

# Postnatal depression – the impact for women and children and interventions to enhance the mother-infant relationship

**Postnatal depression can have a major impact for women and children. Zoe Tsivos, Dr Anja Wittkowski, Dr Rachel Calam and Prof Matthew Sanders review interventions that address the mother-infant relationship.**

Postnatal depression (PND) has a profound impact on maternal health and wellbeing, and both short-term and long-term implications for the developing child and wider family. Treatment is, therefore, a major public health concern. This research overview addresses:

- the timing and course of depression in the postnatal period
- the effects of depression for the mother and the developing child
- treatment options and their effectiveness, with a particular focus on the mother-baby relationship and programmes to improve mother-baby interaction and long-term outcomes

The NCT research overview series provides an evidence base to guide the practice of NCT and other transition to parenthood workers on topics of relevance during pregnancy, birth, parenthood and the care of babies and toddlers aged 0-2 years. Workers must decide how to apply the evidence in their practice but they can feel confident that the research overview provides an up-to-date, balanced and reliable summary and interpretation of the relevant research literature.

There is insufficient space to consider prevention of PND.

While this overview is not systematic, the authors have searched the following

databases: MIDIRS, Ovid, PsycINFO, Psycarticles, Medline and PubMed to identify studies on the effects of postnatal depression and psychological treatments. Reference lists from relevant literature were also searched manually.

## The timing and course of postnatal depression

*'PND is an illness that creeps up on you so slowly that it took over my life in every way... Depression affects everyone around you as they see you suffer... I was like a robot and just went on automatic but I always bonded and loved my baby.'* (CS, a PND sufferer. Personal communication, February 12, 2011.)

## 'Parents can be supported to improve their attachment to their baby'

Motherhood can be both rewarding and fulfilling. However, the stress and daily pressures of raising children impact on wellbeing. The postnatal period can be especially difficult for women already experiencing mental health problems, and for those with a history of serious mental health problems. Although depression is common in women at different ages and life stages, and the overall prevalence may not vary greatly,<sup>1</sup> women are particularly vulnerable to developing an episode of depressive feelings or clinical depression during the postnatal period.<sup>2</sup> It is estimated that at least one in ten women suffer from PND,<sup>3</sup> with episodes lasting from two to six months and in some cases longer.<sup>4,5,6</sup> While depression experienced in the antenatal period is thought to be the best predictor of PND,<sup>7,6</sup> psychosocial factors including poverty, marital difficulties, lack of a confiding relationship, life stressors (e.g., bereavement) are also contributing risk factors and are more predictive of

vulnerability to PND than biological or hormonal factors.<sup>1</sup>

The NICE guideline on *Antenatal and postnatal mental health* suggests that depressive illness in the postnatal period is not dissimilar from the prevalence at other times in a woman's life, though the incidence (the number of new cases with a postnatal onset) may be raised – one study found a threefold increase in the first five weeks postnatally (p62-3).<sup>1,2</sup> The guideline authors note that 'some changes in mental state and functioning are a normal part of the antenatal and postnatal experience...(including) sleep disturbance, tiredness, loss of libido and anxious thoughts about the infant'.<sup>6</sup> This demonstrates one of the challenges in defining PND.

Research studies use different methods for identifying PND, different criteria and different symptom thresholds. For example, some use the Edinburgh Postnatal Depression Scale (EPDS); a *screening* tool for PND, (higher scores indicating greater risk), whereas other studies use a professional *diagnosis*. Diagnostic criteria for PND also vary. Some define PND as onset of symptoms *within* the first four weeks postpartum, although there are also reports that 50% of cases start within three months and 75% of cases within seven months.<sup>8</sup> This means that there may be significant variance between study samples with implications for generalisability of research findings.

## Effects of depression on the mother

Like other episodes of depression, depression after childbirth affects the woman's feelings about herself and her interpersonal relationships, and notably the mother-baby relationship, the couple relationship and relationships with older children and the wider family.<sup>6</sup> Women with PND have an increased risk of future depressive episodes. In the postnatal period, an additional challenge for the mother is coping with depression at a time when there is a strong societal expectation that motherhood will be

joyful and rewarding.<sup>9-11</sup> Social expectations about motherhood can increase women's reluctance to disclose negative feelings.

Seven dimensions of the PND experience were identified: sleeping and eating disturbances, anxiety and insecurity, emotional lability (instability), mental confusion, loss of self, guilt and shame, and suicidal thoughts.<sup>12</sup> Researchers who have taken a specifically woman-centred approach and carried out qualitative interviews continue to add to the dimensions of understanding of PND. For example, Nicolson, who carried out one antenatal and three postnatal interviews with 24 previously depressed women found that women experienced losses and concerns which can affect mood and sense of wellbeing but are not covered by diagnostic criteria for clinical depression. These related specifically to childbirth and aspects of motherhood including physical adjustment (related to body changes), insecurities about health of their baby, and loss of former self including a shift in sexual identity.<sup>13</sup> Further research is needed on illness experiences and perceptions of women in the postnatal period.

