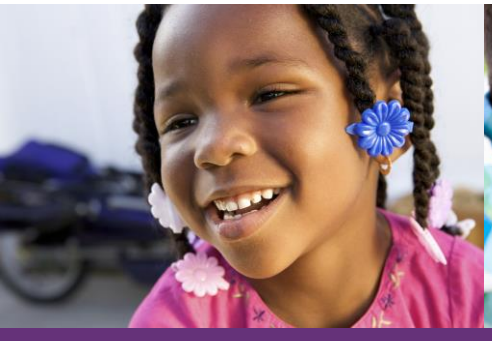
Workshop A
What does the evidence tell us?
Parent-child interactions and the Healthy Child Programme

Alison Burton, National lead for Maternity and Early Years, Public Health England *(Chair)*

Dr Nick Axford, Head of What Works, Dartington Social Research Unit
Dr Kirsten Asmussen, Evidence Analyst, Early Intervention Foundation




Opening remarks from the chair

EARLY INTERVENTION FOUNDATION

Alison Burton, National lead for Maternity and Early Years, Public Health England

#EIFEarlyYears
@theEIFoundation
eif.org.uk

Dr Nick Axford,
Head of What Works,
Dartington Social Research Unit

EARLY
INTERVENTION
FOUNDATION

#EIFEarlyYears
@theEIFoundation
eif.org.uk

DARTINGTON
SOCIAL
RESEARCH
UNIT

Attachment and attachment-related outcomes in pre-school children: a review of reviews

Nick Axford

We undertook a rapid review of reviews for Public Health England to update the evidence on a range of topics covered by the Healthy Child Programme 0-5, involving authors from DSRU and the Universities of Warwick, Coventry and Plymouth (Axford et al., 2015a). **Chapter 7 focused on attachment and attachment-related outcomes**.

The review was conducted in parallel to a rapid review for the Early Intervention Foundation focusing on interventions to improve parent-child interaction from conception to age 5 with a view to improving children's social, emotional and behavioural development and language and communication skills, involving authors from DSRU and the Universities of Warwick and Coventry (Axford et al., 2015b).

This slideshow draws mainly on the first of these reviews, although there is some overlap between the two. **It includes relevant systematic reviews and meta-analyses published in the period 2008 to 2014.** It does not include relevant RCTs published in the same period but not covered in the reviews, although these are covered in the PHE review and a related article based on that review (Barlow et al., 2016).

Mortensen and MasterGeorge (2014) included 18 studies (inc. 15 RCTs) of relationship-based parenting interventions (inc. home visiting, VIPP, Parent-Infant Programme, Family Check-Up, and pregnancy programmes focusing on alcohol use), **all targeting low-income mother-child dyads** (starting prenatally or when child <48mths).

A meta-analysis found a small mean effect size (d=.23), indicating that relationship-based interventions for low-income families are modestly effective at increasing observed parent-child interactions.

The authors concluded that **overall the effectiveness of relationship-based parenting interventions to facilitate supportive parent-child interactions among socio-economically disadvantaged families with infants and toddlers is significant, yet small**.

Results were most effective for programmes that: were shorter in duration; provided direct services to the parent-child dyad; used intervenors with professional qualifications; and assessed parent-child interactions with free-play tasks.

Kersten-Alvarez et al. (2011) included 10 controlled studies evaluating 13 preventive interventions (inc. interpersonal psychotherapy, non-directive counselling, CBT, infant massage, home-based interaction coaching, parent training, support group, and mother-infant therapy), **aimed at improving sensitivity in depressed mothers**. All except one started in child's first year.

In the meta-analysis, the average overall effect on maternal sensitivity was small-to-medium (g=.32), although effect sizes in individual studies varied considerably and one study (focused on teenage mothers) was particularly influential. Interventions providing infant massage were found to be highly effective in improving maternal sensitivity (g=.85).

The authors concluded that **depressed mothers' sensitivity can be improved by preventive intervention** and that **baby massage may be an effective intervention method to evoke short-term changes in maternal sensitivity**.

Infant massage commonly involves teaching infant massage strokes within a group setting on a weekly basis.

Bennett et al. (2013) included 34 RCTs involving healthy parent-infant dyads in which the infant was <6 months.

No significant effects were found for a range of aspects of infant temperament, parent-infant interaction and mental development.

