The Parental Relationship with the Unborn Baby: Key concepts and evidence

Parenting begins in pregnancy and impacts the unborn baby via 2 pathways:

Direct Physiological Pathway

A direct physiological pathway in which maternal health behaviours such as smoking, drinking and use of substances, have a direct influence on the unborn baby as a result of the fact that these substances cross the placental barrier and influence the rapidly developing fetal organs and their neurological development.

Indirect Psychological Pathway

An indirect psychological pathway that involves the way in the mother feels or thinks about her unborn baby (i.e. her relationship with them) indirectly impacting the baby as a result of its influence on her interactions post birth.

This factsheet focuses primarily on the processes involved in the psychological pathway – the relationship with the unborn baby.

Some factors such as antenatal anxiety and depression and exposure to domestic abuse can involve both pathways.

Key concepts capturing the relationship with the unborn baby

Key concepts

- **Maternal/paternal-fetal attachment or bonding**
- **Parental representations of the unborn baby**
- **Parental reflective functioning or mind-mindedness**

The literature focusing on ways of assessing the relationship with the unborn baby is based on three key concepts:

Maternal/paternal-fetal attachment – refers to the parent's sense of **emotional closeness or bond** towards the unborn baby, as demonstrated by their thoughts, feelings and behaviours.

Maternal or paternal prenatal mental representations of the baby and themselves as a parent-to-be, refers to the projections, dreams, attributions, and unconscious fantasies that derive from their own childhood attachment experiences.

Maternal prenatal reflective functioning or mind-mindedness refers to the ability of the parent to perceive and interpret their own and their unborn baby's behaviour in the context of existing or future mental states, such as feelings, wishes, goals and desires. For example, pregnant parents who have high reflective functioning or mind-mindedness are more inclined to think about their babies and what they might be like.

A range of tools have been developed to measure the above aspects of the relationship - see p.3 below.

Parental representations of the unborn baby classification system

The Working Model of the Child Interview (WMCI) uses the following categories to classify the narratives of women following a an interview to explore her mental representations:

Balanced narratives include both positive and negative characteristics of the child's personality or the caregiver's relationship with the child. They convey a sense of the caregiver as deeply involved in the relationship with the child, as recognizing and valuing the child's individuality, as empathically appreciating the child's subjective experience, and as valuing the child and the relationship with the child

Nonbalanced, "disengaged" narratives are characterized by pervasive emotional distance or indifference toward the child. The topic of the child or caregiver's relationship with the child may be approached at a cognitive level and be remote from feelings and emotions.

Nonbalanced, "distorted" narratives are characterized by distortion of the mother's mental representation of her child and/or relationship with the child. The distortion may take one or more of the following forms: devaluing or excessively negative, self-referential, or role-reversed.

Taken from Benoit, Parker, & Zeanah, 1997

What factors affect the parent's relationship with the unborn baby?

A recent review examined a range of factors – i) individual (e.g. personality, age etc.), ii) relational (e.g. marital relationship, family alliance etc.), and iii) contextual factors (e.g. prenatal screening, treatment, IVF etc), and found the following:

Factors that were **negatively** associated with maternal fetal attachment (MFA) included disordered eating behaviours and depression, detachment and ambivalence about the pregnancy, smoking during pregnancy and lack of social support were negatively associated with MFA.

Factors that appeared to be **positively** associated with MFA included attitude to childbearing and awareness of the fetus, psychological maturity, relationship satisfaction, perception of support from partner, and a secure attachment style with their partner.

For fathers, ambivalence about the pregnancy and detachment were negatively associated with attachment to the fetus, while psychological maturity and marital satisfaction were positively associated with such attachment.

Why does this matter?

How a mother thinks or feels about her unborn baby is a strong indicator of how she will bond and interact with him/her in the postnatal period.

