SCREENING FOR ANXIETY IN BC: IS THE EPDS ENOUGH?

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[Logos of Vancouver Foundation and UBC]
WHY STUDY PERINATAL ANXIETY?

- Prenatal, maternal anxiety is associated with negative outcomes
- Postpartum anxiety → impact on parenting
- Perinatal anxiety disorders are more common than depression!
- Anxiety disorders are:
  - Highly distressing
  - Impairing to functioning (work, family…)
- Perinatal anxiety is a neglected area
- Safe, effective treatments (e.g., CBT) exist
Prenatal Anxiety & Stress

**Animal Studies**
- Primarily experimental
- Long term -ve effect on
  - Attention
  - Learning
  - Behaviour
- Motor development
- Reduced birth weight
- Anxious responding

**Human Studies**
- Primarily correlational
- Ethical constraints
- Obstetrical complications
  - Length of labour
  - Preterm labour
  - Reduced birth weight
- Effects on offspring
  - ADHD
  - Poorer language abilities
  - Emotional reactivity
  - Mental health problems
POSTPARTUM ANXIETY

- Infants/children
  - Behavioural inhibition
  - Insecure attachment
  - Impaired adaptability
  - Negative mood
  - Soothing difficulty
- Mothers
  - Interact and communicate less skillfully with their infants
IMPACT OF ANXIETY DISORDERS

- Significant impairment in functioning
- High level of health care service utilization
- High level of direct health care costs
- Diminished work capacity
PREVALENCE

ANXIETY DISORDERS
- Most prevalent of all psychiatric conditions
- Lifetime: 28.8%
- One-year: 18.1%
- Almost twice (1.6) as common among women

MOOD DISORDERS
- Lifetime: 20.8%
- One-year: 9.5%
- Postpartum depression
  - 19.2% (Major & Minor Depression)
  - 7.1% (Major Depression only)
## PERINATAL PREVALENCE & INCIDENCE

<table>
<thead>
<tr>
<th>DISORDER</th>
<th>PREVALENCE</th>
<th>INCIDENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety</td>
<td>PREGNANCY</td>
<td>12.1 &lt; 16.3 &lt; 20.4</td>
</tr>
<tr>
<td></td>
<td>POSTPARTUM</td>
<td>12.8 &lt; 17.0 &lt; 21.2</td>
</tr>
<tr>
<td>Depression</td>
<td>PREGNANCY</td>
<td>1.5 &lt; 3.6 &lt; 5.7</td>
</tr>
<tr>
<td></td>
<td>POSTPARTUM</td>
<td>2.2 &lt; 4.5 &lt; 6.8</td>
</tr>
</tbody>
</table>

The above data represents 95% confidence intervals for proportions.
SCREENING FOR PERINATAL ANXIETY DISORDERS
SCREENING FOR ANXIETY: THE EPDS

EPDS-3A ITEMS

- I have blamed my self unnecessarily when things went wrong
- I have been anxious or worried for no good reason
- I have felt scared or panicky for no very good reason

VALIDITY

<table>
<thead>
<tr>
<th></th>
<th>EPDS-3A</th>
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<tbody>
<tr>
<td>Cut-Score</td>
<td>6</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>67%</td>
</tr>
<tr>
<td>Specificity</td>
<td>88%</td>
</tr>
<tr>
<td>PPV</td>
<td>32%</td>
</tr>
<tr>
<td>NPV</td>
<td>97%</td>
</tr>
</tbody>
</table>
SCREENING FOR ANXIETY: OTHER APPROACHES

- Other self-report screening tools for perinatal anxiety and related disorders have been assessed.
- Few have been adequately assessed, and most perform poorly.
- The most carefully assessed and most promising is the State Trait Anxiety Inventory (STAI).

<table>
<thead>
<tr>
<th></th>
<th>PREG</th>
<th>PREG</th>
<th>PP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cut score</td>
<td>40</td>
<td>40</td>
<td>34</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>81%</td>
<td>66%</td>
<td>71%</td>
</tr>
<tr>
<td>Specificity</td>
<td>80%</td>
<td>67%</td>
<td>67%</td>
</tr>
<tr>
<td>PPV</td>
<td>52%</td>
<td>38%</td>
<td>26%</td>
</tr>
<tr>
<td>NPV</td>
<td>94%</td>
<td>86%</td>
<td>93%</td>
</tr>
</tbody>
</table>
PERINATAL ANXIETY & RELATED DISORDER PREVALENCE & INCIDENCE STUDY
RATIONALE

- Current policy in BC = Screening for depression
- Anxiety and related disorders are more common than depression
- Anxiety & related disorders are not screened for
- Using the EPDS to screen for anxiety would be the LOWEST cost and effort solution
OBJECTIVE & METHODS