#### Effects of depression on the child

Early relationships are central in promoting healthy social and emotional child development.<sup>14</sup> There are many factors which contribute to healthy development (often called protective factors), but development can also be disrupted by many factors (often called risk factors). PND has been identified as one such risk factor. Longitudinal studies have shown there is an impact on cognitive development, including language development and intelligence, depending on the child's gender, numerous social factors, and the timing and course of the mother's depression.<sup>15,16</sup> For example, mothers with PND display more negative behaviours towards their babies and their babies are less positive than babies of non-depressed mothers.<sup>18,19</sup> An Australian comparative observational study of 48 'depressed' and 40 'non-depressed' mother-baby pairs found an association between poor maternal responsiveness and poorer developmental patterns, specifically increased fussiness and lower IQ scores at 48 months in babies of women with PND at six months postpartum.<sup>16</sup> Several studies show that cognitive outcomes in babies are related to the quality of the early mother-baby relationship, which were not alleviated by later remittance of depression.<sup>17</sup>

Murray and Cooper have argued that the effects of PND on development are mediated through negative maternal beliefs (about themselves or their baby) and poor parenting practices (such as a lack of responsiveness or over-intrusive interaction with their baby).<sup>18</sup> This is underpinned by numerous studies which have now shown that a mother's ability to regulate her baby's state plays an important role in helping children develop strategies for managing their feelings and emotions.<sup>19-23</sup> In her book, *Why Love Matters*, Gerhardt outlines that not responding appropriately to a baby's needs may lead to prolonged increase of cortisol, a stress hormone, which may affect how babies tolerate stress later in life.<sup>21</sup> Van den Boom reports that educating low-income mothers of irritable babies on how to respond appropriately to their babies' fussy behaviour was central to them forming secure attachment bonds with their baby.<sup>24</sup> Research shows that responding appropriately *most of the time* is key to a parent's ability to regulate and soothe their baby during periods of distress. Perhaps more importantly, findings demonstrate that parents can be supported to improve their attachment with their baby despite research showing the negative long-term impact of PND on child development.<sup>21</sup>

## 'Mothers with PND display more negative behaviours towards their babies'

It is important to interpret research findings with caution. It would be overly simplistic, and deterministic, to imply that maternal depression is exclusively responsible for developmental difficulties or that the effects are immutable. Every child comes into this world with a unique biology and temperament, and development is a dynamic process; with support and treatment maternal mood can improve and developmental pathways in children can be repaired.<sup>25</sup>

#### Evidence-based interventions for maternal depression and PND

Given the impact of PND on mother and baby and their relationship, effective timely intervention is paramount.<sup>26</sup> NICE

recommends a range of psychological interventions in different circumstances, based on their review of the evidence. The guideline provides evidence on self help approaches, listening visits, CBT, Interpersonal Psychotherapy (IPT) and antidepressant (AD) medication (where preferred) for treatment of mild to moderate PND.<sup>1</sup> These guidelines have been summarised and discussed for NCT practitioners previously.<sup>27</sup> The evidence for some of these treatments is reviewed below.

#### Pharmacological treatment

'I had a nightmare with medication and had about seven different antidepressants, none of which worked.'

Anti-depressant (AD) treatment is recommended for PND by NICE. However, women with symptoms are often reluctant to take medication, due to fear of dependency and possible effects for breastfed babies. In a qualitative study, women's views on taking ADs varied depending on the emotional and practical support they received from family, friends and, particularly, the views of their general practitioner.<sup>28</sup>

Despite reports that ADs are safe while breastfeeding, the long-term effects of ADs on the baby are still unknown.<sup>29-31</sup> Other, non-invasive, treatment approaches have been compared with ADs with the objective of finding an efficacious alternative. As well as assessing depressive symptoms and behaviour in the mother, another important outcome is the mother-baby relationship. A recent trial comparing medication with eight (90 minute) non-directive counselling sessions conducted by health visitors found the medication was more effective at reducing depressive symptoms in the mother.<sup>32</sup> However, the effect on the mother-baby relationship was not assessed. Given the effect that depression has on mother-baby interaction, it is important for research to establish whether AD treatment on its own is sufficient to improve the quality of the mother-baby relationship.

