CINAHL, HealthSTAR, the Cochrane Library and the UK National Research Register from 1980 (or their inception if earlier) to August 2001. Search terms were reported. The search was limited to studies published in English or French. The authors also searched reference lists of published papers and book chapters, and recent proceedings of the Marcé Society.

Study selection
Studies that evaluated a screening instrument (or combination of instruments) for classifying pregnant women in any care setting as being at risk or not at risk of postnatal depression were eligible for the review. No inclusion criteria for study design were stated. Outcomes of interest were measures of diagnostic accuracy; the proportion of those screened defined as being at risk; and the proportion of women diagnosed with postnatal depression after birth that had been screened during pregnancy as not at risk.

The included studies varied widely in population, setting and the timing and method of antenatal assessment. The majority included a study-specific screening instrument but only one of these used an instrument developed for an earlier study. Postnatal depression was most commonly assessed using the Edinburgh Postnatal Depression Scale; the score taken to indicate depression ranged from >9 to >14.

The authors did not state how the papers were selected for the review, or how many reviewers performed the selection.

Assessment of study quality
The authors did not state that they assessed validity.

Data extraction
Data on sensitivity, specificity, positive and negative predictive values and positive and negative likelihood ratios for each screening instrument were extracted (or calculated when not explicit in the original paper). For studies that reported outcomes for only a subsample of those who had screened negative, the original proportions were reconstituted to calculate the positive and negative predictive values for the whole sample.

Data extraction was performed by one reviewer.

Methods of synthesis
Studies were combined in a narrative synthesis by study characteristics and screening properties of the instruments reviewed. Differences between studies were discussed in the text and presented in tables.

Results of the review
Sixteen studies (12,963 participants assessed after birth) were included.

Prevalence of depression after birth ranged from 5.5% to 31.5%. 
Sensitivity of the screening instruments ranged from 0.23 (specificity 0.66) to 0.82 (specificity 0.78) and specificity from 0.43 (sensitivity 0.73) to 0.96 (sensitivity 0.44). The proportion of women predicted to be at risk who became depressed (positive predictive value) ranged from 0 to 0.80. Negative predictive value (the proportion of women classed as not at risk who did not become depressed) ranged from 0.73 to 0.98.

The proportion of cases of depression missed by screening ranged from 21% to 100%.

**Authors' conclusions**

None of the screening instruments were suitable for routine application in the antenatal period.

**CRD commentary**

This review had clear inclusion criteria for participants, interventions and outcomes. No inclusion criteria were stated for study design, which means that the review was not limited to the best evidence to answer the review question. The authors searched a range of relevant databases and made some efforts to identify unpublished studies. Limitation of the review to studies in English or French introduced the risk of language bias. Validity of included studies was not assessed, so the reliability of the included studies and the synthesis based on them is uncertain. Review methods were poorly reported, so the risk of errors and bias during the review process is uncertain. Where reported (data extraction by a single reviewer), the methods were not rigorous enough to minimise such problems. Adequate details of included studies were presented. Studies were synthesised narratively, which seemed appropriate in view of the varied interventions and populations included. The authors’ conclusions reflected the limitations of the evidence presented but should be treated with caution in view of the methodological limitations of the review.

**Implications of the review for practice and research**

Practice: The authors stated that staff using current tools to select women for antenatal interventions should be aware of their limitations and reconsider their routine use.

Research: The authors stated that there is a continuing need for a predictive tool for postnatal depression that is clinically useful and has acceptable specificity and sensitivity. They also stated that broader set of risk factors should be considered when developing such tools.

**Funding**

Not stated.

**Bibliographic details**


**PubMedID**

12558536

**Additional Data URL**


**Other publications of related interest**


**Indexing Status**

Subject indexing assigned by NLM

**MeSH**

Depression, Postpartum /diagnosis /epidemiology; Female; Humans; Pregnancy; Prenatal Care /methods
AccessionNumber
12003000347

Date bibliographic record published
01/12/2008

Date abstract record published
01/07/2009

Record Status
This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.