The authors concluded that **the findings do not currently support the use of infant massage with low-risk groups of parents and infants**. They argue that there may be more potential for change with demographically and socially deprived parent-infant dyads, and that future research should focus on this.

Video feedback involves a professional video-taping up to 10 minutes of interaction between a parent/carer and their baby, returning subsequently to view the tape with the parent and examine examples of positive parent-infant interaction.

Fukkink (2008) included 29 studies (23 included children <5 years) examining the effectiveness of video feedback on parental behaviours, sensitivity, responsiveness, verbal and non-verbal communication, and child problem behaviours.

A meta-analysis showed a positive, statistically significant effect (ES=.47) for video feedback intervention on parenting behaviours. **Brief video feedback interventions with parents in high-risk groups were the most effective**. The aggregate effect on child behaviour was described as being between 'small' and 'average' (ES=.33).

The authors concluded that **family programmes with video feedback achieve the intended dual level effect: parents improve their interaction skills, which in turn help their children's development**. Parents become more skilled in interacting with their child and experience fewer problems and gain more pleasure from their role as parent.

Video feedback

Home visiting programmes are manualised interventions that involve an intensive series of home visits beginning prenatally (in some models), and continuing during the child's first two years of life, by specially trained personnel who provide information, support and training regarding child health, development and care.

Nievar et al. (2010) evaluating the effectiveness of home visiting for at-risk families on attachment-related outcomes (included 29 controlled studies).

Interventions were moderately successful (d=.37) at improving maternal behaviours, as measured by a combination of survey and observational measures that assessed the home learning environment and maternal sensitivity. Programmes with more frequent contact between home visitors and their clients are most successful. It is notable that positive effects were achieved with trained paraprofessionals.

The authors concluded that **appropriate and frequent home visiting for low-income families improves the environment of children's development by improving maternal behaviour**.

Parent-infant/child psychotherapy (PIP) involves a therapist working with the parent and infant/toddler together. It aims to help the parent to recognise how their current interactions are shaped by past experiences in order to enable them to respond more freely and sensitively to their infant.

Barlow et al. (2015) evaluated the effectiveness of PIP (8 RCTs comparing the effectiveness of PIP with a no-treatment control *or* comparing PIP with other treatment (inc. an infant-led model of PIP, counselling/CBT and interaction guidance).

Meta-analyses indicated that parents who received PIP were more likely to have an infant who was rated as being securely attached to the parent after the intervention; however, there were no significant differences in studies comparing outcomes of PIP with another model of treatment (e.g. video interaction guidance, counselling, CBT).

The authors concluded that **PIP is a promising model in terms of improving infant attachment in high-risk families** but that **further research is needed into its impact on potentially important mediating factors** (e.g. mental health, reflective functioning, parent-infant interaction).

Parent-infant/child psychotherapy (PIP)

Collectively the studies show evidence **of small-to-medium improvements in a range of outcomes related to infant/child attachment security**, inc. parental sensitivity and reflective functioning.

The **theories of change underpinning the different programmes are diverse**, and **there is an increasing eclecticism**, with programmes drawing on different theoretical traditions. Almost all (except home visiting) build in the use of video feedback.

There **is considerable divergence in terms of the frequency and duration of interventions**, with home visiting often involving intensive visits over a prolonged period and most other types of programme involving intensive work over brief periods. The limited evidence regarding their comparative effectiveness suggests little difference between them (Barlow et al., 2015).

Although some of the interventions need to be delivered by specialist practitioners (e.g. psychologists and parent-child psychotherapists), many of the remaining interventions are manualised, and **some can be delivered effectively by health visitors as part of the Healthy Child Programme following appropriate training** (e.g. video feedback).

Many of the identified interventions are not currently routinely available to children, despite the high prevalence of disorganised attachment in disadvantaged populations, and the strong association between such attachment patterns and later problems.

Key messages

Axford, N., Barlow, J., Coad, J., Schrader-McMillan, A., Bjornstad, G., Berry, V., Wrigley, Z., Goodwin, A., Ohlson, C., Sonthalia, S., Toft, A., Whybra, L. & Wilkinson, T. (2015a) *Rapid Review to Update Evidence for the Healthy Child Programme 0-5*. London: Public Health England.