#### Psycho-education groups

Psycho-education groups have been offered to treat PND in the UK and elsewhere. One British study found that women with probable PND who attended a psycho-education group (8x2 hour sessions) scored significantly lower on the EPDS compared with a group of women receiving usual care

only.<sup>33</sup> Although significant reductions in depressive symptoms were found in the treatment group, the sample had not received professional diagnoses of depression, making it difficult to generalise these findings to clinical populations. Further research is needed, including professional diagnoses of depression and longer follow-up periods.

### Cognitive Behaviour Therapy

There is extensive research that supports cognitive behaviour therapy (CBT) as an effective treatment for depression occurring outside the perinatal period. Reviews of studies providing interventions based on CBT for PND report mixed findings. The most recent review assessed studies of CBT, psychodynamic therapy and nondirective counselling.<sup>30</sup> Two of the three CBT studies found statistically significant differences.<sup>34,35</sup> The third, a small RCT in which women in the comparison group received parenting advice and non-specific emotional support, found positive, non-significant differences.<sup>36</sup> Only two of these studies followed their design protocols.<sup>36,35</sup>

In a four-arm RCT (n=192), not included in the review, CBT was compared with individual counselling, group counselling and treatment as usual (TAU) in women with a diagnosis of PND.<sup>17</sup> Improvements in depressive symptoms were not maintained at 12-month follow-up. Another four-arm RCT comparing CBT, psychodynamic therapy, non-directive counselling and TAU to treat PND, showed a significant reduction in maternal depression symptoms across all treatment groups compared with the TAU post-intervention, but improvements were not maintained at 9, 18 and 60 months.<sup>37</sup>

CBT appears to be an effective short-term treatment for PND, but there is little evidence of a sustained reduction in depressed mood compared with other interventions and the implications for the mother-child relationship and child development are unclear, so further research is needed.

### Interventions focusing on the mother-baby relationship

'Infants and mothers do not dance like Fred Astaire and Ginger Rogers but, instead, the way that most of us dance – with frequent stepping on toes, apologies, and the pleasure of then dancing a few coordinated steps together' (p.148)<sup>23</sup>

### Mother as affect regulator

Interventions that focus on the mother-baby relationship draw on theory and evidence regarding the role of the mother as a regulator of their baby's affective states. Studies show that mothers and babies are not always in harmony; often they are in states of disynchrony.<sup>23</sup> The key difference between depressed and non-depressed mothers is that non-depressed mothers are able to repair those moments of dysynchrony with their baby, adjusting and responding to get back in tune.

## 'Baby massage is promising for both parents'

There is good evidence from programmes designed to support depressed or vulnerable mothers in their relationship with their baby that interventions focusing on the mother-baby relationship are helpful.<sup>38</sup> Some of these have focused on developing the knowledge, skills and communication of professionals who work with families and some have focused directly on families.

### Interventions with professionals

The UK-based *Solihull Approach* focuses on developing the skills of community health workers to support the parent-baby relationship.<sup>39</sup> The main aim is to promote a collaborative relationship between practitioners and parents to encourage parents to develop sensitive and attuned parenting.<sup>39</sup>

### Interventions with parents

- Interventions based on baby massage focus directly on parents and have had beneficial results in both parents.<sup>40</sup> The first RCT to test the efficacy of baby massage (five x 75 minutes sessions) in the treatment of PND found significantly lower depression scores in the baby massage group and overall improved quality mother-baby relationships compared with controls.<sup>41</sup> These preliminary findings are promising, though the study reported high drop rate and did not measure long-term outcomes.
- A Canadian intervention, Keys to Caregiving, consists of five weekly group

session designed to help women with PND understand and respond to their infants. A before and after observational study showed that post-intervention, babies displayed an increase in interest and joy during interaction with their mothers. However, there was no comparison group in the study, which indicates the need for a controlled trial to verify the potential benefits of this intervention.<sup>42</sup>

- An Australian programme to educate mothers to facilitate a positive and interactive connection (EPIC) with their baby was piloted with 10 depressed mother-baby pairs aged under 12 months.<sup>43</sup> EPIC focuses on facilitating mother-child relationships through 'education' (social and learning activities), a 'circuit of activities' (guided stimulus for mum and baby) and 'creativity' (mother-centred activity). Interviews conducted at post treatment suggest that women found this to be a highly acceptable programme.
- A small RCT conducted in the Netherlands involving 71 depressed mother-baby pairs were randomised to the treatment or control arm. In the treatment arm women received 8-10 sessions of an intervention according to perceived need: either 'modelling', 'cognitive restructuring', 'practical support' or baby massage. In the control group mothers were offered practical parenting advice in three telephone calls. They were videotaped and given feedback.<sup>44</sup> At six months follow-up, mother-baby pairs in the treatment groups showed significantly increased maternal sensitivity and better attachment and developmental outcomes for babies.