Bonding after the birth

Findings from the most recent systematic review of 19 studies that assessed the relationship between MFA and postnatal parent to infant attachment (found that higher pre-natal attachment led to more parent-to-infant attachment, and fewer post-partum bonding disorders.

These results were found both in women and men, in normative and at-risk pregnancies, and irrespective of the use of a range of assessment approaches (i.e., self-report measures, observations, and projective measures).

Parent-infant interaction

Findings from a systematic review that included data gathered from 14 studies involving a total of 1862 mothers and fathers, showed modest but robust associations with observed parent-child interaction quality. This review included studies that had measured the relationship with the unborn baby using a range of measures that are used to tap into both thoughts (i.e. representations/reflective functioning) and feelings (i.e. emotional bond with the unborn baby).

Infant attachment

A small number of studies also show that prenatal representations are associated with infant attachment at 12 months postnatal. So women classified as 'balanced' were more likely to have infants whose attachment was classified as 'secure' and mothers classified as 'disengaged' or 'distorted' were more likely to have infants classified as 'insecure' in 'disorganised'.

What are the implications for Practice?

The above findings suggest the potential benefit of:

- identifying women in need of additional support to bond with the baby before birth;
- skilling up the workforce to enable them to deliver techniques/methods of support that have been shown to improve the relationship with the unborn baby

Identifying women in need of support

2 types of measure have been developed to assess the parent-relationship with the unborn baby:

Parent-reported Outcome Measures (PROMS) – self report questionnaires such as the Parental Bonding Inventory (PBI); Mother-Object Relationship Scale (MORS) and the Maternal/Paternal Antental Attachment Scale (MAAS/PAAS). These are on the whole:

- Easy to administer and score
- Rely on the insight of the parent to report accurately

Clinician-reported Outcome Measures (CROMS) – clinician assessed/administered tools include interviews such as the Working Model of the Child and observational tools such as the Parent-Infant Interaction Scale (PIIOS), the CARE Index or the National Institute of Child Health and Human Development (NICHD) scale. These are on the whole:

- More time consuming to administer and score
- More accurate

HOWEVER, the best approach for frontline practitioners in the first instance is to talk to all mothers-to-be about how they are feeling about their unborn baby. A number of simple probes could be used for this purpose, some examples of which are included in the Antenatal Promotional Guide https://www.nursinginpractice.com/clinical/womens-health/promoting-early-infant-development

Supporting women to develop a relationship with the unborn baby

Fetal awareness interventions aim to help parents to be more conscious of the unborn baby by drawing their attention to experiences such as quickening, which may reinforce the conception of the fetus as a person in his/her own right, and a range of methods of doing this have been developed and evaluated.

Fetal Awareness Interventions

- **Ultrasound scans/imaging**
- **Movement counting**
- **Music therapy/singing to the infant**
- **Psychoeducation interventions**

The evidence regarding these methods of working is mixed and suggests that a combination of these approaches might be most effective.

An example of one such UK based model of working is Baby CHAT which is a novel, single-session group antenatal intervention, incorporating 4D scan video footage.

It aims to improve RF by helping parents think about the experience and characteristics of their unborn baby and to improve pre-natal bonding by encouraging parents to do activities with their baby pre-birth to enhance emotional ties and feelings of closeness (i.e. stroking the bump; talking and singing to their baby). Early findings suggest that this brief intervention improved prenatal reflective functioning and antenatal attachment to the unborn baby.

Women experiencing more significant problems in terms of anxiety or depression or unresolved trauma, will need more intensive interventions that focus on treating the presenting mental health problem. This may also involve the delivery of one of the many group-based Preparation for Parenthood programmes:

Pregnancy in Mind
https://learning.nspcc.org.uk/research-resources/2020/pregnancy-in-mind-process-evaluation

or individually focused home visiting programmes such as:

Minding the Baby -
https://medicine.yale.edu/childstudy/education-and-training/professional-development/minding-the-baby

both of which are focused on improving parental reflective functioning and their ability to relate to the unborn baby.