Axford, N., Barlow, J., Coad, J., Schrader-McMillan, A., Sonthalia, S., Toft, A., Wrigley, Z., Goodwin, A., Ohlson, C. & Bjornstad, G. (2015b) *The Best Start at Home: What Works to Improve the Quality of Parent-Child Interactions from Conception to Age 5 Years? A Rapid Review of Interventions*. London: Early Intervention Foundation.

Barlow, J., Schrader-McMillan, A., Axford, N., Wrigley, Z., Sonthalia, S., Wilkinson, T., Rawsthorn, M., Toft, A. and Coad, J. (2016) Attachment and attachment-related outcomes in pre-school children: a review of recent evidence. *Child and Adolescent Mental Health* 21 (1), 11-20.

*Barlow, J., Bennett, C., Midgley, N., Larkin, S.K., Wei, Y. (2015). *Parent-infant psychotherapy for improving parental and infant mental health.* Cochrane Database of Systematic Reviews, Issue 1. Art. No.: CD010534. DOI: 10.1002/14651858.CD010534.pub2.

*Bennett, C., Underdown, A., & Barlow, J. (2013). Massage for promoting mental and physical health in typically developing infants under the age of six months. *Cochrane Database of Systematic Review, 2013 (4)*.

*Fukkink, R. G. (2008). Video feedback in widescreen: A meta-analysis of family programs. *Clinical Psychology Review, 28*(6), 904-16.

*Kersten-Alvarez, L. E., Hosman, C. M. H., Riksen-Walraven, J. M., Van Doesum, K. T. M. & Hoefnagels, C. (2011) Which preventive interventions effectively enhance depressed mothers' sensitivity? A meta-analysis. *Infant Mental Health Journal,* 32 (3), 362-376

*Mortensen, J. A., & Mastergeorge, A. M. (2014). A Meta-Analytic Review of Relationship-Based Interventions for Low-Income Families with Infants and Toddlers: Facilitating Supportive Parent–Child Interactions. *Infant Mental Health Journal*, *35*(4), 336-353.

*Nievar, M. A., Van Egeren, L. A., & Pollard, S. (2010). A meta-analysis of home visiting programs: Moderators of improvements in maternal behavior. *Infant Mental Health Journal, 31*(5), 499-520.

References (* indicates review included)

DARTINGTON SOCIAL RESEARCH UNIT

The Dartington Social Research Unit is an independent charity that brings science and evidence to bear on policy and practice in children's services to improve the health and development of children and young people.

nick.axford@dartington.org.uk

DARTINGTON SOCIAL RESEARCH UNIT

The Warren House Group at Dartington (trading as The Dartington Social Research Unit) is a company limited by guarantee registered in England (Company No 04610839), and a registered charity (Charity No. 1099202).
Registered Office: Lower Hood Barn, Dartington, Totnes, Devon, TQ9 6AB, with satellite offices in London and Glasgow
info@dartington.org.uk | 01803 762400 | dartington.org.uk

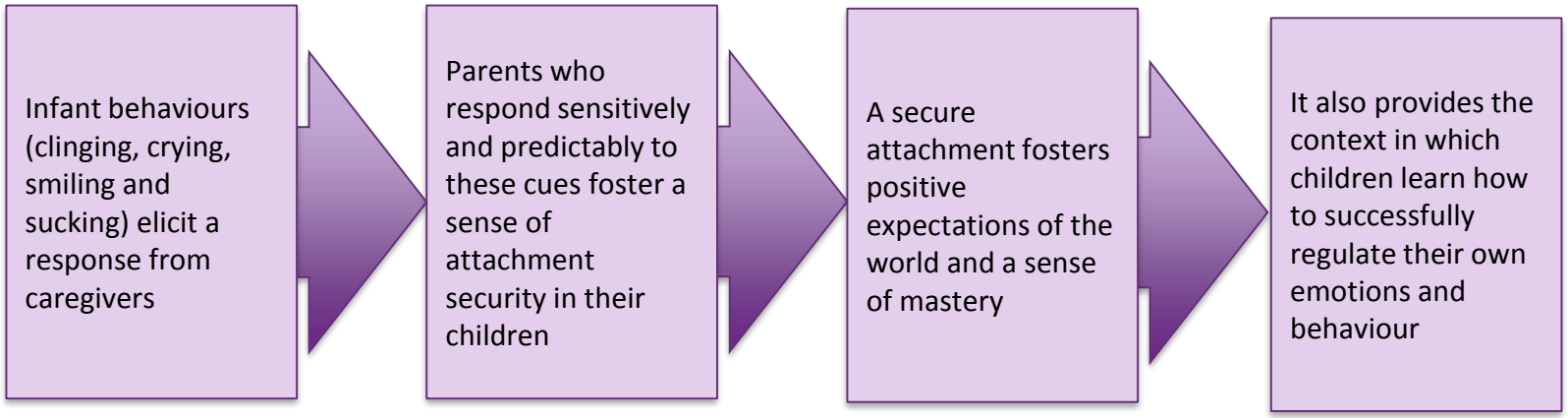
Dr Kirsten Asmussen,
Evidence Analyst,
Early Intervention Foundation

