Review: antenatal screening tools to predict postnatal depression generally have low specificity and sensitivity


QUESTION: What is the sensitivity and specificity of antenatal screening tools developed to predict depression following childbirth?

Range of outcomes in studies of antenatal screening tests for postnatal depression

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Range of findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proportion depressed after birth whose depression had been predicted by antenatal screening (sensitivity)</td>
<td>0.23 to 0.79</td>
</tr>
<tr>
<td>Proportion of women predicted to be “at risk” who became depressed after birth (positive predictive value)</td>
<td>0 to 0.56</td>
</tr>
<tr>
<td>Proportion not depressed after birth, identified as “not at risk” (specificity)</td>
<td>0.43 to 0.93</td>
</tr>
<tr>
<td>Proportion predicted to be “not at risk” after birth who did not become depressed (negative predictive value)</td>
<td>0.73 to 0.98</td>
</tr>
<tr>
<td>Proportion with depression identified antenatally as “not at risk” (missed cases)</td>
<td>21 to 100%</td>
</tr>
<tr>
<td>Positive likelihood ratio</td>
<td>0.93</td>
</tr>
<tr>
<td>Negative likelihood ratios</td>
<td>0.42 to 1.17</td>
</tr>
</tbody>
</table>

COMMENTARY

Postpartum depression is a traumatic event that can have lasting effects on a woman’s confidence in herself as a mother and on her infant’s social, emotional and cognitive development. The introduction of several screening tools to aid early detection and diagnosis of depression has helped to raise awareness among healthcare providers. Preliminary evidence suggests that we would be better able to predict postpartum depression if we considered social and psychological maternal risk factors.

Austin and Lumley’s systematic review should compel practitioners to reflect on the causes and consequences of postnatal depression. Recent research suggests that many women are susceptible to psychiatric disorders during pregnancy, with 10–12% of pregnant women experiencing major depression. Postpartum disorders have recently been incorporated into the DSM-IV. The most valuable time for a woman to develop mood disorders is during the postpartum period. During this period, about 12–10% of women experience depressive disorders.

We must consider whether the type of depression women suffer from in the postnatal period is the same as depression during pregnancy or at other times. The culmination of many factors may ultimately lead to postnatal depression. These factors include a previous history of mood disorders, psychosocial factors such as employment stress, marital discord, or the absence of support from partners, family members and friends, physical and stressful situations during pregnancy and labour such as hormonal fluctuation, anaemia, and the use of anaesthetics; and the presence of ‘maternity blues.’ I would argue that these aetiological factors suggest that postnatal depression is a specific disorder, not equivalent to depression at other times. If we are to increase the sensitivity and specificity of predictive tools, screening methods and the study of risk factors may need to be more specific for postnatal depression.

This hypothesis needs further analysis. At present, despite notable attempts such as this review, the causes, consequences and methods of predicting postnatal depression remain uncertain. One thing, though, is clear. Postnatal depression is a major problem. Clinicians have an important role to play in helping women identify and deal with the consequences, including routine screening at 6 weeks postpartum.1

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