Postpartum Depression in Women Admitted to a Kangaroo Mother Care Ward

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Introduction

• Postpartum depression (PPD) incidence in developed countries is ± 10-15 % (1)

• Known associated factors:
  – Years of education
  – Social stressors and absence of support

• Limited data available in developing countries

• Study in Cape Town at a well baby clinic - PPD was found to be 35 % (2)

(1) Tomlinson et al. 2006 (2) Cooper et al. 1999
Effects of PPD on Infants

• PPD can have numerous effects on the infant
  – Decreased visual and verbal interaction (3)
  – Difficulty in breastfeeding and disturbed sleeping patterns
• Long term:
  – Difficulty in forming attachments
  – Adverse influence on social, verbal, cognitive and emotional development (4)

(3) Field et al. 2010  (4) Brand et al. 2009
Research question

• How many mothers with LBW and/or premature infants admitted to a KMC ward screen positive for PPD?
• What factors are associated with an increased risk to develop PPD?
Setting

• Kalafong Provincial Tertiary hospital
• Mainly low income patients from an urban setting
• Referral hospital for high risk pregnancies
• KMC ward consisting of 20 beds
• Step down unit
Edinburgh Postpartum Depression Scale\(^{(5)}\)

• The EPDS was developed and validated for use in the UK
• It is a 10-item self-report scale, designed specifically as a screening instrument for the postnatal period
• The 10 questions with choice of 3 answers where each answer carries a certain value
• Scores of 12 or more out of 30 predicted PPD

(5) Cox et al.
Modified EPDS (6)

• The language of the EPDS was simplified and validated for use in a South African multilingual, urban population
• It was administered verbally to participants
• A threshold of 12 on the EPDS identified:
  – 100% of women with major depression and
  – 71% of women with minor depression
• Positive predictive value 53% and negative predictive value 92%
Inclusion criteria

1. Mothers who voluntarily agreed to participate
2. Mothers with infants born less that 37 weeks gestational age
3. Infants with birth weights less than 2500 grams
Exclusion criteria

1. Caregivers other than mothers
2. Mothers with language barriers
3. Mothers whose babies have congenital abnormalities
4. Teenage mothers < 16 years
5. Mothers previously diagnosed with a mood disorder or who are on mood stabilising therapy
Methodology

• Permission obtained from Ethics committee at UP
• Short pilot study (December 2014)
• Data collection: 01/01/15-31/12/15
• Experienced research assistant interviewed mothers individually:
  – Informed consent obtained
  – Completed modified EPDS
  – Demographic questionnaire
• All women with scores ≥12/30 was referred for psychological evaluation and/or counselling
Demographic information

Mother
• Age
• Citizenship
• Gravity and parity
• Pregnancy planned
• Delivery method
• HIV status
• Social (education, employment, support)

Infant
• Birth weight
• Gestation age
• Gender
Results

- Total number of mothers interviewed: $n = 457$
- EPDS Score $\geq 12$: $n = 166$ (37%)
- Demographics
  - Mean age of mothers – 28 years
  - Mean weight of infants – 1670 grams
  - Mean gestational age – 34 weeks
  - Mean age at interview – 14 days
Residential Area – Socio Economic

- Informal settlements
- Established suburbs

<table>
<thead>
<tr>
<th></th>
<th>All</th>
<th>Depressed</th>
<th>%</th>
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</thead>
<tbody>
<tr>
<td>Informal</td>
<td>139</td>
<td>59</td>
<td>42%</td>
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<tr>
<td>Established</td>
<td>218</td>
<td>53</td>
<td>24%</td>
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</table>

0% to 100% categories are not fully visible in the image.
Education

- No schooling: 5, 20%
- 0-10: 101, 37%
- 11+12: 311, 38%
- After school: 40, 28%

p value: 0.555
Relationship

- Single: 182, 41% Depressed, 69% All, p value: 0.352
- Co-habitting: 134, 37% Depressed, 63% All
- Married: 80, 31% Depressed, 69% All
- Traditional: 57, 28% Depressed, 72% All
Miscarriages

- All: 35%
- Depressed: 41%
- %: 35%
HIV status

- All: 345 (35% positive, 65% negative)
- Depressed: 45 (40% positive, 60% negative)

p value: 0.668
### EPDS ≥ 12/30 (n=166)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Citizenship</th>
<th>Pregnancy planned</th>
<th>Employment father</th>
<th>Maternal grand parent support</th>
<th>Gender</th>
<th>p-values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citizenship</td>
<td>RSA citizen (140)</td>
<td>Non-RSA citizen (26)</td>
<td></td>
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<td>Female (93)</td>
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<tr>
<td>Pregnancy planned</td>
<td>Planned (75)</td>
<td>Unplanned (89)</td>
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<td>Male (73)</td>
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<td>Employment father</td>
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<td>Maternal grand parent</td>
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<td>0.558</td>
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<td>support</td>
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<td>Gender</td>
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<td>0.035</td>
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</table>
Limitations

• Observational descriptive study
• Mothers in a tertiary referral hospital
• High risk pregnancies and deliveries
• Language barrier to interviewing non-RSA citizens
In Summary

• PPD was found to be very prevalent in mothers with preterm and/or LBW infants
• 1 in 3 mothers were screened as having PPD
• Gender was the only associated factor found to be statistically significant
• More single mothers suffered from PPD compared to married ones
• Socioeconomic factors may influence why mothers from informal settlements had more PPD
Conclusion

• Screening for postpartum depression should be considered as part of routine post natal care

• From these findings it is important to have counselling and psychological support for mothers in the post partum period, especially those with preterm and / or LBW infants

• Appropriate treatment and follow-up for affected mothers to prevent long term complications for the infants
Acknowledgements

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  – ms. Tshifiwa Nkwenika
Bibliography


3. Field T. Postpartum depression effects on early interactions, parenting and safety practices. Infant Behav Develop. 2010; 33: 1-6
