Preliminary evaluation of a primary care intervention for cry-fuss behaviours in the first 3-4 months of life (‘The Possums Approach’): effects on cry-fuss behaviours and maternal mood

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Background

The baby who cries and fusses
- Common
- Complex
- Exhausting and distressing
The average normal crying time per day, for infants 0 to 12 weeks of age

110-118 min per day

0 - 6 weeks of age

100

120

72 min per day

10 - 12 weeks of age

Total hours of crying per day
(infants 0 to 12 weeks of age)

1Wolke D, Samara M, Alvarez Wolke M. Meta-analysis of fuss/cry durations and colic prevalence across countries. 2011: Presented at the 11th International Infant Cry Research Workshop, 18-10 June 2011, Netherlands
Background

- 1 in 5 families report problem crying\(^1\)
- Many more commence formula because of unsettled behaviour\(^2\)
- Self-limiting at 16 weeks
- No long-term effects for most
  (the dynamic system of the family is inherently resilient!)\(^3,4\)

\(^1\)Wake 2006; \(^2\)Odom 2013; \(^3\)Wu 2013; \(^4\)Douglas 2013
Background

**Correlates with ↑ risk of:**

- Postnatal depression\(^1\)
- Child abuse\(^2\)
- Premature weaning\(^3\)
- Developmental problems in later childhood\(^4,5\)
  - Attention Deficit Hyperactivity Disorders\(^6\)
  - Feeding disorders\(^7\)
  - Autistic Spectrum Disorder\(^8,9\)
- Functional somatic symptoms at school-age\(^10\)
  - Migraine\(^11\)

Baby needs to be taught to self-settle?
Background

Families\textsuperscript{1}
\begin{itemize}
\item Receive conflicting advice
\item Difficulty accessing the help they need
\item Recourse to multiple health providers
\item Recourse to Emergency Departments
\end{itemize}

Expensive\textsuperscript{1,2}
\begin{itemize}
\item For parents
\item For health system
\end{itemize}

\textsuperscript{1}McCallum 2011; \textsuperscript{2}Morris 2001
## Methods

### Development:

**Key informant interviews**

<table>
<thead>
<tr>
<th>Category</th>
<th>Health professional group</th>
<th>Health discipline</th>
<th>Total number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary care practitioner</td>
<td>GPs, GP-IBCLCs, Child health nurses</td>
<td>General practice, Lactation consultancy, Child health nursing</td>
<td>5</td>
</tr>
<tr>
<td>Midwives</td>
<td>Midwives</td>
<td>Midwifery</td>
<td>6</td>
</tr>
<tr>
<td>Referral practitioners</td>
<td>Allied health professionals</td>
<td>Occupational therapy, Speech Pathology, Paediatric Physiotherapy</td>
<td>7</td>
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<tr>
<td>Medical specialists</td>
<td>Medical specialists (other than GPs)</td>
<td>Paediatrics, Perinatal psychiatry</td>
<td>3</td>
</tr>
<tr>
<td>Family therapists and counsellors</td>
<td>Family therapists and counsellors</td>
<td>Social work, Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

1Douglas AJPH 2011

*Lead. Inspire.*
Development: Systematic reviews

A. Theoretical foundations
   - Dynamic systems theory (complexity science)\(^1\)
   - Neurobiological model of infant crying\(^2\)

\(^1\)Douglas Arch Dis Child 2011
\(^2\)Douglas Med Hyp 2013

Lead. Inspire.
Methods

Development: Systematic reviews

B. Metanarrative mapping into 5 domains\(^1,2\)
- Baby’s health
- Mother’s health
- Feeds
- Sensation
- Sleep

[C. Applied functional contextualism (ACT)]

\(^1\)Douglas BMJ 2011; \(^2\)Douglas Curr Op Ped 2011
Methods

Development: Training

22 health professionals trained
- GPs, CHNs, psychologists,
- midwife-LC, paediatrician

Evaluation of training
- 2 focus groups
- Independent facilitators (Institute for Social Science Research UQ)
- Independent analysis
Methods

Delivery

- GPs (3)
- Midwife-lactation consultants (2)
- Perinatal mental health practitioner (1)
- Occupational therapist (1)

UQ Health Care (superclinic) 2011-2012
Evaluation

- Patients self-referred or HP-referred to ‘Possums Clinic for Unsettled Babies’
- Pre-consultation parent questionnaire
- Phone questionnaire 3-4 weeks after initial consultation
  - Independent research assistant
Evaluation

Measures include

- Crying pattern questionnaire (validated)
- Edinburgh Postnatal Depression Scale (validated)
- Likert scales for perception of sleep problems and maternal self-efficacy
Results

Feeding method

- 81% received any breastmilk in previous 24 hours
- 68.8% had used formula at some time prior to initial consultation
Crying Patterns Questionnaire

\[\leq 16 \text{ weeks } N=20\]
Evening: 1.5 to 0.5 hrs  
Night: 0.5 to 0 hrs  
Median total hrs cry/fuss in 24 hrs: 6.12 to 3  
Av age = 6.15 weeks

\[\leq 12 \text{ weeks } N=16\]
Evening: 2.0 to 0.875 hrs  
Night: 0.5 to 0.125 hrs  
Median total hrs cry/fuss in 24 hrs: 7 to 3.75  
Av age = 4.71 weeks
Edinburgh Postnatal Depression Scale

\[ \leq 16 \text{ weeks} \quad N=20 \\
\text{Pre-consultation} \ 11 \\
\text{Post-consultation} \ 6 \\
\text{Av age} = 6.15 \text{ weeks} \\

\leq 12 \text{ weeks} \quad N=16 \\
\text{Pre-consultation} \ 10.5 \\
\text{Post-consultation} \ 6.5 \\
\text{Av age} = 4.71 \text{ weeks} \]
Results

\[ \leq 12 \text{ wks and } \leq 16 \text{ wks} \]

Statistically insignificant improvement (\(p=0.221\)) in
- Maternal self-efficacy

No change in
- Hours of fussing and crying in morning or afternoon
- Feeding method
- Frequency of bouts of unsoothable crying
- Maternal perception of sleep as problem

Qualitative data positive about the service
Limitations

- Response rate 60.6%
- Small sample size
- Natural attrition of crying
Dissemination

- Publications
  - E.g. ‘How to treat: the crying baby’ May 2013 AusDoc
- Conferences
- Recorded webinars [www.possumsonline.com]
- Possums Level 1 Certification 28 November 2014
  - Pending CPD points and ALM RACGP
  - Metro North Medicare Local, Lutwyche

www.possumsonline.com
info@possumsonline.com
Dissemination

THE discontented LITTLE BABY BOOK
All you need to know about feeds, sleep and crying

DR PAMELA DOUGLAS

Lead. Inspire.
Possums Evidence-base

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