OBJECTIVE

1. Assess the capacity of the EPDS to function as a screening tool for perinatal anxiety and related disorders
2. Compare the full EPDS to a 2 and 3 – item EPDS derived measure as screening tools for perinatal anxiety and related disorders

INCLUSION/EXCLUSION

- Resident of the city of Vancouver at the time of recruitment
- Functionally fluent in English
STUDY PROCEDURES

CONSENT

PRENATAL QUESTIONNAIRES
≈ 33 weeks gestation

POSTNATAL QUESTIONNAIRES
≈ 7 weeks postpartum

Score below cut off on ALL screening measures
END OF PARTICIPATION

Score above cut off on one or more screening measures
Study interview administered
END OF PARTICIPATION

≈ 13 weeks postpartum
ASSESSMENT MEASURES

QUESTIONNAIRES
- Each of the primary anxiety disorders
- Obsessive compulsive disorder
- Posttraumatic stress disorder
- Acute stress disorder
- Depression

INTERVIEW
- Structured Clinical Interview for DSM (SCID)
- DSM-IV
- Interviewers trained to criterion
- 13-weeks postpartum
- In person
## Participants

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>STATISTIC</th>
</tr>
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<tbody>
<tr>
<td>N</td>
<td>310</td>
</tr>
<tr>
<td>AGE</td>
<td>33.2 (6.2) years</td>
</tr>
<tr>
<td>WEEKS’ GESTATION</td>
<td>27.3 (8.5) weeks</td>
</tr>
<tr>
<td>MARITAL STATUS</td>
<td>96% Married or Common Law</td>
</tr>
<tr>
<td>RACE</td>
<td>91% Caucasian or Asian</td>
</tr>
<tr>
<td>POST-SECONDARY</td>
<td>5.5 (3.1) years</td>
</tr>
<tr>
<td>INCOME</td>
<td>75% &gt; $60,000</td>
</tr>
<tr>
<td>EXPECTING FIRST BABY</td>
<td>64.7%</td>
</tr>
<tr>
<td>SINGLETON PREGNANCY</td>
<td>94.3%</td>
</tr>
</tbody>
</table>
SCREENING FOR ANXIETY WITH THE EPDS

<table>
<thead>
<tr>
<th></th>
<th>FULL EPDS</th>
<th>EPDS-3A</th>
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</thead>
<tbody>
<tr>
<td>Accuracy</td>
<td>65%</td>
<td>64%</td>
</tr>
<tr>
<td>Cut-score</td>
<td>5.5</td>
<td>3.0</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>68%</td>
<td>78%</td>
</tr>
<tr>
<td>Specificity</td>
<td>64%</td>
<td>61%</td>
</tr>
<tr>
<td>PPV</td>
<td>27%</td>
<td>29%</td>
</tr>
<tr>
<td>NPV</td>
<td>91%</td>
<td>93%</td>
</tr>
</tbody>
</table>
ANXIETY SCREENING TOOL

- Discriminant function analysis for item selection
  - 10-item scale
  - 7-item scale
- ROC curve analysis to assess sensitivity and specificity
- Replication in the prenatal sample

<table>
<thead>
<tr>
<th>7-ITEM SCALE</th>
<th>POSTPARTUM</th>
<th>PREGNANCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accuracy</td>
<td>72%</td>
<td>62%</td>
</tr>
<tr>
<td>Cut-score</td>
<td>4.0</td>
<td>4.0</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>84%</td>
<td>69%</td>
</tr>
<tr>
<td>Specificity</td>
<td>70%</td>
<td>72%</td>
</tr>
<tr>
<td>PPV</td>
<td>34%</td>
<td>34%</td>
</tr>
<tr>
<td>NPV</td>
<td>96%</td>
<td>92%</td>
</tr>
</tbody>
</table>
7-ITEM ANXIETY SCREENING SCALE

1. ...not being able to stop or control worrying
2. I get upset if objects are not arranged properly
3. I find it difficult to touch an object when I know it has been touched by strangers or by certain people
4. Heart palpitations bother me when I am around people
5. I am afraid of doing things when people might be watching
6. Being embarrassed or looking stupid are among my worst fears
7. Being "superalert" or watchful or on guard?
CONCLUSIONS

- Anxiety disorders should be screened for among pregnant and postpartum women.
- The EPDS functions poorly as a screening tool for perinatal anxiety disorders.
- The new, 7-item screening tool may prove to be a valid tool.
PAR LAB – PERINATAL ANXIETY RESEARCH LAB

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- parlab.med.ubc.ca