Efficacy of existing parenting interventions and Prem Baby Triple P for improving the relationship between mothers and their preterm infants.

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Presentation Overview

- Background
- Systematic Review
- Prem Baby Triple P
Background

Preterm birth: 8.2 % (Aust.)
Mortality and morbidity

- Lung Dysfunction
- Cerebral palsy
- Blindness
- Deafness
- Chronic Respiratory disease
- Seizure disorders
Maternal difficulties

Infant’s medical Condition:
• Decreased physical contact
• Withdrawal – disappointment, hurt, guilt

Emotional problems
Maternal responsiveness
Relationship difficulties
Mother-preterm infant relationship

Mothers: secure attachment representations

- Mothers of preterm infant: 20% at 6 months and 30% at 12 months
- Mothers of term infants 53% and 57% (Borghini et al., 2006)

Infants: secure attachment

- Preterm infants: 44% at 12 months ca
- Term infants: 83% Strange Situation task (Wille, 1991)
...later development?

Language skills

Problem solving

Social development

Cognitive development

Behaviour
Transactional Model
(Sameroff & Chandler, 1975)

Preterm infant’s biological problems → Infant’s caregiving environment → Infant development

→ Parenting interventions
Preterm Mortality Rate

Rate per 1000 births

1960: 657.5
1986: 229.6
2006: 184.4

Singh and van Dyck, 2010
“Are parenting interventions effective in improving the relationship between mothers and their preterm infants?”

Aims

Primary
- efficacy of parenting interventions

Secondary
- delivery location, content, intensity, duration or delivery mode
Inclusion Criteria

1. RCT’s or quasi-RCT’s
2. < 37 weeks gestation with no major congenital abnormalities, and their mothers
3. Parenting interventions
4. Measure mother to infant and/or infant to mother attachment and/or relationship outcomes
5. Mother-preterm infant relationship data
6. Standardized mother-preterm infant relationship outcome measures
7. Articles written in English
Literature Search

Databases
- PsycINFO
- Cochrane Library
- CINAHL
- PubMed
- Web of Science

Search Terms
- preterm infant or prematurity
  AND
- parenting intervention OR parent education OR intervention
  OR parent intervention
  AND
- attachment OR mother-infant interaction OR mother infant interaction OR parent-infant interaction OR parent infant interaction
Results
• 17 RCT’s or Quasi-RCT’s
• 14 ≥ 6 PEDro → further analysis

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14 parenting interventions (MITP: 3 studies)
3 studies trialled 2 interventions
20 different assessment measures

8 of the 14 parenting interventions were found to improve the quality of the mother-preterm infant relationship.
## Outcomes

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<td><strong>Effect sizes</strong></td>
<td>0.38 – 2.81</td>
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<td>Mother-Infant Transaction Program (MITP)</td>
<td>LE SM-NSTEP-P</td>
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<td><strong>Conclusion</strong></td>
<td><strong>focused on cue-based care</strong></td>
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Summary

- Heterogeneity of current interventions
  - Structural framework
  - Assessment measures

Future direction

- Unified approach: streamlined, minimally sufficient, clinically
  - Cue-based responsive care – Attachment theory
  - Observational assessment (bi-directional, quality)
Prem Baby Triple P Study

Sample
92 families
(111 infants)

PBTP
48 families
(61 infants)

CAU
44 families
(50 infants)
Hypothesis

The parenting intervention Prem Baby Triple P compared to care as usual will improve the quality of the mother-very preterm infant relationship and a mother’s responsiveness to her very preterm infant at post intervention as measured by a mother-infant interaction observation, the Maternal Postnatal Attachment Scale (MPAS) and the Maternal Infant Responsiveness Instrument (MIRI).
Outcomes Measures

- **Maternal attachment**
  - Maternal Postnatal Attachment Scale (MPAS)
  - 19 items

- **Maternal responsiveness**
  - Maternal Infant Responsiveness Instrument
  - 22 items

- **Mother-infant relationship**
  - Emotional Availability (EA) Scale
  - 4 maternal items: sensitivity, structuring, non-intrusiveness, non-hostility
  - 2 infant items: responsiveness, involvement
  - 1 overall score
Analysis

• Linear regression
• Generalized estimating equations (correlated data)
• t-tests & chi-square tests (baseline characteristics)
Preliminary Results

Baseline Characteristics

- Maternal age
- Relationship status
- Education
- Employment
- SES
- Gender
- Birth weight
- GA

MPAS & MIRI
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<td>84.10 (1.32)</td>
<td>84.94 (0.99)</td>
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<td>Maternal Responsiveness (MIRI)</td>
<td>96.18 (1.30)</td>
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Next step....?

- 12 months ca data
- MPAS, MIRI & Observation
- Problems with 6 week ca
- Intervention effects
- Outcome ?
Outcome...
Acknowledgements

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