EARLY
INTERVENTION
FOUNDATION

#EIFEarlyYears
@theEIFoundation
eif.org.uk

Supporting the attachment relationship

EARLY INTERVENTION FOUNDATION



- Parents are in the best position to support their child's attachment security if they were securely attached as a child (Main et al., 1985)
- Attachment security is malleable. Life events may change attachment security over time (Sroufe et al., 2011)
- Interventions that aim to improve parents' sensitivity work best for children with a disorganised attachment (Cicchetti et al. 2006; Lieberman et al. 2006).

Supporting the attachment relationship

EARLY INTERVENTION FOUNDATION

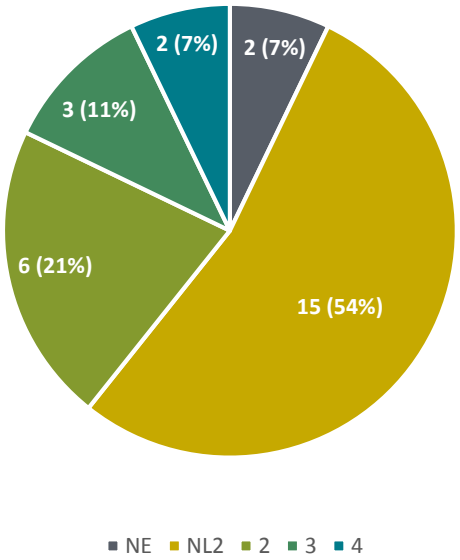
- The primary aim of attachment programmes is to help parents understand their infants' cues and respond sensitively to them
- The programmes with the strongest evidence improve maternal sensitivity and children's social and emotional skills
- Key risks for attachment problems include maternal mental health, a poor attachment history or other serious stresses
- Targeted and Specialist interventions often make use of one-to-one coaching and video feedback
- Targeted and Specialist interventions also often include therapeutic work with parents (lasting a year or longer)

Supporting the attachment relationship

EARLY INTERVENTION FOUNDATION

- Interventions that aim to support the attachment relationship are relatively new (20 years old)
- The majority of programmes are still in a pilot stage of development
- They *tend to* target parents at the time of the child's birth or within the first year
- They are *typically* offered to parents on a one-to-one basis
- They are *typically* offered to parents by individuals with a Master's level qualification or higher in a helping profession – typically nursing, psychology and social work

Interventions supporting the attachment relationship by strength of evidence



Established Evidence
- Family Foundations

Programme aims – to help parents establish a positive co-parenting relationship in meeting the needs of their child.

For whom – Low-risk couples expecting their first child.

What happens? – Groups of eight to ten couples attend five group sessions embedded in a standard childbirth class in the last trimester of the mother's pregnancy. During these sessions, parents learn strategies for establishing a positive co-parenting relationship when the baby arrives. The programme then stops until the baby is six months old, when the couples reconvene for four more sessions to learn further strategies for strengthening the co-parenting relationship and responding sensitively to the needs of their child.

The evidence – Family Foundations has evidence from two RCTs conducted in the US. Both studies observed short-term improvements in co-parenting relationship and child attachment related behaviours. The first study also has evidence of improving children's behaviour at age three and seven.

Cost – 1. This rating is based on the relatively short duration (nine sessions and group format, delivered by trained and supervised health professionals). Together, the programme inputs suggest that this programme is less resource-intensive to deliver relative to other interventions.