### Parenting skills

The role of parenting is central in promoting child development. Meany proposed a direct link between the nature of parental care and an increased risk of emotional and behavioural problems across child development.<sup>45</sup> Warm and supportive families are protective for women and for children. For parents with mental health problems including PND it may be helpful to address parenting skills.<sup>46</sup>

- Parenting programmes, such as the Triple P Positive Parenting Programme, promote positive parenting behaviours.<sup>46-50</sup> Triple P aims at 1) enhancing parental knowledge and resourcefulness; 2) promoting nurturing,

low conflict environments for children; and 3) promoting children's social, emotional and intellectual competencies through positive parenting practices. The framework is developmentally sensitive and offers flexible delivery.<sup>51</sup>

- The Baby Triple P programme has been developed to strengthen the knowledge, coping skills and confidence of parents of babies. So far, no study has investigated the effectiveness of Baby Triple P in the treatment of women with PND. Building on the good evidence base for Triple P programmes for older children, Baby Triple P is designed to address difficulties experienced by women with mild to moderate PND, including managing expectations around parenthood, supporting the partner relationship, coping with stress and promoting understanding of babies' development.

Thus, despite promising findings, interventions focusing on the mother-baby relationship are still at an early stage of development. A recent review of RCTs aimed at treating PND through focusing on the mother-baby dyad found that studies that report improvements in mother-baby interaction do not always promote improvements in babies' developmental outcomes.<sup>52</sup>

At the University of Manchester, a pilot trial is under way examining whether the Baby Triple P programme reduces symptoms of PND and improves the quality of the mother-baby relationship. Until March 2012, first-time mothers aged 18 to 45, who have a healthy baby under 12 months old and who live in Greater Manchester are invited to participate if they are experiencing symptoms associated with PND. For more information contact the research team at: [zoe-lydia.tsivos@postgrad.manchester.ac.uk](mailto:zoe-lydia.tsivos@postgrad.manchester.ac.uk) or visit [www.psychsci.manchester.ac.uk/pfrg/aboutus/currentstudies/howtotakepart/babytriplep/](http://www.psychsci.manchester.ac.uk/pfrg/aboutus/currentstudies/howtotakepart/babytriplep/).

### Discussion and conclusion

This overview describes a range of approaches to treating PND and summarises available evidence of their efficacy. Much of the available research is weak in terms of overall design, sample size and reporting,<sup>53,54</sup> and there is currently insufficient evidence to single out one specific treatment or strategy.<sup>54,55</sup> Further development of programmes and detailed research and evaluation are needed.

Despite routine screening for PND around six-to-eight weeks postpartum, many women resist disclosure of the full extent of their negative feelings, fearing the consequences, so there are challenges in identifying and engaging women who might benefit from interventions.<sup>56,57,58</sup>

Government policies provide frameworks for further promotion of mental health, highlighting the importance of promoting parenting skills and attachment and acknowledging the importance of a positive start in life.<sup>59,60,61</sup> There is a huge unmet need for interventions and a range of potential opportunities to explore including 'nontraditional service providers, self-help interventions, and the media'.<sup>62</sup>

Recent reviews by Frank Field and Graham Allen have reinforced the importance of early intervention for families, and made practical recommendations to improve long-term opportunities.<sup>63,64</sup>

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### Key points

- Given the evidence for the impact of PND on women and mother-baby relationships, interventions should promote both maternal and infant mental health, focusing on the mother-child relationship.
- Women coping with depression may benefit from an intervention that helps them to manage their symptoms while also improving their relationship with their baby, including their skills in

regulating their baby's emotions.

- It is important for care providers to minimise the barriers to women seeking help, addressing their fears that they may be judged as an inadequate mother and risk their baby being taken from them.
- Despite promising developments, further research on interventions to alleviate PND is needed, particularly evaluation of the impact on long-term outcomes including maternal mood, child development and the quality of the mother-baby relationship.

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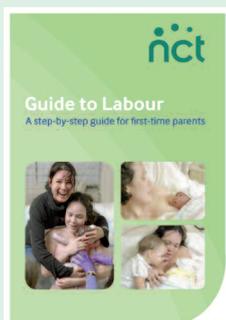
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[www.nctprofessional.co.uk](http://www.nctprofessional.co.uk) or call 0845 8100 100



## Handouts for Parents

### Guide to labour

Code 1606 **£2.50** or **£2.00**  
 each when you buy 10



### Fathers and Breastfeeding

Code 1713 **£4.50**  
 pad of 50 sheets



### Positions in Labour and Birth

Code 3254PAD **£4.50**  
 pad of 50 sheets



With so much discussed in classes and midwife visits, having specific information sheets and handouts will help parents recall the discussions and activities from the classes or meeting.

Full range available from  
[www.nctprofessional.co.uk](http://www.nctprofessional.co.uk)  
 0845 8100 100