A systematic review of studies validating the Edinburgh Postnatal Depression Scale in antepartum and postpartum women


CRD summary
This review of studies that validated the Edinburgh Postnatal Depression Scale (EPDS) against a structured or semi-structured clinical interview found that estimates of its diagnostic accuracy varied widely. This suggested that the EPDS may not be an equally valid screening tool across all settings. The authors’ conclusions reflect the evidence presented and appear reliable.

Authors' objectives
To determine whether the Edinburgh Postnatal Depression Scale (EPDS) compared favourably with a structured or semi-structured clinical interview for the detection of antepartum and postpartum depression.

Searching
MEDLINE, EMBASE, CINAHL, PsycINFO and SIGLE were searched from 1987 (when the EPDS was published) to July 2008. Search terms were reported. Reference lists of retrieved papers were checked and experts in the field were contacted for unpublished data.

Study selection
Studies in which EPDS was used as a screening instrument in pregnant or postpartum (up to one year) women were eligible for the review. The reference standard was use of a structured or semi-structured clinical interview to diagnose depression. Studies had to provide sufficient data for diagnostic accuracy outcomes to be extracted or calculated for relevant cut-off points. The selected cut-off points for postpartum women were 9/10 for possible depression and 12/13 for probable depression. For studies in pregnant women, a cut-off point of 14/15 for probable depression was used.

Studies were excluded if the population was one week or less postpartum or restricted to a specific subgroup. The reference standard had to be administered within 24 hours of EPDS.

Most included studies were in postpartum women. Most study samples were recruited from the general population, but some contained a higher proportion of women who were depressed or identified as likely to be depressed. A variety of reference standards were used, the most common being the Diagnostic and Statistical Manual for Mental Disorders.

Two reviewers selected studies independently. Disagreements were resolved by discussion or reference to a third reviewer.

Assessment of study quality
Studies were assigned a grade (A to C) based on blinding of assessment, appropriate use of reference standard and population spectrum. The authors did not explicitly state how many reviewers performed the validity assessment.

Data extraction
Two reviewers independently extracted data using a standardised form. Sensitivity, specificity, positive and negative predictive values, and positive and negative likelihood ratios were extracted or calculated for different EPDS cut-off points. Any disagreements were resolved by consensus or reference to a third reviewer.

Methods of synthesis
Meta-analysis was considered inappropriate because of the expected heterogeneity of the included studies. Results were synthesised narratively and summarised using scatter plots of sensitivity versus (1 minus specificity). A subgroup analysis of results from non-English speaking populations was performed.

Results of the review
Thirty-seven studies were included in the review. The total number of participants was unclear. Sample size ranged from 23 to 876. Twelve studies were rated A for quality, 24 were rated B and one did not provide enough data for evaluation.

For antepartum depression (three studies), sensitivity of EPDS for major depression ranged from 73% (specificity 93%) to 100% (specificity 96%) and specificity ranged from 93% (sensitivity 73%) to 99% (sensitivity 78%).

For postpartum depression, sensitivity and specificity of different cut-off points showed marked heterogeneity between studies. Sensitivity ranged from 34% (specificity 97%) to 100% (specificity 51% to 93%) and specificity from 44% (sensitivity 90%) to 100% (sensitivity 55% to 67%). Positive likelihood ratios varied from 1.61 to 78. Other accuracy outcomes were reported.

Studies of non-English speaking populations showed a wider range of sensitivity and specificity values than those of English-speaking populations at a cut-off of 12/13 and a wider range of sensitivity values at a cut-off of 9/10.

Authors' conclusions
The heterogeneity of the study methods and findings suggested that the results of different studies may not be directly comparable and that the EPDS may not be an equally valid screening tool across all settings and contexts.

CRD commentary
The review addressed a clear question and had clear inclusion and exclusion criteria. The search covered a range of databases and included attempts to locate unpublished studies. Risk of publication bias was not assessed and it was unclear whether any language restrictions were applied to the search. Measures were taken to minimise reviewer errors and bias in study selection and data extraction, although it was unclear whether similar methods were used for validity assessment. The validity assessment used appropriate criteria, but results for individual studies were not reported and the information was not used in the analysis. Other relevant details of included studies were reported. The authors' decision not to perform meta-analysis appeared justified in light of the heterogeneity of the included studies. Differences between studies were investigated and the authors highlighted a possible effect of language of administration. Overall, the authors' conclusions reflect the evidence presented and appear reliable.

Implications of the review for practice and research
Practice: The authors stated that despite its limitations the EPDS was a useful screening tool because of its free availability, ease of administration and general acceptability to women.

Research: The authors stated that further research was required to identify the underlying causes of heterogeneity in validation studies of the EPDS and that more studies should be performed to validate the EPDS in antenatal populations.

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