Established Evidence

Family Nurse Partnership

Programme aims – to support the health and well being of young single mothers and their first child

For whom – young, single mothers

What happens? –. Highly trained and supervised nurses visit first-time young mothers in their home from the time of their first booking until their child's second birthday. During these visits, mothers receive information about their child's development and learn strategies for understanding supporting their child's and their own needs.

The evidence – FNP has evidence from five RCTs suggesting a variety of benefits for mothers and infants. These benefits include improvements in attachment security and early learning. The initial UK trial results have been disappointing, but improved cognitive outcomes have still been achieved

Cost – 5 meaning that it is **high cost** to implement. Factors contributing to this rating include the fact that it is provided to mothers on a one-to-one basis over a period of two and a half years (involving approximately 64 sessions lasting one hour each) by highly trained (QCF Level 6) and supervised nurses and health visitors.

EARLY INTERVENTION FOUNDATION

Initial Evidence

- Child Parent Psychotherapy (Leiberman)

Programme aims –to improve children's attachment security by helping mothers change their internal representations of their child's behaviour.

For whom – the programme has three versions for mothers of infants, toddlers or preschool children.

What happens? –CPPis delivered by clinical psychologists to individual mothers and their infants through weekly sessions that typically take place for a year or longer. During these sessions, the practitioner uses empathic, non-didactic methods to help the mother reflect on the past issues may be impacting her current relationship with her child. The sessions include joint play activities with the child that allow the practitioner to demonstrate sensitive responding and suggest positive explanations for the child's behaviour.

The evidence – CPP has evidence from several RCTs demonstrating a significant decrease in the number of infants with a disorganised attachment. One of these studies involved the implementation of the programme through a model comparable to the Troubled Families initiative. Additional benefits include improvements in children's language development and reductions in maternal psychopathology.

It is noteworthy that this evidence exists for the original Leiberman model, but not for revisions developed by other providers. While some of these programmes have observed some improvements in parenting behaviours, few of demonstrated consistent child benefits, including improvements in children's attachment security.

Cost -- No available.

Initial Evidence
- Child First

Programme aims –to support the parent/child relationship in highly vulnerable families

For whom – Families with a child who may be at risk of emotional problems, developmental delay or abuse and neglect

What happens? – Child First begins with a comprehensive needs assessment of each family's specific strengths and weaknesses. Motivational interviewing is used during these first visits to actively engage and recruit parents to the programme. Practitioners also learn strategies for recruiting parents who initially refuse programme participation. Once the family and practitioners have agreed a plan, weekly home visits begin for a period of six to twelve months. Each visit lasts between 45 and 90 minutes, depending on the family's needs and the number of family members present. During these sessions, family members receive Child–Parent Psychotherapy (CPP).

The evidence – Child First has evidence from a single RCT showing improvements in children's language and behaviour

Cost -- 5 . This programme is high cost. Participants receive one-to-one support lasting over a year from two practitioners: a QCF Level 5 practitioner who is responsible for each family's plan and therapeutic support from a QCF Level 7/8 clinician who provides the Child–Parent psychotherapy.

No Effect
- Social Baby

Programme aims –to increase attachment security and early learning among children with a parent at risk of postnatal depression

For whom – Mothers identified as being at risk of postnatal depression at their 20 week scan

What happens? – Highly trained and supported health visitors visit mothers in their home starting before the birth of the baby and then for the following two months. Mothers learn about their baby's social capabilities and receive coaching on responding to their infant's cues through demonstrations utilising items from the neonatal behavioural assessment schedule (NBAS).

The evidence – The Social Baby has evidence of no effect on any EIF child outcome, including infant attachment security and early learning

Cost -- Not available.

Group discussion

EARLY INTERVENTION FOUNDATION

- How much influence does and should research evidence have on practice in this transformation area?

- What are the implications of the new evidence for service commissioning and delivery?

- What can evidence be designed to better inform local practice?

Questions and comments from the floor with

EARLY INTERVENTION FOUNDATION

Alison Burton, National lead for Maternity and Early Years, Public Health England *(Chair)*

Dr Nick Axford, Head of What Works, Dartington Social Research Unit
Dr Kirsten Asmussen, Evidence Analyst, Early Intervention Foundation